Annexure-III

Pro-Forma for Display of Information on the college Website

The Following Details are mandatory to be filled up by the Medical College and displayed on their website (once entered should be updated without removal of data)

S No.	Information of the medical college/institution Year of Inception: Government/Private:	Private (2013)
1.	Name	Indian Institute of Medical Science & Research
2.	Address with pin code	Aurangabad-Jalna Road, Warudi Tq. Badnapur Dist. Jalna -431202
3.	University address with pin code	Maharashtra University Of Health Sciences , Vani - Dindori Rd, Mhasrul Gaon, Nashik, Maharashtra 422004
4.	Official website	WWW.IIMSR.CO.IN
5.	Dean/Principal/Director	Dean
6.	Mobile Number	02482-261053 7058980011/44
7.	Email ID of Dean	iimsr11@gmail.com
8.	Hospital	Noor Hospital
9.	Date and Year of Registration of the Hospital (DD/MM/YYYY)	**31/10/2009**
10.	Number of Beds	770
11.	Number of Beds for emergency	30
12.	Date of the First Letter of Permission (LoP) of MBBS (DD/MM/YYYY) & number of seats	Latter No.MCI -34(41)(E-3)/2013-Med Dated 14/07/2013 Intake- 100 NMC Letter No. NMC/UGI/2020/000050/040968 Dated 25/11/2021. (For Increase intake intake 100 to 150)
13.	Status of Recognition	Reconised:100 seats 3rd Renewal:- 150 seats
14.	Number of MBBS and PG broad specialty and super specialty students admitted in this session*	MBBS:150 MD/MS:31 DM/MCh: -
15.	Inpatients registered and admitted (Previous month record)	2846
16.	Outpatients registered (Previous month record)	28434
17.	Number of Death reported to the Municipality/village register (month-wise)\ (Previous month record)	04
18.	Address and pin code of the Corporation/Village where the Death records are reported	Grampanchayat office At post Warudi

19.	Website link/email ID/ hyperlink of the corporation in case Death Records are reported	NA
20.	Number of Births reported (Month-wise)	390
21.	Address and pin code of the Corporation/village where the Birth records are reported	Grampanchayat office At post Warudi
22.	Website link/email ID/hyperlink of the corporation in case Birth Records are reported	NA
23.	Number of Rooms in Men's Hostel and students accommodated	200 rooms with capacity of 02 students per room. No. 180 of student accommodated
24.	Total Number of Rooms in Women's Hostel and students accommodated	180 rooms with capacity of 02 students per room. No. 338 of student accommodated
25.	Name of the Grievance Redressal Officer (PIO & CPIO):	Dr. Veena Hatolkar
26.	Address with Pin code	B-3, Asqwari Apt. Jyoti Nagar, Aurangabad
27.	Telephone Number mail Id	9850686698
28.	Grievances reported (Previous month record)	Nil

29. Details of Post-Graduation Courses offered

Post Graduate Course	Year of Commencement of the Course	Number of Students Currently pursuing the Course	Number of Students admitted in the current session **(2023-24)**
MD Pathology	2020-21	2021-03 2022-03 2023-04	04
MD Anaesthesiology	2020-21	2021-04 2022-03 2023-04	04
MD Medicine	2020-21	2021-04 2022-04 2023-04	04
MD Psychiatry	2020-21	2021-02 2022-01 2023-02	02
MD Paediatrics	2020-21	2021-02 2022-02 2023-02	02
MD Skin VD	2020-21	2021-02 2022-02 2023-02	02
MS Surgery	2020-21	2021-04 2022-04 2023-04	04
MS Ophthalmology	2020-21	2021-03	03

		2022-01 2023-03	
MS Orthopaedics	2020-21	2021-03 2022-03 2023-03	03
MS OBGY	2020-21	2021-03 2022-03 2023-03	03

Department of Anatomy

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Anatomy	Dr. Azhar Ahmed Siddiqui (M.S. Anatomy) IMR NO. MMC 082616	Professor & Dean 01.12.2012	Regular	√	√	√	√	√	Embryology, Genetics 45 hours
Anatomy	Dr. Zuberi Hussain Riyaz (MD Anatomy) IMR NO. MMC 200102877	Professor & Head 01.09.2020	Regular	√	√	√	√	√	Histology Lectures-45 hours, Gross Anatomy lectures -59 hours, Gross Anatomy Practical's-213 hours, Histology Practical's-129 hours, ECE Module-30 hours, Demonstration Classes-35 hours, SDL- 10 hours, Seminar-30 hours
Anatomy	Dr. Karkhyle Md. Layeeque (MD Anatomy) IMR NO. 2000/03/1923	Associate Professor 08.03.2021	Regular	√	√	√	**X**	**X**	ECE Module-30 hours, Gross Anatomy Practical's 213 hours, Demonstration Classes-35 hours, SDL-10 hours, Seminar- 30 hours.
Anatomy	Dr. Bhushan Gulab Vitore (MD Anatomy)	Associate Professor 01.01.2022	Regular	√	√	√	√	**X**	Gross Anatomy Lectures-50 hours, Gross Anatomy Practical's 213 hours, Demonstration Classes-35 hours, SDL-10 hours,

	IMR NO : MMC 2004010266								Seminar-30 hours, ECE Modules-30 hours.
Anatomy	Dr. Syed Yaseen Ahmed (M-Sc Anatomy) IMR NO : NA	Assistant Professor 11.01.2018	Regular	√	√	√	√	√	Gross Anatomy Practical's 213 hours, Demonstration Classes-35 hours.

Department of Anatomy Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
01	Dr. Azhar Ahmed Siddiqui	The Relationship between Depth and Diameter of Human Acetabulum in Dry Hip Bone of Maharashtrian Population	Indian Journal of Anatomy: Volume 10 Number 3-4, July - December 2021
02	Dr. Zuberi Hussain Riyaz	The Relationship between Depth and Diameter of Human Acetabulum in Dry Hip Bone of Maharashtrian Population	Indian Journal of Anatomy: Volume 10 Number 3-4, July - December 2021
03	Dr. Karkhyle Md. Layeeque	The Relationship between Depth and Diameter of Human Acetabulum in Dry Hip Bone of Maharashtrian Population	Indian Journal of Anatomy: Volume 10 Number 3-4, July - December 2021
		Identification of Sex from Maxillary Sinus in Western Maharashtrian Population	Indian Journal of Forensic Medicine & Toxicology: 15 May 2020
		Identification of Sex from Facial Index in Western Maharashtrian Population	Indian Journal of Forensic Medicine & Toxicology: 24 April 2020

MCI NODAL CENTRE FOR NATIONAL FACULTY DEVELOPMENT

Jawaharlal Nehru Medical College,
DMIMS (DU), Sawangi (Meghe), Wardha

1st Revised Basic Course in Medical Education Technology

Certificate of Participation

This is to certify that Dr. Hussain Riyaz Zuberi, Assistant Professor, Department of Anatomy from JIIU's IIMSR, Warudi, Badnapur, Jalna has participated in the Revised Basic Course in Medical Education Technologies held from 8th – 10th September 2015, organized by MCI Nodal Centre for National Faculty Development, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra State.

Dr. Sandeep Srivastava
Dean
JNMC, Sawangi (M), Wardha

Dr. Tripti Srivastava
Convener, MCI Nodal Centre
JNMC, Sawangi (M), Wardha

Dr. Adarshlata Singh
Co- Convener & In- Charge,
(Revised Basic Course)
JNMC, Sawangi (M), Wardha

MUHS

MCI Regional Centre, IMETTT,

Maharashtra University of Health Sciences, Nashik

Curriculum Implementation Support Program II

Certificate of Participation

This is to certify that **Dr. Zuberi Hussain Riyaz** *of JIIU's IIMSR Warudi, Tq. Badnapur, Dist. Jalna has participated in the* Curriculum Implementation Support Program II (Online) *held from 22 July 2020 to 23 July 2020 at the* MCI Regional Centre, IMETTT, MUHS, Nashik.

Prof. Dr. Deelip Mhaisekar	Prof. Dr. Mohan Khamgaonkar	Dr. Kalidas Chavan	Dr. Deepanjali Lomte	Dr. Chitra Netare
Vice-Chancellor	Pro-Vice-Chancellor	Registrar	Convener	Co-Convener

Dated: 23/09/2020

icmr NIE

Online Certification

This certificate is awarded to

DR ZUBERI HUSSAIN RIYAZ

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 63 % in Proctored Examination

JAN 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: JAN30BCBRS24123476

To validate and check scores: http://nptel.ac.in/noc

JAWAHARLAL NEHRU MEDICAL COLLEGE

Datta Meghe Institute of Medical Science (Deemed to be University)
Sawangi (Meghe), Wardha-442004

Medical Council of India Nodal Centre for Faculty Development

Advance Course in Medical Education

This is to Certify that ***Dr. Hussain Riyaz Zuberi, Associate Professor, Anatomy***

From ***Indian Institute of Medical Sciences and Research, Badnapur, Warudi, Jalana***

Has successfully completed a Project based

"Advance Course in Medical Education"

Having successfully met all the requirements for the course, this certificate is awarded to her/him on ***15th November 2019.***

Dr. Tripti Srivastava
Convener

Dr. Abhay Mudey
Dean

Ref. No.MCI Nodal Centre/JNMC/2018-B

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

Institute of Medical Education Technology & Teachers' Training

Regional Centre, 3rd Floor, Civil Hospital Building, Aundh Camp, Pune 27.

Certificate No. 7473

This is to certify that

Dr./Mr./Smt. *Karkhyle MD Layeeque*

has participated as a Delegate / ~~Faculty in~~

Basic Workshop in Research Methodology

held from 22nd August 2016 to 24th August 2016

Organised by

Sinhgad Dental College & Hospital, Pune

Approved vide letter No. MUHS IMETTT,Pune/1368/2016 Dated 28/07/2016

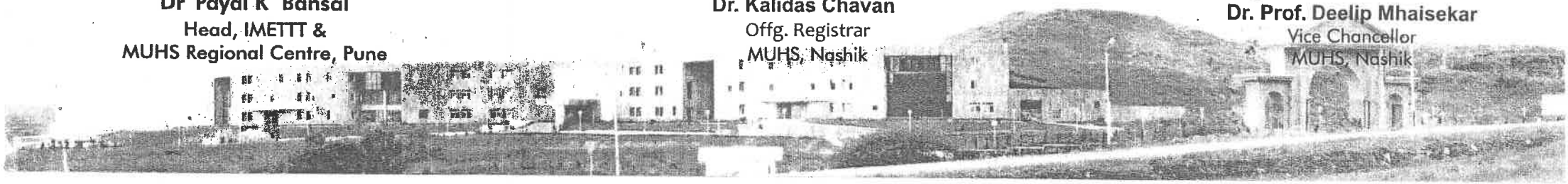
Payal K Bansal

Dr Payal K Bansal
Head, IMETTT &
MUHS Regional Centre, Pune

Dr. Kalidas Chavan
Offg. Registrar
MUHS, Nashik

Mhaisekar

Dr. Prof. Deelip Mhaisekar
Vice Chancellor
MUHS, Nashik



MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

Institute of Medical Education Technology and Teachers' Training, Nashik

Certificate No.
16512

MUHS

This is to certify that

Dr. /Mr./Smt. **Bhushan Gulab Vitore**

has participated as a delegate in

Basic Workshop in Research Methodology

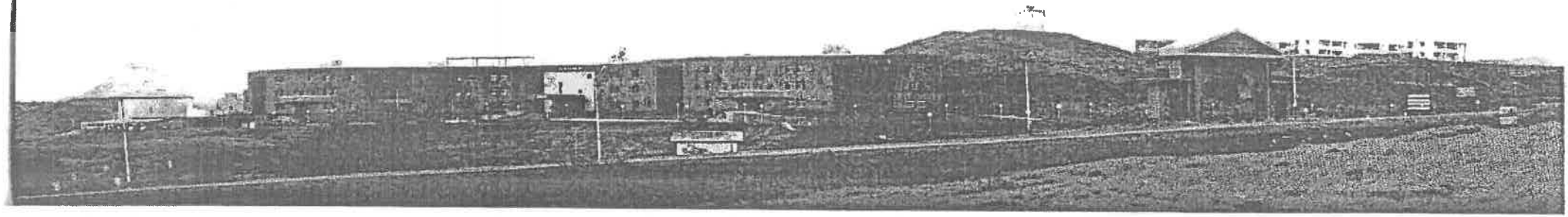
held from 03 to 05 March 2018

organised by

Godavari Foundation's Dr. Ulhas Patil Medical College & Hospital, Jalgaon

Approved vide letter no. MUHS/IMETTT/Nashik/47/2018 dated 03/02/2018

Dr. Payal K Bansal HOD, IMETTT MUHS, Nashik	**Dr. Kalidas Chavan** Registrar MUHS, Nashik	**Prof. Dr. Mohan Khamgaonkar** Pro Vice Chancellor, MUHS, Nashik	**Prof. Dr. Deelip Mhaisekar** Vice Chancellor MUHS, Nashik



MCI NODAL CENTRE FOR NATIONAL FACULTY DEVELOPMENT

Jawaharlal Nehru Medical College, DMIMS (DU)

Sawangi (Meghe), Wardha

Revised Basic Course in Medical Education Technology

Certificate of Participation

This is to certify that

Dr. Bhushan Vitore, Assistant Professor, Department of **Anatomy,** from **Dr. Ulhas Patil Medical College, Jalgaon** has participated in the "8th Revised Basic Course in Medical Education Technology" held during 10th to 12th July 2018, organized by MCI Nodal Centre for National Faculty Development, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra State.

Dr. Abhay Mudey
Dean
JN Medical College
Sawangi (M), Wardha

Dr. Tripti Srivastava
Convener
MCI Nodal Centre
JNMC, Sawangi (M), Wardha

Dr. Archana Khursade/Dhok
Co- Convener & In- Charge
(Revised Basic Course Workshop)
JNMC, Sawangi (M), Wardha

Department of Physiology

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent/ contract	Details of service in the last five years					No of lectures take / year, small teaching groups with topics covered
				1	2	3	4	5	
Physiology	Dr. Sayed Badar Daimi Azhar MD Physiology IMR No. 2007/09/3446	Professor 01/09/2020	Regular	√	√	√	√	√	Lectures – 30 CVS,RS, Integrated topic SGL- 260 hours Tutorial- 10 hours Certification- 20 hours SDL – 10 hours ECE – 10 hours AETCOM – 8 hours
Physiology	Dr. Mohammed Suhail MD Physiology IMR No. 2008/04/1223	Professor 16/09/2022	Regular	√	√	√	√	√	Lectures – 35 Endocrine, CNS Part 1 Exercise Physiology, Integrated topic SGL- 260 hours Tutorial- 10 hours Certification- 20 hours SDL – 10 hours ECE – 10 hours AETCOM – 8 hours
Physiology	Dr. Bemat Ilyas MD Physiology IMR No .MCI/13-47155	Associate Professor 27-07-2020	Regular	√	√	√	√	√	Lectures – 10 General Physiology, Integrated topic SGL- 260 hours Tutorial- 10 hours Certification- 20 hours SDL – 10 hours

									ECE – 10 hours AETCOM – 8 hours
Physiology	Dr. Mohammed Shoebuddin MD Physiology IMR No. 2009/03/0537	Associate Professor 1/11/2021	Regular	√	√	√	√	√	Lectures – 35 Nerve Muscle Physiology, GIT,CNS Part 2 Integrated topic SGL- 260 hours Tutorial- 10 hours Certification- 20 hours SDL – 10 hours ECE – 10 hours AETCOM – 8 hours
Physiology	Dr. Yaser Askari MD Physiology IMR No. 2007/06/2387	21/02/2023 Assistant Professor	Regular	**x**	**x**	**x**	√	√	Lectures – 32 Blood, Excretory system, Special Senses, Integrated topic SGL- 260 hours Tutorial- 10 hours Certification- 20 hours SDL – 10 hours ECE – 10 hours AETCOM – 8 hours

Department of Physiology Publications

Sr. No.	Faculty name	Sr. No	Publications in Vancouver referencing style	Indexing systems
1	Mohammad Shoebuddin Naseruddin	1	Shoebuddin M, Ahmed M. Peripheral Nerve Conduction study in prediabetes, a cross sectional study.International Journal of Pharmacy and Biological Sciences ISSN: 2321-3272 (Print), ISSN: 2230-7605 (Online) IJPBS | Volume 7 | Issue 4 | OCT-DEC| 2017 | 116-122	Open Access | Ugc Approved | MCI Approved Journal
		2	Baig AS, Shoebuddin M, Ahmed M. Comparison of manual sperm analysis with computer-assisted sperm analysis: A comparative cross-sectional study. Natl J Physiol Pharm Pharmacol. (2019), [cited January 20, 2020]; 9(9): 862-864. doi:10.5455/njppp.2019.9.0621817062019.	Scopus
		3	Shoebuddin M, Daimi SB. Correlation of percentage body fat with physical efficiency index and maximal oxygen uptake. Natl J Physiol Pharm Pharmacol. (2019), [cited July 04, 2019]; 9(7): 586-589. doi:10.5455/njppp.2019.9.0312004042019.	Scopus
		4	Mohammad Shoebuddin, Mohammad Suhail, "Moderate and vigorous intensity aerobic exercise as per WHO recommendations vs HIIT on aerobic capacity of inactive young adults a cross sectional study.", IJRAR - International Journal of Research and Analytical Reviews (IJRAR), E-ISSN 2348-1269, P-ISSN 2349-5138, Volume.10, Issue 4, Page No pp.349-354, October 2023, Available at : http://www.ijrar.org/IJRAR23D1177.pdf	Google Scholar, ResearcherID Thomson Reuters, Mendeley : reference manager, Academia.edu, arXiv.org, Research Gate, CiteSeerX, DocStoc, ISSUU, Scribd

Research methodology BCBR attached as below.

MCI NODAL CENTRE FOR NATIONAL FACULTY DEVELOPMENT

Jawaharlal Nehru Medical College,
DMIMS (DU), Sawangi (Meghe), Wardha

1st Revised Basic Course in Medical Education Technology

Certificate of Participation

This is to certify that Dr. Sayed Badar Daimi, Associate Professor, Department of Physiology from JIIU's IIMSR, Warudi, Badnapur, Jalna has participated in the Revised Basic Course in Medical Education Technologies held from 8th – 10th September 2015, organized by MCI Nodal Centre for National Faculty Development, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra State.

Dr. Sandeep Srivastava
Dean
JNMC, Sawangi (M), Wardha

Dr. Tripti Srivastava
Convener, MCI Nodal Centre
JNMC, Sawangi (M), Wardha

Dr. Adarshlata Singh
Co- Convener & In- Charge,
(Revised Basic Course)
JNMC, Sawangi (M), Wardha

Datta Meghe Institute of Medical Sciences (Deemed University)

Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha

Workshops on Basic Course in Medical Education Technology

Code no.-MMC/MAC/2014/F-000495

Nodal Center for National Faculty Development (By MCI)

This is to certify that Dr. Sayed Bodar A. Daimi *has participated as delegate in Basic Course Workshop in Medical Education Technology held from 20th Feb. to 22nd Feb. 2014.*

Maharashtra Medical Council has granted FOUR Credit hour for this delegate.

Dr. Mrs. Sunita Vagha
Convener, Nodal Centre
JN Medical College, Sawangi (M.)

Dr. S. Shrivastava
Dean
JN Medical College, Sawangi (M.)

MMC Observer

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, **https://nptel.ac.in/noc/**

Roll No: NPTEL21MD03S13130008

To
DAIMI SAYED BADAR AZHAR
FLAT NO.10,NAAZ COMPLEX,ALTAMASH COLONY
NEAR MOHAMMADIYA MASJID, CENTRAL NAKA
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9595455114

Online Certification

This certificate is awarded to

DAIMI SAYED BADAR AZHAR

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 88 %

Online Assignments	**93 %**	**Proctored Examination**	**86 %**

AUG-DEC 2020

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD03S13130008

To validate and check scores: **http://nptel.ac.in/noc**

Medical Council of India

Basic Course Workshop in Medical Education Technologies

Certificate of Participation

This is to certify that Dr Sayed Bodar A. Daimi

from .....*has participated in the*

Basic Course Workshop in Medical Education Technologies held during .....

by the Nodal Centre, Jawaharlal Nehru Medical College, Sawangi (M) Wardha,, Maharashtra State

Dr. S. Shrivastava
Dean
JN Medical College, Sawangi (M)

Dr. Mrs. Sunita Vagha
Convener Nodal Center
JN Medical College, Sawangi (M)

Dr. M. Rajalakshmi
Chief Consultant
Academic Cell, MCI, New Delhi

MCI NODAL CENTRE FOR NATIONAL FACULTY DEVELOPMENT

Jawaharlal Nehru Medical College,
DMIMS (DU), Sawangi (Meghe), Wardha

Sensitization Program

Certificate of Participation

This is to certify that Dr. Sayed Badar Daimi, Associate Professor, Department of Physiology from JIIU's IIMSR, Warudi, Badnapur, Jalna has participated in the Sensitization Programme for Attitude and Communication (AT-COM) module organized by MCI Nodal Centre for National Faculty Development, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra State, on 7th September 2015.

Dr. Sandeep Srivastava
Dean
JNMC, Sawangi (M), Wardha

Dr. Tripti Srivastava
Convener, MCI Nodal Centre
JNMC, Sawangi (M), Wardha

Dr. Adarshlata Singh
Co- Convener & In- Charge,
(Revised Basic Course)
JNMC, Sawangi (M), Wardha

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, **https://nptel.ac.in/noc/**

Roll No: NPTEL21MD03S13130008

To

DAIMI SAYED BADAR AZHAR
FLAT NO.10,NAAZ COMPLEX,ALTAMASH COLONY
NEAR MOHAMMADIYA MASJID, CENTRAL NAKA
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9595455114

Online Certification

This certificate is awarded to

DAIMI SAYED BADAR AZHAR

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 88 %

Online Assignments	93 %	Proctored Examination	86 %

AUG-DEC 2020

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD03S13130008

To validate and check scores: **http://nptel.ac.in/noc**

JIIU's Indian Institute of Medical Science and Research, Warudi

&

MCI Nodal Centre, Jawaharlal Nehru Medical College Sawangi (Meghe), Wardha

Revised Basic Course Workshop in Medical Education Technologies

Certificate of Participation

CME Code : MMC/MAC/2016-F-005977
Type of CME : **Medical Education**

This is to certify that **Dr. Mohammed Suhail** *has participated as Delegate in the Revised Basic Course Workshop in Medical Education Technologies conducted by MCI Nodal Centre for National Faculty Development, Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha at JIIU's Indian Institute of Medical Science and Research, Warudi, from 21-09-2016 to23-09-2016. Maharashtra Medical Councile, Mumbai has granted Four (04) Credit Hours for this Workshop*

Dr. Azhar Ahmed Siddiqui
Organizing Secretary
MEU Coordinator - IIMSR, Warudi

Dr. A. B. Solepure
Dean / Principal
IIMSR, Warudi

Dr. Goyal Satish Rameshwar
Observer
MMC Mumbai

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, https://nptel.ac.in/noc/

Roll No: NPTEL21MD04S13110157

To
MOHAMMED SUHAIL
2/23 LUNAR HOUSING SOCIETY
NEAR VIDYALNKAR SCHOOL CIDCO N12
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9768848239

icmr | NIE

Online Certification

This certificate is awarded to

MOHAMMED SUHAIL

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 69 %

Online Assignments	98 %	Proctored Examination	59 %

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD04S13110157

To validate and check scores: http://nptel.ac.in/noc

MCI Nodal Centre, Jawaharlal Nehru Medical College
Sawangi (Meghe), Wardha

Revised Basic Course Workshop in Medical Education Technologies

Certificate of Participation

This is to certify that **Dr. Mohammed Suhail** from **JIIU's IIMSR**, Warudi has participated as Delegate in the Revised Basic Course Workshop in Medical Education Technologies **conducted** by MCI Nodal Centre for National Faculty Development, Jawaharlal Nehru Medical College, **Sawangi** (Meghe), Wardha at **JIIU's Indian Institute of Medical Science and Research,** Warudi, Taluka Badnapur, Dist. Jalna from **21-09-2016 to 23-09-2016.**

Dr. Azhar Ahmed Siddiqui
MEU Coordinator
IIMSR, Warudi

Dr. Amarnath B. Solepure
Dean / Principal
IIMSR, Warudi

Dr. Abhishek Ingole
Observer
MCI Nodal Centre
JNMC, Sawangi (Meghe)

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, **https://nptel.ac.in/noc/**

Roll No: NPTEL21MD03523130059

To

MOHAMMAD SHOEBUDDIN NASERUDDIN
MAKSAN [illegible] NO 34,PROFESSOR COLONY,
DELHI GATE, A[illegible]NGABAD.
AURANGABAD
MAHARASHTRA [illegible]
PH. NO :9881[illegible]

icmr NIE

Online Certification

This certificate is awarded to

MOHAMMAD SHOEBUDDIN NASERUDDIN

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 71 %

Online Assignments	**78 %**	**Proctored Examination**	**69 %**

AUG-DEC 2020

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD03523130059

To validate and check scores: **http://nptel.ac.in/noc**

Medical Council of India

Maharashtra University of Health Sciences, Nashik

Revised Basic Course Workshop in Medical Education Technology

Certificate of Participation

This is to certify that Dr. Mohammad Shoebuddin, Assistant Professor, Department of Physiology, from MIJ's Indian Institute of Medical Sciences and Research, Jalna has participated in the **Revised Basic Course Workshop** *held from 21st to 23rd May, 2019 by MCI Regional Centre, Maharashtra University of Health Sciences, Nashik*

Prof. Dr. Deelip Mhaisekar	Prof. Dr. Mohan Khamgaonkar	Dr. Kalidas Chavan	Dr. Payal Bansal	Dr. Deepanjali Lomte
Vice-Chancellor	Pro-Vice-Chancellor	Registrar	Convenor	Co-Convenor

d: 23rd May 2019

Maharashtra University of Health Sciences, Nashik
MCI Regional Centre

MUHS

JIIU's Indian Institute of Medical Science & Research

Aurangabad-Jalna Road, Warudi, Tq. Badnapur, Dist. Jalna

Curriculum Implementation Support Program

Certificate of Participation

This is to certify that **Dr. Mohammad Shoebuddin**, Assistant Professor Department of Physiology, JIIU's Indian Institute of Medical Science & Research has participated in the **Curriculum Implementation Support Program** held from 28th May 2019 to 30th May 2019 at JIIU's Indian Institute of Medical Science & Research College under aegis of Maharashtra University of Health Sciences, Nashik, MCI Regional Centre.

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Dated : 30th May 2019

Department of Biochemistry

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular / permanent or contract / outsourced	Details of service in the last 5 years					No of lectures taken / year, small teaching group with Topics covered
				1	2	3	4	5	
Biochemistry	Dr. Ajit P. Bhale MBBS, MD **Reg. No. 079131**	Professor & HOD	Regular	No	No	No	No	Yes	06
	Dr. Veena Hatolkar M.Sc. Ph.D	Professor	Regular	Yes	Yes	Yes	Yes	Yes	36
	Mrs. Savita Deshmukh MSc	Assistant Professor	Regular	Yes	Yes	Yes	Yes	Yes	39
	Dr. Quadri Syeda Ayesha MBBS, MD **Reg. No. 2001/08/2945**	Assistant Professor	Regular	No	No	No	Yes	Yes	40

Department Of Biochemistry Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
1.	Dr. Ajit P. Bhale	1. A study of oxidant anti-oxidant imbalance and pulmonary function tests in cigarette smokers Indian Journal of Medical Biochemistry (IJMB) ; Vol. 10, No.1,2007 2. A study of serum Cholesterol level in patients with depression. The Antiseptic, Vol. 107, No.3, March 2010 3. Free radicals and complications of diabetes mellitus : A cause relationship study The Antiseptic, Vol. No. 7 , July 2010 4. Screening by point of care testing: A critical view for community health service for evaluation of anemia in women. WIMJOURNAL, Vol. No. 8, ISSUE No. 2027, PISSN 2349,2910, EISSN 2395-0684 5. Evaluating liver enzyme abnormalities in chronic alcohol consumers : A Biochemical Cross sectional study. Journal of cardiovascular research Vol. 15, Issue 10, 2024 ISSN: 0975-3583, 0967-2833. 6. The concurrence of serum total cholesterol levels and anti thyroperoxidase (anti TPO) antibodies in patients with subclinical hypothyroidism : A prospective observational study. Sent for publication to Indian Journal of Biochemistry and Biophysics (IJBB)	Indexed
2.	Dr. V.S. Hatolkar	1)Mulani Manzura R. , Savita Deshmukh, Mrs Veena Hatolkar, Mr. Dilip Bhave Serum ceruloplasmin and serum bilirubin in chronic obstructive pulmonary disease, International Journal of Medical Science and Innovative Research, April - 2022, Vol – 7, Issue - 2, P. No. 21 – 24.	Pubmed
		2) Log TG/HDL-C ratio in type II diabetes mellitus, Internation Journal of Biochemistry 201(2021) 554-558	Indexed
		3)Do Vitamin D Levels Correlate To Body Mass Index and Insulin Resistance in Urban Indian Fema International Journal of Medical Science and Innovative Research (IJMSIR) Volume – 7, Issue – 4, August – 2022, Page No: 128-135	Indexed
		4) Study of serum alkaline phosphatase in chronic kidney disease International Journal of Advanced Biochemistry Research Vol 4, Issue 2, 2020, PP -20-23	Indexed
3.	Mrs. Savita Deshmukh	1)Mulani Manzura R. , Savita Deshmukh, Mrs Veena Hatolkar, Mr. Dilip Bhave Serum ceruloplasmin and serum bilirubin in chronic obstructive pulmonary disease, International Journal of Medical Science and Innovative Research, April - 2022, Vol – 7, Issue - 2, P. No. 21 – 24.	Pubmed
		2) Mrs. Savita Deshmukh Study of serum levels of vitamin D and calcium in primary hypothyroid patients Paripex –Indian journal of research/ 10/(08)Aug2021	Copernicus
		3) Mrs. Savita Deshmukh Study of vitamin D Levels in patient Diagnosed with COVID-19 Infection International Journal of Medical Research & Health Science, 2021,10(08): 178-183.	Copernicus

		4) Sunita Aghade, Mrs. Savita Deshmukh, Dipti Katre. Assessment of reproductive health, metabolic and cardiovascular risk profile in first-degree relatives of women with polycystic ovarian syndrome: a hospital-based study in Maharashtra, India	Embase indexed

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Serum ceruloplasmin and serum bilirubin in chronic obstructive pulmonary disease

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Introduction: Oxidative stress has been known for having a key role in pathogenesis of many diseases. The aim of this study was to investigate the antioxidant status with chronic obstructive pulmonary disease (COPD) and healthy control subjects.

Material and methods: Fifty subjects having COPD and fifty healthy control participated in this study. The investigation included determination of the serum ceruloplasmin (Cp) and serum bilirubin with basal metabolic rate (BMI).

Results: Significantly increased sr. ceruloplasmin ferroxidase activity and sr. bilirubin levels were found in subjects with COPD than healthy normal subjects. No significant difference in BMI were found in COPD patients.

Conclusion: Biochemical biomarkers can be reliably utilized in the prognosis of COPD. Reduced lung function is associated with increased levels of systemic inflammatory markers which may have important pathophysiological and therapeutic implications for subjects with stable COPD.

Keywords: COPD, Ceruloplasmin, bilirubin and BMI

Introduction

COPD is a major and increasing global health problem and is currently the 3rd leading causes of death by 2020 [1] are at increased risk of CVD, atherosclerosis, osteoporosis and muscle wasting. Systemic inflammation may be involved in the pathogenesis of these disorders. The use of inflammatory markers for this study have been intimately linked with the development of ischemic heart disease and stroke, which interestingly are also with COPD.[2] Ceruloplasmin was the strongest single predictor of COPD.[3]

Chronic obstructive pulmonary disease (COPD) is characterized by persistent respiratory symptoms and airflow limitation caused by significant exposure to noxious particles or gases.[4] Oxidative stress is an important mechanism in the development, progression, and exacerbation of COPD. Biomarkers of oxidative

respiratory distress syndrome.[9] This knowledge has evolved in parallel with the study of antioxidant agents able to neutralize the effects of oxygen free radicals neutralizing agents may be included in the therapeutic arsenal against may be included the principle pulmonary diseases.[10].

The BMI is a prognostic factor for COPD. BMI alternations COPD with no significant difference among subjects. Furthermore, it is still unclear, if BMI alteration in COPD is associated with the severity of airflow limitations or with other factors like gender, age, ethnicity, reduction, employment, tobacco consumption, clinical symptoms and geographical variations. [11]

Ceruloplasmin the major serum inhibitor of lipid peroxidation[12] has been documented as a main extracellular antioxidant in serum[13] inhibiting ferrous ions in the decomposition of lipid peroxides.[14]Cp protects protease inhibitor from oxidative inactivation. It has been reported that Cp activity play a role in preventing lung injury and an abnormality of Cp oxidative inhibition could be involved in the pathogenesis of COPD. [15]

Bilirubin is one of the numerous nonenzymatic antioxidants located within skeletal muscle fibers, and it inhibits both lipid and protein oxidation [16] In addition, bilirubin attenuates vascular endothelial activation and dysfunction in response to proinflammatory stress. [17] Albumin bound bilirubin protects human ventricular myocytes against oxyradical damage.

However, the relationship of bilirubin and clinical outcomes should be cautiously assessed in various settings when other health statuses could confound the results. Brown et al. showed that higher bilirubin level was associated with lower risk of acute exacerbation of COPD.[18]

In patients with chronic obstructive pulmonary disease (COPD), higher serum bilirubin levels within the normal range may be associated with lower mortality and risk for exacerbations, a reduced incidence of COPD diagnoses, and improved lung function. Results of the analysis were published in the journal BMC Pulmonary Medicine.[19]

Conclusion

Reduced lung function is associated with increased levels of systemic inflammatory markers which may have important pathophysiological and therapeutic implications for subjects with stable OPD. Oxidative stress is one of the major physio pathological hallmarks in the development of COPD.

References

1. Global Initiative for Chronic Obstructive Lung Disease. Global Strategy for the Diagnosis, Management and Prevention of Chronic Obstructive Pulmonary Disease. In. 2018.

2. W Q Gan, S F P Man, A Senthil Selvan, D D Sin Association between chronic obstructive pulmonary disease and systemic inflammation: a systematic review and a metaanalysis, Thorax 2004;59:574–580.

3. Lara Milevoj Kopčinović, Ana-Marija Domijan, Ksenija Posavac, Ivana Čepelak, Tihana Žanić Grubišić & Lada Rumora , Systemic redox imbalance in stable chronic obstructive pulmonary disease, Bio markers,2016; 21:8:692-698.

4. Global Initiative for Chronic Obstructive Lung Disease 2019 [cited 2019 Feb 24]. Available online: www. goldcopd.org

5. Leem, A., Kim, Y., Lee, JH. et al. Serum bilirubin level is associated with exercise capacity and quality of life in chronic obstructive pulmonary disease. Respir Res; 2019:20, 279.

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Log TG / HDL-C ratio in type-2 diabetes mellitus

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Abstract

T2DM is associated with atherogenic dyslipidemia (AD), defined as decreased HDL-C plus raised triglycerides (TG). AD confers increased risk for CAD, even when LDL-C is at target. AD is rarely assessed due to lack of screening methods consensus.

To establish the prevalence and severity of AD from log(TG)/HDL-C in T2DM males, and to determine how it relates to cardio metabolic phenotype, glucose homeostasis, micro- and macrovascular complications. So, The aim of present study was to evaluate the log (TG)/HDL-C ratio as AD markers and non HDL-C as measurable predictors of CVD in T2DM.

55 T2DM divided according to quintiles (Q) of log(TG)/HDL-C. AD prevalence defined as HDL-C <40 mg.dL-1 plus TG ≥150 mg.dL-1.

Mean HDL-C and TG were 35.38±9.53 and 170.11±84.96 mg.dL-1. AD prevalence was 47%. AD correlated with lower β-cell function, with accelerated loss of insulin secretion, and with poorer HbA1c levels. AD was related to a high prevalence of CAD, and also to 10-year absolute CAD risk. log (TG)/HDL-C is a simple means to estimate AD and the residual CV risk it confers in T2DM. AD closely associates with major cardio metabolic and glucose homeostasis determinants and poorer metabolic control. The ratio also relates to macroangiopathy prevalence and ranks future CAD risk, and is well-suited to capture non-LDL-related macrovascular residual risk and major glycemic determinants.

Introduction

Dyslipidemia is implicated cardiovascular risk associated with Type-2 diabetes mellitus (T2DM).[Antonio Gonzalez Chavez et al 2011]

The spectrum of dyslipidemia in T2 DM can include all the various types of dyslipidemia

Results

Patients characteristics are described in table 1. There were 55 diabetic patients in which 36 males and 19 female. The prevalence of atherogenic dyslipidemia (AD) defined as the combination of HDL < 40mg/dl in male and in female <50mg/dl. TG ≥150mg/dl was 47%. Early diagnosed T2DM patients were divided according to AD quintiles of log (TG) /HDL-C, patients in the first quintiles had mean log TG/HDL-C value similar to control, non diabetic subjects. (Table 1)

A significant decrease trend in HDL-C levels across log TG/HDL-C where seen in type2DM.

Non HDL-C levels where higher in quintile 4th. And in quintile 5th of log (TG)/HDL-C (P<0.001)

As compared to control the non HDL-C level was significantly increased in T2DM. TC/ HDL-C ratio was also step wise increased across quintile of log TG/HDL-C. This ratio in all quintile was more than 3.5. There was step wise increased across quintiles of log TG/HDL-C in HbA1C levels (P<0.004)

Mean HbA1c in all patients where 7.83 with 43.63 % of patients at HbA1c target. There was significant increased trend of LDL-C across quintiles of log TG/HDL-C in the present study mean LDL-C was 111-18±41 mg/dl with 32% patients were at LDL-C target. HDL-C was 35.38±9.35 mg/dl. TG level was 170.11±84.96 mg/dl and non HDL-C was on average 145.20±46.70 mg/dl suggesting elevated number of both apo-B carrying and TG rich lipoproteins.

Discussion

We observed 47% prevalence of AD in T2DM. The ratio was linked to glycemic status of T2DM.

In the present study HDL-C level, non HDL-C level, ratio of TC/HDL-C and TG/HDL-C confirmed the high prevalence of AD related abnormalities in T2DM. AD was also associated with high number of apo-B 100 carrying particles and with markers lipoprotein TG enrichment.[Michel P Hermans et al]

Despite the limitation, the simplicity of this approach has oblivious advantages and we hope that our findings will encourage other investigator to further evaluate the clinical utility of TG/HDL-C ratio as a way to identify IR individuals at high cardio metabolic risk. [Hermans P. H. et al]

Table No.1 :-Clinical and biochemical characteristics of the study participants cases

11	All	Q1	Q2	Q3	Q4	Q5	F - value	P-Value
LOG TG/HDL	0.067± 0.023	0.044± 0.004	0.053± 0.003	0.062± 0.002	0.074± 0.005	0.104± 0.021		
N	55	11	11	11	11	11		
Age	56.64± 10.05	58.00± 8.99	55.36± 11.04	58.00± 10.64	58.46±1 1.07	53.36± 9.28	0.509	0.73
FBS	155.33±66. 10	135.36± 53.49	141.18± 52.31	141.18± 56.74	185.55± 97.49	173.36± 55.07	1.31	0.28
PPBS	217.96±76.	199.00±	201.73±	202.73±	248.18±	238.55±	1.05	0.39

Competing interests

Authors have declared that no competing interest exists. Dr. Manzura R. Mulani is Assistant professor. Dr. Veena S. Hatolkar is Professor. Dr. Nitmala R. Hajari is Associate professor.

References:-

Antonio Gonzalez Chavez, Luis Ernesto Simental Mendia et al . Elevated TG/HDL-C ratio associated with insulin resistance,Cir Cir,2011;79(2):115-119.

Arshag D. Mooradian, Dyslipidemia in type 2 diabetes mellitus.Nature clinical practice Endocrinology and metabolism.2009; 5(3):150-159.

Hermans P.H. Ahn A.A. and Rousseau. M.F. et al. The atherogenic dyslipidemia ratio log TG/HDL-C is associated with residual vascular risk, β- cell function loss and microangiopathy in type -2 diabetes females. Lipids in Health and Disease. 2012;11:132.

Kannel WB, Vasan RS, Keyes MJ. Usefulness of the triglyceride- HDL veruses the cholesterol –high-density lipoprotein ratio for predicting insulin resistance and cardiometabolic risk (from Framingham offspring cohort). Am J Cardiol, 2008;101:497-501.

M. F. Kajingulu, B. F. Lepira et al. The atherogenic Dyslipidemia ratio Log TG/HDL-C was not associated with urinary albumin excretion rate and increased cardiovascular risk in black patients with type-2 diabetes. World journal of cardiovascular diseases, 2016, 6:14-20.

Michel P Hermans, Sylvie A Ahn, Michel F Rosseau et al . Log TG/HDL-C is related to both resudial cardiometabolic risk and β-cell function loss in type- 2 diabetes males, Cardiovascular Diabetology, 2010; 88(9):1-10.

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Do Vitamin D Levels Correlate To Body Mass Index and Insulin Resistance inUrban Indian Females

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Type of Publication: Original Research Article

Conflicts of Interest: Nil

Abstract

Background: Vitamin D deficiency found rampant all throughout the Indian subcontinent; has been linked with various disorders like hypertension, diabetes, obesity and high triglyceride levels ultimately leading to increased risk of cardiovascular mortality.

Objective: To examine the concentration of 25-hydroxyvitamin D (25[OH]D) in apparently healthy females of age group 40-60 years and its association with BMI, blood sugar levels, serum insulin and insulin resistance.

Methodology: This was an observational cross sectional study. About 250 apparently healthy females were evaluated for anthropometric (height, weight, B.M.I.) and biochemical (fasting insulin and glucose, 25[OH]D, and HOMA-IR) parameters. Appropriate statistical analysis was done to find the vitamin D, obesity status amongst study participants and comparison of biochemical parameters between obese and non-obese groups. Correlation analysis was done to find relationship of vitamin D with B.M.I, blood sugar, serum insulin and HOMA-IR. Results: Our study demonstrated that 11% participants were found to be vitamin D sufficient, 73% were insufficient and 16 % were deficient. About 64.6% were found to be obese. Vitamin D status comparison between obese and non-obese group by Chi square test showed a significant difference ($p < 0.0001$). 25(OH)D levels showed significant negative correlation with BMI ($r=-0.658$), BSL (-0.432), Insulin (-0.24483) and HOMA IR (-0.276). B.M.I., vitamin D, serum insulin and HOMA- IR showed significant difference between obese and non-obese groups.

Conclusions: Vitamin D deficiency is widespread among urban Indian females and it is significantly associated with obesity, fasting blood sugar levels and insulin resistance

Keywords: Anthropometric parameter, Insulin resistance, Vitamin D, obesity.

Introduction

Vitamin D deficiency has been documented as one of the major health problems worldwide. India, located between latitude of 8.40 -N and 37.60 N, receives ample sunlight

In growing pandemic of metabolic syndrome, identifying the exact prevalence of Vitamin D deficiency in females can be one of the modifiable risk factors in them before the progression to obesity and diabetes mellitus. In the above context, this cross-sectional study was undertaken with the objective to estimate Vitamin D status and correlate it with anthropometric measure of obesity (BMI) , fasting blood sugar, serum insulin and insulin resistance (HOMA IR) among apparently healthy females (40-60 years age group) of non-manual employment group (confined to house hold work) from Aurangabad, Maharashtra.

Material And Methods

The study participants comprised of 250 apparently healthy females from Aurangabad, Maharashtra inthe age group of 40-60 years. All the study participants were housewives, involved in indoor house hold work with minimal sun exposure. This cross-sectional study was conducted from January 2019 to May 2019. The participants of study were informed about the protocol and written consent was taken. Females with chronic diseases, known case of diabetes mellitus, pregnant and lactating women, those taking drugs for obesity, Vitamin D or calcium supplementations for last 6 months, were excluded. A proper history was taken and inclusion-exclusion criteria precisely looked over.

Anthropometric Measurements: Weight was measured with an accuracy of 0.1 kg using a weighing machine. Height was measured using a wall stadiometer to the nearest 1 mm without shoes. The formula for calculation of BMI is, weight (in kg)/height (in m2). Those with BMI ≥25 kg/m2 were categorized as obese while < 25 as non-obese.[17]

Biochemical Parameters: Following overnight fasting of minimum 8 hours venous blood was collected from all participants in plain bulb (2 ml) and fluoride bulb (1 ml). Serum was separated for analyzing insulin, and 25(OH) D levels and glucose levels. The serum level of 25(OH) D was measured by fully automated Chemi Luminescent Immuno Assay (CLIA) .Vitamin D deficiency was defined as 25(OH)D ≤ 20 ng/ml and level of 21-29 ng/ml was insufficient while ≥ 30ng/ml was considered optimal. Plasma glucose was analyzed by glucose oxidase-peroxidase method on fully auto analyzer. Serum insulin was measured using Chemi Luminescent Immuno Assay. Homeostatic model assessment (HOMA-IR) was calculated as (Fasting Glucose×Insulin)/405(Insulin in μIU/ml and glucose in mg/dl).[18]

Statistical Analysis

Vitamin D and obesity status was assessed amongst study participants as percentiles. Quantitative variables were expressed as mean ± standard deviation. To study whether there is any significant difference in average levels of the various parameters of study between obese and non-obese group, we used student t-test. Pearson correlation coefficient of vitamin D with BMI, Insulin, HOMA & BSL was computed. A significant level of 95% was taken for all tests ($p<0.05$).

Observation And Results

A total of 250 females were enrolled in the study after reviewing inclusion-exclusion criteria. Based on vitamin D status, the individuals were divided into three groups, viz.: (1) Vitamin D sufficiency: (25(OH) D ≥30 ng/ml), (2) vitamin D insufficiency: (25(OH) D 21-29 ng/ml), (3) vitamin D deficiency: (25(OH) D ≤20 ng/ml). Amongst the study participants approximately 11% (n=27) were found to be vitamin D sufficient, 73% (n=183) were found to be vitamin D insufficient and 16 % (n=40) were vitamin D deficient. (figure1). Amongst the study participants, 86 (34.4%) were found to be non-obese

Table 3: Pearson correlation of vitamin D with BMI BSL Insulin, HOMA.

Parameter	R value
BMI	-O.658
BSL	-0.432
Insulin	-0.24483
HOMA	-0.276

Table 4 : Comparison of anthropometric and biochemical variables between obese and non-obese group

Characteristics	Non-obese (n=86)	Obese (n=164)	P-value
Age	48.01 ± 12.44	46.19 ± 9.05	0.18
BMI	23.14 ± 1.48	30.06 ± 3.20	<0.0001*
Vitamin D	29.65 ± 6.62	24.65 ± 4.53	<0.0001*
Insulin	14.59 ± 3.04	16.45 ± 7.55	0.02*
BSL	96.0 ± 9.26	100.80 ± 28.29	0.2
HOMA-IR	3.06 ± 0.94	5.48 ± 2.80	<0.0001*

Discussion

Vitamin D insufficiency is increasingly being recognized in India as well as globally, affecting majority of the individuals regardless of their gender, age, race, and geography. Owing to its diverse effects on health, the extensive vitamin D deficiency in India will considerably add to the huge burden on the healthcare system.[19] In the present study, approximately 11% (n=27) females were found to be vitamin D sufficient, 73% (n=183) were found to be vitamin D insufficient and 16 % (n=40) were vitamin D deficient. The very high prevalence of vitamin D deficiency and insufficiency (89%) is consistent with previous studies. Sahu et al. reported Vitamin D deficiency in 88.6% adolescent female in rural area of North India, they stated that urban females are more prone as compared to their rural counterparts to Vitamin D deficiency, probably because of less exposure to sunrays as a result of urbanization, pollution and less outdoor activities.[20] Kumar et al found that prevalence of Indian women with vitamin D deficiency was 65.24%, 32.86% were insufficient and only 1.90% were vitamin D sufficient.[21] Goswami et al showed that in spite of plentiful sunlight, healthy people of Delhi were vitamin D deficient. Apart from inadequate direct sunlight, low-calcium, high-phytate diets, skin pigmentation of Indians, pregnancy in females, and climatic variations may affect vitamin D levels.[22]

In our study population about 34.4% females were non obese and 65.6%were obese. We found significant difference in vitamin D levels among obese and non – obese groups. Obesity is associated with alterations in the vitamin D physiology as seen from our and some previous studies demonstrating a negative correlation of vitamin D levels with BMI. Vitamin D being fat soluble gets accumulated in the adipose tissue and its bio availability is reduced for action at other sites. [23,24] Fat cells are endocrinologically active and have the vitamin D receptor (DVR). Hence, fat tissue is among the target tissues for active vitamin D. Also sufficient Vitamin D levels cause inhibition of adipogenesis.[25]

We also found statistical significant difference in blood sugar levels, serum insulin and HOMA IR between the obese and non-obese groups. Vitamin D levels negatively correlated with blood sugar, insulin and HOMA IR. Thus obese individuals are more prone for vitamin D deficiency and insulin resistance leading to raised blood sugar levels. Same has been demonstrated from previous studies. Bhatt et al demonstrated that lower vitamin D levels are linked with higher blood glucose values in Indian women who are pre diabetic. The prevalence (%) of vitamin D deficiency, insufficiency and sufficiency was 68.6,

25.9 and 5.5, respectively and obesity was 61.7% in their study.[26] In a study by Sahasrabuddhe et al 73% participants had vitamin D deficiency and individuals with severe vitamin D deficiency had maximum IR.[27] Another study on conducted Indian postmenopausal

7. Martins D, Wolf M, Pan D, Zadshir A, Tareen N, Thadhani R, et al. Prevalence of cardiovascular risk factors and the serum levels of 25-hydroxyvitamin D in the United States: Data from the Third National Health and Nutrition Examination Survey. Arch Intern Med. 2007;167:1159–65.
8. Parikh SJ, Edelman M, Uwaifo GI, et al. The relationship between obesity and serum 1,25-dihydroxy vitamin D concentrations in healthy adults. J Clin Endocrinol Metab 2004;89:1196-9
9. Wortsman J, Matsuoka LY, Chen TC, et al. Decreased bioavailability of vitamin D in obesity. Am J Clin Nutr 2000;72:690-3
10. Misra A, Khurana L. Obesity and the metabolic syndrome in developing countries. J Clin Endocrinol Metab 2008; 93(11 Suppl 1):S9–S30
11. Bhatt SP, Misra A, Sharma M, et al. Vitamin D insufficiency is associated with abdominal obesity in urban Asian Indians without diabetes in North India. Diabetes Technol Ther 2014;16:392–7.
12. Holick MF. Sunlight and vitamin D for bone health and prevention of autoimmune diseases, cancers, and cardiovascular disease. Am J Clin Nutr 2004;80(6 Suppl):1678S-88S.
13. Sung CC, Liao MT, Lu KC, Wu CC. Role of vitamin D in insulin resistance. J Biomed Biotechnol.2012;2012:634195
14. Chiu KC, Chu A, Go VL, et al. Hypovitaminosis D is associated with insulin resistance and beta cell dysfunction. Am J Clin Nutr 2004;79:820-
15. Pittas AG, Lau J, Hu FB, et al. The role of vitamin D and calcium in type 2 diabetes. A systematic review and meta-analysis. J Clin Endocrinol Metab 2007;92:2017-2
16. Cigolini M, Iagulli MP, Miconi V, Galiotto M, Lombardi S, Targher G. Serum 25-hydroxyvitamin D3 concentrations and prevalence of cardiovascular disease among Type 2 diabetic patients. Diabetes Care. 2006;29(1):722-4.
17. Misra A, Chowbey P, Makkar BM, Vikram NK, Wasir JS, Chadha D, Joshi Sr, Sadikot S, Gupta R, Gulati S, Munjal YP: Consensus Group: Consensus statement for diagnosis of obesity, abdominal obesity and the metabolic syndrome for Asian Indians and recommendations for physical activity, medical and surgical management. J Assoc Physicians India 2009;57:163–170.
18. Singh Y, Garg MK, Tandon N, Marwaha RK. A study of insulin resistance by HOMA-IR and its cut-off value to identify metabolic syndrome in urban Indian adolescents. J Clin Res Pediatr Endocrinol. 2013;5(4):245-51.
19. Agarwal N, Mithal A, Dhingra V, Kaur P, Godbole MM, Shukla M. Effect of two different doses oforal cholecalciferol supplementation on serum 25-hydroxy-vitamin D levels in healthy Indian postmenopausal women: A randomized controlled trial. Indian J Endocrinol Metab. 2013;17(5):883-9.
20. Sahu M, Bhatia V, Aggarwal A, Rawat V, Saxena P, Pandey A, et al. Vitamin D deficiency in rural girls and pregnant women despite abundant sunshine in northern India. Clin Endocrinol (Oxf). 2009;70(5):680-4.
21. Kumar R , Kunwar K, Kumar A , Agrawal N. An Observational study to assess the prevalence of Vitamin D deficiency in Indian women. International Journal of Health and Clinical Research, 2020; 3(12):290-294
22. Goswami R, Gupta N, Goswami D, Marwaha RK, Tandon N, Kochupillai N, et al. Prevalence and significance of low 25-hydroxyvitamin D concentrations in healthy subjects in Delhi. Am J

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Study of serum alkaline phosphatase in chronic kidney disease

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Abstract

Introduction: Chronic kidney disease (CKD) now a day becomes an emerging condition with increasing morbidity and mortality. CKD associated with disturbances in alkaline phosphatase levels significantly alters in stage 4 and 5. Serum ALP levels have been shown to have a promoting effect on vascular calcification. So, correlation of ALP with renal failure is also well established.

Aim: To compare the level of serum ALP, urea and creatinine among the CKD patients and healthy controls.

Materials and method: About 50 CKD patients in stage 4 & 5 in dialysis unit and 50 healthy subjects between the age group 30-60 yrs were included in this study carried out from May2018 to January2020 at Noor hospital and IIMSR Medical College, Warudi, Maharashtra. Serum level of ALP, urea and creatinine were measured by fully autoanalyzer. Statistical analysis is done by minitab version 17 software.

Results and conclusion: The results are presented as a mean ±SD and 'P' values of less than 0.05% is considered as significant. In our study ALP, urea and creatinine are increased in stage 4 and 5 CKD patients.

Keywords: Chronic kidney disease, eGFR, alkaline phosphatase, urea and creatinine.

Introduction

Chronic kidney disease (CKD) is a worldwide public health problem with increasing prevalence and potentially lethal adverse outcomes like progressive loss of kidney function, cardiovascular disease and premature death.

According to the kidney Disease Outcomes Quality Initiative (KDOQI) of the National Kidney Foundation (NKF) defines CKD as either kidney damage or a glomerular filtration rate (GFR) <60ml/min/1.73m^2 for 3 or more months with pathological abnormalities or damage, including abnormalities in blood or urine tests [1].

CKD is now recognized as a major medical problem worldwide. The Global Burden of Disease (GBD) study ranked CKD 17th among the cause of death globally (age standardized annual death rate of 19.2 deaths per 100000 populations). In India, GBD 2015 ranks CKD as the eighth leading cause of death.

Death due to renal failure constituted 2.9% of all deaths in 2010-13 among 15-69 years old, an increase of 50% from 2001-03 [2].

In patients with CKD including those undergoing hemodialysis therapy or predialysis CKD stages (1-5) various abnormalities related to mineral and bone disorders with certain enzyme defects have been implicated as novel risk factors of mortality [3].

Serum ALP levels have been shown to have a promoting effect on vascular calcification through the pyrophosphate pathway. In addition to the directly toxic effects of the contrast agent, disturbances in renal blood flow, vasoconstriction of renal vessels, oxidative stress, free radical damage and endothelial dysfunction are thought to be major mechanisms in the development of kidney disease [4].

CKD consists of a wide spectrum of conditions associated with a progressive decline in kidney functions and abnormal glomerular filtration rate (GFR). According to the recent guidelines of the National Kidney Foundation is classified into1-5 stages based on estimated GFR (eGFR). In stage 1 & 2 no symptoms associated with decreasing eGFR. In stage 3, 4 and 5 complications are more common [5].

Stages 3-4 in a Clinical Population. Am J Kidney Dis 2013;62(4):703-710.
12. Sribarsha Damera Kalani, Raphael L, Bradley Baird C, Alfred Cheung K, Tom Greene, Srinivasan Beddhu. Serum alkaline phosphatase levels associate with elevated serum C-reactive protein in chronic kidney disease. Kidney International 2011.79:228-233.

ORIGINAL RESEARCH PAPER

Biochemistry

STUDY OF SERUM LEVELS OF VITAMIN D AND CALCIUM IN PRIMARY HYPOTHYROID PATIENTS.

KEY WORDS: Vitamin D , Calcium , free T3 , free T4 , Hypothyroidism

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ABSTRACT

BACKGROUND Hypothyroidism is one of the most common endocrine disorders in whole world.[1] In humans primary hypothyroidism is a grossly prevalent thyroid disorder with preponderance in females. On the other hand vitamin D deficiency is a global health problem.[6] Even in Indian population this sunshine vitamin is reported to be deficient, despite the abundance of sunlight in this country. In addition, it is thought that vitamin D may play a role in the regulation of the immune system because vitamin D receptors are detected on cells of the immune system.[8] The high prevalence of hypothyroidism and vitamin D deficiency in the Indian population provides a unique opportunity to assess the association between these two variables.

AIM & OBJECTIVE To study the blood levels of vitamin D and calcium in patients with primary hypothyroidism and create awareness among general hypothyroid subjects regarding the need as well as importance of blood vitamin D & calcium estimation over regular intervals to avoid the incidence of vitamin D and calcium deficiency.

MATERIAL & METHODS

Study Design:- The current study is a Comparitive Cross Sectional Study in which hypothyroidism cases were compared with healthy subjects.

Study Period:- August 2019 to January 2020.

Inclusion Criteria :- Subjects who were diagnosed with primary hypothyroidism were enrolled in case group of this study. All patients suffering from hypothyroidism were diagnosed and confirmed by the physician based on free T3 , free T4 and TSH levels of the patients.

Exclusion Criteria :- Patients with secondary hypothyroidism post radioiodine hypothyroidism, hepatic or renal dysfunction, on anti-epileptic medications or vitamin D supplementation were excluded from the study.

Study subjects :- We conducted a study on the blood samples of those patients who were advised and referred to the CCL of IIMS&R medical college for thyroid profile(free T3,freeT4 & TSH) tests and then diagnosed with primary hypothyroidism. So accordingly in this study we selected 75 subjects who were recently diagnosed with primary hypothyroidism in medicine OPD of IIMS&R Jalna medical college and these study subjects were categorised in Group I. We analysed their serum samples for the vitamin D & calcium and their respective levels were compared with vitamin D & calcium serum values of another 75 healthy subjects who were categorised in Group II.

So we had two groups ; first group was labelled as case group which consisted of 75 primary hypothyroid patients ageing less than 60 years and second was another comparable group comprising of 75 healthy subjects ageing less than 60 years which we labelled as control group. The objectives of the study were explained to all eligible subjects. Ethical approval for undertaking the study was taken from ethical committee of the IIMS&R medical college as well as due informed consent of all subjects included in the study was obtained for their involvement in study groups and for venipuncture.

Method of sample analysis:- Serum freeT3 , freeT4 , TSH and vitamin D estimations were done in the central clinical laboratory on cobas e411 biochemistry immunoassay analyser which used the principle of electrochemiluminiscence for estimating these hormones. On the other hand serum total calcium estimation was done on erba EM 200 autoanalyser by using ortho-cresolphthalein complexone method (OCPC).

Method of statistical analysis:- The statistical analysis was performed using Microsoft Excel Software. The statistical data was systematically analysed and was represented in form of mean + S.D. Unpaired t-test was used to compare between two means of all parametric continuous variable and p-value < 0.05 was considered as statistically significant.

Results :- The mean levels of serum 25(OH) vitamin D in control group was 37.68 ng/ml while vitamin D values in hypothyroid group was found to be 17.83 ng/ml. When t-test was applied to compare the mean levels between these two study group it was found that 25(OH) vit D levels were significantly lower in the hypothyroid group (P=0.001) as compared to the levels in healthy group.

Conclusion :- This study reported significant decrease in the serum levels of vitamin D as well as calcium in the hypothyroid subjects enrolled in our study where as there was no abnormal alteration in the serum levels of vitamin D and calcium in healthy group.

INTRODUCTION :

Hypothyroidism is one of the most common endocrine disorders in whole world.[1] Primary hypothyroidism is a very common thyroid disease, whose prevalence is 0.8–2.0% among women and around 0.2% among men.[2] The prevalence of hypothyroidism in India accounts to 10-11%.[3] Along with it the prevalence of subclinical hypothyroidism has been estimated to be 9% among Indian population.[4] According to the study done by Orlova M et al, recently the number of hypothyroid patients with autoimmune diseases have also been increased by 2.1%.[3]

On the other hand vitamin D deficiency is a global health problem.[6] Even in Indian population this sunshine vitamin is reported to be deficient, despite the abundance of sunlight in this country.[6] In recent years, however, vit-D has been reported to have a role in the incidence of autoimmune diseases, heart diseases, cancer, inflammatory bowel diseases, diabetes, and rheumatologic diseases.[7] In addition, it is thought that vit-D may play a role in the regulation of the immune system because vit-D receptors are detected on cells of the immune system.[8] The high prevalence of hypothyroidism and vitamin D deficiency in the Indian

population provides a unique opportunity to assess the association between these two variables.[3] There has been controversies between the studies on relation between vitamin D deficiency and hypothyroidism which in turn urged us to study this interesting context of hypothyroidism and vitamin D deficiency.[9]

AIM OF THE STUDY :- To study the levels of vitamin D and calcium in patients with primary hypothyroidism.

OBJECTIVE OF THE STUDY :- To make the general hypothyroid subjects aware of the need as well as importance of evaluating vitamin D & calcium blood levels at regular intervals in the management of hypothyroidism so as to prevent collateral deficiency of vitamin D and calcium in hypothyroidism.

MATERIAL & METHODS :-

Study Design :- The current study is a Comparitive Cross Sectional Study in which primary hypothyroid Subjects were compared with healthy subjects .

Study Period :- August 2019 to January 2020.

Inclusion Criteria :-

Subjects having decreased serum free T3 and free T4 levels associated with increased TSH levels were diagnosed with primary hypothyroidism and such subjects were enrolled in case group of this study.

All patients suffering from hypothyroidism were diagnosed and confirmed by the physician based on free T3 , freeT4 and TSH levels of the patients.

Exclusion Criteria :-

Patients with secondary hypothyroidism, post radioiodine hypothyroidism, hepatic or renal dysfunction, on anti-epileptic medications or vitamin D supplementation were excluded from the study.

Study subjects :-

We conducted a study on the blood samples of those patients who were advised and referred to our CCL of IIMS&R medical college for thyroid profile(free T3,freeT4 & TSH) tests and then diagnosed with primary hypothyroidism in the medicine OPD of our medical college.

So accordingly in this study we selected 75 subjects who were recently diagnosed with primary hypothyroidism in medicine OPD of IIMS&R Jalna medical college and these study subjects were categorised in Group I. We analysed their serum samples for the vitamin D & calcium and their respective levels were compared with vitamin D & calcium serum values of another 75 healthy subjects who were categorised in Group II.

So we had two groups ; first group which consisted of 75 primary hypothyroid patients ageing less than 50 years and second was another comparable group comprising of 75 healthy subjects ageing less than 50 years. The objectives of the study were explained to all eligible subjects. Ethical approval for undertaking the study was taken from ethical committee of the IIMS&R medical college as well as due informed consent of all subjects included in the study was obtained for their involvement in study groups and for venipuncture.

Method Of Sample Analysis:

Vitamin D estimation was Outsourced to laboratory in Hedgewar hospital where its estimation was done on cobas e411 biochemistry immunoassay analyser. The method used for vitamin D estimation was electrochemiluminiscence in which 25-hydroxy vitamin D was estimated instead of 1-25-dihydroxyvitamin D. 25-hydroxy vitamin D was preferred inspite of being an inactive precursor as it is present in higher concentration in the blood and is having longer half life when compared to its active form 1-25-dihydroxyvitamin D.

We took the reference from endocrine society clinical practice guidelines[10] according to which **vitamin D deficiency** was labelled as levels **below 20 ng/ml** & vitamin D levels **between 20–30 ng/ml was labelled as vitamin D insufficent** while levels **more than 30 ng/ml** was considered as state of **vitamin D sufficiency.**

Same method of electrochemiluminiscence was also used for estimation of thyroid hormones which are free T3 , free T4 & TSH.

The following serum thyroid hormone values were considered as normal according to the kit insert information sheet :

Normal free T3 → 2.4-4.2 pg/ml
Normal free T4 → 0.7-1.4 ng/dl
Normal TSH → 0.34-4.25 μIU/ml)

On the other hand serum total calcium estimation was done on erba EM 200 autoanalyser by using endpoint Ortho-cresolphthalein complexone method (OCPC) in central clinical laboratory. This method is based on the reaction between OCPC and calcium ions in order to form purple coloured complex.

According to the medscape[11] reference the serum total calcium levels between 9 – 10.5 mg/dl was considered as normal where as the calcium levels below 8.8 mg/dl were labelled as calcium deficiency in adults.

Biochemical Analyte	Normal Levels	Deficiency Level Cutoff
Vitamin D	> 30 ng/dl	Vitamin D Deficiency
		< 20 ng/dl
		Vitamin D Insuficiency
		20 - 30 ng/dl
Total Calcium	9 – 10.5 mg/dl	Calcium Deficiency
		< 8.8 mg/dl
		Hypothyroidism
free T3	2.4 - 4.2 pg/ml	< 2.4 pg/ml
freeT4	0.7 - 1.4 ng/dl	< 0.7 ng/dl
TSH	0.34 - 4.25 μIU/ml	> 4.25 μIU/ml

Table : 1

METHOD OF STATISTICAL ANALYSIS

The statistical analysis was performed using Microsoft Excel software. All the statistical data was systematically analysed and was represented in form of mean±S.D.

Unpaired t-test was used to compare between two means of all parametric continuous variable and p-value < 0.05 was considered statistically significant.

RESULTS

The data parameters are characteristically tabularised in table number 2.

The mean levels of serum 25(OH) Vitamin D in Group II was 37.68 ng/ml while vitamin D values in hypothyroid group was found to be 17.83 ng/ml.

When t-test was applied to compare the levels between two study group it was found that 25(OH)vit D levels were significantly lower in the hypothyroid case group ($p = 0.001$) as compared to the levels in healthy control group.

However in the hypothyroid group, when we compared the levels of 25(OH) vit D between the male and female patients insignificant difference was observed which was statistically proven by t and p values as $p = 0.98$.

Parameters	Control Group (Healthy Subjects)	Case Group (Hypothyroid Subjects)	p-value	Statistical Significance
	Mean ± SD	Mean ± SD		
Age	42.1 ± 6.35	39.7 ± 7.18	0.017	Non Significant
Gender	18 F (50%) 32 M (50%)	30 F (60%) 20 M (40%)	0.029 (*Case Group*)	Non Significant
Serum 25(OH)Vit D (ng/ml)	37.68 ± 4.24	17.83 ± 2.86	0.001	Significant
Serum Calcium (mg/dl)	9.47 ± 0.29	7.51 ± 0.42	0.001	Significant
Serum TSH (μIU/ml)	3.16 ± 0.39	8.37 ± 2.94	0.001	Significant
Serum fT3 (pg/ml)	2.13 ± 0.62	1.81 ± 0.30	0.002	Significant
Serum fT4 (ng/ml)	1.20 ± 0.17	0.5 + 0.11	0.001	Significant

Table : 2

DISCUSSION :

In Indian subcontinent it has been recently concluded in the study done by Rittu.G et al that the prevalence of vitamin D deficiency is witnessed in 70%-90% of the general population in the country and hence needs considerable attention regarding this subject of vitamin D deficiency.[12] It has also been witnessed in many other research studies that vitamin D may play a role in many biochemical mechanisms in addition to bone and calcium metabolism.[13] Interestingly, it has newly been shown that vitamin D has potent immunomodulatory effects and plays important roles in the pathogenesis of autoimmune diseases. This association of vitamin D with autoimmunity was confirmed and established by researchers like Smolders J et al & Naderi et al in which they found that the vitamin D receptor (VDR) gene polymorphisms is present in many autoimmune diseases like DM-I , IBD & Multiple sclerosis.[14,15]Because of these interesting newly found vitamin D properties and gross prevalence of vitamin D deficiency in India we were inspired to undertake this research study in which we found that the serum levels of vitamin D was significantly lower in primary hypothyroid group as compared to their healthy counterpart. Similar findings were reported in a study conducted by Vikram Sharma et al in which they attributed this effect of vitamin D to its property of immunomodulation.[16] Due to immunomodulatory nature of vitamin D, hypothyroidism linked with vitamin D deficiency may be mainly due to autoimmune thyroid disorder i.e Hashimotos thyroiditis. Hashimoto's thyroiditis is predominantly a disease of cell-mediated immunity that is manifested by a genetic defect in suppressor T-cell function.[17] In Hashimoto's thyroiditis, the autoimmune process may be suppressed at various stages by 1,25(OH)2D. At first, vitamin D might suppress dendritic cell-dependent T cell activation, then, it might decrease proliferation of Th1 cells and the synthesis of Th 1 cell cytokines such as IFNγ.[17] Furthermore, after being activated by T cells and B cells' ongoing proliferation may be suppressed and B cell apoptosis may be induced by 1,25(OH)2D. In this way, vitamin D might decrease autoantibodies that react with thyroid antigens. [18,19] We also compared hypothyroid subjects serum calcium levels with the healthy group and we found that serum calcium levels were significantly decreased in the primary hypothyroid group. Our this finding was consistent with the other research study conducted by Heaney RP in which he attributed the decrease in serum calcium levels to the vitamin D deficiency. Another study done by Vikram Sharma et al found that in hypothyroid patient there was decrease in blood calcium levels because of impaired mobilization of calcium into bones.[16] Similar findings were also reported by Shridevi et al and Murgod R et al in which they observed that disturbance of calcium homeostasis was a common finding in subjects with thyroid dysfunction. They gave the justification of their finding that thyroxine normally regulates blood calcium levels by releasing calcium extracellularly. So in hypothyroidism as their is decreased thyroxine in the bloodstream less thyroxin will enter into the cells which in turn will cause decreased calcium release from the cells and ultimately it will lead to decrease in the levels of calcium in blood.[21,22]

CONCLUSION :

This study reported significant decrease in the serum levels of vitamin D as well as calcium in the hypothyroid subjects enrolled in our study where as there was no abnormal alteration in the serum levels of vitamin D and calcium in healthy group. Thus it can be concluded that vitamin D deficiency may have a potential role in the development of hypothyroidism and hence these hypothyroid patients can be recommended to get their blood vitamin D and calcium levels estimated at regular intervals so as to prevent the suffering from vitamin D and calcium deficiency.

REFERENCES

1. Unnikrishnan AG, Menon UV. Thyroid disorders in India: An epidemiological perspective. Indian J Endocrinol Metab 2011;15 Suppl 2:S78-1.
2. Orlova M M, Rodionova T I. Functional state of kidneys in patients with clinical manifestations of hypothyroidism. Russian Open Medical Journal. 2: 1-5 (2013).
3. Unnikrishnan AG, Kalra S, Sahay RK, Bantwal G, John M, Tewari N. Prevalence of hypothyroidism in adults: An epidemiological study in eight cities of India. Indian J Endocrinol Metab 2013;17:647-52.
4. Bagcchi S. Hypothyroidism in India: More to be done. Lancet Diabetes Endocrinol 2014;2:778.
5. Hollick MF, Chen TC. Vitamin D deficiency a worldwide problem with health consequences. Am J ClinNutr. 2008;87:1080S-6S.
6. GR, Gupta A. Vitamin D deficiency in India: Prevalence, causalities and interventions. Nutrients 2014;6:729-75.
7. Holick MF. Vitamin D deficiency. N Engl J Med. 2007;357:266-81.
8. Bikle D. Nonclassic actions of vit D. J Clin Endocrinol Metab. 2009 Jan;94(1):26-34.
9. Vitamin D and primary hypothyroidism: Is there an Association ; Thyroid Research and Practice /Volume 15 /Issue 1 /:January-April 2018 p: 35-37.
10. Holick MF, Binkley NC, Bischoff-Ferrari HA, Gordon CM, Hanley DA, Heaney RP, *et al.* Evaluation, treatment, and prevention of Vitamin D deficiency: An endocrine society clinical practice guideline. J ClinEndocrinolMetab 2011;96:1911-30.
11. Hypocalcemia and Serum Calcium ; Manish S & Alina G ; Medscape Nov 2019.
12. Ritu G, Ajay Gupta Vitamin D deficiency in India: Prevelence, causalities and interventions Nutrients 2014;6:729-775.
13. M.F Holick, "Vit D; Extra Skeletal Health", Endocrinology and Metabolism Clinics of North America, Vol 39, no:2, pp.381-400.
14. Smolders J, Peelen E, Thewissen M, Menheere P, Tervaert JWC, Hupperts R, et al. The relevance of vitamin D receptor gene polymorphisms for vitamin D research in multiple sclerosis. Autoimmunity reviews. 2009;8(7):621-6.
15. Naderi N, Farnood A, Habibi M, Derakhshan F, Balaii H, Motahari Z, et al. Association of vitamin D receptor gene polymorphisms in Iranian patients with inflammatory bowel disease. Journal of gastroenterology and hepatology. 2008;23(12):1816-22.
16. Vikram Sharma, Anil Gupta, Rabia Showkat ; Vitamin D Deficiency & Low Serum Calcium Levels in Hypothyroid Patients Volume 5 | Issue 1 | January 2018; p : 1-4.
17. Giovanna Muscogiuri, Joanna Mitri1, Chantal Mathieu2, Klaus Badenhoop3, Gonca Tamer4 ; Vitamin D as a potential contributor in endocrine health and disease; European Journal of Endocrinology (2014) 171, R101–R110.
18. Tamer G, Arik S, Tamer I & Coksert D. Relative vitamin D insufficiency in Hashimoto's thyroiditis. Thyroid 2011 21 891–896.
19. Szyper-Kravitz M, Marai I & Shoenfeld Y. Coexistence of thyroid autoimmunity with other autoimmune diseases: friend or foe? Additional aspects on the mosaic of autoimmunity Autoimmunity 2005 ; 247–255.
20. Heaney RP. Vitamin D and calcium interactions: Functional outcomes. Am J Clin Nutr 2008;88:541S-4S.
21. Sridevi D. A study of serum magnesium, calcium and phosphorus in hypothyroidism. Int J ClinBiochem Res 2016; 3: 236-239.
22. Murgod R, Soans G. Changes in electrolyte and lipid profile in hypothyroidism. Int J Life Sci Pharm Res 2012; 2: 185-194.

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Study of Vitamin D Levels in Patient Diagnosed with COVID-19 Infection

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ABSTRACT

Background: *In the pandemic of COVID-19 because an adequate immune response is crucial for overcoming this viral infection, it is important to identify the existing and known substances that strengthen immune system activity. On the other hand, India being a tropical country is blessed with sunlight in almost all of its territory and so it would be more interesting to have an estimate of vitamin D levels representative of the Indian population who suffered from COVID-19 infection.* ***Aim:*** *To study the levels of vitamin D in patients with COVID-19 infection.* ***Material and Methods:*** *This study is a cross-sectional study conducted for estimating the prevalence of vitamin D deficiency in patients diagnosed with COVID-19 infection. The present study was conducted at tertiary care COVID-19 hospital at Indian Institute of Medical Science and Research, Jalna, Maharashtra in collaboration with Hedgewar Multispeciality Hospital, Aurangabad, Maharashtra.* ***Result:*** *Among the 141 study subjects 86 were vitamin D insufficient, 38 were vitamin D deficient while the remaining 14 subjects were having normal vitamin D levels. When the prevalence rate was estimated from this data the prevalence of vitamin D insufficiency was reported to be 60.99% whereas the prevalence of vitamin D deficiency was found to be 29.07% in the COVID-19 population of this study.* ***Conclusion:*** *Vitamin D deficiency and insufficiency were prevalent in COVID-19 patients and so vitamin D supplementation may help in the prognosis of COVID-19 disease.*

Keywords: Vitamin D, COVID-19, Vitamin D deficiency, Prevalence

INTRODUCTION

The novel Coronavirus (COVID-19) has infected millions of people, and World Health Organization (WHO) has declared COVID-19 as a pandemic in March 2020 [1]. The clinical manifestations of this disease have a broad spectrum, including asymptomatic infection, mild upper respiratory tract infection, and severe pneumonia with respiratory failure, for which hospitalization with sub-intensive or intensive care is required [2]. The etiology of COVID-19 has not yet been fully elucidated. The main cause of death in COVID-19 patients is inflammation, especially in the lung which leads to Acute Respiratory Distress Syndrome (ARDS) [1]. Because an adequate immune response is crucial for overcoming this viral infection, it is important to identify the existing and known substances that strengthen immune system activity. Nutrition has been a determinant factor for the maintenance of homeostasis and the health of different organs and physiological systems of an organism, including immune function [3]. In the current scenario of the COVID-19 pandemic, the "nutritional status-immune response" dyad of an individual becomes even more significant because of the absence of a definitive treatment supported for COVID-19. While vitamin D is commonly known for its contribution to bone health and metabolism of calcium and phosphorus, it has also been known to have an important function in the immune system [4]. Vitamin D was found to have a critical role as an "immune-modulator" that modulates the body's immune response during infection [4]. Vitamin D modulates both the innate immune system and the adaptive immune system by increasing the cathelicidins and β-defensins levels in the body, and by reducing the secretion of immunoglobulin by plasma cells and the production of pro-inflammatory cytokines, respectively [5]. It has both antimicrobial and anti-inflammatory effects and is known to be effective in preventing various upper Respiratory Tract Infections (RTIs) [5]. It also has the potential to prevent or lessen the possibility of having complications from RTIs. Vitamin D can also hasten the healing process of affected areas, specifically lung tissues [5]. Vitamin D

deficiency has been associated with increased levels of inflammatory cytokines and increased risk of pneumonia and viral upper respiratory tract infections [6]. It is also an important risk factor for Acute Respiratory Distress Syndrome (ARDS), which is an important determinant of the severity of illness among COVID-19 patients [6]. Vitamin D deficiency is also associated with increased episodes of thrombosis, which is commonly observed among COVID-19 patients [6]. A low level of vitamin D is commonly observed among those in the older age group, obese, and smokers, and among patients with chronic diseases like hypertension, gastroenterological disease, and diabetes [7]. It is also among these groups that COVID-19 was observed to be more prevalent and have more severe complications. With the observation that the group of people with vitamin D deficiency are also the same group suffering from more complications and higher mortality from COVID-19, then vitamin D deficiency might be an important risk factor for COVID-19. On the other hand, India being a tropical country is blessed with sunlight in almost all of its territory and so it would be more interesting to have an estimate of vitamin D levels representative of the Indian population who suffered from COVID-19 infection.

Aim and Objective

- To study the levels of vitamin D in patients with COVID-19 infection
- To create awareness among Indian subjects about the importance of vitamin D in this pandemic of COVID-19

MATERIALS AND METHODS

Study Design

This study is a cross-sectional study conducted for estimating the prevalence of vitamin D deficiency in patients diagnosed with COVID-19 infection.

Study Duration

April 2021-July 2021.

Study Site

The present study was conducted at tertiary care COVID-19 hospital at Indian Institute of Medical Science and Research, Jalna, Maharashtra in collaboration with Hedgewar Multispeciality Hospital, Aurangabad, Maharashtra.

Inclusion Criteria for Study Subjects

Those who tested positive for SARS-CoV-2 by RT-PCR test from COVID-19 OPD and COVID ward were included in the study with their due consent.

Exclusion Criteria for Study Subjects

Those who were taking vitamin D supplements or having taken them in the last 6 months were excluded.

Study Subjects

In this study blood samples were taken from 141 patients who were diagnosed with COVID-19 by RT-PCR test and were admitted in the wards and ICCU of IIMSR as well as that of Hedgewar hospital. The study subjects were categorized into three groups "Mild, Moderate and Severe" based on the severity of their respective COVID-19 disease by the criteria laid down in guidelines of the Ministry of Health and Family Welfare, India [8]. These guidelines are tabularized as below (Table 1).

Table 1 COVID-19 severity categories according to clinical presentation and SpO^2

COVID-19 Severity	Clinical Presentation	SpO^2 on room air
Mild Case	Fever and Cough with no Dyspnoea and Hypoxia	95%-100%
Moderate Case	Fever and Cough with Dyspnoea and Hypoxia; RR >24/min	90%-94%
Severe Case	Pneumonia clinical signs along with severe respiratory distress evident by RR >30/min	<90%

Method of Sample Analysis

Blood samples were collected from patients by venipuncture into plain bulbs. Vitamin D estimations were done in the central clinical laboratory of Hedgewar hospital on Beckman Coulter Access 2 immunoassay analyzer which used the principle of chemiluminescence for vitamin D estimation.

25-hydroxy vitamin D was estimated instead of 1-25-dihydroxy vitamin D.

25-hydroxy vitamin D was preferred despite being an inactive precursor as it is present in higher concentration and major storage form in the blood with longer half-life and thus is very feasible to be estimated at a much lower cost when compared to its active form 1-25-dihydroxy vitamin D.

We took the reference from endocrine society clinical practice guidelines according to which vitamin D deficiency was labeled as levels below 20 ng/ml and vitamin D levels between 20 ng/ml-30 ng/ml were labeled as vitamin D insufficient while levels more than 30 ng/ml was considered as state of vitamin D sufficiency [9].

Method of Statistical Analysis

All the data were entered into Microsoft excel 365 versions and analysed using SPSS (Statistical Package for Social Science). The classification of vitamin D deficiency and clinical severity was defined. To find out the association, the chi-square test was applied and a p-value less than 0.05 was considered statistically significant. To understand the Vitamin D status among the different groups, deficiency, and insufficiency were calculated separately and compared. Further stratification of data was carried out in mean and standard deviation to get the overall picture of the respective group. Data of clinical severity were compared to check the association between clinical severity and vitamin D levels.

Ethical Consideration

All the patients were informed about the purpose of the study and written/digital consent was taken to participate in the study. The study protocol was approved by the institutional ethical committee of both i.e Indian Institute of Medical Science and Research as well as of Hedgewar hospital.

RESULTS

Among the 141 COVID-19 subjects, enrolled in this study and in accordance with guidelines of the Ministry of Health and Family Welfare, India, 102 (72.34%) were classified under the mild category, 27 (19.14%) were classified under the moderate category while the severe category comprised of remaining 12 (8.5%) COVID-19 subjects (Table 2).

Table 2 COVID-19 severity category and vitamin D status

COVID-19 Severity Category	Vit. D Deficiency (<20 ng/mL)	Vit. D Insuficiency (<20 ng/mL-30 ng/mL)	Vit. D Normal (>30 ng/mL)	p-value
Mild (102)	25	64	13	>0.05
Moderate (27)	12	14	1	>0.05
Severe (12)	4	8	-	>0.05
Total (141)	41	86	14	-
Prevalence	29.07%	60.99%	-	-

DISCUSSION

This study reported a 60.99% prevalence of vitamin D insufficiency as well as a 29.07% prevalence of vitamin D deficiency in the sample size. Similar findings were reported by Singh, et al. in their research study [6]. Another study claimed that the risk factors for vitamin D deficiency overlap strikingly with severe COVID-19 disease [10]. Consistent with the present study results, a recent study showed that nearly 75% of hospitalized and 85% of ICU care patients symptomatic for COVID-19 patients suffered from vitamin D insufficiency [11]. A recent study that assessed inflammatory response and lung involvement found that vitamin D deficiency was associated with altered inflammatory response and higher lung involvement [12]. Several have recently been performed in different populations to decipher the possible role of vitamin D in SARS-CoV-2 infection. In another study, a retrospective analysis of 3,48,598 UK bio-

bank participants showed a higher chance of SARS-CoV-2 in subjects with lower levels of 25(OH)D [13]. In addition to its significant role in calcium homeostasis and the maintenance of bone health, vitamin D had played an important role in the body's immune function [14]. The study reported that vitamin D acted as a powerful immune-modulator, for which the authors gave the following justification:

- The authors had reported that vitamin D receptors were found in all immune cells
- Vitamin D was associated with the differentiation of T and lymphocytes as well as with the maturation of monocytes and macrophages
- Vitamin D was also found to optimize the anti-inflammatory functions by alteration in the levels of IL-10 and cytokines
- Lastly vitamin D was found to play role in phagocytosis by inducing the secretion of the lysosomal enzymes like acid phosphatase [15]

In one of the studies, it was reported that this immune-modulating function of vitamin D was considered to be complex during viral infections and appeared to vary according to the nature of the pathogen and the type of immune function affected in the disease [16]. In the same context, another study reported that Vitamin D was found to play an immune-regulatory role *via* suppression of the adaptive immune responses in respiratory epithelial cells during viral infections [17]. This is manifested predominantly *via* dampening T cell proliferation and the resultant shift from T helper type 1 (Th1) cells to T helper type 2 (Th2) [18]. Apart from the role of immune-modulation, the Vitamin D Receptor (VDR) was also found in pulmonary epithelial cells as reported in a study done by Klotman ME, et al. The author further reported that when activated, VDR was found to stimulate the expression of defensins, cathelicidins, and peptides with antiviral activity [19]. In the same context of vitamin D's role in immune-modulation, it was speculated in one of the studies that, during vitamin D deficiency, the impaired antiviral immune response in COVID-19 patients may have been due to the reduction in LL37 levels, an antimicrobial peptide derived from cathelicidin [20]. Some authors have also postulated that vitamin D may down-regulate Angiotensin-Converting Enzyme-2 (ACE-2) receptors and thus can have protective effects in COVID-19 [21]. Now concerning the Indian context of vitamin D deficiency, it was surprising to come across a study that has estimated the prevalence of vitamin D deficiency in India [22]. This study has reported that although India because of its closeness to the equator had been receiving a large amount of sunlight throughout the year, most of the Indian population (50%-90%) was found to be deficient in vitamin D [22]. The author of this study further justified their finding by attributing such vitamin D deficiency in urban India to avoidance of sunlight and dietary deficiency [22]. They also further reported that the considerably similar status of vitamin D deficiency in rural India despite considerable exposure to sunlight may have been possibly attributed to various factors including the presence of phytates and phosphates in the Indian diet [22].

The correlation between vitamin D deficiency and COVID-19 disease was addressed in a retrospective, a multicentric study which had suggested that whilst the COVID-19 patients who were deficient in vitamin D generally had poor outcomes, those with high levels of vitamin D fared better outcomes [23]. Consistent with this study a review was published by Rhodes, et al. in which they had concluded that there was substantial ecological evidence to correlate vitamin D deficiency with the severity of COVID-19 infection [24]. In a study done by Jain et al., they had speculated that African Americans with vitamin D deficiencies as well as those with poorer COVID-19 outcomes may stand to benefit from vitamin D supplementation [25]. Similar conclusions were made by Merzon and colleagues in an Israeli population [26]. In another study, the authors concluded that vitamin D deficiency played an independent causal role in COVID-19 severity and that preventive or therapeutic supplementation in populations at risk can be useful to prevent poor disease outcomes [27]. Similarly Martineau AR, et al. had reported that vitamin D supplementation is taken daily or weekly, had been found to reduce ARI (Acute Respiratory Infection) by 32% to 60% [28]. Thus based on the findings in the present study in concordance with the above-mentioned studies it can be suggested that vitamin D supplementation may help in preventing the incidence of COVID-19 disease as well as may decrease the severity of COVID-19 disease although a web of confounders makes it difficult to label vitamin D supplementation as a conclusive preventive or therapeutic approach in COVID-19 pandemic.

CONCLUSION

The prevalence of Vitamin D Insufficiency and Deficiency in the present study was 60.99% and 29.07% respectively.

As vitamin D had been reported to be an immune-modulator bio-molecule in many studies its deficiency may lead to a decrease in immune function which may be attributed to increased susceptibility of such vitamin D deficient individuals to COVID-19 infection. But it needs the support of other research study designs such as cohort studies for proving such temporal association between COVID-19 and vitamin D deficiency. Given that vitamin D supplementation as per the above-mentioned reference studies had shown benefits in certain viral respiratory infections, the roles of vitamin D in COVID-19 warrant further exploration. The role of vitamin D in the management of COVID-19 needs strong Randomised Control Trial evidence.

DECLARATIONS

Conflicts of Interest

The authors declared no potential conflicts of interest concerning the research, authorship, and/or publication of this article.

REFERENCES

[1] Yuen, Kit-San, et al. "SARS-CoV-2, and COVID-19: The most important research questions." *Cell & Bioscience,* Vol. 10, No. 1, 2020, pp. 1-5.

[2] Caccialanza, Riccardo, et al. "Early nutritional supplementation in non-critically ill patients hospitalized for the 2019 novel coronavirus disease (COVID-19): Rationale and feasibility of a shared pragmatic protocol." *Nutrition,* Vol. 74, 2020, p. 110835.

[3] Wu, Dayong, et al. "Nutritional modulation of immune function: Analysis of evidence, mechanisms, and clinical relevance." *Frontiers in Immunology,* Vol. 9 2019, p. 3160.

[4] Panfili, F. M., et al. "Possible role of vitamin D in Covid-19 infection in pediatric population." *Journal of Endocrinological Investigation,* Vol. 44, No. 1, 2021, pp. 27-35.

[5] Mohan, Mradul, Jerin Jose Cherian, and Amit Sharma. "Exploring links between vitamin D deficiency and COVID-19." *PLoS Pathogens,* Vol. 16, No. 9, 2020, p. e1008874.

[6] Singh, Shruti, et al. "Prevalence of low level of vitamin D among COVID-19 patients and associated risk factors in India-A hospital-based study." *International Journal of General Medicine,* Vol. 14, 2021, pp. 2523-31.

[7] Siuka, Darko, Marija Pfeifer, and Bojana Pinter. "Vitamin D supplementation during the COVID-19 pandemic." *Mayo Clinic Proceedings,* Vol. 95, No. 8, 2020, pp. 1804-05.

[8] Ministry of Health and Family Welfare. "Clinical management protocol: COVID-19." 2020. https://www.mohfw.gov.in/pdf/ClinicalManagementProtocolforCOVID19.pdf

[9] Holick, Michael F., et al. "Evaluation, treatment, and prevention of vitamin D deficiency: An Endocrine society clinical practice guideline." *The Journal of Clinical Endocrinology & Metabolism,* Vol. 96, No. 7, 2011, pp. 1911-30.

[10] Klein, Sabra L., et al. "Sex, age, and hospitalization drive antibody responses in a COVID-19 convalescent plasma donor population." *The Journal of Clinical Investigation,* Vol. 130, No. 11, 2020, pp. 6141-50.

[11] Mendy, Angelico, et al. "Factors associated with hospitalization and disease severity in a racially and ethnically diverse population of COVID-19 patients." *MedRxiv,* 2020.

[12] Ricci, Alberto, et al. "Circulating Vitamin D levels status and clinical prognostic indices in COVID-19 patients." *Respiratory Research,* Vol. 22, No. 1, 2021, pp. 1-8.

[13] Hastie, Claire E., et al. "Vitamin D concentrations and COVID-19 infection in UK Biobank." *Diabetes & Metabolic Syndrome: Clinical Research & Reviews,* Vol. 14, No. 4, 2020, pp. 561-65.

[14] Jovic, Thomas H., et al. "Could vitamins help in the fight against COVID-19?" *Nutrients,* Vol. 12, No. 9, 2020, p. 2550.

[15] Vanherwegen, An-Sofie, Conny Gysemans, and Chantal Mathieu. "Regulation of immune function by vitamin D and its use in diseases of immunity." *Endocrinology and Metabolism Clinics,* Vol. 46, No. 4, 2017, pp. 1061-94.

[16] Xu, Yi, et al. "The importance of vitamin d metabolism as a potential prophylactic, immunoregulatory and neuroprotective treatment for COVID-19." *Journal of Translational Medicine,* Vol. 18, No. 1, 2020, pp. 1-12.

[17] Sly, Laura M., et al. "1α, 25-Dihydroxyvitamin D3-induced monocyte antimycobacterial activity is regulated by phosphatidylinositol 3-kinase and mediated by the NADPH-dependent phagocyte oxidase." *Journal of Biological Chemistry,* Vol. 276, No. 38, 2001, pp. 35482-93.

[18] Daniel, Carolin, et al. "Immune modulatory treatment of trinitrobenzene sulfonic acid colitis with calcitriol is associated with a change of a T helper (Th) 1/Th17 to a Th2 and regulatory T cell profile." *Journal of Pharmacology and Experimental Therapeutics,* Vol. 324, No. 1, 2008, pp. 23-33.

[19] Klotman, Mary E., and Theresa L. Chang. "Defensins in innate antiviral immunity." *Nature Reviews Immunology,* Vol. 6, No. 6, 2006, pp. 447-56.

[20] Crane-Godreau, Mardi A., et al. "Vitamin D deficiency and air pollution exacerbate COVID-19 through suppression of antiviral peptide LL37." *Frontiers in Public Health,* Vol. 8, 2020, p. 232.

[21] Arboleda, John F., and Silvio Urcuqui-Inchima. "Vitamin D supplementation: a potential approach for coronavirus/ covid-19 therapeutics?" *Frontiers in Immunology,* Vol. 11, 2020, p. 1523.

[22] Aparna, P., et al. "Vitamin D deficiency in India." *Journal of Family Medicine and Primary Care,* Vol. 7, No. 2, 2018, pp. 324-30.

[23] Alipio, Mark. "Vitamin D supplementation could possibly improve clinical outcomes of patients infected with coronavirus-2019 (COVID-19)." 2020.

[24] Rhodes, Jonathan M., et al. "Perspective: Vitamin D deficiency and COVID-19 severity-plausibly linked by latitude, ethnicity, impacts on cytokines, ACE2 and thrombosis." *Journal of Internal Medicine,* Vol. 289, No. 1, 2021, pp. 97-115.

[25] Jain, Sushil K., and Rajesh Parsanathan. "Can vitamin D and L-cysteine co-supplementation reduce 25 (OH)-vitamin D deficiency and the mortality associated with COVID-19 in African Americans?" *Journal of the American College of Nutrition,* Vol. 39, No. 8, 2020, pp. 694-99.

[26] Merzon, Eugene, et al. "Low plasma 25 (OH) vitamin D level is associated with increased risk of COVID-19 infection: An Israeli population-based study." *The FEBS Journal,* Vol. 287, No. 17, 2020, pp. 3693-702.

[27] Munshi, Ruhul, et al. "Vitamin D insufficiency as a potential culprit in critical COVID-19 patients." *Journal of Medical Virology,* Vol. 93, No. 2, 2021, pp. 733-40.

[28] Martineau, Adrian R., et al. "Vitamin D supplementation to prevent acute respiratory infections: Individual participant data meta-analysis." *Health Technology Assessment,* Vol. 23, No. 2, 2019, pp. 1-44.

Section: Biochemistry

JAMP

Original Research Article

ASSESSMENT OF REPRODUCTIVE HEALTH, METABOLIC AND CARDIOVASCULAR RISK PROFILE IN FIRST-DEGREE RELATIVES OF WOMEN WITH POLYCYSTIC OVARIAN SYNDROME: A HOSPITAL-BASED STUDY IN MAHARASHTRA, INDIA

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Abstract

Background: Polycystic ovarian syndrome (PCOS) is an endocrine and metabolic disorder in women with attributes of substantial genetic predisposition and potentially varied, but not yet blatantly identified, triggers. Moreover, it has clinical repercussions across the lifespan and is pertinent to related family members. In addition to the increased heritability of reproductive hallmarks of PCOS, first degree relatives (FDR) of these women have great potential of developing endocrine and metabolic co-morbidities of PCOS particularly obesity, insulin resistance, dyslipidaemia and metabolic syndrome. The purpose of current research was to explore reproductive health, glucose tolerance status and cardiovascular risk profile in first-degree relatives of women with PCOS. **Materials and Methods:** This case-control study included FDR of PCOS women (fathers, mothers, brothers and sisters) compared with equivalent number of age-matched FDR of non-PCOS control women. Primary outcome measures were prevalence of PCOS and isolated PCOS features (hirsutism, menstrual irregularities and ovarian morphological changes), impaired glucose tolerance, type 2 diabetes mellitus and dyslipidaemia. Mean differences in body mass index, waist-hip ratio, fasting and 2-hr blood glucose, lipoprotein components were assessed in all participants. **Result:** Prevalence of PCOS diagnosis (29.4%) and isolated PCOS attributes was notably higher in female FDR of PCOS probands than in control FDR. The mothers (21.7%) and fathers (18.1%) of PCOS women had increased prevalence of T2DM than controls parents. Frequency of systemic hypertension (25%), central obesity (55.9%) and dyslipidaemia (28.9%) was significantly raised in FDR of PCOS probands than of control FDR. Male FDR of PCOS patients appeared to have a higher risk of premature baldness than did control FDR. **Conclusion:** Our study indicates that seemingly healthy first-degree relatives of PCOS probands encountered reproductive and cardiometabolic dysregulations. There is clustering of glucose intolerance and classical cardiovascular risk elements in this population. Accordingly, FDR of PCOS women exhibit an increased risk of diabetes and cardiovascular disease, as do PCOS probands. Further emphasis should be conferred to this population with well-timed and regular screening in such a way that preventive strategies could be constituted to circumvent ensuing cardiometabolic aberrations.

INTRODUCTION

Polycystic ovarian syndrome (PCOS) is amongst the most frequent endocrinological and metabolic disorders observed in pre-menopausal women with a prevalence varying around 6% to 20%, according to the diagnostic guidelines used.[1,2] It is a chronic disorder alongside psychological and reproductive manifestations typically commencing in adolescence later transitioning to include infertility and advancing

morphology on ultrasound (>12 follicles measuring 2–9 mm in diameter or ovarian volume >10 ml in at least one ovary).

FDR with diabetes mellitus, coronary artery disease, hepatic or renal dysfunction, thyroid disorders, pregnant and lactating women were excluded from this study. Subjects with current or previous use (within 3 months) of glucocorticoids, oral contraceptives, hormonal replacement therapy, drugs modifying carbohydrate and lipid metabolism were also excluded from the study.

Study protocol was approved by the Institutional Ethical Committee. Informed, written consents were obtained from women with PCOS and non-PCOS as well as from their FDRs, after detailed explanation of purpose and nature of the study. All the procedures were performed in line with the relevant guidelines and regulations.

For parents of PCOS women, comparable age for controls was stated as > 40 years, while for siblings, comparable age for controls was 18-40 yrs. A thorough clinical evaluation was conducted in all participants and socio-demographic details, anthropometric variables which include weight, height, waist circumference (WC), hip circumference (HC) and blood pressure were documented by using a pre-designed questionnaire. Body mass index (BMI) was computed as per the formula [weight(kg)/[height(m)^2] to assess the obesity degree. Waist-to-hip ratio (WHR) was also measured. Male relatives of PCOS and control women were evaluated for degree and time of onset of balding. Premature baldness was defined as significant frontoparietal hair loss (type IV or V of the Hamilton score) before age of 30 years.[17]

Fasting venous blood samples were collected from all participants and analyzed for biochemical parameters such as glucose and lipid profile, followed by an oral glucose tolerance test (OGTT) with 75-g anhydrous glucose. Glucose tolerance state was evaluated using American Diabetes Association (ADA) criteria.[14]

Statistical Analysis

Data collected based on the research objectives were analyzed using GraphPad Prism, version 7.0 software system. Descriptive statistical methods such as mean and standard deviation were employed to summarize continuous variables. Frequencies and percentages were used for categorical data. Student's unpaired t-test was applied to compare biochemical variables between the groups. Analysis of frequency difference between groups was evaluated by chi-square (χ^2) test. Statistical significance was set at $p < 0.05$.

RESULTS

Total 100 first degree relatives of 48 PCOS women [Mothers PCOS (32), Fathers PCOS (20), Sisters PCOS (29) and Brothers PCOS (19)] were studied. These were compared with 100 age-matched FDR of 40 control women [Mothers Control (26), Fathers Control (28), Sisters Control (22) and Brothers Control (24)].

[Table 1], compares the prevalence of PCOS diagnosis rate, hirsutism, menstrual irregularities and ovarian morphological changes together with impaired glucose tolerance, T2DM and dyslipidaemia between first degree relatives of PCOS and control women.

PCOS was diagnosed in 29.4% (18.5% mothers and 32.3% sisters) of female FDR of PCOS women, while in 4.1% of control FDR. This proportion was more in Sisters PCOS when compared with that in Sisters Control. However, no significant difference was noticed between Mothers PCOS and Mothers Control group. Frequency of isolated PCOS symptoms namely hirsutism, menstrual irregularities and ovarian morphological changes was 17.9%, 29.3% and 15.2% respectively that was significantly increased in female FDR of PCOS women than in control FDR. [Table 1]

The proportion of impaired glucose tolerance was 35% in FDR of PCOS in our study as compared to 14% in control FDR. It was 26.1% in Mothers PCOS, 32.7% in Fathers PCOS, 16% in Sisters PCOS and 12% Brothers PCOS. 27.8% of FDR of PCOS women were diagnosed with T2DM as opposed to 5.7% of control FDR. Mothers (21.7%) and fathers (18.1%) of PCOS group had statistically significant higher prevalence of diabetes than controls parents. The proportion of T2DM was higher in sisters and brothers of PCOS than siblings of control group women; however, neither of this difference was statistically significant. [Table 1]

Amongst cardiovascular risk evaluation parameters, frequency of systemic hypertension (25% vs 11.4%), abdominal obesity (55.9% vs 21.2%) and dyslipidaemia (28.9% vs 9.2%) were comparable in FDR of PCOS and control women respectively and the difference was statistically significant. [Table 1]

The prevalence of individual lipoprotein components was TC >200 mg/dL (32.1% vs. 17.5%), TG >150 mg/dL (27.4% vs. 19%), HDL < 50 mg/dL (33.9% vs. 20.6%), LDL >130 mg/dL (29.7% vs. 14.2%) respectively in PCOS and control FDRs.

In male FDR of PCOS women, the altogether proportion of premature baldness was 21.7% whilst it was 10.5% in FDR of controls. It was observed in 38.6% of Brothers PCOS and 13.7% of Brothers Control. Fathers of PCOS group women also seemed to have increased risk of premature baldness than did control fathers. The differences were of statistical power. [Table 1]

Subgroup evaluation was carried out for the demographic and biochemical characteristics among Mothers PCOS and Mothers Control, Fathers PCOS and Fathers Control, Sisters PCOS and Sisters Control, Brothers PCOS and Brothers Control groups and represented in Tables II, III, IV and V respectively.

The parents and sisters of PCOS women had increased WHR, when compared with those of control group women. The parents of PCOS group

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Table 5: Comparison of Demographic and Biochemical Parameters in Brothers PCOS and Brothers Control Groups (Student's unpaired 't' test)

Sr. No.	Clinical Parameters	Brothers PCOS Group (19)	Brothers Control Group (24)	'P' value
1.	Age (years)	29.37 ± 9.58	25.93 ± 5.71	-
2.	BMI (kg/m2)	26.92 ± 4.23	24.59 ± 5.81	-
3.	W/H Ratio	0.94 ± 0.08	0.80 ± 0.05	-
4.	Systolic Blood Pressure (mm Hg)	118.54 ± 11.79	119.4 ± 5.85	-
5.	Diastolic Blood Pressure (mm Hg)	76.34 ± 5.82	73.29 ± 6.19	-
6.	Fasting Glucose (mg/dl) (70-100)	97.38 ± 14.47	86.47 ± 9.10	< 0.05
7.	2-hour Plasma Glucose (mg/dl) (<140)	128.27 ± 19.1	120.6 ± 25.84	< 0.05
8.	TC (mg/dl) (Upto 200)	218.79 ± 20.38	189.64 ± 15.98	< 0.05
9.	TG (mg/dl) (Upto 150)	132.61 ± 18.94	129.76 ± 19.5	-
10.	HDL (mg/dl) (40 –60)	45.11 ± 8.2	50.76 ± 10.43	< 0.05
11.	LDL (mg/dl) (Upto 100)	119.37 ± 21.92	108.74 ± 18.32	< 0.05

DISCUSSION

PCOS is a systemic endocrine and metabolic condition having manifestations throughout the lifespan and represents the crucial public health and economic burden.[3] As research on PCOS is expeditiously advancing, it is essential that research evidence is translated to knowledge and action amongst PCOS women, healthcare specialists as well as policy makers.[1] Familial clustering of PCOS in consistence with genetic susceptibility had been well-established in literature.[14] Our study addressed the reproductive health, cardiovascular and metabolic risk profile in first degree relatives of women suffering from PCOS.

PCOS was more frequently diagnosed in female FDR of PCOS women and they revealed high prevalence of isolated PCOS features than Control FDR, proposing the heritable component and high degree of familial clustering tendency of this disorder. Increased androgen levels are thought to be one of the contributors to suboptimal uterine conditions in mothers of PCOS patients. Hyper exposure to androgens in the intrauterine environment might possibly reprogram the genes concerned with ovarian follicular development, ovarian steroidogenesis and insulin metabolism which may finally bring about PCOS development in offspring.[1] In one of the studies by Ahmad T et al, prevalence of PCOS was 26% in PCOS FDR while 5.4% in Control FDR.[7] Melissa D et al, found that prevalence of PCOS was 24% and 32% in mothers and sisters of PCOS probands respectively while it was 4% in controls.[18] In study by L Agnieszka et al, diagnosis of PCOS was made in 18.2% sisters.[19] Findings by these researchers are in accordance with the outcomes of our study.

The male FDR of PCOS in our study manifested hyperandrogenism in the form of premature balding and the prevalence was more as compared to controls. This premature male pattern baldness has been designated as the phenotypic male counterpart of PCOS.[14] Similar results were noted by Ahmad T et al,[7] and L Agnieszka et al.[19]

This study has displayed statistically significantly increased proportion of glucose intolerance and T2DM in FDR of PCOS probands regardless of the degree of obesity when compared with FDR of controls. Studies have demonstrated the heritable component of β-cell dysfunction in families of PCOS women. Accordingly, it would be reasonable to anticipate higher prevalence of glucose intolerance status in FDR of women with PCOS.[9] Comparable findings were reported by BuLent O Yildiz et al,[13] and V Putthussery et al.[11]

PCOS by itself has been established as significant risk element for developing type 2 diabetes and as stated by ADA guidelines, history of PCOS is counted as criteria for screening of T2DM.[2] As reported by Developmental Origins of Health and Disease theory, unfavourable intrauterine conditions in mothers of PCOS women might lead to adaptations in their offspring which could bring about metabolic and endocrinological disorders later in life.[1] This might potentially explain high degree of glucose intolerance in PCOS FDR observed in our study.

In this study, we assessed the cardiovascular disease risk in FDR of women with POCS using traditional risk factors such as obesity, hypertension and dyslipidaemia. FDR of PCOS have significantly increased prevalence of systemic hypertension, central adiposity and dyslipidaemia as compared to control FDR. In addition, TC, TG and LDL cholesterol concentrations were higher while HDL level was lower in PCOS FDR than in Controls. Similar results were obtained by Iram Shabir et al,[14] Akbarzadeh M et al [20] and Murat Yılmaz et al.[15] These findings imply that first- degree relatives of PCOS women are predisposed to hypertension and dyslipidaemia which increases the risk of CVD.

Dyslipidaemia, a well-recognised risk factor for CVD could be the most prevailing metabolic aberration in PCOS women. Even though different kinds of lipid profile parameters were deranged, dyslipidaemia was observed in all PCOS FDR groups. Hence, first-degree relatives of PCOS subjects should have a complete lipoprotein evaluation as part of their cardiovascular risk assessment and be treated with therapeutic interventions and lifestyle modifications.

PCOS women have increased peripheral insulin resistance, which triggers ovarian and adipose tissue androgen production and impairs sex hormone binding globulin (SHBG) synthesis in liver through hyperinsulinemia.[9] Studies have presented parallel outcomes in FDR of PCOS women as well. This early

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Department of Pharmacology

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Pharmacology	Dr. Imran N Khan MBBS, MD Pharmacology	Head of Department	Permanent						22 1.Principle of Pharmacology 2. Biotransformation 3. Describe parts of correct, complete and legible generic prescription 4. SGD (describe general principle of mechanism of action drug) 5. Cholinergic & anticholinergic drugs. Introduction to ANS 6. Drug used in CCF. 7. Fibrin ology. 8. Hypolipidemic. 9. Pharmacology of Fluoroquinolones. 10. Penicillin. 11. Cephalosporin & Then B lactam melibioses. 12. Pharmacology of Aminoglycosides & macrolides. 13. CNS sedatives & Hypnotics. 14. Antidepressant. 15. Drugs used in Diabetics Meletus-I 16. Drugs used in Diabetics Mellithus-II

									17. Training class on CAL 18. Peptic ulcer-I 19. Peptic ulcer-II 20. Sedative & Hypnotics. 21. MCQ Tutorial
	Dr. Syed Obaidullah MBBS, MD	Professor	Regular						
	Dr. Syed Maaz MBBS, MD	Associate Professor	Permanent						20 Lectures 1.Drug delivery system. 2. Describe general principles of action mechanism of drug action-I. 3. Describe general principles of action mechanism of drug action-II. 4. Drugs acting on RAAS. 5. Diuretics. 6. Antihypertensive drugs. 7. Treatment of Hypertension. 8. Drug used in Malaria KALA- AZAR. 9. Describe the drugs used in malaria, KALA-AZAR, amebiases & intestinal helminth. 10. Anti-tubercular drugs-I. 11. Anti-tubercular-II 12. Histamine & Anti-histamine. 13. Serotonin & Pretendents. 14. Metabolism & otonecines management. 15. Corticosteroids-I. 16. Corticosteroids-II 17. Drugs acting on eye. 18. Bronchial asthma-I 19. Drug used in cough.

									20. MCQ Tutorial.
	Dr. Shaikh Huzaif MBBS, MD	Assistant Professor	Permanent						16 Lectures 1.Absorption and bioavailability. 2. Excretion of drugs. 3. Describe principles of pharmacovigilance & ADR reporting. 4. Adrenergic & antiadrenergic drugs used in glaucoma-I. 5. Adrenergic & antiadrenergic drugs used in glaucoma-II. 6. Adrenergic & antiadrenergic drugs used in glaucoma-III. 7. Coagulants & anti-coagulants. 8. Pharmacology of sulfonamides & trimethoprim. 9. Anti-viral, HIV, STD. 10. Anti-viral. HIV, STD-II. 11. usurer antimicrobial. 12. General anesthetics. 13. Describe drugs for gout, anti-rhematic drugs. 14. Drug used in thyroids disorder. 15. Chelating Agent. 16. Drug used as below antiemetics and prokinetics.
	Dr. Quazi Zubair MBBS, MD	Assistant Professor	Permanent						16 lectures 1.Describe absorption, distribution, metabolism excretion. 2. Describe nomenclature of drug I,e generic, branded drugs. 3. Identify and describe the management of drug interaction.

									4. Calculate the dosage of drugs using appropriate formula for individual patient, including children, eddyline patient with renal disfunction. 5. Describe the drugs used in chemic heart disease peripheral vascular disease. 6. Shock. 7. Amebiases and intestinal helminth. 8. Anthelmintic drugs. 9. Aerodigestive disorder 10. Describe drugs of abuse dependence, addiction simulants, depressants, psychedelics drugs used for criminal offences. 11. Opioids, agonism & atheronal 12. Drug used in sex hormones, their analogs & anterior pituitary hormones. 13. Antiseptic, disinfectants. SDT & MDT. 14. Training class on CAL. 15. Adverse Drug Reaction. 16. Drug used as below antidiarrheals laxatives in flummery bowl disease.
	Dr. Sukhmeen Kaur MSc, PHD, Pharmacology	Assistant Professor	-						21 Lectures 1.Routes of drug administration. 2. Evidence based medicine TDM. 3. Cholinomimetics. 4. Anticholinergic drugs-I. 5. Anticholinergic drugs-II 6. Anticholinergic drugs-III 7. Skeletal muscle relaxant. 8. Drug T/t Anemia. 9. Chemotherapy -general omittance-I

									10. Chemotherapy -general coordinator-II 11. Tetracyclines & chlorophenol. 12. Antileprotic drugs. 13. Antifungal drugs. 14. Drugs which CNS- drugs used. 15. Drugs which act on CNS anti-epileptic drug. 16. Anesthetics drugs, NSAIDs-I 17. NSAIDs-II 18. Estrogen & Progesterone-I. 18. Estrogen & Progestron-II 19. Drugs acting on uterus. 20. Good clinical practice. 21. Antiseptic & disinfectants.

Department of Pharmacology Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
1	Dr. Imran N Khan	1. Khan IN, Syed MH, Shaikh H, Quazi Z, Chandra S. Pharmacovigilance: The extent of knowledge, attitude, and practice in MBBS interns of rural tertiary health center of Maharashtra. Natl J Physiol Pharm Pharmacol. 2022 Oct 16; 12(4): 484-88.	CINAHL, Hinari, Google Scholar, ScopeMed, Indian Science Abstracts, EBSCO Publishing Electronic Database
		2. Shaikh H, Syed MH, Shadab MM, Khan IN, Kausar A, Quazi Z. Comparative Study of Efficacy and Safety of Gabapentin and Amitriptyline in Treatment of Neuropathic Pain Associated with Chronic Lumbar Radiculopathy. An Open Label, Prospective Randomized Clinical Study. European Journal of Molecular and Clinical Medicine. 2022; 9(3): 5024-31.	Scopus (Discontinued March 2021), CrossRef, JISC KB+, SHERPA RoMEO, Cengage Learning, Directory of Open Access Journals (DOAJ), and Google Scholar.

2	Dr. Shaikh Ubedulla	-	-
3	Dr. Syed Maaz	1. Khan IN, Syed MH, Shaikh H, Quazi Z, Chandra S. Pharmacovigilance: The extent of knowledge, attitude, and practice in MBBS interns of rural tertiary health center of Maharashtra. Natl J Physiol Pharm Pharmacol. 2022 Oct 16; 12(4): 484-88.	CINAHL, Hinari, Google Scholar, ScopeMed, Indian Science Abstracts, EBSCO Publishing Electronic Database
		2. Shaikh H, Syed MH, Shadab MM, Khan IN, Kausar A, Quazi Z. Comparative Study of Efficacy and Safety of Gabapentin and Amitriptyline in Treatment of Neuropathic Pain Associated with Chronic Lumbar Radiculopathy. An Open Label, Prospective Randomized Clinical Study. European Journal of Molecular and Clinical Medicine. 2022; 9(3): 5024-31.	Scopus (Discontinued March 2021) CrossRef, JISC KB+, SHERPA RoMEO, Cengage Learning, Directory of Open Access Journals (DOAJ), and Google Scholar.

		Kausar A, Shaikh SP, Afreen U, Syed MH. Vaccine Perception: Acceptance, Hesitancy, Beliefs And Barriers Associated With COVID-19 Vaccination Among Medical Students. European Journal of Molecular and Clinical Medicine. 2021; 8(4): 949- 59.	Scopus (Discontinued March 2021) CrossRef, JISC KB+, SHERPA RoMEO, Cengage Learning, Directory of Open Access Journals (DOAJ), and Google Scholar.
4	Dr. Shaikh Huzaif	1. Khan IN, Syed MH, Shaikh H, Quazi Z, Chandra S. Pharmacovigilance: The extent of knowledge, attitude, and practice in MBBS interns of rural tertiary health center of Maharashtra. Natl J Physiol Pharm Pharmacol. 2022 Oct 16; 12(4): 484-88.	CINAHL, Hinari, Google Scholar, ScopeMed, Indian Science Abstracts, EBSCO Publishing Electronic Database
		2. Shaikh H, Syed MH, Shadab MM, Khan IN, Kausar A, Quazi Z. Comparative Study of Efficacy and Safety of Gabapentin and Amitriptyline in Treatment of Neuropathic Pain Associated with Chronic Lumbar Radiculopathy. An Open Label, Prospective	Scopus (Discontinued March 2021) CrossRef, JISC KB+, SHERPA RoMEO, Cengage Learning, Directory of Open Access Journals

		Randomized Clinical Study. European Journal of Molecular and Clinical Medicine. 2022; 9(3): 5024-31.	(DOAJ), and Google Scholar.
5	Dr. Quazi Zubair	1. Khan IN, Syed MH, Shaikh H, Quazi Z, Chandra S. Pharmacovigilance: The extent of knowledge, attitude, and practice in MBBS interns of rural tertiary health center of Maharashtra. Natl J Physiol Pharm Pharmacol. 2022 Oct 16; 12(4): 484-88.	CINAHL, Hinari, Google Scholar, ScopeMed, Indian Science Abstracts, EBSCO Publishing Electronic Database
		2. Shaikh H, Syed MH, Shadab MM, Khan IN, Kausar A, Quazi Z. Comparative Study of Efficacy and Safety of Gabapentin and Amitriptyline in Treatment of Neuropathic Pain Associated with Chronic Lumbar Radiculopathy. An Open Label, Prospective Randomized Clinical Study. European Journal of Molecular and Clinical Medicine. 2022; 9(3): 5024-31.	Scopus (Discontinued March 2021) crossref, JISC KB+, SHERPA romeo, Cengage Learning, Directory of Open Access Journals (DOAJ), and Google Scholar.

6	Dr. Sukhmeen Kaur Johar	1. Shivmore K, Johar SK. A comparative evaluation of the effect of Metformin and Voglibose individually and in combination on serum Insulin of diabetic Patients. Int J Health Environ Res. 2023;1:6–10	Thieme
		2. Jaybhaye D, Chandra S, Johar S, Nagre AS. Bacteriological profile and antibiotic susceptibility pattern of neonatal septicaemia-a prospective study. Int J Contemp Pediatr 2023;10: 506-9.	PubMed and PubMed Central (PMC) (NLM ID: 101729456, Selected citations only) Scilit (MDPI), Index Copernicus, Index Medicus for South-East Asia Region (WHO), ScopeMed, Journal Index, J-Gate, Google Scholar, CrossRef, Directory of Science, JournalTOCs, ResearchBib, ICMJE, SHERPA/RoMEO
		3. Chandra S, Jaybhaye D, Johar SK, Ubale A. Evaluation of self-medication practice during COVID-19 pandemic: a cross sectional online survey in Aurangabad city, Maharashtra,	Scope Database, Google Scholar, Research Bible, Index Copernicus, DOAJ, DRJI, IP Indexing, Pubmed

		India. European journal of Pharmaceutical and medical research. 2022 April17; 9(5): 336-43	
		4. Jaybhaye D, Chandra S, Johar SK, Nagre AS. Effect of honey and ginger mixture on productive cough in pediatrics patients. International Journal of Basic and Clinical Pharmacology. 2022; 11(3): 237-41.	PubMed and PubMed Central (PMC) (NLM ID: 101637479, Selected citations only), Index Copernicus, Index Medicus for South-East Asia Region (WHO), Scilit (MDPI), CrossRef, EBSCO A-to-Z, Ulrichsweb, Journal Index, Medical Journals Links, Google Scholar, J-Gate, Directory of Science, Electronic Journals Library (EZB), Gale, JournalTOCs, ResearchBib, ICMJE, SHERPA/RoMEO.
		5. Johar SK, Jaybhaye D, Chandra S, Mishra PS. Evaluation of Knowledge, attitude and practices of postgraduate medical students towards,	PubMed and PubMed Central (PMC) (NLM ID: 101637479, Selected citations only), Index

		clinical research in a tertiary care teaching hospital. International Journal of Basic and Clinical Pharmacology. 2021; 10(7):800-805.	Copernicus, Index Medicus for South-East Asia Region (WHO), Scilit (MDPI), CrossRef, EBSCO A-to-Z, Ulrichsweb, Journal Index, Medical Journals Links, Google Scholar, J-Gate, Directory of Science, Electronic Journals Library (EZB), Gale, JournalTOCs, ResearchBib, ICMJE SHERPA/RoMEO.
		6. Jaybhaye D, Chandra S, Johar SK, Nagre AS. Comparative effect of mixture of ginger and honey with dextromethorphan in dry cough in children. International Journal of Basic and Clinical Pharmacology. 2021; 10(5): 545-51.	PubMed and PubMed Central (PMC) (NLM ID: 101637479, Selected citations only), Index Copernicus, Index Medicus for South-East Asia Region (WHO), Scilit (MDPI), CrossRef, EBSCO A-to-Z, Ulrichsweb, Journal Index, Medical Journals Links, Google Scholar, J-Gate, Directory of Science, Electronic

			Journals Library (EZB), Gale, JournalTOCs, ResearchBib, ICMJE
		7. Gawali UP, Mishra PS, Rizvi SH, Kaur S. Drug utilization study in patients visiting psychiatric OPD in tertiary care hospital. International Journal of Basic and Clinical Pharmacology. 2021; 10:342-6.	PubMed and PubMed Central (PMC) (NLM ID: 101637479, Selected citations only), Index Copernicus, Index Medicus for South-East Asia Region (WHO), Scilit (MDPI), CrossRef, EBSCO A-to-Z, Ulrichsweb, Journal Index, Medical Journals Links, Google Scholar, J-Gate, Directory of Science, Electronic Journals Library (EZB), Gale, JournalTOCs, ResearchBib, ICMJE SHERPA/RoMEO.

Medical Council of India

Maharashtra University of Health Sciences, Nashik

Revised Basic Course Workshop in Medical Education Technology

Certificate of Participation

This is to certify that Dr. Syed Maaz, Associate Professor, Department of Pharmacology, from JIIU's Indian Institute of Medical Sciences and Research, Jalna has participated in the **Revised Basic Course Workshop** *held from 21st to 23rd May, 2019 by MCI Regional Centre, Maharashtra University of Health Sciences, Nashik*

Prof. Dr. Deelip Mhaisekar	Prof. Dr. Mohan Khamgaonkar	Dr. Kalidas Chavan	Dr. Payal Bansal	Dr. Deepanjali Lomte
Vice-Chancellor	Pro-Vice-Chancellor	Registrar	Convenor	Co-Convenor

Dated: 23rd May 2019

This certificate is computer generated and can be verified by scanning the QR code given below.

Roll No: NPTEL21MD05S33120272

To
SYED MAAZ HUSSAIN
H NO: 4-9-72, RANMAST PURA
JINSI ROAD
AURANGABAD
MAHARASHTRA - 431001
PH. NO :8087444405

Pass criteria: ≥ 50% in Proctored Examination

Online Certification

This certificate is awarded to

SYED MAAZ HUSSAIN

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 81 % in Proctored Examination

Mar 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository. https://nptel.ac.in/noc/

Roll No: NPTEL21MD03511110042

To
DR SHAIKH HUZAIF BADRUDDIN
H.NO 77
SADAF COLONY RATAN GATE AURANGABAD
AURANGABAD
MAHARASHTRA 431001
PH NO 9158499919

icmr NIE

Online Certification

This certificate is awarded to

DR SHAIKH HUZAIF BADIUDDIN

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 86 %

Online Assignments	84 %	Proctored Examination	87 %

AUG-DEC 2020

Dr. Manoj V Murhekar
Director, Adl. Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD03511110042

To validate and check scores: http://nptel.ac.in/noc

Medical Council of India

Maharashtra University of Health Sciences, Nashik

Revised Basic Course Workshop in Medical Education Technology

Certificate of Participation

This is to certify that **Dr.Shaikh** *Huzaif, Assistant Professor, Department of Pharmacology, from JIIU's Indian Institute of Medical Sciences and Research, Jalna has participated in* **the Revised Basic Course Workshop** *held from 21st to 23rd May, 2019 by MCI Regional Centre, Maharashtra University of Health Sciences, Nashik*

Prof. Dr. Deelip Mhaisekar	Prof. Dr. Mohan Khamgaonkar	Dr. Kalidas Chavan	Dr. Payal Bansal	Dr. Deepanjali Lomte
Vice-Chancellor	Pro-Vice-Chancellor	Registrar	Convenor	Co-Convenor

Dated: 23rd May 2019

Department wise list of Faculty Members:

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
PATHOLOGY	Dr. Tooba Fatima MMC no-88817	Professor & HOD	Regular & Permanent	Yes	Yes	Yes	Yes	Yes	35% lecture/ year (systemic & general pathology)
	Dr. Murtuza Shaikh MMC No-40924	Professor	Regular & Permanent	Yes	Yes	Yes	Yes	Yes	25% lecture/ year (systemic & general pathology)
	Dr. Jaya Baviskar 2008/10/3708	Associate Professor	Regular & Permanent	Yes	Yes	Yes	Yes	Yes	02%/ lecture year (systemic & general pathology
	Dr. Piyush Narkhede MMC no-2019/04/2973	Associate Professor	Regular & Permanent	Yes	Yes	Yes	Yes	Yes	09%/ lecture year (systemic & general pathology
	Dr. Deepu M cherian 2019/04/2613	Associate Professor	Regular & Permanent	No	No	No	Yes	Yes	5% lectures and 35 % Practicals/ year
	Dr. Jafar Pathan	Assistant Professor	Regular & Permanent	No	No	No	No	yes	2% lecture/ year (systemic & general pathology)-
	Dr. Naziya Sultana	Assistant Professor	Regular & Permanent	No	No	No	No	yes	10 % Practicals/ year
	Dr. Ashmira Patel 2018/09/4882	Assistant Professor	Regular & Permanent	No	No	No	No	Yes	7 % Practicals/ year

	Dr. Priyanka Ramesh Chandak	Assistant Professor	Regular & Permanent	No	No	No	No	Yes	7 % Practicals/ year -
	Dr. Shrinivas Kale	Assistant Professor	Regular & Permanent	No	No	No	No	Yes	6 % Practicals/ year

N.B.

1. Publications by faculty should be attached as annexure (Last 03 years).
2. Publications should be quoted in Vancouver referencing style.
3. Medical Educator Training/research methodology and dates (Certificate copies should be attached) (BCME & BCBR).
4. Additional information, if any, may also be provided.

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
01	Dr. Tooba Fatima	Yes	Yes
02	Dr. Murtuza Shaikh	Yes	Yes
03	Dr. Jaya Bavishkar	Yes	Yes
04	Dr. Piyush Narkhede	Yes	Yes
05	Dr. Deepu M cherian	Yes	Yes
06	Dr. Jafar Pathan	Yes	Yes
07	Dr.Naziya Sultana	Yes	Yes
08	Dr. Ashmira Patel	Yes	Yes
09	Dr.Priyanka Ramesh Chandak	--	--
10	Dr.Shrinivas Kale	--	--
11	Dr. Neelam M.	--	--
12	Dr. Saba Qureshi	--	--
13	Dr.Shahan Hashmi	--	--

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

Institute of Medical Education Technology & Teachers' Training

Regional Centre, 3rd Floor, Civil Hospital Building, Aundh Camp, Pune 27.

Certificate No. 6131

This is to certify that

Dr./Mr./Smt. Tooba Fatima

has participated as a Delegate / Faculty in

Basic Workshop in Research Methodology

held from 04 April 2016 to 06 April 2016

Organised by

JIIUS's Indian Institute of Medical Science & Research, Badnapur

Approved vide letter No. MUHS/IMETTT, Pune/629/2016 Dated 02/04/2016

Payal K Bansal
Dr Payal K Bansal
Head, IMETTT &
MUHS Regional Centre, Pune

Dr. Kashinath D. Garkal
Registrar

Dr. Prof. Dilip Mhaisekar
Vice-Chancellor

MCI NODAL CENTRE FOR NATIONAL FACULTY DEVELOPMENT

Jawaharlal Nehru Medical College, DMIMS (DU)
Sawangi (Meghe), Wardha

NAAC Accredited Grade 'A'

3rd Revised Basic Course in Medical Education Technology

Certificate of Participation

This is to certify that Dr. TOOBA FATIMA, PROFESSOR Department of PATHOLOGY, from JIIU's IIMS & R, BADNAPUR, JALNA has participated in the "3rd **Revised** Basic Course in Medical Education Technology" held from 13th to 15th July 2016, organized by MCI Nodal Centre for National Faculty Development, at Jawaharlal Nehru Medical College, Sawangi (Meghe), Wardha, Maharashtra State.

Dr. Sandeep Srivastava
Dean
JNMC, Sawangi (M), Wardha

Dr. Tripti Srivastava
Convener, MCI Nodal Centre
JNMC, Sawangi (M), Wardha

Dr. Adarshlata Singh
Co- Convener & In- Charge, (Revised Basic Course)
JNMC, Sawangi (M), Wardha

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, **https://nptel.ac.in/noc/**

Roll No: NPTEL21MD04S23110308

To

TOOBA FATIMA MOHAMMED SHAFEE
A1, PATEL PALMS, HARSUL,
BESIDE RAHAT HOSPITAL, SAWANGI ROAD.
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9168593000

Online Certification

This certificate is awarded to

TOOBA FATIMA MOHAMMED SHAFEE

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 74 %

Online Assignments	**81 %**	**Proctored Examination**	**72 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD04S23110308

To validate and check scores: **http://nptel.ac.in/noc**

Online Certification

This certificate is awarded to

DR SHAIKH MURTUZA MUSTAFA

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 63 % in Proctored Examination

Mar 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

Roll no: NPTEL21MD05S33120302

JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur, Jalna

Certificate of Participation

Revised Basic Course Workshop and Training
in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Shaikh Murtuza*** *Associate Professor, Department of Pathology, JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***'Revised Basic Course Workshop & AETCOM (rBCW)-II"*** *held during 06th July to 08th July 2021 under supervision of* ***NMC Nodal/Regional Centre, MUHS,*** *Nashik (M.S.).*

Shaikh Murtuza

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

Department of Microbiology

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ Permanentor contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Microbiology	Dr. Sufia M. Siddiqui MBBS, MD IMR No.-2002/03/1300	Professor & HOD	Regular	Yes	Yes	Yes	Yes	Yes	20
	Dr. Harish Ghogare MBBS, MD IMR No. (MMC) 61259	Professor	Regular	Yes	Yes	Yes	Yes	Yes	23
	Dr. Syeda G. S. MBBS, MD IMR No. -2001042041	Associate Professor	Regular	No	No	Yes	Yes	Yes	22
	Dr. Sayyed Mariya MBBS, MD IMR No. – 2003/03/881	Assistant Professor	Regular	No	No	No	No	Yes	05
	Dr. Nashrah Khan MBBS, MD IMR No. - 2008/04/0868	Assistant Professor	Regular	No	No	No	No	Yes	02
	Uzma Afreen M. SC Medical Microbiology	Assistant Professor	Regular	Yes	Yes	Yes	Yes	Yes	25

Department of Microbiology Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
1	Dr. Sufia M. Siddiqui	Correlation of thrombocytopenia and Serological markers in Dengue infection.	Pub Med, NCBI, Google scholar ISSN No. 2249-555X
		Comparison of Immunochromatographic test with ELISA for detection of Dengue in a Tertiary Care Hospital Jalna e-ISSN: 2279-0853,p-ISSN: 2279-0861.	e-ISSN: 2279-0853,p-ISSN: 2279-0861. Volume 22, Issue 1 Ser. 4 (January. 2023), PP 57-60
		1) Study of microbiological profile of sputum specimen isolates with special Reference to pulmonary nocardiasis in rural tertiary care center	
2	Dr. Harish Ghogare	Detecting Carbapenem Resistance in *Entrerobacteriaceae* Isolates Using Carbapenem Discs and the modified Test at a Tertiary Care Hospital in Maharashtra, India.	DOAJ (Directory of open access journal)
		Journal of Medical Microbiology and Infectious Diseases 2023; 11 (3): 185-191.	ISSN 2345-5349, e-ISSN 2345-5330
3	Dr. Syeda G. S.		
		2) Comparison of Teicoplanin vs Vancomycin in patients of infective endocarditis with MRSA	Vol.-10, Issue-4, P. 58-65 DOL: 10.36848/IJBAMR/2020/29215.55610 WWW.ijbamr.com P ISSN: 2250-284X, E ISSN: 2250-2858 58
		Comparison of Immunochromatographic test with ELISA for detection of Dengue in a Tertiary Care Hospital Jalna e-ISSN: 2279-0853,p-ISSN: 2279-0861.	e-ISSN: 2279-0853,p-ISSN: 2279-0861. Volume 22, Issue 1 Ser. 4 (January. 2023), PP 57-60
		Comprehensive evaluation of the Bact/Alert 3D system for the culture of body fluid	e-ISSN: 2279-0853,p-ISSN: 2279-0861. Volume 22, Issue 1 Ser. 7 (January. 2023), PP 18-23

		Trends of Catheter associated urinary tract infection in a rural tertiary teaching hospital	e-ISSN: 2279-0853,p-ISSN: 2279-0861. Volume 22, Issue 1 Ser. 5 (January. 2023), PP 67-23
4	Dr. Sayyed Mariya	-	-
5	Uzma Afreen	Vaccine perception: acceptance, hesitation, beliefs and barriers associated with COVID-19 vaccination among medical students	ISSN:2515-8260 Volume: 08, Issue 04 2021
		Comparison of Immunochromatographic test with ELISA for detection of Dengue in a Tertiary Care Hospital Jalna e-ISSN: 2279-0853,p-ISSN: 2279-0861.	e-ISSN: 2279-0853,p-ISSN: 2279-0861. Volume 22, Issue 1 Ser. 4 (January. 2023), PP 57-60
6	Dr. Nashrah Khan	The Covid-19 Pandemic and Tb – Impact and Implications : Original article – (IOSR Journal of Dental and Medical Sciences (IOSR- JDMS)	e-ISSN 2279-0853, p-ISSN 2279-0861. Volume 20, Issus 6 Ser.11(June.2021), PP 19-22

Dr. A.S. Damle

National Medical Commission Regional Center, IMETTT, Maharashtra University of Health Sciences (MUHS), Nashik.

JIIU'S INDIAN INSTITUTE OF MEDICAL SCIENCE & RESEARCH,

Warudi, Tal, Badnapur, Dist. Jalna

Revised Basic Course Workshop in Medical Education Technology & Training in Attitude, Ethics & Communication (AETCOM)

Certificate of Participation

This is to certify that ***Dr. Ajit S. Damle****, Professor, Department of Microbiology, from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 21st February to 23rd February 2023 under supervision of* ***NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

Dr. Azhar Ahmed Siddiqui
Organizing Chairman
Dean JIIU'S IIMSR

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Ganesh Chaudhari
NMC Observer

MCI Regional Centre for Medical Education Technologies

Seth G.S. Medical College & KEM Hospital

Basic Course Workshop in Medical Education Technologies

Certificate of Participation

This is to certify that

Dr. Ajit S. Damle

from Government Medical College, Aurangabad has participated in the Basic Course Workshop in Medical Education Technologies conducted by G.S. Medical College, Mumbai, Regional Centre in Medical Education Technologies, at Government Medical College, Aurangabad,

from 16th to 18th April 2013.

Dr Mrs. S.T. Khan
Coordinator
MEU, GMC, Aurangabad

Dr. K. S. Bhople
Dean
GMC, Aurangabad

Dr. Nirmala N. Rege / Dr. P. S. Bhuiyan
Convenor
GSMC-Mumbai

BASIC WORKSHOP IN RESEARCH METHODOLOGY

GOVERNMENT MEDICAL COLLEGE

AURANGABAD

MUHS

Certificate

This is to certify that Dr. A. S. Damale

From Dept. of Microbiology has participated in the basic workshop in research methodology conducted by Research society Govt. Medical College Aurangabad. From 7 Jan 2015 to 9 Jan 2015.

M.U.H.S. has approved this workshop vide letter No. MUHS/METI,Pune/2505/2014 Dated 29/12/2014

Dr. A.R. Joshi
Convenor
Asso. Prof. Pathology GMC, Aurangabad.

Dr. R.S. Bindu
Prof. and HOD Dept. of Pathology
GMC, Aurangabad.

Dr. Mrs. C.V. Diwan
Dean
Govt. Medical College Aurangabad.
Chairperson Medical Research Society

ORIGINAL RESEARCH PAPER

Volume-9 | Issue-1 | January-2020 | PRINT ISSN No. 2277 - 8179 | DOI : 10.36106/ijsr

INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH

A STUDY OF AEROBIC BACTERIOLOGICAL PROFILE ALONG WITH ANTIBIOTIC SUSCEPTIBILITY PATTERN IN CHRONIC SUPPURATIVE OTITIS MEDIA

Microbiology

Dr. Dinesh Gadekar — Medical Officer, Pimpri Chinchwad Municipal Corporation's Postgraduate Institute, Yashwantrao Chavan Memorial Hospital, Pimpri, Pune-18

Dr. Ajit Damle* — Professor, Department of Microbiology, JIIU'S Indian Institute of Medical Science and Research, Warudi, District Jalna, Maharashtra, India. *Corresponding Author

Dr Atul Desale — Assistant Professor, Department Of PSM ,Dr D. Y. Patil Medical College, Pimpri, Pune- 18

Dr. Tushar Baheti — Assistant Professor, Department of Pharmacology, Rural Medical College, Loni bk, District Ahmednagar

ABSTRACT

Introduction: Chronic suppurative otitis media (CSOM) is a destructive and persistent disease with irreversible sequel and can proceed to serious intra and / or extra cranial complications. Causative agents of infection include bacteria, fungi and viruses with bacteria being the commonest cause. Hence bacteriological studies of CSOM are important for determining effective antibiotic choice and surveillance of bacterial patterns and their relative sensitivities.

Materials and Methods: Total 157 patients having CSOM were included in the study. Ear discharge was processed with standard Microbiological procedures.

Results: On aerobic culture Staphylococcus aureus 58 (36.96%) was the most common isolate followed by Pseudomonas aeruginosa 35 (21.21%). Fungal culture yielded 19 (11.2%) isolates.

Conclusion: Evaluation of microbiological pattern and antibiotic sensitivity of isolates is necessary to decrease the potential risk of complications of CSOM by early institution of appropriate treatment.

KEYWORDS

Chronic Suppurative Otitis Media, Aerobic bacteriological profile, Antibiotic susceptibility test

INTRODUCTION

Otitis media is common childhood illness second in frequency only to viral upper respiratory tract infection. Chronic suppurative otitis media (CSOM) is a result of an initial episode of acute otitis media (AOM) and is characterised by a persistent discharge from the middle ear through a tympanic perforation. It is an important cause of hearing loss particularly in developing world.[3] CSOM is a destructive and persistent disease with irreversible sequel and can proceed to serious intra as well as extra cranial complications.[4] Causative agents of infection include bacteria, fungi and viruses with bacteria being the commonest cause[5].

The microbiological flora of middle ear in chronic otitis media includes organisms like *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Klebsiella pneumoniae* and anaerobic bacteria.[6]

Treatment of CSOM should be guided by culture and suggest choices for instituting narrowest spectrum systemic antibiotics assuring a most effective and cost–effective protocol of treatment.[7] Indiscriminate, haphazard and half-hearted use of antibiotics and poor follow up of patients has resulted in persistence of low grade infections. *In-vitro* antibiotic susceptibility pattern is very important for the clinicians to plan the general outline of treatment for a patient with CSOM.[4]

Hence bacteriological studies of CSOM are important for determining effective antibiotic choice and surveillance of bacterial patterns along with their relative sensitivities.[8]

The present study was undertaken to provide baseline data on aerobic bacteriological profile of CSOM in our area as this is the first of its kind study from this institute. The study would also provide information regarding antimicrobial susceptibility of the isolates to commonly used antibiotics in this institute.

MATERIALS AND METHODS

The study was conducted in Microbiology Department, at a tertiary care centre during January 2012 to June 2013. A total 157 patients of CSOM (including 12 bilateral cases; hence a total of 169 ear swabs) were examined. Clearance of the institutional ethical committee was obtained before initiation of the study. It was a prospective cross sectional study.

Patients of all age groups and both sexes attending outpatient department (OPD) and those admitted in our tertiary care centre and clinically diagnosed as suffering from CSOM by ENT Surgeon were included in the study. Patients who have taken topical or systemic antibiotics in last 7 days were excluded from the study.

Sample collection[9]

Written consent of patient / parent of a minor patient was taken before collection of sample.

Patient's detailed history consisting of present complaints, treatment history, and history of investigations was taken.

The external auditory canal of discharging ear was cleaned with sterile cotton. Under all aseptic precautions discharge was collected with two cotton swabs with help of sterile ear speculum, taking care not to touch external ear canal. Swabs were transported in sterile containers to the microbiology laboratory; each specimen was labelled with patient's name, age, sex, registration number, laterality of ear.

Laboratory procedure

Gross appearance of the discharge including colour, odour and consistency were noted.

Microscopy[10,11]

Primary smear was made from one of the swabs. Gram staining was done and observed under microscope and presence of organisms, pus cells were noted. Potassium hydroxide (KOH) mount was done from the same swab and observed under microscope.

Culture[9,10,12,13]

Second swab was cultured on Blood Agar (BA), MacConkey agar (MA) and incubated aerobically at 370C for 24 hours. The same swab was also inoculated on two Sabouraud's dextrose agar (SDA) one was incubated at 37° Celsius and other was kept at room temperature as per standard microbiological procedures.

Blood and MacConkey agar plates were observed for growth of microorganisms. If no growth was present plates were further incubated for next 24 hours, if still there was no growth then it was reported as sterile and plates were discarded. SDA slants were observed thrice weekly for four weeks before reporting sterile.

In case of growth colony / colonies were identified by colony characteristics, morphology, motility and biochemical reactions as per

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Comparison of Immunochromatographic test with ELISA for detection of Dengue in a Tertiary Care Hospitalat Jalna.

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[2]Dr Hira Ananda Padekar, *Associate Professor Microbiology ,PMT Loni.*
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[5]Uzma Afreen, *Assistant Professor, Microbiology, IIMSR,Warudi Jalna*
Corresponding author: Dr Sufia M Siddiqui

Abstract: *Dengue infection ,caused by a flavivirus is a major cause of mortality and morbidity in India.The infection ranges from self-limited,undifferentiated fever (dengue fever) to more severe form dengue haemorrhagic fever (DHF) to dengue shock syndrome(DSS).Early diagnosis will help in foreseeing the complications at an early stage and help in reduction of mortality and morbidity.*
Aims and objectives: *To compare the rapid immunochromatographic test for detection of NS1 antigen and IgM withEnzyme Linked Immunosorbant Assay(ELISA) in suspected dengue patients.*
Materials and methods: *This cross sectiontal study was carried out in the Department of Microbiology at IISMR,Warudi, Jalna over a period of six months. All the samples in dengue suspected patients were subjected to rapid diagnostic tests and then cross verified by ELISA .*
Results: *The rapid immunochromatographic tests had a sensitivity of 95% and specificity of 93% for NS1 antigen when compared with ELISA and sensitivity of 90.9% and specificity of 98.9% for IgM antibody as compared to ELISA.*
Conclusion: *Considering their high sensitivity and specificity,these rapid immunochromatographic tests can be used as an early predictor of dengue infections in resource poor settings, and in peripheral health care centres,*
Key words: *Rapid immunochromatographic test,ELISA.*

Date of Submission: 01-01-2023 Date of Acceptance: 11-01-2023

I. Introduction:

Dengue virus infection in humans is an acute mosquito-borne flaviviral transmitted mainly by *Aedesaegypti* mosquito and*Aedesalbopictus*(1,2).It manifests as aspectrum of illness ranging from inapparent or mildfever to severe and fatal haemorrhagic disease [3,4].Classic dengue fever is marked by a rapid onset ofhigh grade fever, headache, retro-orbital pain, diffusemyalgia, weakness, vomiting, sore throat, an alteredtaste sensation, and a centrifugal maculopapular rash[5]. DHF and DHS are potentially fatalcomplications which are often associated with aninfection by a second serotype [6].These complications can lead to plasma leaking, fluid accumulation, respiratory distress, severe bleeding, or organ impairment.(7)

Currently the three basic methods used by most laboratories for the diagnosis of dengue virus infection are viral isolation, detection of the viral genomic sequence by a nucleic acid amplification technology assay (Reverse transcription polymerase chain reaction(RT-PCR)), and detection of Dengue specific IgM antibodies and antigen by the IgM –Capture enzyme linked immunosorbent assay (MAC-ELISA) and /or the rapid dengue immunochromatographic test (ICT)(8).Virus isolation and RTPCR tests for Dengue diagnosis arelaborious ,require specialized laboratory facilities and as the antibodies become detectable,the level of the circulating virus wanes and so these procedures are successful only when done within a few days of the onset of illness(9).Serological tests like ELISA and Rapid Immunochromatographic tests are more commonly used nowadays to diagnose dengue infections because of their ease of use compared to the above techniques .

Early and accurate diagnosisis is not only essential in foreseeing the complications thereby reducing the morbidity and mortality due DHF and DHS but it is also essential for the effective surveillance and control of disease outbreaks. Thus, there is a need for specific, inexpensive dengue diagnostic tests that can be used for

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Original article:

Profile of dengue cases studied in a tertiary care hospital

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ABSTRACT:

INTRODUCTION: Dengue is a growing public health problem. This study is carried out to find out the seroprevalence of dengue infection & its clinical profile. An early and accurate diagnosis of dengue is essential to keep a watch on complication such as DHF/ DSS, for initiation of therapy, for early enhancement of epidemic control measures and in undertaking effective vector control measures.

METHODS: Blood samples were received from clinically suspected dengue cases and patients were divided into 2 groups based on history of duration of fever. GroupA comprising of patients having history of fever for 5 days or less, samples were subjected to testing for dengue NS1 antigen using NS1 ELISA kit. Group B comprising of patients having history of fever for more than 5 days were subjected to testing for dengue IgM using dengue specific IgM capture ELISA.

OBSERVATION & RESULTS: Out of 1237 suspected cases, 186 tested positive for dengue virus infection either by NS1 ELISA or IgM ELISA. Infection was commonly seen in young adults with a male preponderance. It was common during monsoon and post monsoon season and the common clinical presentations were fever, headache, body ache & joint pain. Platelet count less than 1 Lakh was seen in 48 (16.84 %) dengue positive cases. Mortality rate was 1%.

CONCLUSION: In India, we require a national awakening program about the sanitation and garbage disposal which result in many infectious diseases like Dengue, malaria, Chikungunya, hepatitis, diarrhoea.

KEYWORDS: NS1 ELISA, IgM ELISA

INTRODUCTION:

Dengue fever is an arboviral disease caused by dengue virus belonging to the family Flaviviridae.[1] It is a single-stranded, positive sense enveloped RNA virus. The genome is composed of three structural protein genes, encoding the nucleocapsid or core protein (C), a membrane associated protein (M), an envelope protein (E), and seven non-structural (NS) protein genes NS1, NS2a, NS2b, NS3, NS4a, NS4b, and NS5 (Deubel et al., 1988). [2] Dengue is transmitted by *Aedes* mosquitoes, particularly *Aedes aegypti* and, less frequently by *Aedes albopictus*. [3] There are four serotypes of the virus referred to as DV-1, DV-2, DV-3, and DV-4.[4] All four serotypes can cause the full spectrum of disease from a subclinical infection to a mild self-limiting disease, the dengue fever (DF) and a severe disease that may be fatal, the dengue

Dr. S.M. Siddiqui

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Date of Submission: 01-01-2023 Date of Acceptance: 11-01-2023

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Early and accurate diagnosisis is not only essential in foreseeing the complications thereby reducing the morbidity and mortality due DHF and DHS but it is also essential for the effective surveillance and control of disease outbreaks. Thus, there is a need for specific, inexpensive dengue diagnostic tests that can be used for

Dr. Syeda G.S.

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May 2022

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Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Syeda Gulsitan Siddiqe*** *, Associate Professor, Department of Microbiology , from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 05th October to 07th October 2021 under supervision of* ***NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

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NMC Observer

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Original article:

Comparison of Teicoplanin vs Vancomycin in patients of with MRSA of infective endocarditis

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ABSTRACT

Introduction: Infective endocarditis (IE) is the infection of lining of the heart or the valves, often affecting the muscles of the heart. It is a life threatening infection with high morbidity and mortality, in case if not aggressively treated with antibiotics or surgery (1).

Aim: To compare effect of Teicoplanin vs Vancomycin in patients of with MRSA of infective endocarditisTo compare effect of Teicoplanin vs Vancomycin in patients of with MRSA of infective endocarditis in terms of Microbiological eradication and in terms of adverse event

Results: However in ouer study the effects of of vancomycin and Teicoplanin were found to be similar however Treatment with teicoplanin offer advantages over treatment with vancomycin-provided that similar clinical efficacy can be shown . studies with larger sample size are required to come to a conclusion.

Conclusion: Treatment with teicoplanin offer advantages over treatment with vancomycin-provided that similar clinical efficacy can be shown . studies with larger sample size are required to come to a conclusion

INTRODUCTION:

Infective endocarditis (IE) is the infection of lining of the heart or the valves, often affecting the muscles of the heart. It is a life threatening infection with high morbidity and mortality, in case if not aggressively treated with antibiotics or surgery (1). Despite the availability of improved diagnostic and therapeutic facilities, it remains a serious cardiac problem (2). The reported incidence of IE is between 1.7 and 6.2 per 100,000 cases per year, and it has been on the increase and been changing in recent years (3). Overall mortality remains increased, ranging from 21–50%, over the past three decades with an operative mortality of 5–30%, despite recent advances in diagnosis, medical and surgical management of patients with IE (4). The epidemiology, clinical and microbiologic spectrum of IE is different in Indian population, compared to the west and usually depends on the type of endocarditis (native valve or prosthetic) (5). In most developed countries, NVE accounts for 84.5% of cases and PVE accounts for 7–25% of cases of IE (5). The changing spectrum of IE was described through several data available from the developed countries (4). Chronic rheumatic heart disease was found to be the leading cause of chronic valvular disease, comprised of 46% of all cases. Common organisms causing IE include streptococci, staphylococci,

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Original article:

Study of microbiological profile of sputum specimen isolates with special reference to pulmonary nocardiasis in rural tertiary care center

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Abstract:

Background: Respiratory Tract Infection (RTI) is by large one of the leading causes of the morbidity and mortality in the world. In lower respiratory tract infections sputum is the common and easily available specimen. The etiologies of respiratory infections assume an important role in the choice of empirical antibiotics and hospitalization measures. Among the various etiological agents *Nocardia*, a branching, filamentous bacteria, is widely distributed in the environment causing pulmonary disease especially in a rural areas.

Microbiological profile of sputum isolates with special reference to Nocardiosis . Present study was done at Dept. of Microbiology, RMC, and Loni over a period of one year aiming to study the bacteriological profile of sputum specimen isolates and its sensitivity pattern with special reference to Nocardiasis.

Materials and method: A total of 381 patients sputum specimens were received in the Dept. of Microbiology during the study period. Direct microscopy (Gram staining, Ziehl Neelsen (ZN) and 1% modified Ziehl Neelsen) was done for all sputum specimens. All the sputum specimens were inoculated and subjected to culture study. The sputum isolates were identified and antibiotic sensitivity pattern was studied.

Results: Sputum culture positivity in our study was found to be 45.40%. The sputum isolates included both bacteria and yeasts. Gram negative organisms were found to be predominant isolates 143(82.65%) followed by Candida and Gram positive organisms. We found four cases of Nocardiasis.

Conclusion: Sputum specimen staining and culture is still a standard method to detect the pathogen causing lower respiratory tract infections at earliest. Specific recommendation for modified ZN staining in suspected TB, Bronchitis and chronic pulmonary disease patients is need of hour. Early detection can lead to the prompt treatment can reduce mortality in these patients.

Keywords: Sputum, Nocardia spp. ZN staining, Gram negative organisms, Candida

Introduction:

Lower respiratory tract infections (LRTI's) may be defined as those infections presenting with symptoms including cough, expectoration, dyspnea, wheeze and /or chest pain/discomfort usually for a period ranging from 1-3 weeks.[1] In this infection , there is an inflammation of the respiratory tract instigated from trachea to the alveoli with ensuing proliferation of an infectious agent.[2] It encompasses bronchitis, bronchiectasis, bronchiolitis, emphysema, lung abscess, pleural effusion and pneumonia. Many studies had incorporated all prevailing bacterial isolates from sputum, endo-tracheal aspirate and bronchoalveolar lavage (BAL). [3]

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Trends of Catheter associated urinary tract infection in a rural tertiary teaching hospital.

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Abstract
Background: *In recent years, hospital acquired infections (HAI) has emerged as the most common adverse events in delivery of healthcareCatheter Associated Urinary Tract Infections (CA-UTI) contribute 30%-40% of all the HAI and they are associated with substantially increased institutional death rates.The present study was conducted at a rural tertiary care academic hospital with an aim to study the rate of catheter associated urinary tract infection with special emphasis on its clinical and microbiological features.* ***Materials and Methods:*** *For the purpose of CAUTI surveillance the definitions of CDC's National Nosocomial Infections Surveillance (NNIS)systemcriteria,were used.The urine sample was aseptically collected from sampling port of urinary catheter with sterile syringe and needle.The urine specimens were inoculated on blood agar and Mackonkey's agar and incubated at 35°C. Isolates were identified bystandard protocol.* ***Results:*** *The overall occurrence of CA-UTIrate for three years was 5.42.E. coli (31.2%) followed by Klebsiella spp. (19.1%) and Candida spp. (13.9%) were most common isolates from cases of CA-UTI.* ***Conclusion:*** *In recent years, most of the health care institutions are adapting surveillance as a tool for monitoring HAI. Surveillance is the major step towards reducing the risk for infection in vulnerable hospitalized patients. The present surveillance study helped us to generate institutional data regarding CA-UTI.*

Date of Submission: 02-01-2023 Date of Acceptance: 14-01-2023

I. Introduction.

The field of medical science is advancing at a rapid pace, however infectious diseases still continue to contribute significantly to the morbidity and mortality. Hospital acquired infections are the most common adverse iatrogenic events seen in patients.

Hospital acquired infections (HAI) are infections that occur during hospitalization but are neither present nor incubating upon hospital admission. In developed nations, HAIs concern 5-15% of hospitalized patients and can lead to complications in 25-50% of patientswho are admitted in intensive care units.[1]sachin sir

In a healthcare setup, surveillance of HAI is a basic and most critical requirement for organizing and maintaining an effective infection prevention and control (IPC)programme.Surveillance of medical device-associated infections (MDAI) has become an integral part of infection control in all hospitals. Catheter associated urinary tract infections(CA-UTI),catheter - related blood stream infections (CRBSI) and ventilator-associated pneumonia (VAP) are most commonly reported MDAI.[2]Horanetal

Mathur P and Podovik*etal*stated that among MDAIs,CAUTI are the most commonest.[3][4] UTI are associated with indwelling catheter. As per Centre for Disease prevention and Control (CDC) CAUTI is defined as a UTI where an indwelling urinary catheter was in place for > 2 calender days on the date of event.(CDC) Estimation of HAI infection rate per 1000 device days allows all hospitals to compare their baseline data , rates and also to acknowledge exclusive problem that need re-assessment.[5][6]

CA-UTI is caused by instrumentation of the urinary tract(Jaggietal stated)[7] andDeepabhani*etal*and Zahranetal documented that it has been associated with increased morbidity, mortality, length of hospital stay and cost.[8][9]

Most of the studies related to MDAI are from developed countries. As very few studies from developing countries provide data of MDAI using the standardized definitions HAI rates per 1000 device associated days, there is dearth of information from developing countries like India.

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Date of Submission: 01-01-2023 Date of Acceptance: 11-01-2023

I. Introduction:

Dengue virus infection in humans is an acute mosquito-borne flaviviral transmitted mainly by *Aedesaegypti* mosquito and*Aedesalbopictus*(1,2).It manifests as aspectrum of illness ranging from inapparent or mildfever to severe and fatal haemorrhagic disease [3,4].Classic dengue fever is marked by a rapid onset ofhigh grade fever, headache, retro-orbital pain, diffusemyalgia, weakness, vomiting, sore throat, an alteredtaste sensation, and a centrifugal maculopapular rash[5]. DHF and DHS are potentially fatalcomplications which are often associated with aninfection by a second serotype [6].These complications can lead to plasma leaking, fluid accumulation, respiratory distress, severe bleeding, or organ impairment.(7)

Currently the three basic methods used by most laboratories for the diagnosis of dengue virus infection are viral isolation, detection of the viral genomic sequence by a nucleic acid amplification technology assay (Reverse transcription polymerase chain reaction(RT-PCR)), and detection of Dengue specific IgM antibodies and antigen by the IgM –Capture enzyme linked immunosorbent assay (MAC-ELISA) and /or the rapid dengue immunochromatographic test (ICT)(8).Virus isolation and RTPCR tests for Dengue diagnosis arelaborious ,require specialized laboratory facilities and as the antibodies become detectable,the level of the circulating virus wanes and so these procedures are successful only when done within a few days of the onset of illness(9).Serological tests like ELISA and Rapid Immunochromatographic tests are more commonly used nowadays to diagnose dengue infections because of their ease of use compared to the above techniques .

Early and accurate diagnosisis is not only essential in foreseeing the complications thereby reducing the morbidity and mortality due DHF and DHS but it is also essential for the effective surveillance and control of disease outbreaks. Thus, there is a need for specific, inexpensive dengue diagnostic tests that can be used for

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Comprehensive evaluation of the Bact/Alert 3D system for the culture of body fluids

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Dr.Bansal V.P Associate Professor, Dept of Microbiology,MGM medical college, Aurangabad
Dr. Wyawahare A.S Professor, Dept of Microbiology, MGM medical collegeAurangabad
Ms. Mishra J.K Assistant Professor, Dept of Microbiology,MGM medical college,Aurangabad
Dr. Mulay M.V Professor and Head.Dept of Microbiology, MGM medical College Aurangabad

ABSTRACT
Background:*The study was undertaken to evaluate the utility of BacT/Alert 3D automated culture system (BAS) using FA plusaerobic culture bottles for recovery of aerobic bacteria from bodyfluids other than blood.*
Material and methods: *A total of 250 body fluid samples were processed for culture by conventional Culture method (CM) and by BAS system using FA Plus aerobic culture bottles. Isolates were identified by standard bacteriological methods and Vitek 2 Compact system. The mean time to detection was calculated for the BAS. The turnaround time was calculated for both the culture methods.*
Result:*Out of 250 body fluid specimens BAS give a positive result in 90 (97.82%) clinically significant specimens. Whereas for conventional culture the recorded positivity was for 54 specimens (58.69%). For BAS the calculated mean time to detection for Gram positive cocci was 8 hrs 11 minutes and for Gram negative bacilli was 6 hrs 41 minutes. The mean turnaround time for BAS was 72 hours and for CM was 45 hours 30 minutes.*
Conclusion:*The BacT/AlerT 3Dsystem using FA plus aerobic bottles is efficient in detection of important pathogen from body fluids.*
KEY WORDS: *BacT/ Alert, body fluids, mean time to detection, turnaround time*

Date of Submission: 05-01-2023 Date of Acceptance: 19-01-2023

I. Introduction:

It is of a great importance to isolate bacteria from sterile body fluids, as microorganisms are present in very low numbers in these samples and are usually missed by conventional culture methods.[1,2]These infections usually are life threatening and the patients are on antibiotics resulting in failure of isolating the organism by conventional methods.[2]Several automated culture system are developed for isolation of bacteria from blood. Some of these are BacT/Alert 3D, Bactec 9000, ESP culture system, Vital blood culture system,Oxoid system.[3] These systems have been evaluated for the culture of blood.[4]There are few studies evaluating BacT/AlerT 3D system for the recovery of clinically significant bacteria from bodyfluid other than blood.[5]The present study has evaluated the BacT/Alert 3D system (Biomerieux) using FA plus aerobic bottles for recovery of aerobic bacteria from bodyfluids. This system was compared with standard conventional culture methodusing solid media.

II. Materials And Methods:

The present study was carried out in department of microbiology MGM medical college and hospital Aurangabad, Maharashtra. The 250 bodyfluid specimen in the study comprised of pleural fluid (72), Cerebrospinal fluid (41),Pus aspirates (n=59), Bile (n=19), Ascitic fluid (n=34), Dialysis fluid(n=7), Pericardial fluid (n=2), Vitreous fluid (n=1). The pus samples were from deep seated infection collected by aspiration .The samples were processed by CM and BAS within 30 minutes of arrival in the laboratory.

Conventional method: The samples were inoculated on blood, MacConkey andchocolate agar and incubated at 37^0C for 48 hrs.

BacT/Alert 3D system: A maximum 5ml of the sample was inoculated into BacT/Alert FA plusculturebottles and incubated in the BacT/Alert system for a maximum of 5 days. Bottlesflagged positive were subcultured on blood agar and MacConkeys agar.If no growth was observed on blood agar and MacConkeysagar, chocolate agar was inoculated for fastidious bacteria. The media were incubated for 48 hours at 37^0C.

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Original research article

Vaccine Perception: Acceptance, Hesitancy, Beliefs And Barriers Associated With COVID-19 Vaccination Among Medical Students.

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Abstract

Introduction: COVID-19 vaccines have emerged as a key strategy, being the most effective public health intervention in preventing the massive humanitarian crisis. Thus, as a part of preventive measure, government of India had launched COVID-19vaccines on 16 January 2021.Indeed vaccine hesitancy is one of the most significant barriers for success of any immunization drive. Hence, in view of the recent surge in Covid19 cases in our country, this study was planned to assess the awareness, hesitancy and acceptance attitudes ofCOVID-19vaccine among Medical Students (MS) of Maharashtra.

Methodology: This was a cross sectional study. Data was collected using self-reported. structured questionnaire from 356 MS through online Google form. Data were extracted, transferred and analysed using appropriate statistical tool.

Results: The study reported 83.43%vaccine acceptance and 16.57% of hesitancy among MS. Furthermore, the main source of COVID-19 vaccine information was social media followed by government web sites. Majority 91.57% of the students were aware of different types of COVID-19vaccines available in our country. However 62.62% MS among acceptance group were willing to get vaccinated through college or university health centre. Beside the main reason for hesitancy was fear of adverse reactions. Moreover the hesitant group [illegible] about safety and efficacy of available vaccines.

Conclusion: High acceptance was shown among MS regarding COVID-19 vac[illegible] it is critical to alleviate uncertainties among hesitant MS by continuous education. encouragement and motivation. Consequently, planning and implementation of [illegible] further amplify the vaccination rate among medical student is vital to augment the COVID-19 vaccination drive in our country.

Keywords: COVID-19 vaccines, Vaccine hesitancy, vaccine acceptance.

National Journal of Physiology, Pharmacy and Pharmacology

RESEARCH ARTICLE

Effect of structured lecture on the knowledge and practices of menstrual health in adolescent girls of urban slum

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ABSTRACT

Background: Menstruation is natural physiological processes. Psychosocial and religious taboos around it make it complicated as health issue. Poor menstrual health is not only associated with health and well-being of women, but also reflects on morbidity and mortality patterns of female population. **Aim and Objectives:** The study aims to assess the effect of a structured lecture on the knowledge and awareness about practices of menstrual health in adolescent girls of urban slum. **Materials and Methods:** A cross-sectional study was conducted among adolescent girls of slum area in Aurangabad city of Maharashtra. Pre-structured Questionnaire to assess the knowledge and practices about menstruation and menstrual hygiene was given. Structured lecture was organized and postlecture questionnaire was taken. **Results:** 72% were in age group of 10–14 years and mean age of menarche was 12.7 years. Before lecture 64% had poor awareness about hygienic menstrual practices, 24% had fair, 12% had good awareness. But after the lecture, the majority of girls, that is, 56% showed good awareness, 30% had fair while 14% girls still showed the poor awareness. This difference was found statistically significant. The reasons behind the unhygienic practices most commonly quoted were poverty, high cost of sanitary pads, ignorance and lack of privacy. **Conclusion:** If perception and attitude of adolescent girls toward menstrual hygiene is improved then it will definitely enhance their reproductive health. Moreover, awareness created among them will indirectly affect their mother's reproductive health and their next female generation as well.

KEY WORDS: Menstruation; Adolescent Girls; Menstrual Hygiene

INTRODUCTION

Adolescence stage is defined by the World Health Organization as period between 10 and 19 years of age.[1] The adolescents group contributes major proportion in population. Hence, the health issues related to this group needs to be addressed as adolescent health plays a key role in optimum wellbeing of adulthood. Nowadays, urban slums are growing since chunk of rural population is shifting toward urban area. The psychosocial health issues linked to this migration necessitate to through light at proper time.

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Adolescence period of girl's life cycle is marked with onset of menarche.[2] Menstruation is one of the vital processes of female's reproductive physiology. Menstruation is an exceptional phenomenon in which women undergoes certain physiological changes from stage of menarche till achieving menopause. Adolescence period in girls is considered as special period because it is the stage of physical, psychological,

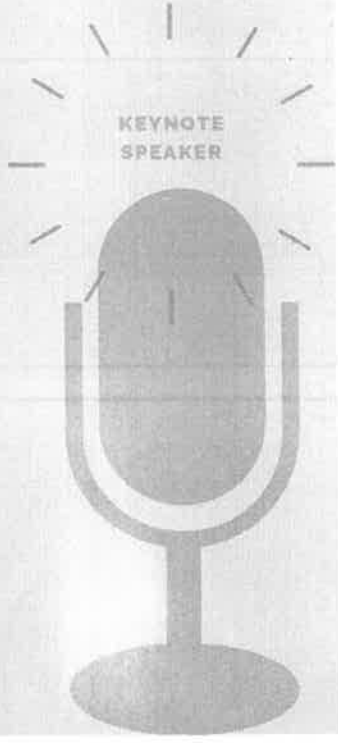
FOHOWAY

CERTIFICATE OF RECOGNITION

THIS IS PRESENTED TO

Ms. Uzma Afreen

For being part of our panel of Keynote Speakers at online International level Conference on *"COVID-19 Pandemic Awareness & Boosting Immunity by Nutraceuticals"* on this day of April 23, 2020.



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This is to certify that UZMA AFREEN from JNUs IIMSR JALNA

Designation TUTOR - MICROBIOLOGY has participated as **DELEGATE** in the **Fourth National Certificate Course on Hospital Infection Prevention and Control** organized by IFCAI and CARE Hospitals, Nampally from 29th Sep – 1st Oct, 2016 at Hyderabad. This course is awarded 06 CME credit hours by Telangana State Medical Council as per the letter TSMC/CME/201/2016, Dated:10-08-2016.

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Medical Director,
CARE Hospitals, Nampally

Dr. Ranga Reddy Burri
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Dr. Mustafa Afzal
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UIN : IFCAI/HIPC 2016/D417

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Moving Academy of Medicine & Biomedicine, Pune

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Visiting Professor,
B J Govt. Medical College & Sassoon Hospital , Pune

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23rd, 24th & 25th March, 2022

Venue: AIG Auditorium, AIG Hospitals, Gachibowli, Hyderabad.

The Telangana State Medical Council has awarded accreditation of 5 (Five) credit hours for this program

Vide Ref. No. TSMC/CME/1447/2022, Dated: 05/03/2022

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Dr. D Nageshwar Reddy
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Dr. G.V. RAO
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DATE	TIMINGS

Dr Neeraj Jain
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from 28th September to 1st October 2020

Dr. Neeraj Jain
President & Course Director
(MELAP)

A-2/194, Near Police Station, Paschim Vihar, New Delhi-110063

Original Research Paper

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Microbiology

CORRELATION OF THROMBOCYTOPENIA AND SEROLOGICAL MARKERS IN DENGUE INFECTION.

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Dr. Ajit Damle	Professor and Head of Department of Microbiology, Indian Institute of Medical Science, Warudi ,Jalna.
Uzma Afreen	Assistant professor, Department of Microbiology, Indian Institute of Medical Science, Warudi ,Badnapur.

ABSTRACT **Introduction:** Dengue is the most common and widespread arboviral infection. It is a flaviviral infection found in large areas of tropical and subtropical regions of the world. Early and specific diagnosis of dengue haemorrhagic fever (DHF) or dengue shock syndrome (DSS), followed by supportive therapy, reduces morbidity and mortality. NS1 Detection is reported to be sensitive as well as specific test. Apart from the dengue-specific parameters platelet count is one of the important predictive markers to help in early diagnosis of Dengue infection. In primary care setup, platelet count is only additional test available that can support the diagnosis of DHF or DSS. In present study we tried to correlate the platelet count and immunochromatography (ICT) based dengue serology test.

Aims: To assess platelet count in serologically positive dengue cases.

Methods: A total of 750 serum samples collected from clinically suspected dengue fever patients were collected. Samples tested for NS1, immunoglobulin M (IgM),G(IgG) by ICT-based test. The platelet count was noted in all the positive dengue cases.

Results: A total 50 cases showed positivity for either one and more of the three markers (NS1, IgM, IgG). A Platelet count <1,00,000/ml was observed in 33(66%) cases.The association of thrombocytopenia in NS1+IgM positive cases was statistically significant (Z=2.057, P<0.0394).

Conclusion: Rapid immunochromatography (Both NS1, & antibodies detection) test is an excellent tool in the diagnosis of dengue increases the detection rate significantly. In our study , thrombocytopenia was seen in statistically significant number of patients having NS1 and IgM positivity simultaneously.

KEYWORDS : Dengue, NS1, IgM, IgG , Thrombocytopenia

INTRODUCTION:

Dengue is the most common and widespread arboviral infection in the world today, also called classic dengue or break bone fever. It is a flaviviral infection found in large areas of tropical and subtropical regions with significant morbidity and mortality.[1] Dengue virus is an enveloped, single-stranded, positive sense RNA virus belonging to the genus *Flavivirus* in family *Flaviviridae* . There are four serotypes of dengue virus (DV), namely DEN-1,DEN-2, DEN-3, DEN-4.

In humans, one serotype produces lifelong immunity against reinfection but only temporary and partial immunity against the other serotypes.[2]All four serotypes can cause the full spectrum of disease ranging from a mild self-limiting disease, the dengue fever (DF), to life-threatening dengue hemorrhagic fever and dengue shock syndrome.[3] World Health Organization (WHO) has taken several preventive measures to control the spread of dengue virus infection. However, still new outbreaks are reported in several parts of the world during post monsoon season. Newer diagnostic techniques, public awareness programs, better education, and proper monitoring of vector control are required to prevent such outbreaks.

The transmission of dengue is dependent on various macro and micro level factors such as temperature, humidity, rainfall, the population density, movement, immunity and virus load, urbanization, environmental factors and socio-demographic and economic factors.[4] These influence the spread of the disease through increased *Aedes aegypti* mosquito population, transmission of the vector, spreading of the disease and practices of protection mechanism, Vector dynamics.[5] It is important that, early case detection and prompt diagnosis followed by supportive management reduces morbidity and mortality.[6] Currently the three basic methods used by most laboratories for the diagnosis of dengue virus infection are viral isolation, detection of the viral genomic sequence by a nucleic acid amplification technology assay (Reverse transcription polymerase chain reaction (RT-PCR)), and detection of Dengue specific IgM antibodies and antigen by the IgM –Capture enzyme linked immunosorbent assay (MAC-ELISA) and /or the rapid dengue immunochromatographic test (ICT).[7]

Detection of NS1 has been a promising test to diagnose dengue in its early febrile stage due to its long half-life in blood. The NS1 protein was found to be highly conserved in all dengue serotypes, circulating in high levels during the first few days of illness. It correlates with the development of DHF. There is no cross-reaction of the dengue NS1 protein with those of other related *flaviviruses*.[8]Apart from the dengue-specific antigen and antibodies, platelet count is one of the important predictive markers to help in early diagnosis of Dengue infection.[9]In primary care setup, platelet count is only additional test available that can support the diagnosis of DHF or DSS. A rough estimation of platelet counts by microscopy in resource-limited settings of primary care is helpful in diagnosis and monitoring the treatment of infection. In the present study, we have correlated the platelet counts, and ICT-based dengue serology tests which will help the clinicians to diagnose and monitor the treatment of DENV infections.

MATERIALAND METHODS:

This was prospective observational study conducted in the Department of Microbiology, IIMSR Warudi , Badnapur - a tertiary care hospital from July 2020 to December 2020 after receiving permission from the institutional ethical committee. A total of 750 serum samples collected from clinically suspected cases of dengue –like illness attending the outpatients departments and admitted in inpatient departments and sent for serological diagnosis of Dengue infection were included in this study.

Samples were tested by a rapid qualitative immunochromatographic assay (J.Mitra andCo Pvt Ltd, Dengue Day 1 test) for differential detection of dengue specific IgM and IgG antibodies and NS1 antigen. Platelet counts of all the positive cases for any of the dengue parameter were recorded by cell counter method.(Sysmax haematology analyser Xn350)

RESULTS:

Total 750 serum samples from suspected dengue cases were collected and subjected to immunochromatography test (ICT). A total 50 cases showed positivity for either one and more of the three markers (NS1,IgM, IgG) as shown in (**table 1**). Majority of 36 (72%) Cases were positive for NS1 followed by IgM 5(10%) and IgG 4 (6%) respectively. More than one marker was detected in the remaining 7

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Original research article

COVID-19 Vaccination: The Extent of Knowledge and Perception in Health Care Workers of Rural Tertiary Health Center in India.

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Abstract

BACKGROUND: Mass vaccination is a key preventive approach against COVID-19 pandemic and governments have prioritized health care workers (HCWs) for vaccination. HCWs are the frontline army of the COVID-19 pandemic and are at a high risk of infection. Some studies have documented that not the entire HCWS are ready to accept COVID-19 vaccines, when offered in their country. HCW acceptance or rejection, can influence the general population's perception towards COVID-19 vaccines. Thus the study was planned to determine the COVID-19 vaccine perception and to improve vaccine awareness among HCWS of Maharashtra, India

MATERIAL AND METHODS: This cross-sectional study was conducted among HCWS of Noor hospital from 1 June – 14 June 2021 through self-reported, structured questionnaire prepared from prior evidence from studies on vaccine perception among HCWS and general population.

RESULTS: Out of 392, 300 HCWS (response rate 76.53%) had completely filled the online survey questionnaire. In present study 87% of the participant were agreed to take COVID-19 vaccine and 13% were reluctant to take it. Acceptance for vaccine was more in doctors (94.80%) and nurses (89.92%) than pharmacist (80.76%) and laboratory technicians (75%).

CONCLUSION: Vaccine acceptance is more in doctors and nurses as compared to pharmacist and technical staff. Vaccine acceptance is influenced by academic level, exposure to infection in family and inadequate information regarding vaccine.

KEY WORDS: COVID-19 vaccination, health care workers

Department of FMT

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				√	√	√	√	√	40 lectures + 10 SDL + 75 Practical
Forensic Medicine and Toxicology	Dr. Abdul Mateen MBBS MD (FMT) 85459	Professor and Head From 1/9/2020	Regular and permanent	√	√	√	√	√	40 lectures 40 Practical + 05 SDL (Small group teachings/tutorials/Integrated teaching/Practical's)

Department of FMT Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
01	Dr Mohammed Abdul Mateen	1 Incidence of burns among autopsies done at govt. medical college, Aurangabad. (Medpulse international journal of forensic medicine, print	ISSN:2579-0935, volume1,issue 3 March 2017 pp22-24
		2 Correlative study of Cranial index with diameter of foramen ovale in Maharashtra population	IISN-0973-9122 (Print) volume 12, no.2 , April-june 2018 pp155-158)
		3 Study of elbow joint for estimation of age in Maharashtra population	IISN-0973-9122(print) volume12, no.3 july-sept 2018 pp153-156)
		Study of dimorphism of humerus in Maharashtra population	IISN-0973-9122(print) volume14, no.1, January-march 2020 pp110-112)
		Study of pedestrian injuries and fatalities in Maharashtra population	IISN-0973-9122(print) volume14, no.3 july-sept 2020 pp430-435)

- BCME / BCBR Certificates Attached

Department of Community Medicine

Name of the College : JIIU's Indian Institute of Medical Science & Research									College Code: 1407
Sr. No.	**Name of the Teacher**	**Designation**	**Nature of empolyment Regular/Permamnat Or Contractual/ Oustsourced and Date of Promotion**		**Details of Service in the last 5 years**					**No. of Lectures Taken in Last Academic Year (Year 2021)**
			Nature of Employment	**Date of Promotion**	**2019**	**2020**	**2021**	**2022**	**2023**	
1	**Dr. Purushottam Giri** Qualification-2007 MD (PSM) IMR NO-2001/07/2607 Aadhar No. 695808255929 PAN No. **AJOPG2653A**	Professor & HOD	REGULAR	DOJ-21/07/2015	√	√	√	√	√	Total Lectures – 18 Health care, PHC, health care system, RNTCP, International health, Tuberculosis, Poliomyelitis, ANC, PNC, School health, Diabetes, Occupational health, NHP-2017, VHA, Malaria
2	**Dr. Mohammad Shafee** Qualification-2003 MD (PSM) IMR NO- 89073 Aadhar	Professor	REGULAR	DOJ-09/11/2020 DOP-08/03/2021	X	X	X	√	√	Total Lectures – 18 Cancer, Mental Health, NVBDCP, NPCDCS, Diphtheria & Peruses, Family planning, Feeding of Infant, RHD, IDSP, Management

	No.630095137484 PAN No.**AJJPM4786F**									technique, Health System, National AIDS program
3	**Dr. Hina Kausar** Qualification-2012 MD (PSM) IMR NO-2008/07/2836 Aadhar No. 581127862938 PAN No.**ADNP1347M**	Professor	REGULAR	DOJ-29/10/2013 DOP-23/01/2017 DOP-01/11/2021	√	√	√	√	√	Total Lectures – 18 CDP & Multispectral Development, MCH, Accidents and injury, RCH-II (RMNCH), Infuenza and ARI, Dengue, Filarial, Behavioral sciences, Management Information system, Evaluation of Health System, NRHM, Tetanus, Under-5, Hypertension,
4	**Dr. Jawwad Hashmi** Qualification-2014 MD (PSM) IMR NO-2009/03/1285 Aadhar No. 349443274115 PAN No.**DHIPS2173C**	Assoc. Prof.	REGULAR	DOJ-22/09/2015 DOP-01/07/2020	√	√	√	√	√	Total Lectures – 18 Feeding of Infant, Growth & Development, CHD, RHD, Hypertension, Occupation Diseases-II , IDD, Cholera, JE, KFD, Health care systems, Rights of Children, MCH Indicators, Geriatrics,

5	**Dr. Vishal Rathod** Qualification- 2018 MD (PSM) IMR NO- 2006/06/2711 Aadhar No. 807179564065 PAN No. **AMJPR56522G**	Asst. Prof.	REGULAR	DOJ- 03/07/2019 DOP- 0104/2021	X	√	√	√	√	Total Lectures – 18 Behavioral & Social Problems of Children, Diabetes Mellitus, HPDI, MHPW, Health Planning Management, NRHM, Chicken Pox, Rubella, Rickettsial Diseases, Hepatitis, Cholera,
6	**Dr. Mohammad Ghodke** Qualification- 2018MD (PSM) MMC NO- Aadhar No. 895980711519 PAN No.**BIRPG4872Q**	Asst. Prof.	REGULAR	DOJ- 13/02/2023	X	X	X	X	√	Total Lectures – 15 Analysis of survey findings of the allotted families and group disussion on important health related issues in the community , Measles/ mumps, Pertusis/diphteria/ARI
7	**Dr. Avinash Magare** Qualification- 1981 MBBS 1989 MD (PSM) MMC NO- 48487 Aadhar No. 35648203473 PAN No.	Asst. Prof.	REGULAR	DOJ-01-07- 2021	X	X	X	√	√	Total Lectures – 05 Measures of Variation, Normal Distribution, Sampling Methods & Sampling variability, SE of difference between two proportions,

This certificate is computer generated and can be verified by scanning the QR code given below.
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Roll No: NPTEL21MD04S23110356

To

MOHAMMAD SHAFEE MOHAMMAD HNAEEF
A1 BAITUL HANEEF, PATEL PALMS
BESIDE RAAHAT HOSPITAL, HARSUL
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9168583000

Online Certification

This certificate is awarded to

MOHAMMAD SHAFEE MOHAMMAD HNAEEF

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 79 %

Online Assignments	**80 %**	**Proctored Examination**	**79 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

Roll no: NPTEL21MD04S23110356

To validate and check scores: **http://nptel.ac.in/noc**

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Roll No: NPTEL21MD04S13110141

To

HINA KAUSAR MASLEHUDDIN
R H NO. K14 GUT24,PATEL PRIDE
BEHIND JALAN NAGAR , BANEWADI
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9545643930

Online Certification

This certificate is awarded to

HINA KAUSAR MASLEHUDDIN

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 84 %

Online Assignments	**97 %**	**Proctored Examination**	**79 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD04S13110141

To validate and check scores: **http://nptel.ac.in/noc**

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, **https://nptel.ac.in/noc/**

Roll No: NPTEL21MD04S13110105

To

SYED JAWWAD ALI HASHMI
PLOT NO 68 SADAF COLONY
KAT KAT GATE
AURANGABAD
MAHARAHSTRA - 431001
PH. NO :9970303731

Online Certification

This certificate is awarded to

SYED JAWWAD ALI HASHMI

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 78 %

Online Assignments	**97 %**	**Proctored Examination**	**71 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD04S13110105

To validate and check scores: **http://nptel.ac.in/noc**

Online Certification

This certificate is awarded to

DR VIJAYKUMAR JADHAV

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 80 % in Proctored Examination

September 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

Roll no: NPTEL22MD01S14190031

Pass criteria: ≥ 50% in Proctored Examination

You
today at 11:11 AM

Online Certification

MOHAMMAD GHODKE

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 83 %

Online Assignments 87 % Proctored Examination 82 %

MAR - JUN 2021

Dr. Manoj V Murhekar

Prof. Balram Bhargava

Roll no: NPTEL21MD05131110685

To validate and check scores: https://nptel.ac.in/noc

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, **https://nptel.ac.in/noc/**

Roll No: NPTEL19GE33S1221651

To
PRANIT SANJAY PATIL
DEPARTMENT OF COMMUNITY MEDICINE,
MAHATMA GANDHI INSTITUTE OF MEDICAL SCIENCES
SEWAGRAM
WARDHA
MAHARASHTRA - 442102
PH. NO :9890421648

ICMR NIE

Online Certification

This certificate is awarded to

PRANIT SANJAY PATIL

for successfully completing

Basic Course in Biomedical Research

As mandated by the Board of Governors in supersession of Medical Council of India (MCI)

with consolidated assignment score of 89 %

SEP-DEC 2019

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Dr. Rakesh Kumar Vats
Secretary General
Board of Governors in supersession of MCI
New Delhi, India

swayam

Roll no: NPTEL19GE33S1221651

To validate and check scores: **http://nptel.ac.in/noc**

Department of General Medicine

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Medicine	Dr. Sachin N. Solanke 2003/03/1258 M.D. Medicine	Prof & HOD	Regular	√	√	√	√	√	10 lectures, small teaching group 06
	Dr. Abdul Jabbar 85556 M.D. Medicine	Professor	Regular	√	√	√	√	√	08 lectures, small teaching group 07
	Dr. Rameshwar Warkad 2004/02/1001 M.D. Medicine	Associate Professor	Regular	√	√	√	√	√	10 lectures, small teaching group 08
	Dr. Yogesh Lakkas 2006/02/528 M.D. Medicine	Associate Professor	Regular	√	√	√	√	√	14 lectures, small teaching group 12
	Dr. Suhas Bavikar 51782 M.D. Medicine	Associate Professor	Regular	√	√	√	√	√	10 lectures, small teaching group 08
Medicine	Dr. Mohammed Sami 76120 M.D. Medicine	Associate Professor	Regular	X	X	√	√	√	15 lectures, small teaching group 12
	Dr. Ansari Mohammed Shoeb 2010/10/3063	Associate Professor	Regular	√	√	√	√	√	18 lectures, small teaching group 15

	Dr. Vaijwade Govind 2008/05/2048 DNB (Neuro)	Assistant Professor	Regular	X	X	√	√	√	06 lectures, small teaching group 05
	Dr. Syed Shahnawaz 2008/03/0452 M.D. Medicine, DNB (Cardiac)	Assistant Professor	Regular	X	X	√	√	√	06 lectures, small teaching group 04
	Dr. Nilesh Lomte 2010/05/1690 M.D. Medicine, DM (Endocrine)	Assistant Professor	Regular	X	√	√	√	√	12 lectures, small teaching group 10
	Dr. Prafull Pande 2011/05/1293 M.D. Medicine	Assistant Professor	Regular	√	√	√	√	√	10 lectures, small teaching group 08
	Dr. Dhiraj Chhabda 66109 M.D. Medicine	Assistant Professor	Regular	√	√	√	√	√	04 lectures, small teaching group 03
	Dr. Anand Agrawal 082659 M.D. Medicine	Assistant Professor	Regular	X	X	√	√	√	04 lectures, small teaching group 03
	Dr. Rohit Kasat 2012/06/1851 M.D. Medicine	Assistant Professor	Regular	√	√	√	√	√	04 lectures, small teaching group 03
	Dr. Tushar Nikam 2008/04/1667 M.D. Medicine, DM(Cardiac)	Assistant Professor	Regular	X	X	X	√	√	06 lectures, small teaching group 05
	Dr. Milind Kulkarni 2012/05/1048 M.D. Medicine	Assistant Professor	Regular	X	X	X	√	√	10 lectures, small teaching group 08
	Dr. Mukund Bajaj 2002/03/1761 M.D. Medicine	Assistant Professor	Regular	X	X	X	√	√	02 lectures, small teaching group 02

Department of Medicine Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
01	Dr. Sachin Solanke	Deepak KA, Solanke SN, Correlation between D-dimer and computed tomography severity score in middle aged young adults with COVID-19 pneumonia: a retrospective study, *Int J Adv Med.,2022; 9(1) :1-4*	Index Copernicus **(Published before Feb 2022)**
02	Dr. Abdul Jabbar	Abdul Jabbar Abdul Mannan1, Syed Shahnawaz Ali Hamid Ali2, Mohammed Suhail3, Mohammad Shafee4, Afshan Kausar5, Complete Blood Counts in COVID-19 patients at JIIU's Indian Institute of Medical Science and Research, Jalna, Maharashtra, European Journal of Molecular & Clinical Medicine, 2022,09(08)2828-32	Google Scholar
		Abdul Jabbar Abdul Mannan1, Syed Shahnawaz Ali Hamid Ali2, Mohammed Suhail3, Mohammad Shafee4, Afshan Kausar5,Clinical Profile and Outcome of COVID 19 Patients from JIIU's IIMSR, Jalna, Maharashtra, European Journal of Molecular & Clinical Medicine(EJMCM),2022, 09(08) 2823-27	Google Scholar.
03	Dr. Yogesh Lakkas	Yogesh Lakkas1*, Rameshwar A Warkad2, Uma Sundar3, Jitendra Rathod4, Rupali Kharat5, Prospective study for classification of vertigo with special emphasis on BPPV, MedPulse International Journal of Medicine, 2021 19 (03)	Index Copernicus

		91-95	
		Rameshwar Warkad1*, Yogesh Lakkas2, Judicious use of medications in COVID-19 patients and its outcome, MedPulse International Journal of Medicine, 2021, 1-5	Index Copernicus
		Dr.YogehLakkas, Dr. Uma Sundar, Dr. Rupali kharat, Dr. Jitendra Rathod, To Evaluate The Efficacy Of Repeated Epley's Maneuver Over And Above Betahistine In The Treatment Of Patients Diagnosed With Benign Paroxysmal Positional Vertigo (BPPV), International Journal Dental and Medical Sciences Research, 2021, 3(04), 772-780	Google Scholar
04	Dr. Suhas Bavikar	1Suhas Bavikar, 2Ajay Oswal, 3Swarnalata Gourishankar, 4Purva Bavikar, Therapeutic plasmapheresis in kidney transplant patients: 30 years experience, European Journal of Molecular & Clinical Medicine, 2022, 09(02), 1089-97	Google Scholar
		Vilas Magarkar1, MD, DM, Cardiology; Devendra Borgaonkar1, MD, DM, Cardiology; Pravir Lathi1, MD, DNB, Cardiology; Suhas Bavikar2, MD, DNB, Nephrology, Percutaneous Intervention in Thrombotically Occluded Grafted RenalArtery, Journal of Clinical and Preventive Cardiology, 2023,09(01), 31-33	Scopus journals
		Vivek B. Kute, MD, DM,1,2 Vivek Pathak, MD, DNB,3 Deepak S. Ray, MD, DM,4 Anil K. Bhalla, MD, DM,5 Suraj M. Godara, MD, DM,6 Sajith Narayanan, MD, DM,7 Umapati Hegde, MD, DNB,8 Pratik Das, MD, DM,4 Pranaw Kumar Jha, MD, DNB,9 Vijay Kher, MD, DM,10 Sonal Dalal, MD, DNB,11 Madan M. Bahadur, MD, DNB,12	Wolters Kluwer Health-2023

		Sishir Gang, MD, DM,8 Vijay Kumar Sinha, MD, DNB,13 Himanshu V. Patel, MD, DNB,1,2 Rushi Deshpande, MD, DM,12 Manish Mali, MD, DNB,14 Ashish Sharma, MS,15 Sushree Sashmita Das, DNB,4 Sharmila Thukral, MD, DNB,4 Ashay Shingare, MD, DNB,12 Anil Kumar BT, MD, DNB,16 Benil Hafeeq, MD, DM,17 Feroz Aziz, MD, DM,17 Ismail N. Aboobacker, MD,7 Jyotish Chalil Gopinathan, MD, DM,17 Rutul M. Dave, MD, DM,11 Dinesh Bansal, MD, DM,9 Urmila Anandh, MD, DM,18 Sarbpreet Singh, MS,15 Jai Kriplani, MD, DNB,19 Suhas Bavikar, MD, DNB,20 Vishwanath Siddini, MD, DNB,21 Satish Balan, MD, DM,22 Manish Singla, MD, DM,23 Munish Chauhan, MD, DM,23 Vidyanand Tripathi, MD, DNB,24 Devang Patwari, MD, DM,25 Abi M. Abraham, MD, DM,26 Sanshriti Chauhan, MD, DM,1,2 and Hari Shankar Meshram, MD, DM1,2, A Multicenter Retrospective Cohort Study on Management Protocols and Clinical Outcomes After ABO-incompatible Kidney Transplantation in India, Original Clinical Science—General, 1-11	
05	Dr. Rameshwar Warkad	Yogesh Lakkas1*, Rameshwar A Warkad2, Uma Sundar3, Jitendra Rathod4, Rupali Kharat5, Prospective study for classification of vertigo	Index Copernicus

		with special emphasis on BPPV, MedPulse International Journal of Medicine, 2021 19 (03) 91-95	
		Rameshwar Warkad1*, Yogesh Lakkas2, Judicious use of medications in COVID-19 patients and its outcome, MedPulse International Journal of Medicine, 2021, 1-5	Index Copernicus
06	Dr. Shoeb Ansari	Dr. Ansari Mohammed Shoeb 1, Dr. Afroz Ziyaulla Khan2, A study of Left Ventricular Diastolic Dysfunction by Echocardiography in patients of Type II Diabetes Mellitus with or without Hypertension, *IOSR Journal of Dental and Medical Sciences, 2021 , 20(06) 34-42*	Google Scholar
		Ameer QadeerAhmed Inamdar1*, Ansari Mohammed Shoeb2, Mohammed Sohail Noorani1., Prevalence of anemia in geriatric age group at tertiary care hospital in Maharashtra, India, JETIR, 2022, 09(07) 286-91	Google Scholar
07	Dr. Shahanawaz Ali	Abdul Jabbar Abdul Mannan1, Syed Shahnawaz Ali Hamid Ali2, Mohammed Suhail3, Mohammad Shafee4, Afshan Kausar5, Complete Blood Counts in COVID-19 patients at JIIU's Indian Institute of Medical Science and Research, Jalna, Maharashtra, European Journal of Molecular & Clinical Medicine,2022,09(08)2828-32	Google Scholar
		Abdul Jabbar Abdul Mannan1, Syed Shahnawaz Ali Hamid Ali2, Mohammed Suhail3, Mohammad Shafee4, Afshan Kausar5,Clinical Profile and Outcome of COVID 19 Patients from JIIU's IIMSR, Jalna, Maharashtra, European Journal of Molecular & Clinical Medicine (EJMCM), 2022, 09(08) 2823-27	Google Scholar.

JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur, Jalna

Certificate of Participation

This is to certify that ***Dr. Sachin Solanke*** *has participated in the* ***'Curriculum Implementation Support Program (CISP) -II*** *'Organized by* ***Medical Education Unit (MEU), IIMSR*** *Under the Aegis of* ***MCI Regional Center, MUHS, Nashik*** *at JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna held on 17th & 18th December 2020.*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Organizing Chairman

Dr. Sarojini Jadhav
MCI Observer

BCBR: Exam City/Centre Details on December 3,2023

message

noc22-md01@nptel.iitm.ac.in>
o: drsachinsolanke@gmail.com

Mon, 27 Nov, 2023 at 6:

NPTEL®

Dear Candidate,

Greetings from NPTEL!

Here are the details of your centre for the BCBR exam on 03rd December.

Exam Date: 03-12-2023

Course Name: Basic Course in Biomedical Research

Final Allocated Exam City: Aurangabad

Final Allocated Exam Session: After Noon

Name of centre: iON Digital Zone Chikalthana

Address of centre: E-50 Besides CTR Manufacturing Industries Limited, Near Chikalthana MIDC Police Station, MIDC Industrial Area, Chikalthana, Chhatrapati Sambhaji Nagar, Maharashtra, India, 431006

Note:

1. Link to download hall ticket will be shared soon.
2. Test centre and session provided is based on centre/seating availability from our exam partner. Request for changes in centre and shift cannot be entertained anymore.

For further queries, please write to noc22-md01@nptel.iitm.ac.in

All the best for your exams!

Warm Regards,
NPTEL Team

JIIU'S-IIMS & R
We Serve Humanity

MUHS

Certificate

JIIU's Indian Institute of Medical Science and Research

(Medical College & Hospital)

Warudi, Badnapur, Jalna

CME Code No: ***MMC/MAC/2015/F – 003774***

Type of CME: ***Multispeciality***

This is to certify that ***Dr. Sachin Nandkishor Solanke*** *has participated as* ***Delegate*** *in* ***'Basic Workshop in Research Methodology'*** *organized by Department of Community Medicine (PSM) of JIIU's Indian Institute of Medical Science and Research Medical College, Warudi, Badnapur, Jalna, affiliated to the Maharashtra University of Health Sciences (MUHS), Nashik from 08th to 10th October 2015. Maharashtra Medical Council (MMC), Mumbai has granted 04 (Four) Credit hours to delegate.*

Dr. P. A. Giri
Professor of Community Medicine
IIMSR Medical College, Badnapur
Organizing Secretary

Dr. Mohd. Shafee
Professor & Head of Community Medicine
IIMSR Medical College, Badnapur
Convener

Dr. A. B. Solepure
Dean
IIMSR Medical College, Badnapur
Organizing Chairman

Dr. R. T. Ankushe
Associate Professor of Community Medicine
Govt. Medical College, Aurangabad
Maharashtra Medical Council Observer

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

Institute of Medical Education Technology & Teachers' Training

Regional Centre, 3rd Floor, Civil Hospital Building, Aundh Camp, Pune 27.

Certificate No. 3134

This is to certify that

Dr./Mr./Smt. Sachin Nandkishor Solanke

has participated as a Delegate / Faculty in

Basic Workshop in Research Methodology

held from 08 Oct. 2015 to 10 Oct. 2015

Organised by

JIIU's Indian Institute of Medical Science & Research, Warudi

Approved vide letter no. MUHS IMETTT-Pune/1806 dated 21/09/2015

Payal K Bansal

Dr Payal K Bansal
Head, IMETTT &
MUHS Regional Centre, Pune

Dr. Kashinath D. Garkal
Registrar
MUHS, Nashik

Dr. Prof. Arun Jamkar
Vice Chancellor
MUHS, Nashik

MUHS

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

Institute of Medical Education Technology & Teachers' Training

Regional Centre, 3rd Floor, Civil Hospital Building, Aundh Camp, Pune 27.

Certificate No. 3134

This is to certify that

Dr./Mr./Smt. Sachin Nandkishor Solanke

has participated as a Delegate / Faculty in

Basic Workshop in Research Methodology

held from 08 Oct. 2015 to 10 Oct. 2015

Organised by

JIIH's Indian Institute of Medical Science & Research, Harudi

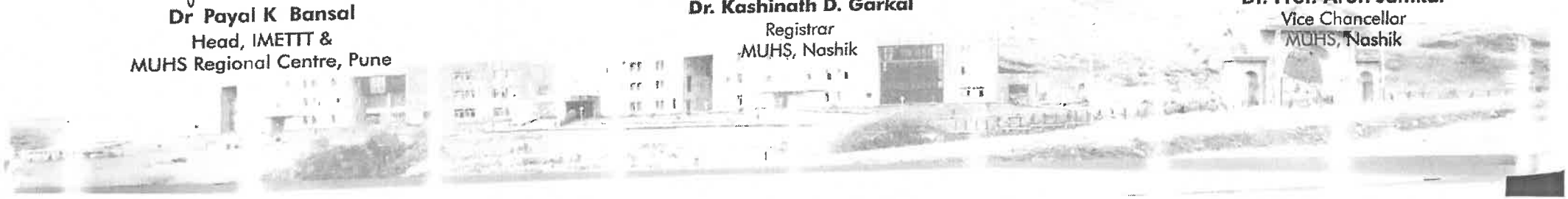
Approved vide letter no. MUHS IMETTT Pune/1806 dated 21/09/2015

Payal K Bansal

Dr Payal K Bansal
Head, IMETTT &
MUHS Regional Centre, Pune

Dr. Kashinath D. Garkal
Registrar
MUHS, Nashik

Dr. Prof. Arun Jamkar
Vice Chancellor
MUHS, Nashik



MUHS

National Medical Commission Regional Center, IMETTT
Maharashtra University of Health Sciences (MUHS), Nashik.

Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Suhas Shriram Bavikar****, Associate Professor, Department of General Medicine , from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***Revised Basic Course Workshop & AETCOM*** *held during 05th October to 07th October 2021 under supervision of* ***NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

National Medical Commission Regional Center, IMETTT,
Maharashtra University of Health Sciences (MUHS), Nashik.

MUHS

JIIU'S INDIAN INSTITUTE OF MEDICAL SCIENCE & RESEARCH,
Warudi, Tal, Badnapur, Dist. Jalna

Revised Basic Course Workshop in Medical Education Technology & Training in Attitude, Ethics & Communication (AETCOM)

Certificate of Participation

This is to certify that ***Dr. Pande Prafull****, Assistant Professor, Department of General Medicine, from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 21st February to 23rd February 2023 under supervision of NMC* ***Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

Dr. Azhar Ahmed Siddiqui
Organizing Chairman
Dean JIIU'S IIMSR

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Ganesh Chaudhari
NMC Observer

Online Certification

This certificate is awarded to

RAMESHWAR ATMARAM WARKAD

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 72 % in Proctored Examination

September 2023

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamilnadu, India

Dr. Rajiv Bahl
Secretary to Government of India,
Department of Health Research and Director General,
Indian Council of Medical Research, New Delhi, India

Roll no: SEP03BCBRS2004295633

Pass criteria: ≥ 50% in Proctored Examination

Online Certification

This certificate is awarded to

YOGESH LAKKAS

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 70 % in Proctored Examination

December 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamilnadu, India

Dr. Rajiv Bahl
Secretary to Government of India,
Department of Health Research and Director General,
Indian Council of Medical Research, New Delhi, India

Roll no: DEC22BCBRS1005575102

Pass criteria: ≥ 50% in Proctored Examination

MUHS

JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur, Jalna

Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Shoeb Ansari****, Professor, Department of OBGY, JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***'Revised Basic Course Workshop & AETCOM (rBCW)-II'*** *held during 06th July to 08th July 2021 under supervision of* ***NMC Nodal/Regional Centre, MUHS,*** *Nashik (M.S.).*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

This certificate is computer generated and can be verified by scanning the QR code given below.
This will display the certificate from the NPTEL repository, **https://nptel.ac.in/noc/**

Roll No: NPTEL21MD04S13110101

To

ANSARI MOHAMMED SHOEB
PLOT NO 06, AHBAB COLONY,
RAVINDRA NAGAR, KATKAT GATE ROAD,
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9595650877

Online Certification

This certificate is awarded to

ANSARI MOHAMMED SHOEB

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 80 %

Online Assignments	**93 %**	**Proctored Examination**	**75 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

Roll no: NPTEL21MD04S13110101

To validate and check scores: **http://nptel.ac.in/noc**

icmr NIE

Online Certification

This certificate is awarded to

SAYYED SAMMIYODHIN GOUS

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 78 % in Proctored Examination

Mar 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

Roll no: NPTEL21MD05S33120299

icmr | NIE
INDIAN COUNCIL OF MEDICAL RESEARCH | NATIONAL INSTITUTE OF EPIDEMIOLOGY

Online Certification

This certificate is awarded to

GOVIND VAIJWADE

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 51 % in Proctored Examination

April 2023

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamilnadu, India

Dr. Rajiv Bahl
Secretary to Government of India,
Department of Health Research and Director General,
Indian Council of Medical Research, New Delhi, India

swayam

Roll no: NPTEL23MD01S63141087

Pass criteria: ≥ 50% in Proctored Examination

Department of Pediatrics

Department	Name of the faculty Qualification IMR Number	Current designation and date of promotion	Nature of employment Regular/permanent or contract/outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Paediatrics	**Dr. Lalit Une** MD(Pediatrics) MMC 65628	Professor and HOD	Regular	IIMSR, Jalna	IIMSR, Jalna	IIMSR, Jalna	IIMSR, Jalna	IIMSR, Jalna	Growth and Development ,Developmental disorder ,Nutrition CNS,RS,Haematology Lectures 11,SGT 16
Paediatrics	**Dr. Ravindra Bhingare** MD(Pediatrics) MMC 76096	Professor	Regular	IIMSR, Jalna	IIMSR, Jalna	AIIMS, Udaipur	AIIMS, Udaipur	AIIMS, Udaipur	Malnutrition ,Vitamin and deficiency , Respiratory system CVS,CNS Lectures 10 SGT 14

Paediatrics	**Dr. Shaikh Ajaz Haneef** MD(Pediatrics) MMC 073601	Professor	Regular	IIMSR, Jalna	Dr. UPMC&H Jalgaon	Dr. UPMC&H Jalgaon	Dr. UPMC&H Jalgaon	Dr. UPMC&H Jalgaon	Immunization Infectious disease Lectures 3 , SGT 6
Paediatrics	**Dr. Pankaj Bansali** MD(Pediatrics) MMC2001/03/1571	Associate professor	Regular	IIMSR, Jalna	IIMSR, Jalna	-	-	-	Nephrology ,Musculoskeletal Haematology Lectures 5,SGT 12
Paediatrics	**Dr. Nikhil Pathak** DNB(Pediatrics) MMC 2003/03/1045	Associate professor	Regular	IIMSR, Jalna	IIMSR, Jalna	IIMSR, Jalna	IIMSR, Jalna	-	Neonatology. Critical care Emergency in Paediatrics Lectures 2,SGT 08
Paediatrics	**Dr. Abdul Wahab** MD(Pediatrics) MMC 2005/01/0197	Assistant professor	Regular	IIMSR, Jalna	IIMSR Jalna	IIMSR Jalna	-	-	Central nervous System, CVS,GUT Lectures 2,SGT 06
Paediatrics	**Dr. Manish Kulkarni** MD(Pediatrics)	Assistant professor	Regular	IIMSR, Jalna	IIMSR Jalna	IIMSR, Jalna	-	-	Paediatric Malignancy GIT Lectures 2,SGT 06

	MMC 74103								
Paediatrics	**Dr. Rahul Gosavi** MD(Pediatrics) MMC 207/04/0645	Assistant professor	Regular	IIMSR, Jalna	IIMSR Jalna	IIMSR, Jalna	-	-	Neonatology, Social Paediatrics Lectures 2,SGT 06
Paediatrics	**Dr. Shah Mansi Pareshbhai** MD(Pediatrics) G-35087	Assistant professor	Regular	IIMSR, Jalna	-	-	-	-	CVS Lectures 2,SGT 04
Paediatrics	**Dr. Jain Shailesh Dllip** MD(Pediatrics) MMC 2016083129	Assistant professor	Regular	IIMSR, Jalna	-	-	-	-	Haematology Lectures 2,SGT 04

Medical Educator training/research methodology:

Sr No	Name	designation	MET	BCBR	ACME
1	Dr. Lalit P. Une	Professor	Met, CISP Completed ,Faculty MEU	Done	Done
2	Dr. Ravindra Bhingare	Professor	Done	Done	Done
3	Dr. S.M. Rasheed	Associate professor			
4	Dr. Pankaj Bansali	Associate professor	Done,29,30sept2014		
5	Dr. Abdul Wahab	Assistant professor	Done ,		
6	Dr. Nikhil Pathak	Assistant professor			
7	Dr. Varsha Vaidya	Assistant professor			
8	Dr. Manish Kulkarni	Assistant professor			
9	Dr. Rahul Gosavi	Assistant professor			

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
1	Dr. Lalit P. Une	**1.** The spectrum of aeroallergen sensitization in children with wheeze at a tertiary care centre- A prospective observational study Medpulse International Journal of Paediatrics March 2021 Vol. 17 Issue 3. 44-48 2636-4662	Index Copernicus
		2. Perception of undergraduate medical students regarding e_learning during COVID 19 pandemic International Journal of Contempory Paediatrics January 2022 Vol 9, Issue 1 89-93 2349-3291	Index Copernicus
		3. A Case series of CKD with renal osteodystrophy in children International journal of scientific research May 2023 Vol .12,Issue 5 1-3 2277-8179	Pub med and PMC
		4. Nutritional status and growth patterns of infants in NICU:A cross sectional analysisJournal of cardiovascular disease research August 2023 Vol 14,Issue 09 837-843 0975-3583 0976-2833	EMBASE and Google Scholar
		5. Prevalence and risk factors of ventilator associated pneumonia in PICU:A cross sectional study Journal of cardiovascular disease research August 2023 Vol 14,Issue 09 837-843 0975-3583 0976-2833	EMBASE and Google Scholar
		6. Requirement of vitamin D in patients with nephrotic syndrome on long term steroid European Journal of Molecular Medicine February 2023 Vol 10,Issue 2,2023 848-858 2515-8260	Scopus
		7. A Comparative Prospective Study on the Pharmacotherapy of Bronchial Asthma in Paediatrics Patients At A Tertiary Care Hospital International Journal of Paediatrics Research Feb-2020 Vol.7/ Issue 02 104 113	Index Copernicus
2	Dr. Ravindra Bhingare	**1.** Effect of long-term treatment with an inhaled corticosteroid(budesonide) on airway hyper responsiveness and clinical asthma in nonsteroid-dependent asthma in children. MedPulse International Journal of Pediatrics August 2018 Vol.7,	Index Copernicus

		Issue 02. 27-29 2636-4662 **2.** Assessment of glycemic control, glucose variability,and hypoglycemic incidence using insulin degludec in children and adolescent with type I diabetes. MedPulse International Journal of Pediatrics July 2018 Vol.7, Issue 01 14-18 2636-4662	
3	Dr. Pankaj Bhansali	**1**.Requirement of vitamin D in patients with nephrotic syndrome on long term steroid European Journal of Molecular Medicine February 2023 Vol 10,Issue 2,2023 848-858 2515-8260 **2**.Clinical Spectrum Of Infections In Childlren with Nephrotic Syndome(EJMCM) ISSN:2515-8260 Volume10,Issue02,2003 **3**.Analysis of Acute Peritoneal Dialysis in Children International Journal of Toxicological and Pharmacological Research 2023;13(4);126-134	Scopus Scopus EMBASE and Google Scholar
4	Dr. Nikhil Pathak	**1.** Nutritional status and growth patterns of infants in NICU:A cross sectional analysis Journal of cardiovascular disease research June 2023 Vol.14,Issue 08 1-7 0975-3583 0976-2833 **2.** Prevalence and risk factors of ventilator associated pneumonia in PICU:A cross sectional study Journal of cardiovascular disease research August 2023 Vol 14,Issue 09 837-843 0975-3583 0976-2833	EMBASE and Google Scholar EMBASE and Google Scholar
5	Dr. Rahul Gosavi	**01** oral paracetamol vs oral ibuprofen in patent ductus arteriosus : A randomized, controlled, noninferiority trial, RCT, J Paediatrics, 2020 July, 222:79-84 **02** oral paracetamol vs oral ibuprofen for closure of haemodynamically significant patent ductus arteriosus in preterm neonates, BMJ Paediatrics Aug. 2017 **3.**Contributor for book-**Text book of Clinical Neonatology** – Chapters 1 UTI in Neonate 2 Thrombocytopenia in sick neonate	Pubmed and Google Scholar Pubmed and Google Scholar

Department of Dermatology

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment	Details of service in last 5 years					Number of lectures taken /year Topics covered small teaching group with Topics covered
				1	2	3	4	5	
Dermatology	Dr. Alhad Jadhav MBBS MD 43967	Professor 01/06/2007	Permanent	√	√	√	√	√	Number of topics-8 HIV and AIDS, psoriasis, lichen planus, vitiligo, connective tissue disorders, allergic disorders, introduction to cosmetic dermatology, genodermatoses, melanoma Number of Small teaching group -1 Topics covered- Eczema
	Dr. Amruta Kulkarni MBBS MD 2008/04/1590	Associate professor 01/11/2023	Permanent	√	√	√	√	√	Number of topics-8 Topics covered Hansen's disease, treatment of Hansen's disease, cutaneous drug eruptions, nutritional disorders, hair disorders, , vesiculobullous disorders, nail disorders, pruritus

									Number of Small teaching group -1 Topics covered- Drugs used in leprosy
	Dr. Nausheen Syed MBBS MD	Assistant Professor 02/01/2023	Permanent			√	√	√	Number of topics-6 Anatomy of skin, hair and nail, basic skin lesions, scabies and pediculosis, fungal infections, acne Number of Small teaching group -1 Topics covered- treatment of scabies and pediculosis

Department of Dermatology Publications

Sr. No.	Faculty name	Publications in Vancouver referencing style	Indexing system
1.	Dr. Alhad Jadhav	1.Jadhav A, Kulkarni A, Lubna S, Jawwad S. Diagnosing the missing case of diabetes mellitus and its risk factors using Indian diabetes risk score as screening tool in a rural area. European Journal of Molecular & Clinical Medicine, 2022; 9(9): 421-426. 2.Kulkarni A, Pathak D, Jadhav A. Prevalence and clinical profile of Dermatophytosis in a tertiary care hospital in central Maharashtra. European Journal of Cardiovascular Medicine,2023; 13(2): 1551-1557 3. Khan A, Jadhav A, Choudhary F, Kulkarni A.Cost effective approach towards acne scars: use of dermaroller in acne scars management in patients with Fitzpatrick skin type 5.European	Embase Embase DOAJ

		Journal of Pharmaceutical and Medical Research 2023;10(5):148-155.	
2.	Dr. Manish Kadam	1. Choudhary F, Kadam M, Khan A, Kulkarni Comparative study of 15% trichloroacetic acid versus oral tranexamic acid in facial melasma. European Journal of Molecular & Clinical Medicine, 2023; 10(5): 374-382.	Embase
3.	Dr. Amruta Kulkarni	1.Jadhav A, Kulkarni A, Lubna S, Jawwad S. Diagnosing the missing case of diabetes mellitus and its risk factors using Indian diabetes risk score as screening tool in a rural area. European Journal of Molecular & Clinical Medicine, 2022; 9(9): 421-426. 2. Choudhary F, Kadam M, Khan A, Kulkarni Comparative study of 15% trichloroacetic acid versus oral tranexamic acid in facial melasma. European Journal of Molecular & Clinical Medicine, 2023; 10(5): 374-382. 3.Kulkarni A, Pathak D, Jadhav A. Prevalence and clinical profile of Dermatophytosis in a tertiary care hospital in central Maharashtra. European Journal of Cardiovascular Medicine,2023; 13(2): 1551-1557 4.Khan A, Jadhav A, Choudhary F, Kulkarni A.Cost effective approach towards acne scars: use of dermaroller in acne scars management in patients with Fitzpatrick skin type 5.European Journal of Pharmaceutical and Medical Research 2023;10(5):148-155.	Embase Embase Embase DOAJ

Faculty wise list of CBME and BCBR with dates

Faculty	**CBME**	**BCBR**
Dr. Alhad Jadhav	2022	Not done
Dr. Manish Kadam	04/04/2016	Not done
Dr. Amruta Kulkarni	06/07/2021	Dec 2020
Dr. Nausheen Syed	21/02/2023	Not done

Department of Psychiatry

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Psychiatry	Dr. Rashmin Achalia M.B.B.S, M.D. (PSY) 2005/02/0673	H.O.D & Prof	Regular	Yes	Yes	Yes	Yes	Yes	Anxiety Disorders, Obsessive compulsive disorder, Alcohol use disorder, Cannabis use disorder.
Psychiatry	Dr. Sadeq Qureshi M.B.B.S, D.N.B 2008/03/0451	Associate Prof	Regular	Yes	Yes	Yes	Yes	Yes	Schizophrenia, Bipolar disorder, Depression, Dementia.
Psychiatry	Dr. Faisal Khilji M.B.B.S, M.D. (PSY) 2007/05/1467	Assistant Professor	Regular	Yes	-	-	-	-	Electroconvulsive therapy, Phobias, Intellectual disability, Personality disorder.

N.B.

1. Publications by faculty should be attached as annexure(Last 03 years).
2. Publications should be quoted in Vancouver referencing style.
3. Medical Educator Training/research methodology and dates (Certificate copies should be attached) (BCME & BCBR).
4. Additional information, if any, may also be provided.

Department of Psychiatry Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
01	Dr. RashminAchalia H.O.D & Prof	1)A Study of Prevalence and Comparison of Anxiety and Depression among Separated, Divorced and Widowed Females in the Rural Population.	Perspectives in Medical Research |January to April 2023 | Val 11 | Issue 01DOI: 10.47799/pimr.1101.08
02	Dr. Sadeq Qureshi Associate Prof	1) To study the usefulness of CBCL-TRF For assessment and screening of psychiatry morbidity in juvenile delinquent boys.	Jul – Dec 2021 volume 10 issue 2, MedicaInnovatica
		2)Assessment and Comparison of Psychological Parameters of Alcohol Craving in Alcohol Dependence, Social Drinkers and Non-drinkers Using Visual Paradigms.	WIMJOURNAL, Volume No. 9, Issue No. 1, 2022 pISSN 2349-2910, Eissn 2395-0684
		3) Assessment of sexual dysfunction among COVID-19 recovered patients in rural population of Marathwada region of Maharashtra	European Journal of Molecular & Clinical Medicine Volume 09, Issue 06, 2022 ISSN 2515-8260
		4) Role of testosterone in treatment of schizophrenia and its interaction with antipsychotic drugs chlorpromazine and respesidone	International journal of academic medicine and pharmacy.
		5)A Study of Prevalence and Comparison of Anxiety and Depression among Separated, Divorced and Widowed Females in the Rural Population.	Perspectives in Medical Research |January to April 2023 | Vol 11 | Issue 01DOI: 10.47799/pimr.1101.08
		6) Study of depressive illness in retired persons in Maharashtra population.	Innovative publication. Panacea journal of medical sciences 2023:13(1):64-66

Online Certification

This certificate is awarded to

RASHMIN MANSUKH ACHALIA

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 73 % in Proctored Examination

September 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

Roll no: NPTEL22MD01S24190178

Pass criteria: ≥ 50% in Proctored Examination

National Medical Commission Regional Center, IMETTT,
Maharashtra University of Health Sciences (MUHS), Nashik.

MUHS

JIIU'S INDIAN INSTITUTE OF MEDICAL SCIENCE & RESEARCH,
Warudi, Tal, Badnapur, Dist. Jalna

Revised Basic Course Workshop in Medical Education Technology & Training in Attitude, Ethics & Communication (AETCOM)

Certificate of Participation

This is to certify that ***Dr. Rashmin Achalia,*** *Professor, Department of Psychiatry from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 21st February to 23rd February 2023 under supervision of NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS), Nashik.*

Dr. Azhar Ahmed Siddiqui
Organizing Chairman
Dean JIIU'S IIMSR

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Ganesh Chaudhari
NMC Observer

Rachalia

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OPP. SUPER MOTOR DRIVING , LOTA KARANJA
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9923790591

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INDIAN COUNCIL OF MEDICAL RESEARCH | NATIONAL INSTITUTE OF EPIDEMIOLOGY

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for successfully completing

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With a consolidated score of 64 %

Online Assignments	**80 %**	**Proctored Examination**	**58 %**

AUG-DEC 2020

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

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Panacea Journal of Medical Sciences

Journal homepage: http://www.pjms.in/

Original Research Article

Study of depressive illness in retired persons in Maharashtra population

Sadeq Mazhar Qureshi[1,*]

[1]*Dept. of Psychiatry, Indian Institute of Medical Science and Research Warudi, Jalna, Maharashtra, India*

ARTICLE INFO

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Received 26-02-2022
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Keywords:
Depression
Manic
paranoid reaction
Suicide
Anxiety

ABSTRACT

Background: As the age advances the myelination of nerve cells degenerate and motor and sensory functions of the brain will start retardation and brain is referred as Fed brain or fatigue brain. After retirement person looses social contact, status or adequate monetary income this will lead to depression.
Materials and Method: 60 (sixty) retired (elderly) patients with multiple psychiatric illness associated with depression were studied with psychiatric counselling. Their post history and associated medical problems were also recorded and treated accordingly.
Results: Different depressive illness include – 23(38.3%) dementia, 14(23.3%) major depression, 11(18.3%) manic, 8(13.3%) anxiety, 4(6.6%) paranoid reaction. Associated medical problems were – 14(23.3%) DM, 21(35%) OA, 8(13.3%) vertigo, 7(11.6%) visual problems, 10(16.6%) constipation The social or family problems were – 17(28.3%) family conflicts, 13(21.6) death of life partner or close relative, 9(15%) sudden loss of job or business, 21(35%) loneliness, 38(61.2%) had suicidal ideation, 22(36.6%) attempted for suicide.
Conclusion: The depressive illness of retired or elderly people is quite common psychiatric illness. Apart from the medical treatment, they must be treated with love and affection because patient develops insecurity and loneliness because of retired life.

1. Introduction

Growth of elderly population is growing continuously and it is projected that by the year 2025 majority of the elderly people worldwide will be residing in developing countries. India is amidst a demographic transition with a trend towards an ageing population. In India ageing population above 60 years has been estimated to almost double-up from 7.7% in 2001 to 12.3% in 2025 and number of elderly people will be nearly 150 million worldwide.[1]

The elderly are more vulnerable to disease because of impaired physiological functions and defence mechanism. It is reported that, 45% of elderly suffer from chronic illness. Hence the aim of the study is to evaluate their psychiatric and associated diseases so that they can be highlighted and treated efficiently.

2. Materials and Methods

60 retired (aged) people regularly visiting psychiatric outpatient department (OPD) of IIMS & R warudi. Badnapur (tq) Jalna (dist) – Maharashtra – 431202 were studied.

2.1. Inclusion criteria

Patients having major depression suicidal ideation or attempt, paranoid reaction, anxiety were selected.

*Corresponding author

JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur, Jalna

Certificate of Participation

This is to certify that Dr. Sadeq Mazhar Qureshi has participated in the 'Curriculum Implementation Support Program (CISP) -II' Organized by Medical Education Unit (MEU), IIMSR Under the Aegis of MCI Regional Center, RUHS, Nashik at JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur Dist. Jalna held on 17th & 18th December 2020.

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator IIMSR

Dr. Azhar Ahmed Siddiqui
Organizing Chairman

Dr. Sarojini Jadhav
MCI Observer

JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur

Certificate of Participation

Revised Basic Course Workshop in Attitude, Ethics & Communication

This is to certify that **Dr. Sadeq Mazhar Qureshi**, Assistant Professor, Department of Community Medicine, JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna, has attended Revised Basic Course Workshop & AETCOM (rBCW)-II held during 06th July to [illegible] at Nodal/Regional Centre, MUHS, Nashik (M.S.).

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

[illegible]
NMC Observer

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To

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C/O DR. ALTAF QURESHI , H.NO. 2-10-93
OPP. SUPER MOTOR DRIVING , LOTA KARANJA
AURANGABAD
MAHARASHTRA - 431001
PH. NO :9623235069

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for successfully completing

Basic Course in Biomedical Research

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With a consolidated score of 76 %

Online Assignments	**80 %**	**Proctored Examination**	**75 %**

NOV 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NOV21BCBRS13100032

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Original Article

www.pimr.org.in

DOI: 10.47799/pimr.1101.08

A study of prevalence and comparison of anxiety and depression among separated, divorced and widowed females in the rural population

Sadeq Qureshi[1], Prakash Ambekar[1], Sana Usman[2*], Rashmin Achalia[3]

[1]Associate Professor, Department of Psychiatry, JIIUs Indian Institute of Medical Science and Research, Warudi, Badnapur, Jalna, Maharashtra
[2]Junior Resident, Department of Psychiatry, JIIUs Indian Institute of Medical Science and Research, Warudi, Badnapur, Jalna, Maharashtra
[3]Professor, Department of Psychiatry, JIIUs Indian Institute of Medical Science and Research, Warudi, Badnapur, Jalna, Maharashtra

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Sana Usman, Junior Resident, Department of Psychiatry, JIIUs Indian Institute of Medical Science and Research, Warudi, Badnapur, Jalna, Maharashtra
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Date of Submission: 01/12/2022 Date of Review: 30/12/2022 Date of Acceptance: 09/01/2023

ABSTRACT

Background: Psychological distress is an important immediate outcome of the death of a spouse or divorce, which may arise because of financial and emotional challenges and can lead to adverse health outcomes with more stress, anxiety, depression, and social isolation than the general population. Methods: Cross-sectional study among separated, divorced, and widowed females from two rural villages. All eligible participants were screened for depression and anxiety using DSM 5 criteria. The severity of depression was assessed using the Hamilton depression rating scale (HDRS) and for anxiety, the Hamilton anxiety scale (HAM-A) was used. Results: Out of 162 women, 30% had mild depression whereas 42% of widow and divorced women had moderate levels of depression but it is in 50% of separated women. Severe and very severe level of depression was in around 20% of widowed and divorced women compared to 16% of separated women. There was no anxiety in around 80% of divorced and widowed women whereas 24.3% of separated women had severe anxiety. On regression analysis, separated women, dependent women, and those with less than two years of duration of separation had higher levels of depression and anxiety. Conclusion: The prevalence of Depression and Anxiety is more common in all three groups. Moderate to severe Depression is around 75% among divorced/separated and widowed females but moderate to severe anxiety was more in separated women compared to widowed women. Dependency and the early phase of widowhood/separation were also important associated factors.

KEYWORDS: Widow, Depression, Anxiety, Separated, Divorce, Women, Mental illness

INTRODUCTION:

Marital disruption is a life event with dangerous potential health implications. Despite the rise in the standard of living of the population, the condition of widows and divorced women face challenges in terms of poor mental and physical health along with poor socioeconomic status, particularly in developing countries like India because of their unique social, cultural, and economic environment. [1]

Death of the spouse or divorce (legal or otherwise) affects both sexes in different ways. Divorced or widowed women suffer more. The Social Readjustment Rating Scale (SRRS) by Holmes and Rahe (1967) for identifying major stressful life events has identified the Death of a spouse, Divorce, and Separation as the top 3 Stressful events of life with a mean value of 100, 75 & 63. [2, 3]

Psychological distress is an important immediate outcome of the death of a spouse or divorce, which may arise because of financial and emotional challenges and can lead to adverse health outcomes with more stress, anxiety, depression, and social isolation than the general population. [2] Emotional liability in divorced or widowed women is a predominant characteristic with a high level of depression and anxiety associated with loneliness, loss, and the uncertainty about future. [4, 5]

In the study of gender differences, the stain of divorce for men is transient but for women's is chronic. [6] It is found that recent divorce or widowhood is associated with an increase in poor health and the harmful mental impact of depression and anxiety. [7, 8]

India has 34 million (10% of the female population, compared to only 3% of men) widows which is the highest number in the world [9] and this number has been increasing because of double pandemics of communicable and non-communicable diseases in India e.g., HIV/AIDS and

JAMP

RESEARCH

ROLE OF TESTOSTERONE IN TREATMENT OF SCHIZOPHRENIA AND ITS INTERACTION WITH ANTIPSYCHOTIC DRUGS CHLORPROMAZINE AND RESPERIDONE

Received : 14/05/2022
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Keywords:
ICD-10, CPZ=chlorpromazine, RIS=Risperidone, testosterone, psychiatric rating scores.

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DOI: 10.47009/jamp.2022.4.3.22

Source of Support: Nil,
Conflict of Interest: None declared

Int J Acad Med Pharm,
2022; 4 (3); 98-101

Sadeq Mazhar Qureshi[1]

[1]Assistant Professor, Department of Psychiatry, Indian Institute Medical and Research, Warudi, Badnapur (TQ), Jalna, Maharashtra, India

Abstract

Background: Schizophrenia is characterised by paranoid, hallucination and delusion. The person with such disorders can't lead a normal life; rather they are great problem to the family members, society and their occupation as well. Hence such psychiatric patients must be treated efficiently. **Materials and Methods:** Out of 14 schizophrenic, 7 patients (seven) (group-A) were treated with CPZ 100 Mg tablet twice daily orally and Risperidone 2 Mg twice daily orally for 30 days and 7 (seven) group-B treated with CPZ 100 mg orally and Risperidone 2 mg twice daily orally, sustanon (testosterone) 100 mg 1 amp Intra muscular dose. Fallow up was done on every eighth day from starting day of treatment to assess the BPRS, SAPS and SANS psychotic rating scales and adverse reactions. **Result:** BRPs score in group-A was 22.15% and in group-B 35.32% SAPS score in group-A was 20.32% and 32.1% in group-B. SANS score were 21.22% in group-A and 45.40% in group-B. When compared statistically all score had significant results ($p<0.001$). **Conclusion:** The administration of testosterone along with anti-psychotic drugs has most pronounced in negative symptoms of schizophrenia.

INTRODUCTION

Schizophrenia is a neuro development disorder affecting 1-2% of the population. Beginning in adolescence schizophrenia typically causes a dramatic, lifelong impairment in social and occupational functioning.[1,2] It is characterised by negative symptoms such as impaired motivation, drop in spontaneous speech and social withdrawal. Positive symptoms such as delusion and hallucinations and cognitive symptoms, such as disturbances in speech, attentions and thought, eventually impairing the person's capability to communicate with others.[3,4] Hormones have an effect on physiology, emotions, cognition, and behaviour without the necessity for conscious input or control.

Recent neuro-endocrinological studies have reported that, gonadal sex hormones play a significant role in the patho-physiology of schizophrenia.[5] Low testosterone levels are also associated with negative symptoms in chronic schizophrenia. Patients receiving treatment for schizophrenia also show high rate of sexual dysfunction.[6] Hence sex steroids modulate cognitive deficits associated with schizophrenia.[7,8] The aim of the study to evaluate the administration of testosterone along with antipsychotic drugs and observe the outcome of schizophrenic symptoms which may be helpful for these patients to lead normal social and sexual life.

MATERIALS AND METHODS

14 (fourteen) schizophrenic patients age between 20-60 year visited to psychiatry OPD of IIMS warudi, Badnapur (Tq), Jalna (dist) Maharashtra - 431202 were studied.

Inclusive Criteria

Schizophrenic patients clinically diagnosed by ICD-10 diagnostic criteria.

Exclusion Criteria

Pregnant and lactating mothers, patients with hepatic and renal diseases were excluded from study.

Method

Out of 14 (fourteen) 7 patients grouped as A group and 7 patients as group-B (Written consent was obtained from all patients / attendant or relatives). The follow up was done every 8th day up to 30 days and illness was monitored on every 8th day by BPRS, SPS and SANS psychiatric rating scales were assessed. During follow-up apart from assessment psychiatric symptoms, adverse reactions

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ORIGINAL ARTICLE

Assessment and Comparison of Psychological Parameters of Alcohol Craving in Alcohol Dependence, Social Drinkers and Non-drinkers Using Visual Paradigms

Sadeq Qureshi[1], Nitin D. Bhoge[2], Ramesh S. Patil[3]

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Abstract:

Background: The present study was planned to assess socio-demographical differences between alcohol dependent, social drinkers and non-drinkers and comparison of subjective craving between alcohol dependent, social drinkers and non-drinkers. *Material and Methods:* The study was conducted in specialty mental health facility for duration of one year. The study consisted of three comparative groups. Each group consisted of 30 consecutive patients as per the inclusion and exclusion criteria were enrolled for the study. Informed consent was taken after explaining the nature of the study in detail. Alcohol use screening was done based on Alcohol Use Disorder Identification Test (AUDIT) whereas the severity of withdrawal was assessed using the Clinical Institute Withdrawal Assessment (CIWA) scale. *Results:* The mean age in alcohol dependent patients was 35.10 (±9.4) whereas in social drinkers the mean age was 37.43±9.4. The mean age in non-drinking subjects was 30.5±8.6. The mean ACQ score in alcohol dependent group, social drinkers and non-drinkers was 32.76, 14.50 and 12.46 respectively. Thus, the alcohol dependents reported more subjective craving once alcohol related visual cues were presented followed by social drinkers. There is highly significant difference between three groups ($p<0.0001$). *Conclusion:* Our study concludes that socio-demographic parameters in alcohol dependent patient differ from social drinkers. On presentation of visual cues, the alcohol dependent subjects reported maximum subjective craving as compared to social drinkers and non-drinkers.

Keywords: Alcohol craving, social drinkers, Non-drinkers, visual paradigms

Introduction:

India is generally regarded as a traditional 'dry' or 'abstaining' culture. The prevalence of alcohol use is low; estimated at 21% among adult males, and less than 5% among women [1, 2]. The per capita consumption is 2 liters of absolute alcohol equivalent per adult per year, and adjusting for undocumented consumption (illicit beverages and tax evaded products account for 45-50% of total consumption), this is likely to reach 4 liters [2,3].'Dry' cultures are known to be predisposed to deviant, unacceptable and anti-social behavior related to alcohol use as well as chronic disabling alcoholism [4]. Repeated observations have documented that more than 50% of all drinkers in India satisfy criteria for hazardous use. The typical consumption pattern is one of heavy solitary drinking, involving predominantly spirits and usually more than 5 standard drinks per occasion [5].

Alcohol addiction is increasingly regarded as a chronic relapsing disorder [6]. Alcohol-related problems account for over a fifth of hospital admissions in India, but are under recognized by primary care physicians. Alcohol misuse has a disproportionately high association with deliberate self-harm, high-risk sexual behavior, HIV infection, tuberculosis, esophageal cancer, liver disease and duodenal ulcers. Alcohol consumption has been implicated in over 20% of traumatic brain injuries [7].

Although craving has a complexity in definition but craving for a drug may be defined as a strong desire to crave, acquire and use drug, and may be evoked even after periods of sustained abstinence by exposure to stressful situations, to drug, or to environmental cues

To study the usefulness of CBCL-TRF for assessment and screening of psychiatric morbidity in juvenile delinquent boys in an observation home.

Nitin D Bhoge[1], Sadeq Qureshi[2]

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Abstract

Background: Given the growth of juvenile delinquent population, epidemiologic data on their psychiatric evaluation is becoming increasingly important. Rehabilitation for juvenile delinquent children is the key whether addressing healthcare, poverty, population control, unemployment or human rights issues. Therefore, the present study was undertaken to evaluate the usefulness of CBCL (Child Behaviour Checklist – TRF (Teacher Report Form) for assessment and screening of psychiatric morbidity in juvenile delinquent boys in an observation home.

Method: The present cross-sectional study was conducted in an Observation Home for Boys. Prior to conducting the study, informed written permission was sought from the Superintendent of Observation Home for Boys. Study sample consisted of 50 boys aged between 6-16 years. The children were recruited through application of inclusion and exclusion criteria and after taking written informed permission from the Observation Home authorities.

Results: Significant CBCL total score was found in 22 (44%) juveniles. Eighteen (36%) juveniles had high score on externalizing behaviour, and 14 (28%) on internalizing behaviour. The sensitivity of CBCL significant score was found to be 88.64% and specificity was 100%. This indicates the utility of CBCL in epidemiological studies and screening of juveniles. It is a simple tool for screening and as noted it has high sensitivity and specificity.

Conclusion: In conclusion, the CBCL has implications for the training of manpower for strengthening of mental health services for these children. There is immediate need for multidisciplinary mental health services at each juvenile center.

Keywords: CBCL-TRF, Psychiatric morbidity, Juvenile delinquent boys, Observation home.

Introduction

In general, it is now well established that children and adolescent with conduct problem are at an increased risk of a wide range of adverse educational and psychosocial outcomes that span: educational under-achievements, occupational problems, juvenile delinquency, substance use, violent victimization, mental health problems, and related physical and social difficulties[1].It is estimated that 10-20% of children and adolescents are affected annually by psychiatric problems[2]. Though an essential component of overall health of children, importance of mental health is being recognized only in the past few years, surveys conducted by psychiatrists in India have suggested that 7- 30% children below 12 years of age, need either evaluation or continuing psychiatric care[3,4].

Generally, delinquency in one age range and delinquency in another age shows continuity. In the Cambridge Study, nearly three-quarters (73%) of people convicted as juveniles aged 10 to 16 years were reconvicted at age 17 to 24 years, compared with only 16% of those not convicted as juveniles[5]. Nearly one-half (45%) of people convicted as juveniles were reconvicted at age 25 to 32 years, compared with only 8% of those not convicted as juveniles. Similar continuity is found in self-reports of offending. Also, the number of juvenile offences is an effective predictor of the number of adult offences.

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Department of Surgery

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
General Surgery	**Dr. Syed Obaid Chand** Qualification- M S General Surgery IMR No- 3546	Professor DOJ-27-07-2013 DOP-05-01-2015 DOP-02-03-2018	**REGULAR**	√	√	√	√	√	1.Describe the clinical features, investigations and principles of management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome (subtopic – Acute Abdomen) 2.Describe the clinical features, investigations and principles of management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome (subtopic – INTESTINAL OBSTRUCTION) 3.Describe the clinical features, investigations and principles of management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome (subtopic –PARALYTIC ILEUS) 4.Describe the clinical features, investigations and principles of

									management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome (subtopic – Ulcerative colitis & Crohn's disease) 5.Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications (subtopic – Acute appendicitis) 6.Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications (subtopic – Appendicular lump and abscess) 7.Describe the clinical features, investigations and principles of management of common anorectal diseases (Subtopic - Prolapse rectum) 8.Describe the clinical features, investigations and principles of management of common anorectal diseases (Subtopic - Carcinoma rectum) 9. Describe the clinical features, investigations and principles of

									management of common anorectal diseases (Subtopic - Surgical anatomy of anal canal ,Anal fissure,fistula) 10. Describe the clinical features, investigations and principles of management of common anorectal diseases (Subtopic - Anal haemmorhoids ,anal carcinoma)
General Surgery	**Dr. Syed Qaisaruddin** Qualification- M S General Surgery IMR No-84579	Professor DOJ-01-12-2011 DOP-05-12-2015 DOP-01-07-2020	**REGULAR**	√	√	√	√	√	1. Describe the etiopathogenesis, clinical features, investigations and principles of treatment of occlusive arterial disease 2. Describe the etiopathogenesis, clinical features, investigations and principles of treatment of occlusive arterial disease Demonstrate the correct examination of the vascular system and enumerate and describe the investigation of vascular disease 3. Describe clinical features, investigations and principles of management of vasospastic disorders 4. Describe the types of gangrene and principles of amputation 5. Describe the applied anatomy of venous system of lower limb 6. Describe pathophysiology, clinical

									features, Investigations and principles of management of DVT and Varicose veins (subtopic – DVT) 7. Describe pathophysiology, clinical features, Investigations and principles of management of DVT and Varicose veins (subtopic- varicose veins) 8. Describe pathophysiology, clinical features, investigations and principles of management of Lymph edema, lymphangitis and Lymphomas 9. Describe the clinical features, investigations and principles of management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome (subtopic – Neonatal Obstruction) 10. Describe applied anatomy including congenital anomalies of the rectum and anal canal 11. Describe the applied anatomy and physiology of stomach 12. Describe and discuss the aetiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis, Peptic ulcer disease, Carcinoma stomach

									(subtopic - congenital hypertrophic pyloric stenosis) 13. Describe and discuss the aetiology, the clinical features, investigations and principles of management of congenital hypertrophic pyloric stenosis, Peptic ulcer disease, Carcinoma stomach (subtopic – PUD, Ca stomach) 14. Demonstrate maintenance of an airway in a mannequin or equivalent. Demonstrate Airway maintenance. Recognise and manage tension pneumothorax, hemothorax and flail chest in simulated environment
General Surgery	**Dr. Reshamwala Mohammed Aarif** MS General Surgery IMR NO- 48359	Professor DOJ-31-05-2022	REGULAR	**X**	**X**	**X**	√	√	1.Describe the applied anatomy of spleen. Describe the clinical features, investigations and principles of management of splenic injuries. Describe the post -splenectomy sepsis – prophylaxis 2. Describe the clinical features, principles of investigation, prognosis and management of pancreatitis 3. Describe the clinical features, principles of investigation, prognosis and management of pancreatitis 4. Describe the clinical features, principles of investigation, prognosis and management of pancreatic

									endocrine tumours. 5. Describe the principles of investigation and management of pancreatic disorders including pancreatitis.. 6. Outline the role of surgery in the management of coronary heart disease, valvular heart diseases and congenital heart diseases, diseases of Thorax and Diaphragm 7. Describe the clinical features of mediastinal diseases and the principles of management 8. Describe the etiopathogenesis, clinical features, investigations and principles of treatment of benign and malignant tumors of breast. 9. Demonstrate the correct technique to palpate the breast for breast swelling in a mannequin or equivalent 10. Describe and demonstrate the clinical examination of surgical patient including swelling and order relevant investigation for diagnosis. Describe and discuss appropriate treatment plan. 11. Describe the etiopathogenesis of thyroidal swellings. Demonstrate and document the correct clinical

									examination of thyroid swellings and discus the differential diagnosis and their management. Describe the clinical features, classification and principles of management of thyroid cancer
General Surgery	**Dr. Murhari D. Gaikwad** Qualification- M S General Surgery IMR No-46668	Associate Professor DOJ-01-03-2014 DOP-02-05-2018	**REGULAR**	√	√	√	√	√	1.Orientation Introduction to CBME 2. Describe pathophysiology, clinical features, Investigations and principles of management of Hernias 3. Describe causes, clinical features, complications and principles of management of peritonitis and omental pathologies 4. Describe pathophysiology, clinical features, investigations and principles of management of Intra - abdominal abscess, mesenteric cyst, and retroperitoneal tumors 5. Describe the applied anatomy of liver. Describe the clinical features, Investigations and principles of management of liver abscess, hydatid disease, injuries and tumors of the liver 6. Describe the applied Anatomy and physiology of esophagus 7. Describe the clinical features,

									investigations and principles of management of benign and malignant disorders of esophagus 8. Describe pathophysiology, clinical features, investigations and principles of management of Lymph edema, lymphangitis and Lymphomas
General Surgery	**Dr. Arifa Almas** Qualification- M S General Surgery IMR No- 8853	Associate Professor DOJ-03-12-2011 DOP-02-05-2017	**REGULAR**	√	√	√	√	√	1. Minimal Invasive General Surgery: Describe indications, advantages and disadvantages of Minimally Invasive General Surgery. 2. Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management of diseases of biliary system 3. Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management of diseases of biliary system. 4. Describe the applied anatomy of biliary system. Describe the clinical features, investigations and principles of management of diseases of biliary system. 5. Surgery tutorial / SDL/ Seminar 6. Describe principles of preoperative assessment. Enumerate the principles of general, regional and local

									anaesthesia 7. Enumerate the indications and principles of day care general surgery. Describe principles of providing post-operative pain relief and management of chronic pain. Describe principles of safe General surgery 8. Describe the clinical features of soft tissue injuries. Choose appropriate investigations and discuss the principles of management.
General Surgery	**Dr. Nagesh Nagapurkar** Qualification- MS General Surgery IMR No-55345	Associate Professor DOJ-01-02-2014 DOP-01-02-2021	**REGULAR**	√	√	√	√	√	1.Describe the causes investigations and principles of management of hematuria 2. Describe the clnical features investigation principle management of congenital anomalies of genitourinary system And Anatomy ot urinary tract 3. Describe the clinical features investigation principle management of urinary tract infection 4. Describe the clinical features investigation principle management of hydronephrosis 5. Describe the clinical features investigation principle management of renal calculi
General	**Dr. Bhawana S.**	Assistant	**REGULAR**	**X**	√	√	√	√	1.Describe pathophysiology,

Surgery	**Takalkar** Qualification- M S General Surgery IMR No- 67958	Professor DOJ- 18-04-2018							mechanism of head injuries. Describe clinical features for neurological assessment and GCS in head injuries. 2. Choose appropriate investigations and discuss the principles of management of head injuries 3. Describe the clinical features of soft tissue injuries. Choose appropriate investigations and discuss the principles of management. 4. Describe classification of hospital waste and appropriate methods of disposal. 5. Discuss the legal and ethical issues concerning organ donation
General Surgery	**Dr. Anand Auti** Qualification- M S General Surgery IMR No- 2008/09/3248	Associate Professor DOJ-08-02-2017	**REGULAR**	√	√	√	√	√	6: Wound Healing & factors affecting it Burns : grading , management Surgical aspects of DM Shock Lymphatics : lymphadema, lymphomas, cold abscess
General Surgery	**Dr. Amrit Mandhane** Qualification- M S General Surgery IMR No- 2012/07/2084	Associate Professor DOJ-19/01/2024	**REGULAR**	**X**	**X**	**X**	**X**	√	-
General Surgery	**Dr. Kedar Mahesh H**	Assistant Professor	**REGULAR**	**X**	**X**	**X**	√	√	2: Surgical approaches, incisions and

	Qualification- M S General Surgery IMR No- 0205	DOJ-10-05-2021							the use of appropriate instruments in Surgery in general. etiopathogenesis, clinical features, investigations and treatment of occlusive arterial disease.
General Surgery	**Dr. Sanjay Khandagale** Qualification- M S General Surgery IMR No- 78250	Assistant Professor DOJ-14-06-2021	**REGULAR**	**X**	**X**	√	√	√	1.Surgery tutorial - Pathology Specimens 2. Describe pathophysiology, clinical features, Investigations and principles of management of Hernias 3. Describe causes, clinical features, complications and principles of management of peritonitis and omental pathologies 4. Describe pathophysiology, clinical features, investigations and principles of management of Intra - abdominal abscess, mesenteric cyst, and retroperitoneal tumors 5. Describe the applied anatomy of liver. Describe the clinical features, Investigations and principles of management of liver abscess, hydatid disease, injuries and tumors of the liver 6 Describe the applied Anatomy and physiology of esophagus 7. Describe the clinical features, investigations and principles of management of benign and

									malignant disorders of esophagus
General Surgery	**Dr. Dhananjay Ghuge** Qualification- MBBS,DNB General Surgery IMR No- 32771	Assistant Professor DOJ-30-08-2019 DOP-01-09-2021	**REGULAR**	**X**	√	√	√	√	4 : Biological basis for early detection of cancer Multidisciplinary approach in management of cancer Oropharyngeal cancer
General Surgery	**Dr. Shaikh Altaf** Qualification- M S General Surgery IMR No- 1802	Assistant Professor DOJ-07-05-2021 DOP-14-09-2022	**REGULAR**	**X**	**X**	**X**	√	√	6.Clinical features, Investigations and principles of management of urinary tract infections Clinical features, investigations and management of renal calculi Anuria and Acute retention of urine Clinical features, investigations and management of disorders of prostate Clinical features, investigations and management of urethral strictures and urethral injuries Ca Penis
General Surgery	**Dr. Ameenuddin Ali Syed** Qualification- M S General Surgery IMR NO-1703	Assistant Professor DOJ-04-10-2021 DOP-08-10-2022	REGULAR	**X**	**X**	**X**	√	√	1.Describe the applied anatomy of small and large intestine 2. Describe the clinical features, investigations and principles of management of disorders of small and large intestine including neonatal obstruction and Short gut syndrome 3. Describe the clinical features, investigations and principles of management of disorders of small

									and large intestine including neonatal obstruction and Short gut syndrome 4.Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications (subtopic – Acute appendicitis) 5. Describe the clinical features, investigations and principles of management of diseases of Appendix including appendicitis and its complications (subtopic – Appendicular lump and abscess) 6.Describe the clinical features, investigations and principles of management of common anorectal diseases (Subtopic - Prolapse rectum) 7. Describe the clinical features, investigations and principles of management of common anorectal diseases (Subtopic - Carcinoma rectum
General Surgery	**Dr. Sushil Kumar Jamdhade** Qualification- M S General Surgery	Assistant Professor DOJ-07-10-2021 DOP-03-12-2022	REGULAR	**X**	**X**	**X**	√	√	6. Spleen : Anatomy , spleenomegaly, causes investigations & injury Small & Large bowel : Amoebiasis, TB, hemorrhage

	IMR NO.-3221								Abdominal Injury Portal hypertension : Presentaion, Investigation & management

Department of Surgery Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
01	Dr. MA Reshamwala	[1]Dr. MA Reshamwala and [2]Dr. Manish Maheshbhai Khokar [3] Dr. Kartikeya Sharma Serum calcium and magnesium levels in patients with acute gastroenteritis Year 2022 Vol. (Issue) V 9 n 02 Pages.1145-48-1394-97 ISSN 2515-8260	Google Scholar
02	Dr. M.D. Gaikwad	M D Gaikwad[1], Amer Patel[2] Kamran Khan[2] Retrospective Study of Cholecystectomy Performed in Rural Medical College in India International Journal Of Scientific Study Vol- 8, Issue 3, Issn:2321-6379 May – June, 2022	Issn Journal With Index Coups Nikus
3.	Dr. M.D.Gaikwad	M D Gaikwad1, Kamran Khan2 Amer Patel[2],Retrospective Study of Carcinoma Breast operated in Rural Medical College in India International Journal Of Scientific Study Issn:2321-6379 Vol -8, Issue 3, May -June 2022	Issn Journal With Index Coups Nikus
4	Dr. Nagesh Nagapurkar	Nagesh Nagapurkar1, Swati Nagapurkar2 Phimosis and Circumcision; A Study at Tertiary Rural Referral Centre in the Marathwada Region	e-ISSN: 0975-1556, p-ISSN: 2820-2643

		of Maharashtra International Journal of Pharmaceutical and Clinical Research years August 2023 e-ISSN: 0975-1556, p-ISSN: 2820-2643	
5	Dr. Nagesh Nagapurkar	Nagesh Shrirampant Nagapurkar1, Swati Nagesh Nagapurkar2 and Khan Amreen Kausar3, Prospective study of the single puncture laparoscopic tubal ligation Indian Medical Research 25 May 2023	
6	Dr. Nagesh Nagapurkar	Study Of Correlation Of Placental Weight With Birth Weight Of Fetus In Normal Delivery Indian Journal Of Applied Research Volume - 13 | Issue - 05 | May - 2023 | PRINT ISSN No. 2249 - 555X | DOI : 10.36106/ijar	ISSN No. 2249 - 555X
7	Dr. Sanjay Khandagale	Sanjay Khandagale1, Syed Ameenudddin Ali 2, Shah Zahid Zakir 3 Rouviere's Sulcus: A Guardian Angel in Laparoscopic Cholecystectomy International Journal of Pharmaceutical and Clinical Research 2023 e-ISSN: 0975-1556, p-ISSN:2820-2643	

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This is to certify that Dr. Syed Obaid, Associate Professor, Department of Surgery , from JIIU's Indian Institute of Medical Sciences and Research, Jalna has participated in the Revised Basic Course Workshop held from 21st to 23rd May, 2019 by MCI Regional Centre, Maharashtra University of Health Sciences, Nashik

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Dated: 23rd May 2019

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Head, IMETTT &
MUHS Regional Centre, Pune

Dr. Kashinath D. Gorkal
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Vice-Chancellor

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SYED QAISARUDDIN

for successfully completing

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As mandated by the National Medical Commission (NMC)

With a score of 70 % in Proctored Examination

Apr 2022

Dr. Manoj V Murhekar
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ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

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Roll no: NPTEL21MD05S33110567

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This is to certify that

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Basic Workshop in Research Methodology

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Organised by

JNU's Indian Institute of Medical Science & Research, Warudi, Jalna

Approved vide letter no MUHS IMETTT Pune/1866 dated 21/09/2015

Dr. Payal K. Bansal
Hon. IMETTT &
MUHS Regional Centre, Pune

Dr. Kashinath G. Gorkal
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MUHS, Nashik

Dr. Prof. Arun Jamkar
Vice Chancellor
MUHS, Nashik

National Medical Commission Regional Center, IMETTT,
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JIIU'S INDIAN INSTITUTE OF MEDICAL SCIENCE & RESEARCH,
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Revised Basic Course Workshop in Medical Education Technology
& Training in Attitude, Ethics & Communication (AETCOM)

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This is to certify that **Dr. M. A. Reshamwala**, Professor, Department of General Surgery from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the **"Revised Basic Course Workshop & AETCOM"** held during 21st February to 23rd February 2023 under supervision of **NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS)**, Nashik.

Dr. Azhar Ahmed Siddiqui
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Dr. Zuberi Hussain Riyaz
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Dr. Ganesh Chaudhari
NMC Observer

Medical Council of India

Maharashtra University of Health Sciences, Nashik

Revised Basic Course Workshop in Medical Education Technology

Certificate of Participation

This is to certify that Dr. M.D. Gaikwad, Associate Professor, Department of Surgery, from JIIU's Indian Institute of Medical Sciences and Research, Jalna has participated in the Revised Basic Course Workshop held from 21st to 23rd May, 2019 by MCI Regional Centre, Maharashtra University of Health Sciences, Nashik

Prof. Dr. Deelip Mhaisekar	Prof. Dr. Mohan Khamgaonkar	Dr. Kalidas Chavan	Dr. Payal Bansal	Dr. Deepanjali Lomte
Vice-Chancellor	Pro-Vice-Chancellor	Registrar	Convenor	Co-Convenor

Dated: 23rd May 2019

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AURANGABAD
MAHARASHTRA - 431001
PH. NO :9823353224

Pass criteria: ≥ 50% in Proctored Examination

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ARIFA ALMAS

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Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

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Dr. Manoj V Murhekar
Director and Scientist G
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New Delhi, India

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Revised Basic Course Workshop and Training
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This is to certify that **Dr. Arifa Almas**, *Associate Professor, Department of Surgery, JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur Dist. Jalna has participated in the "Revised Basic Course Workshop & AETCOM (rBCW)-II" held during 06th July to 08th July 2021 under supervision of NMC Nodal/Regional Centre, MUHS, Nashik (M.S.)*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
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With a score of 65 % in Proctored Examination

Apr 2022

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Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Nagesh Nagapurkar,*** *Associate Professor, Department of Surgery . from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 05th October to 07th October 2021 under supervision of* ***NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

icmr NIE

Online Certification

This certificate is awarded to

SANJAY KHANDAGALE

for successfully completing the

Basic Course in Biomedical Research

As accredited by the National Medical Commission (NMC)

With a score of 63 % in Proctored Examination

March 2023

Dr. Manoj V Murhekar
Director and Scientist G
ICMR-National Institute of Epidemiology
Ayapakkam, Tamilnadu, India

Dr. Rajiv Bahl
Secretary to Government of India
Department of Health Research and Director General
Indian Council of Medical Research, New Delhi, India

swayam

Roll no: NPTEL22MD01534130145

Pass criteria: > 50% in Proctored Examination

MUHS

National Medical Commission Regional Center, IMETTT
Maharashtra University of Health Sciences (MUHS), Nashik.

Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Sanjay Khandagale****, Assistant Professor, Department of Surgery , from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 05th October to 07th October 2021 under supervision of* ***NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

Institute of Medical Education Technology & Teacher's Training, Nashik

Certificate No. 18767

MUHS

This is to certify that

Dr./Mr./Smt. Ameenuddin Ali Syed

has participated as a Delegate / ~~Faculty~~ in

Basic Workshop in Research Methodology

held from 1st to 3rd August 2018

Organised by

Dr. Vithalrao Vikhe Patil Foundation's Medical College & Hospital Ahmednagar

Approved vide letter no. MUHS / IMETTT, Nashik / 318/ 2018 dated 24/07/2018

Dr. Payal Bansal	**Dr. Kalidas D. Chavan**	**Dr. Mohan Khamgaonkar**	**Dr. Deelip G. Mhaisekar**
Head, IMETTT	Registrar	Pro-Vice Chancellor	Vice-Chancellor
MUHS, Nashik	MUHS, Nashik	MUHS, Nashik	MUHS, Nashik

Department Of Orthopaedics

Department	Name of faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ Permanent or Contract/outsourced	Details of service the last 5 years					No. of lectures taken/year, small teaching group with topics covered
				1	2	3	4		
ORTHOPAEDICS	Dr Sunil Vare MS Orthopaedics MMC 55291	HOD &Prof 13/02/2001	Permanent	✓	✓	✓	✓	✓	**5 lectures/year** 1) Dislocations of shoulder, hip, knee -PG 2) Humerus neck fractures –PG 3) Congenital anomalies of the spine – PG 4) Chronic osteomyelitis - 2019 5) Clavicle fractures - 2020
ORTHOPAEDICS	Dr M. A. Naser DNB Orthopaedics	Professor 07/02/2022	Permanent	✓	✓	✓	✓	✓	**7 Lectures/ year** 1) Rheumatoid arthritis -PG 2) Humerus shaft fractures 2020 3) PIVD - 2019

	MMC 2000/02/1034								4) Malignant bone tumours - PG 6) Glenohumeral instability - PG 7) Polytrauma – PG
ORTHOPAEDICS	Dr Shivkumar Santpure MS Orthopaedics MMC 79028	Asso. Prof 08/04/2021	Permanent	✓	✓	✓	✓	✓	**4 Lectures/ year** 1) Proximal femur fractures – 2020 2) Osteotomy around the hip – PG 3) Pott's spine - PG 4) Metabolic bone diseases – PG
ORTHOPAEDICS	Dr Hari Chaudhari MS Orthopaedics MMC 2004/02/1182	Asso. Prof 26/05/2021	Permanent	✓	✓	✓	✓	**X**	**4 Lectures/ year** 1) Amputation – PG 2) Intertrochanteric fractures – 2019 3) Knee Osteoarthritis - PG 4) Pelvis fractures – PG
ORTHOPAEDICS	Dr Alaf Ayub	Asso Prof.	Permanent	✓	**X**	**X**	**X**	**X**	**6 Lectures/ year**

	Pathan MS Orthopaedics MMC 2010/04/1144	27/06/2023							1) CTEV – 2020 2) Compound Fractures -2019 3) Proximal tibia fractures – PG 4) Elbow dislocation and terrible triad injuries – PG 5) DDH – PG 6) Pelvic Ring Injuries – PG
ORTHOPAEDICS	Dr Arshad Shaikh DNB Orthopaedics MMC 2013/03/0514	Asst. Prof. 23/11/2020	Permanent	✓	✓	✓	✓	✓	**5 Lectures/ year** 1) Joint effusions and aspiration - 2020 2) Talus fracture -2020 3) Complications of fractures – 2020 4) Antibiotic cemented coating in orthopaedics - PG 5) Popliteal cyst – PG
ORTHOPAEDICS	Dr Amol Wagh MS Orthopaedics	Asst. Prof. 23/08/2019	Permanent	✓	✓	✓	✓	✓	**6 Lectures/ year** 1) Introduction to Orthopaedics - 2019 2) Implants in Orthopaedics -2019 3) Orthopaedic Instruments- 2019

	MMC 2015/03/1347								4)Fracture fixation -2019 5) Classification of fractures – 2020 6) distal end radius fractures – 2020
ORTHOPAEDICS	Dr Sarang Vyavhare DNB Orthopaedics MMC 2006/01/0336	Asst. Prof. 01/07/2021	Permanent						**4 Lectures/ year** 1) Fracture healing -2020 2) Neck of femur fractures – 2020 3) Orthotics , Prosthetics - 2019 4) Congenital anomalies of the ankle – PG
ORTHOPAEDICS	Dr Pramod Tupe MS Ortho MMC 2011/12/3436	Asst. Prof. 28/04/2021	Permanent	✓	✓	✓	**X**	✓	**6 Lectures/ year** 1) Fractures- first aid/splints -2019 2) Benign bone tumours -2019 3) Fracture- non-union and malunion -2019 4) Hip examination -2019 5) Degenerative conditions of the spine – 2019 6) Cervical spondylosis – 2020

ORTHOPAEDICS	Dr Vikas Kuntwad DNB Orthopaedics MMC 2018/09/4799	Asst. Prof. 16/09/2022	Permanent	✓	✓	✓	**X**	**X**	**4 Lectures/ year** 1) Plaster techniques – 2020 2) Both bone forearm fractures – 2020 3) Chronic Osteomyelitis – PG 4) Ligament injuries in the knee - PG
ORTHOPAEDICS	Dr Ashish Sutrave DNB Orthopaedics MMC 2009/04/1983	Asst. Prof. 22/08/2022	Permanent	✓	✓	**X**	**X**	**X**	**5 Lectures/ year** 1) Supracondylar humerus fractures - 2020 2) Non-operative management of vertebral compression fractures – PG 3) Pre-op Templating for THR - PG 4) Radius head fractures - PG 5) Scaphoid fractures – PG
ORTHOPAEDICS	Dr Siddharth Vakil MS	Asst. Prof. 14/03/2022	Permanent	✓	**X**	**X**	**X**	**X**	**5 Lectures/ year** 1) Acute Osteomyelitis -19 2) Recurrent shoulder dislocation - 19

	Orthopaedics MMC 2014/04/1307								3) Skeletal TB - 19 4) Peripheral nerve injuries -19 5) Ankle joint – anatomy and fractures -19
ORTHOPAEDICS	Dr Mujtaba Patel MS Orthopaedics KMC 106030	Asst. Prof. 01/10/2021	Permanent	✓	✓	✓	✓		**5 lectures/year** 1) Trauma management -2020 2) Grafts for ACL reconstruction – PG 3) Tibia shaft fractures – 2020 4) Closed reduction and plaster techniques – 2019 5) Shoulder arthroscopy - PG

Online Certification

This certificate is awarded to

DR MADHURI LONIKAR

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 74 %

Online Assignments	**75 %**	**Proctored Examination**	**74 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
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Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
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New Delhi, India

Roll no: NPTEL21MD04S23110316

To validate and check scores: **http://nptel.ac.in/noc**

Department of Ophthalmology

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Ophthalmology	Dr. Rupali Rangu (M.S. Ophthalmology) 	Professor & HOD 17/06/2014	Regular	1/01/2012 JIIU's IIMS&R Same Institute					1)Applied anatomy of conjunctiva and classification of conjunctivitis 2) Conjunctivitis-sign,symptoms,treatment 3) Diseases of optic nerve and visual pathway 4) Dacryocystitis-signs,symptoms,treatment 5) Conditions of anterior chamber 6) Trachoma-sign,symptoms,complication ,management 7)Enumerate the types of cataract surgery

						and describe the steps, intra-operative and post-operative complications of extracapsular cataract extraction surgery CLINICAL POSTING-8
	Dr. Sachin Unde (M.S. Ophthalmology)	Asso. Professor	Regular	Vikhe Patil Medical College Ahe,nagar	15/02/2023IIMS &R	1)Lid- common condition 2) Lacrymal apparatus and dacryocystitis 3) Anatomy of orbit Tumours and proptosis 4) Methods of tarsorraphy 5) Demonstrate document and present the correct method of examination of a red eye including vision assessment , corneal lustre, pupil abnormality, ciliary tenderness 6) Orbital cellulites-

						clinical presentation,complication,management 7) Enumerate, describe and discuss the types and causes of corneal Ulceration 8) Enumerate and discuss the differential diagnosis of infective Keratitis 9) Enumerate and discuss the aetiology, the clinical distinguishing features of various glaucomas associated with shallow and deep anterior chamber. Choose appropriate investigations and treatment for patients with above conditions 10) Describe and discuss the aetio-pathogenesis, stages of maturation and complications of cataract

						CLINICAL POSTING-8
	Dr. Prashant Ghorpade (M.S. Ophthalmology)	Asso. Professor 30/06/2023	Regular	08/05/2018 JIIU's IIMS&R Same Institute		1)Anterior chamber conditions & Aqueous flow 2)Glaucoma 3)Primary open angle glaucoma 4) Episcleritis – ocular features, complication, management 5) Surgical anatomy and metabolism of lens 6) Enumerate the causes and discuss the management of dry eye 7) Demonstrate the correct technique of a fundus examination and describe and distinguish the funduscopic features in a normal condition and in conditions causing an abnormal retinal exam 8) Ocular tumours-

					sign, symptoms & various types CLINICAL POSTING-8
	Dr. Amreen Deshmukh (M.S. Ophthalmology)	Assit. Professor 01/04/2020	Regular	26/03/2019 JIIU's IIMS&R Same Institute	1)Keratoplasty 2)Eye donation and eye banking 3)Uvea applied anatomy and uveitis – classification 4)Iridocyclitis 5) Demonstrate the correct technique of removal of foreign body from the eye in a simulated environment 6) Demonstrate testing of visual acuity, colour and field of vision in volunteer/ simulated environment 7) Describe & demonstrate parts and layers of eyeball 8) Describe the role of refractive error correction in a patient

						with headache and enumerate the indications for referral CLINICAL POSTING- 8
	Dr.Ashish Holani M.S. Ophthalmology	Assit. Professor	Regular	-	17/10/2019 JIIU's IIMS&R Same Institute	1)Classification of cataract congenital and developmental cataract 2)Stages of maturation & complication of cataract 3)Dry eye 4)Diseases of Retina vascular occlusion 5) Iridocyclitis- systemic conditions and ocular manifestations 6) Lens 7) Demonstrate the correct technique of ocular examination in a patient with cataract 8) Describe and discuss the importance and protocols involved in eye

							donation and eye banking CLINICAL POSTING-8
	Dr. Fuzail Siddiqui (M.S. Ophthalmology)	Assit. Professor 01/06/2022	Regular	-	-	06/05/2012 JIIU's IIMS&R Same Institute	1)Ocular injury 2) Fundus examination details in normal and abnormal retinal findings 3) Describe the evaluation and enumerate the steps involved in the stabilisation, initial management and indication for referral in a patient with ocular injury 4) Demonstrate the correct technique the examine extra ocular movements (uniocular & binocular 5) Minor surgical procedures 7) Causes of corneal oedema CLINICAL POSTING-8

	Dr. Ujwal Gaikwad (M.S. ophthalmology)	Assit. Professor 01/03/2023	Regular	-	-	09/12/2021 JIIU's IIMS&R Same Institute	1)Cornea-Applied anatomy causes of corneal ulceration 2)Keratitis 3)Corneal blindness 4)Cataract surgery 5) Visual acuity assessment-demonstrate the steps in performing the visual acuity assessment for distance vision,near vision,color vision,the pin hole test and menace and blink reflexes 6) Counsel patients with condition of iris and anterior chamber about their diagnosis , therapy and prognosis in an empathetic manner in a simulated environment 7) Avoidable blindness 8) Demonstrate the symptoms & clinical

									signs of conditions enumerated in OP2.1 CLINICAL POSTING-8
	Dr. Chirag Singh (M.S. Ophthalmology)	Assit. Professor	Regular	-	-	-	-	07/09/2022 JIIU's IIMS&R	1)Anatomy of Eye 2)Embryology and development of the eye 3)Physiology of vision, visual acuity assessment 4)Anatomy of Retina, optic nerve and visual pathway 5) Demonstrate under supervision clinical procedure performed in the lid including : bells phenomenon, assessment of entropion/ectropion,perform regurgitation test of Lacrymal sac, massage technique in congenital dacryocystitis and trichiatic cilia removed by epilation 6) National programmes for

									control of blindness vision 2020 7) Demonstrate the correct technique of instillation of eye drops in a simulated environment 8) Describe the etiology, genetics, pathogenesis, pathology, presentation, sequelae and complications of retinoblastoma CLINICAL POSTING-8
	Dr. Sushma Kulkarni (M.S. Ophthalmology)	Assit. Professor	Regular	B.Y.L. Nyair Hospital			-	02/10/2022 JIIU's IIMS&R	1)Refractive error 2)Refractive surgery 3)Post operative care in cataract surgery and complication 4)Strabismus 5) Vernal catarrh – sign ,symptoms,complication,management 6) Uvea-investigations & management 7) Strabismus-types & amblyopia

							8) Lids and adnexa , orbit 9) Choose the correct local and systemic therapy for conditions of the anterior chamber and enumerate their indications, adverse events and interactions CLINICAL POSTING-8
	Dr. Renuka Prasad Deshpande (M.S. Ophthalmology)	Assit. Professor	Regular			31/01/2024 JIIU's IIMS&R	-

Department of Ophthalmology

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
1	Dr. Rupali Rangu (M.S. Ophthalmology)	1)Dr.Sachin Unde Dr. Rupali Rangu Etiological Diagnosis of Microbial Keratitis in a Tertiary care of hospital JAMP JAMP 2023.5.3.54 2) Dr.Sachin Unde Dr. Rupali Rangu Prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital Eur. Chem. Bull. 2023, (Regular issue 1), 3002-3006 Eur. Chem. Bull. 2023, (Regular issue 1), 3002-3006 3)Dr. Rupali Rangu, Dr.Maryam Khanam Dr. Aisha Siddiqui Effect of watching television on eyes of children aged 6-16 of Badnapur Taluka, Jalna Maharashtra. European Journal of Pharmaceutical and Medical Research. European Journal of Pharmaceutical and Medical Research. / Vol.10 issue 5, 2023	Embase Scopus Google Scholar
2	Dr. Sachin Unde (M.S. Ophthalmology)	1)Dr.Sachin Unde Dr. Rupali Rangu Etiological Diagnosis of Microbial Keratitis in a Tertiary care of hospital JAMP JAMP 2023.5.3.54 2) Dr.Sachin Unde Dr. Rupali Rangu Prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital Eur. Chem. Bull. 2023, (Regular issue 1), 3002-3006 Eur. Chem. Bull. 2023, (Regular issue 1), 3002-3006	Embase Scopus

2	Dr. Prashant Ghorpade (M.S. Ophthalmology)	1)Dr. Prashant Ghorpade, Dr. Chhaya Ashok Shinde Study of the Anatomical and visual results of therapeutic penetrating Keratoplasty J. Evid. Based Med. Healthc. , pISSN-2349-2562,eISSN 2349-2570 J. Evid. Based Med. Healthc. , pISSN-2349-2562,eISSN 2349-2570/ Vol. 4/ Issue 19/ March 06, 2017 2)Dr. Prashant Ghorpade, Dr. Sandip Bodake Study of ocular manifestations in children (12 Years) with positive HIV status at a tertiary hospital European Journal of Molecular and Clinical Medicine European Journal of Molecular and Clinical Medicine Vol.10 issue 3, 2023 3) Dr. Prashant Ghorpade, Dr. Varsha Nandedkar Ocular Involvement in Leukemia- A Studey of 50 Cases MedPulse International Journal of Ophtalmology MedPulse International Journal of Ophtalmology	Google Scholar Scopus Index Copernicus
4	Dr. Amreen Deshmukh (M.S. Ophthalmology)	1)Dr.Amreen Anjum Deshmukh Dr.Mohammad Hafiz Deshmukh Study of clinical presentation and severity of dry eye in patients undergoing cataract surgery at a tertiary care hospital European Journal of Molecular and Clinical Medicine (EJMCM) Print ISSN: 2515-8260 Vol. 7 Issue 07, 2020	EMBASE EMBASE

		2)Dr.Amreen Anjum Deshmukh, Dr. Syed Maaz Hussain Dr. Venukumar Lachmaya Rangu Dr.Rupali Venukumar Rangu Dr.Afshan Kausar Study of Optical Coherence Tomography findings in patients of Retinal Vein Occlusion and their visual prognosis European Journal of Molecular and Clinical Medicine (EJMCM) Embase indexed Print ISSN: 2515-8260 Vol. 7 Issue 10, 2020	
5	Dr.Ashish Holani M.S. Ophthalmoloy		
6	Dr. Fuzail Siddiqui (M.S. Ophthalmology)		
7	Dr. Ujwal Gaikwad (M.S. ophthalmology)		
8	Dr. Chirag Singh (M.S. Ophthalmology)	1)Mishra A, Magdum R, Padmakumar V, Singh C, Tendulkar K, Vaidya T. Clinical profile, causes, and outcome of optic neuritis. Med J DY Patil Vidyapeeth 0;0:0. 2)Motwani D, Maheshgauri R, Bakare P, Bhavsar D, Kaul S, Singh C. Comparison of visual acuity in primary and secondary iris claw implantation in western Maharashtra. Indian J Clin Exp Ophthalmol 2021;7(2):442-447. 3) Kaul S, Magdum R, Mohan M, Motwani D, Singh C, Kotecha M. Prevalence and risk	Scopus Scopus Scopus

		factors of retinopathy of prematurity in Western Maharashtra. Indian J Clin Exp Ophthalmol 2021;7(1):224-228. 4) Singh C, Prasad SP, Kaul S, Motwani D, Mishra A, Padmakumar V. Association of HbA1c levels with diabetic retinopathy. Indian J Clin Exp Ophthalmol 2021;7(2):339-345.	Scopus
9	Dr. Sushma Kulkarni (M.S. Ophthalmology)		

Online Certification

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RUPALI RANGU

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 50 % in Proctored Examination

July 2023

Dr. Manoj V Murhekar
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Chennai, Tamilnadu, India

Dr. Rajiv Bahl
Secretary to Government of India,
Department of Health Research and Director General,
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Roll no: JUL16BCBRS2045608657

Pass criteria: ≥ 50% in Proctored Examination

MUHS

MAHARASHTRA UNIVERSITY OF HEALTH SCIENCES, NASHIK

Institute of Medical Education Technology & Teachers' Training

Regional Centre, 3rd Floor, Civil Hospital Building, Aundh Camp, Pune 27.

Certificate No. 3128

This is to certify that

Dr./Mr./Smt. Rupali Venukumar Rangu

has participated as a Delegate / Faculty in

Basic Workshop in Research Methodology

held from 08 Oct. 2015 to 10 Oct. 2015

Organised by

JIM's Indian Institute of Medical Science & Research, Warudi, Jalna

Approved vide letter no. MUHS IMETTT Pune/184 dated 21/09/2015

Payal K Bansal

Dr Payal K Bansal
Head, IMETTT &
MUHS Regional Centre, Pune

Dr. Kashinath D. Garkal
Registrar
MUHS, Nashik

Dr. Prof. Arun Jamkar
Vice Chancellor
MUHS, Nashik

Certificate

JIIU's Indian Institute of Medical Science and Research

(Medical College & Hospital)

Warudi, Badnapur, Jalna

CME Code No: ***MMC/MAC/2015/F – 003774***

Type of CME: ***Multispeciality***

This is to certify that ***Dr. Rupali Venukumar Rangu*** *has participated as* ***Delegate*** *in* ***'Basic Workshop in Research Methodology'*** *organized by Department of Community Medicine (PSM) of JIIU's Indian Institute of Medical Science and Research Medical College, Warudi, Badnapur, Jalna, affiliated to the Maharashtra University of Health Sciences (MUHS), Nashik from 08th to 10th October 2015. Maharashtra Medical Council (MMC), Mumbai has granted 04 (Four) Credit hours to delegate.*

Dr. P. A. Giri
Professor of Community Medicine
IIMSR Medical College, Badnapur
Organizing Secretary

Dr. Mohd. Shafee
Professor & Head of Community Medicine
IIMSR Medical College, Badnapur
Convener

Dr. A. B. Solepure
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Dr. R. T. Ankushe
Associate Professor of Community Medicine
Govt. Medical College, Aurangabad
Maharashtra Medical Council Observer

MUHS

JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur, Jalna

Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Rupali Venukumar Rangu****, Professor, Department of Ophthalmology, JIIU's Indian Institute of Medical Science, & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***Revised Basic Course Workshop*** *&* ***AETCOM (rBCW)-II*** *held during 06th July to 08th July 2021 under supervision of NMC* ***Nodal/Regional Centre, MUHS,*** *Nashik (M.S.).*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
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Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

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JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur, Jalna

Certificate of Participation

This is to certify that ***Dr. Rupali Venukumar Rangu*** *has participated in the* ***'Curriculum Implementation Support Program (CISP) -II'*** *Organized by* ***Medical Education Unit (MEU), IIMSR*** *Under the Aegis of* ***MCI Regional Center, MUHS, Nashik*** *at JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist: Jalna held on 17th & 18th December 2020.*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
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Dr. Azhar Ahmed Siddiqui
Organizing Chairman

Dr. Sarojini Jadhav
MCI Observer

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Research Article
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EFFECT OF WATCHING TELEVISION ON EYES OF CHILDREN AGED 6-16 OF BADNAPUR TALUKA, JALNA, MAHARASHTRA

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ABSTRACT

One of the most common problems in children is refractive error, which can lead to blindness. Although refractive errors cannot be prevented, they can be detected early with a routine eye exam and fixed with glasses, surgery, or corrective lenses. The current study's objectives were to determine the prevalence of refractive errors in association with watching television among school-age children presenting at Ophthalmology OPD at Tertiary Care Hospital and schools of Badnapur Taluka. A total of 300 kids were randomly selected to find out how common refractive error is in the research population.

KEYWORDS: Refractive errors, TV watching, Children.

1. INTRODUCTION

Refractive errors are the second most common type of functional blindness and account for more than half of all known kinds of visual impairment. It burdens patient financially and affects their quality of life by posing psychological, functional, and aesthetic problems. When compared to other visual diseases, refractive disorders are more likely than other ocular diseases to have a high morbidity as shown by the number of years spent with impairment. Refractive defects can impair performance, lower employability and productivity, and even endanger patients' lives if they are not treated. Yet, correcting refractive errors with the appropriate eyewear is one of the most financially advantageous interventions in eye care.[1] Finding information regarding eye issues in school-aged children is challenging. Since one-third of India's blind individuals lose their sight before the age of 20, early detection and treatment of paediatric ocular morbidity is essential.[2] It is estimated that between 21% and 25% of patients who visit India's eye OPD have this widespread incidence. Refractive errors are most prevalent in children between the ages of 6 and 16 and can impact up to 20% of children by the age of 16.[3-4] Treatment and diagnosis of refractive problems are relatively simple and is one of the easiest ways to reduce imparted visions.[5] Refractive errors can be fixed by spectacles, contacts, or refractive surgery. The most popular and convenient way of refractive correction is wearing glasses since it is more convenient and less expensive. Developing countries have challenges to overcome in terms of eyewear affordability and accessibility.[6] The prevalence of refractive error was 6.7% in a cross-sectional survey of 15,954 schoolchildren in Sikkim, India, with myopia accounting for 335 (31.1%), astigmatism accounting for 317 (29.4%), and hyperopia accounting for 29 (2.6%) of the students. The majority of people with refractive error were between the ages of 14 and 17 (9.2 percent).[7] In an another case[8] a cross-sectional study carried out to evaluate the ocular morbidity among school-going teenagers studying between class 5 and class 10 in the age range of 10 to 16 years in rural north Maharashtra. The prevalence of ocular morbidities was estimated to be 27.65 percent. 10.2% of the 1000 elementary school pupils, aged 8 to 16, who participated in a study on the prevalence of refractive errors in schoolchildren in western Rajasthan were found to have refractive errors. Refractive flaws were primarily caused by myopia, hypermetropia, and astigmatism, accounting for 56.9%, 13.7 percent, and 29.4 percent, respectively.[9] Seung-Hyun K and team[10] in a study investigated the effect of watching 3D TV on refractive error in children. They revealed that watching a 3D TV for 50 min with a 10 min intermission at more than 2.8 meter of distance did not affect the refractive error of children.[10] In another case of Madurai a cross sectional study of 600 students of 10-14 years of television watching effect it was found that prevalence of refractive errors in children was 16.2% as those who were watching television for more than five years have developed refractive errors significantly.[11]

2. MATERIALS AND METHODS

18 months after receiving approval from the Ethics Committee, a cross-sectional study was conducted

among all the kids in the age range of 6 to 16 to check for visual impairment. The investigation was conducted at the tertiary care center's ophthalmology OPD and close-by schools. Students from the chosen schools in the Badnapur Taluka and from the Tertiary care Hospital made up the study population. All the children in the children in the age group 6-16 years were included in the study. Children aged 6 to 16 years who are admitted to a tertiary care hospital and nearby school are enrolled in the current prospective study after gaining prior consent from their parents or legal guardians for extra examinations and treatments. Keratometry, history-taking, clinical examinations of the front and back of the eye, and near- and far-vision tests are used to collect data. After that, children are examined using streak retinoscopy to check for refractive error while being cycloplegic by 1% cyclopentolate. A post-mydriatic test is used to establish the correct prescription for glasses after three days. The collected data is evaluated. Refractive faults that are not corrected are also noted.

3. RESULTS AND ANALYSIS

A total of 300 kids were randomly selected from Ophthalmology OPD at the Tertiary Care Hospital in Badnapur Taluqa and nearby school in order to gauge the prevalence of refractive error in the study population.

3.1. Distribution of time spent in watching TV

Table 1: Time spent in watching TV(N=300)

Sr. NO	Time spent in Watching TV	Number of participants
1	30 min	54
2	1 Hr	145
3	hr	41
4	2hr	38
5	>2hr	22

Figure 1 reveals that among the study participants, 54 (18.6%) watched television for 30 minutes per day, 145 (48.3%) for one hour per day, 41 (13.6%) for one and a half hours per day, 38(12.6%) for two hours per day, and 22(7.3%) for more than two hours per day (Table 1).

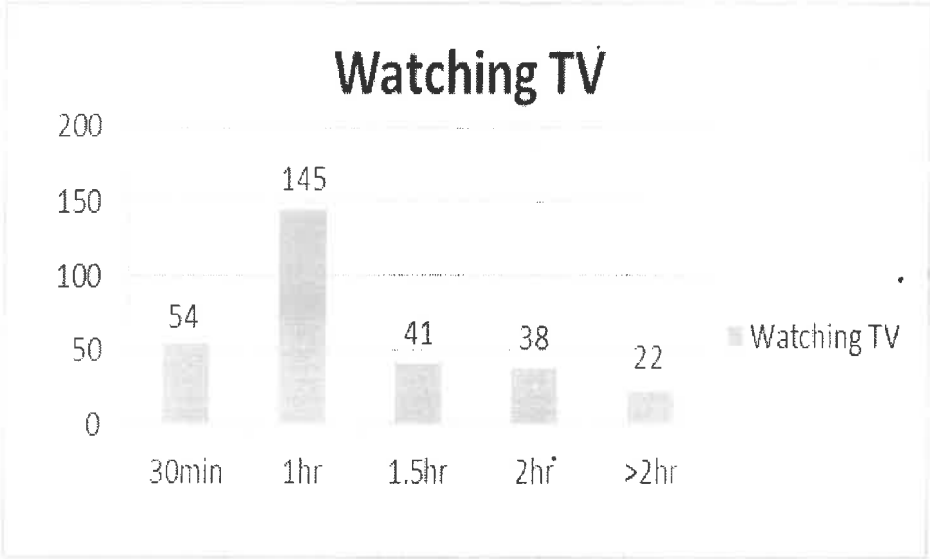

Figure 1: Distribution of time spent in watching TV(N=300)

3.2. Distribution of TV viewing distance among participants

Table 2: TV watching distance.

TV watching distance	Number of participates	Percentage
<10 Feet	195	65
>10 Feet	105	35

As per Figure 2 and Table 2, 65% of participants in the survey watched television at a distance of less than 10 feet, while 35% watched from a distance greater than 10 feet.

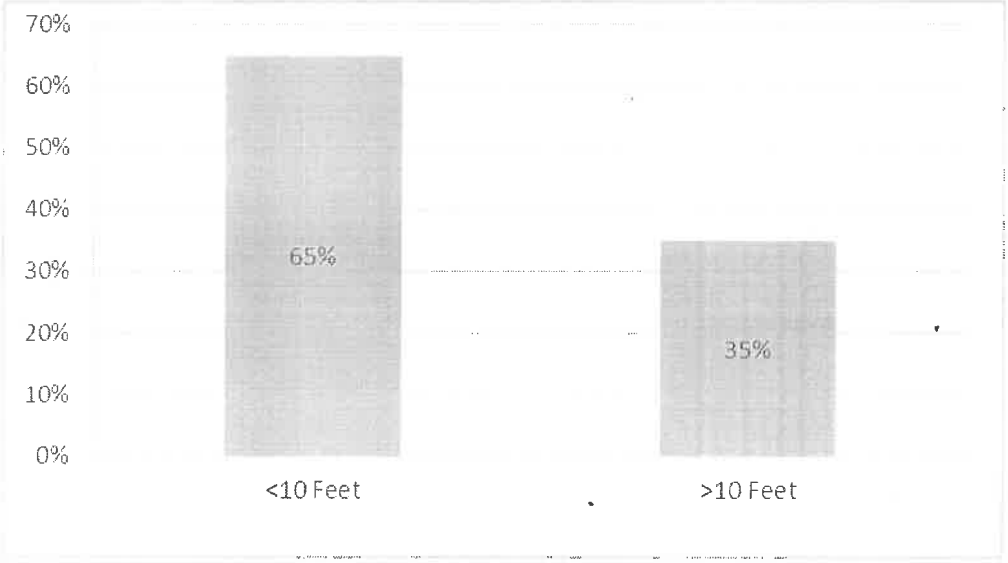

Figure 2: Distribution of TV watching distance (N=300)

3.3. Association of refractive Error with Risk Factors

3.3.1. TV watching duration and refractive error

Table 3: Effect of TV watching duration on Prevalence of refractive error.

TV watching duration	Refractive error present	Refractive error absent
30 min	14%	86%
1 hr	20%	80%
1.5 hr	24%	76%
2 hr	26%	74%
>2hr	40%	60%

The figure 3 and Table 3 shows that the incidence of refractive errors increases with increasing television viewing time. There is a statistically significant association between the time spent watching television and the prevalence of refractive errors. We can observed from Table 3 and Figure 3 that there is a significant increase in incidence of refractive error among children as the TV watching duration increases from 30 min to more than 2 hr the percentage of refercetive errors also increases from 14% to 40%.

Figure 3: Effect of TV watching duration on Prevalence of refractive error.

3.3.2. TV watching distance and refractive error

Table 4: Cross tabulation between TV watching distance and refractive error.

TV watching distance	Refractive error		Total
	Present	Absent	
< 10 feet	46 (23.5%)	149(76.5)	195
> 10 feet	18 (17.2%)	87 (82.8)	105
Total	65 (21.6%)	235 (78.4%)	300

Table 4 shows that among 300 children 195 watches TV with a distance less than 10 feet and out of 195 children 46(23.5%) found to have refractive errors. Whereas among 105 children, who watches TV by more than 10 feet distance, 18(17.2%) found to prevail vision problems. Therefore the study reveals that there is no statistically significant correlation between television viewing distance and refractive error prevalence. Among the study participants (N=300), 65 childrens (21.6%) had refractive errors of which 16.61% had myopia and 2.65% had hypermetropia and remaining 2.32% had astigmatism.

CONCLUSION

The Incidence of refractive errors increases with increasing television viewing time. There is a statistically significant association between the time spent watching television and the prevalence of refractive errors. As far as the TV viewing distance is concerned there is no statistically significant correlation between television viewing distance and refractive error prevalence hence we conclude that TV viewing distance did not affect much more on the refractive error of children.

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REFERENCES

1. Resnikoff S, Pascolini D, Mariotti SP, Pokharel GP, Global magnitude of visual impairment caused by uncorrected refractive errors in 2004, Bull World Health Organ, 2008; 86: 63-70.
2. Gupta M, Gupta BP, Chauhan A, Bhardwaj A. Ocular morbidity prevalence among school children in Shimla, Himachal, North India. Indian J Ophthalmol, 2009; 57: 133-8.
3. Limburg H, Vaidyanathan K, Dalal HP. Cost-effective screening of school children for refractive errors. World Health Forum, 1995; 16(2): 173-8.
4. Goswami A, Ahmed E, Shaha PL, Roy IS., An epidemiological pattern of cases of refractive errors. J Indian Med Assoc., 1978; 72: 227-8.
5. Nitesh Pradhan, Abhishek Sachdeva, Tushar Goel, Bhumika Bhola, Dolly Jha, International Journal of Research in Medical Sciences, 2018; 6(3): 798-801.
6. Megala M, and Joy Patricia Pushparani, prevalence of refractive error and its associated factors among school children in krishnagiri district, Tamilnadu, Dissertation submitted to The Tamil Nadu Dr. MGR Medical University (2015)
7. Bhutia, Karma Loday.; Bhutia, Sonam Choden; Gupta, Nisha; Shenga, Diki O, Prevalence of refractive errors among the school-going children in East Sikkim, Indian Journal of Ophthalmology: 2021; 69(8): 2018-2020.
8. Deshpande Jayant D, Malathi K., Prevalence of ocular morbidities among school children in rural area of North Maharashtra in India Nat J Comm Med, 2011; 2(2): 249-254.
9. Chanchal Shrivastav, Suman Sharma, Suman Jain and Rohita Sharma, Prevalence of refractive errors among school children in western rajasthan, International Journal of Current Research, 2013; 5(10): 2907-2908.
10. Seung-H K, Young W.S, Yong Min Choi, Ji-Yoon H, Gi-Tae Nam, Eun-Joo You and Yoonaee A.Cho, Effect of watching 3-dimensional television on refractive error in children, Korean J Ophthalmol, 2015; 29(1): 53-57.
11. R. Priyadarshini, L. Santhanlakshmi, K. Kanchana and P. Shanmugapriya, Effect of watching television on vision of school children in Madurai, International Journal of Advanced research, 2017; 5(7):-1390-1394.

Section: Ophthalmology

Original Research Article

ETIOLOGICAL DIAGNOSIS OF MICROBIAL KERATITIS IN A TERTIARY CARE HOSPITAL

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Abstract

Background: Microbial keratitis is a serious cause of ocular morbidity in India second only to cataract. The etiological and epidemiological features of Infective keratitis depend on host factors, geographical location, and climate also tends to vary with time. Present study was aimed to study etiological diagnosis of microbial keratitis in a tertiary care hospital. Material and **Methods:** Present study was prospective, observational hospital-based study, conducted in patients of any age/gender, clinically diagnosed with microbial keratitis. **Results:** Among 44 patients, majority were from age group of 41-60 years (34.09 %) & male to female ratio of 3.4:1 Predisposing and associated risk factors noted were trauma (77.27 %), previous medications (topical steroid/ topical antibiotic + steroid combinations) (22.73 %), diabetes mellitus (20.45 %), exposure keratopathy (6.82 %), chronic dacryocystits (4.55 %) & recurrent conjunctivitis (2.27 %). Patients had history of, patients were using either topical steroid or topical steroid and antibiotic combinations (18.92%) and patient was using systemic steroid (2.7%). In majority of patients vision of hand movement with intact perception of light (PL) and Projection of rays (PR) (29.55 %) was noted followed by visual acuity between 6/9-6/18 (27.27 %) and only 1 patient had No PL at the time of presentation. On detailed examination, common ulcer location was paracentral (47.73 %) & central (34.09 %). Majority had corneal ulcer of size > 3 mm (50 %), involved <50% of the corneal stromal depth (63.64 %). Hypopyon was present in 13.64 % of patients. Corneal sensation was absent in 17 patients (38.64 %). Corneal scraping was done in all patients, culture positivity rate was 56.82 %, fungal growth was seen in 10 patients (22.73 %) & bacterial growth was seen in 15 patients (34.09 %). **Conclusion:** Trauma, previous ophthalmological medications, diabetes mellitus, exposure keratopathy were common etiologies observed for microbial keratitis.

INTRODUCTION

Microbial keratitis is a serious cause of ocular morbidity in India second only to cataract. It assumes a greater importance in pediatric population because of risk of irreversible ocular sequelae like visual deprivation or amblyopia.[1,2] Bacterial keratitis is a potentially devastating ocular infection that may occur when the corneal epithelial barrier is compromised due to injury or trauma, leading to ulceration and infiltration of inflammatory cells.[3]

Keratitis rarely occurs in the normal eye because of the cornea's natural resistance to infection. However, predisposing factors such as trauma, contact lens wear, dry eyes, ocular surface disorders, and immune suppression may alter the defense mechanism of the outer eye and permit bacteria to invade the cornea.[4]

Even though most community-acquired corneal ulcers are resolved with appropriate treatment, severe infections may result in acute perforation, scleritis, or endophthalmitis, or lead to blinding sequelae such as secondary glaucoma, corneal scarring, corneal perforation, or phthisis bulbi.[5] The etiological and epidemiological features of Infective keratitis depend on host factors, geographical location, and climate also tends to vary with time.[6] Present study was aimed to study etiological diagnosis of microbial keratitis in a tertiary care hospital.

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MATERIAL AND METHODS

Present study was prospective, observational hospital-based study, conducted in department of ophthalmology, at JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist: Jalna, India.Study duration was of 2 years (January 2021 to December 2022). Study was approved by institutional ethical committee.

Inclusion Criteria

- Patients of any age/gender, clinically diagnosed with infectious keratitis, Willing to participate in present study

Exclusion Criteria

- Patients with impending perforating or perforated corneal ulcer.
- Patients who are unwilling to participate in the study.

Study was explained to patients in local language & written consent was taken for participation & study. Demographic & clinical data was recorded in case record proforma. Detailed history including onset, duration and associated risk factors, medical co-morbidities were noted. General, systemic & ophthalmic examination findings were noted. Distant vision of patient was tested with Snellen's chart and Landolt's C chart. Detailed anterior segment examination was done on Slit-lamp, corneal ulcer characteristics such as size, depth, location, margins, floor, infiltration, vascularization and fluorescein staining of cornea were noted. Corneal sensation was checked with a cotton wisp. Sac patency was checked by Sac syringing under topical anesthesia.

Microbiology evaluation was done by corneal scraping performed on a slit lamp under topical anaesthesia with No. 15 Bard Parker surgical blade from the edge and base of the ulcer. Scraping material plated on 2 slides and sent for Gram and 10% KOH staining and directly inoculated on Blood agar, Chocolate agar and Sabouraud agar for culture.

Data was collected and compiled using Microsoft Excel, analysed using SPSS 23.0 version. Statistical analysis was done using descriptive statistics.

RESULTS

In present study, 44 patients with corneal ulcer were included. Majority were from age group of 41-60 years (34.09 %) followed by age group of 21-40 years (29.55 %). Majority were males (77.27 %) & male to female ratio of 3.4:1.

Table 1: General characteristics

	No. of patients	Percentage
Age groups (in years)		
≤ 20	5	11.36
21-40	13	29.55
41-60	15	34.09
61-80	11	25
>80	0	0
Mean age (mean±SD)		
Gender		
Male	34	77.27
Female	10	22.73

Common clinical features observed were pain (97.73 %), redness (97.73 %), blurred vision (77.27 %), discharge (75 %), photophobia (70.45 %) &itching (47.73 %).

Table 2: Clinical features

Clinical features	No of Patients	Percentage
Pain	43	97.73
Redness	43	97.73
Blurred Vision	34	77.27
Discharge	33	75
Photophobia	31	70.45
Itching	21	47.73

Predisposing and associated risk factors noted were trauma (77.27 %), previous medications (topical steroid/ topical antibiotic + steroid combinations) (22.73 %), diabetes mellitus (20.45 %), exposure keratopathy (6.82 %), chronic dacryocystits (4.55 %) & recurrent conjunctivitis (2.27 %). Patients had history of, patients were using either topical steroid or topical steroid and antibiotic combinations (18.92%) and patient was using systemic steroid (2.7%). In 6 patients (13.62 %), there were no predisposing factors or associated risk factors noted.

Table 3: Risk Factors

Risk factors	No of Patients	Percentage
Trauma	34	77.27

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Trauma With Vegetative Matter	21	
Trauma With Other Than Vegetative Matter	13	
Topical steroid/ Topical Antibiotic + Steroid Combinations	10	22.73
Diabetes Mellitus	9	20.45
Exposure Keratopathy	3	6.82
Chronic Dacryocystits	2	4.55
Recurrent Conjunctivitis	1	2.27

In our study, all patients had unilateral involvement of eyes. In majority of patients vision of hand movement with intact perception of light (PL) and Projection of rays (PR) (29.55 %) was noted followed by visual acuity between 6/9-6/18 (27.27 %) and only 1 patient had No PL at the time of presentation. On detailed examination, common ulcer location was paracentral (47.73 %) & central (34.09 %). Majority had corneal ulcer of size > 3 mm (50 %), involved <50% of the corneal stromal depth (63.64 %). Hypopyon was present in 13.64 % of patients. Corneal sensation was absent in 17 patients (38.64 %).

Table 4: Ophthalmological examination findings

Ophthalmological examination findings	No of Patients	Percentage (%)
Visual Acuity		
<6/9	2	4.55
6/9 - 6/18	12	27.27
6/24 - 6/60	11	25
Finger Count 1Meter – 6Meter	5	11.36
HM PL - PR Accurate	13	29.55
NO PL	1	2.27
Location of Corneal Ulcer		
Paracentral	21	47.73
Central	15	34.09
Peripheral	4	9.09
Paracentral + Peripheral	2	4.55
Limbal To Limbal	2	4.55
Corneal Ulcer Size (mm)		
> 3 MM	22	50
≤ 3 MM	13	29.55
Limbal to Limbal	2	4.55
Stromal depth of corneal Ulcer (%)		0
<50%	28	63.64
>50%	14	31.82
Not Appreciable	2	4.55
Hypopyon		0
Present	6	13.64
Absent	36	81.82
No view of anterior chamber	2	4.55
Corneal Sensation		
Present	15	34.09
Reduced	12	27.27
Absent	17	38.64

Corneal scraping was done in all patients, culture positivity rate was 56.82 %, fungal growth was seen in 10 patients (22.73 %) & bacterial growth was seen in 15 patients (34.09 %). Majority of bacterial isolates were of gram positive bacteria such as *staphylococcus aureus (33.33 %), coagulase negative staphylococcus (26.67 %), streptococcus pneumonia (13.33 %) & other streptococcus* (6.67 %), while only gram negative bacteria islotaed was *pseudomonas*
(20 %). Among fungal isolates organisms noted were fusarium species (40 %), fusarium. soloni (20 %), fusarium oxysporum (10 %), f. dimerium (10 %), aspergillus fumigata (10 %) & trichophyton species (10 %).

Table 5: Culture findings

Culture Findings	No of Patients	Percentage (%)
Culture positives	25	56.82
• Bacterial	15	34.09
• Fungal	10	22.73
Culture negatives	19	43.18
Bacterial Results (n=15)		
Gram Positive Bacteria		
• Staphylococcus aureus	5	33.33
• Coagulase Negative staphylococcus	4	26.67
• Streptococcus pneumonia	2	13.33
• Other streptococcus	1	6.67

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Gram Negative Bacteria		
• Pseudomonas	3	20
Fungal Isolates (n=10)		
• Fusarium species	4	40
• Fusarium. Soloni	2	20
• Fusarium. oxysporum	1	10
• F. Dimerium	1	10
• Aspergillus Fumigata	1	10
• Trichophyton Species	1	10

DISCUSSION

Microbial keratitis is defined as loss of the corneal epithelium, with underlying stromal infiltration and suppuration associated with signs of inflammation with or without hypopyon. Microbial keratitis is an ocular emergency that requires prompt diagnosis and appropriate management to ensure the best visual outcome for the patient.[7]

It presents clinically with pain, photophobia, redness, infiltration, corneal edema, corneal ulceration, and anterior chamber reaction. If left untreated, it can lead to endophthalmitis and even corneal perforation and blindness.[8] Active corneal infection triggers inflammatory and immune responses to preserve ocular integrity, which may lead to loss of transparency and regularity of cornea, visual acuity decreases in a large percentage of cases due to corneal scars.[9]

In study by Paty BP *et al.*,[10] out of 45 patients,35were males. Majority of the patients belonged to age group of 50-60 years. Pain, Redness, Hypopyon was most commonly seen in Bacterial keratitis. In Fungal Keratitis, Redness (80%), Blurred vision (80%) was seen. Most common occupation was Farmers (66.6%). Trauma was the most common risk factor (23 isolates). Majority were bacterial isolates (29 isolates,64.4%) followed by fungal (5 isolates, 11.1%). Predominant isolate was Staphylococcus aureus (68.9%). All the gram- positive isolates showed 100% senitivity to Linezolid and Vancomycin.

Puri LR[11], conducted a retrospective clinical study among 1897 subjects with microbial keratitis, majority of subjects (71.2%) belonged to the age group of 26 to 55 years (71.2%), presented after two weeks (82.3%) and used non-prescription eye drops (71.9%) before visiting to the eye hospital. Ocular trauma (54.5%) was the most commonly reported predisposing factor. The central and paracentral ulcers comprised of 72.8% of ulcers with size greater than 2mm in 2.7% and moderate ulcer in 71.1%. Microbiological test revealed fungal ulcers in 78.1% subjects. Presenting visual acuity better than 6/18 was reported in 7% only.

Augustin JB[12] studied 120 cases, a total of 27 cases were culture positive. 17.5% were bacterial, 5 % were polymicrobial and 18.34 % were fungal. Among bacterial aetiology, *Pseudomonas aeruginosa* was most common 33.34 % followed by Coagulase negative *Staphylococcus*-22.23% and *Streptococcus pneumoniae*-18.51%. Trauma was the major risk factor. Diabetes mellitus, contact lens usage, exposure keratitis were the other comorbidity / risk factors. Out of the total 27 culture positive bacterial corneal ulcer cases none healed completely, 77.78% improved clinically with opacity and 22.22% ended with recurrence/complications.

Acharya M *et al.*,[13] studied 625 patients, 68.2% were male and 31.8% were female. The age group affected most was the sixth decade; 21.9% (137 cases). Trauma was the most common associated risk factor in 151 cases (24.2%) followed by previous ocular surgery in 111 (17.8%). Out of the 625 corneal scrapings, 393 (62.9%) were culture-positive. Bacterial culture accounted for 60.6% (238/393) and fungal cultures were 143 (36.4%). More than 50% of the bacterial keratitis cases and more than 60% of the fungal cases had a favorable outcome. Staphylococcus sp. And Fusarium sp. were the most common bacteria and fungus isolated, respectively. Only one-third of the cases required surgical intervention, and the remaining two-thirds were managed medically.

Pre-existing dry eye disease, blepharo-conjunctivitis, corneal perforation, recent trauma or surgery, immunosuppression and local or systemic steroid therapy have all been identified as risk factors of progression to endophthalmitis in initially corneal infections.[14] Microbial resistance to antibiotic agents is becoming increasingly prevalent in ocular infections. Clinicians should prescribe antibiotic agents only when clearly indicated and should order susceptibility testing whenever possible to prescribe the most appropriate agent.[15]

For prevention & treatment of microbial keratitis, important areas to target are, improved access to timely and effective medical treatment for this condition; improving patient awareness of the disease and available eye care services, educating the community health workers who provide initial treatment and referral prior to attending the eye hospital, and, increasing the affordability and accessibility of available treatment.

CONCLUSION

Trauma, previous ophthalmological medications, diabetes mellitus, exposure keratopathy were common etiologies observed for microbial keratitis.

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Prompt diagnosis and specific treatment according to the etiological agent is the best path to a better visual prognosis.

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REFERENCES

1. Hsiao CH, Yeung L, Ma DH, Chen YF, Lin HC, Tan HY, *et al.* Pediatric microbial keratitis in Taiwanese children: A review of hospital cases. Arch Ophthalmol 2007;125:603-9.
2. Olivia MS, Schottman T, Gulati M. Turning the tide of corneal blindness. Indian J Ophthalmol 2012;60:423-7.
3. G. Pachigolla, P. Blomquist, and H. D. Cavanagh, "Microbial keratitis pathogens and antibiotic susceptibilities: a 5-year review of cases at an urban county hospital in North Texas," Eye and Contact Lens, vol. 33, no. 1, pp. 45–49, 2007.
4. Lin A, Rhee MK, Akpek EK, Amescua G, Farid M *et al.* (2019) Bacterial keratitis PPP. The American Academy of Ophthalmology Preferred Practice Pattern Cornea/External Disease Committee 126(1):1–55
5. Joshi RK, Goyal RK, Kochar A (2017) A prospective study of clinical profile, epidemiology and etiological diagnosis of corneal ulcer in North-West Rajasthan. International Journal of Community Medicine and Public Health 4(12):4544–4547
6. Panda A, Satpathy G, Nayak N, Kumar S, Kumar A. Demographic pattern, predisposing factors and management of ulcerative keratitis: evaluation of one thousand unilateral cases at a tertiary care centre. Clin Exp Ophthalmol. 2007;35(1):44–50.
7. Puri LR, Burn H, Roshan A, *et al.* Epidemiology and clinical outcomes of microbial keratitis in South East Nepal: a mixed-methods study. BMJ Open Ophthalmology 2022;7:e001031.
8. Suwal S, Bhandari D, Thapa P, Shrestha MK, Amatya J (2016) Microbiological profile of corneal ulcer cases diagnosed in a tertiary care ophthalmological institute in Nepal. BioMed Central ophthalmology 16(1):209.
9. Krachmer JH, Mannis MJ, Holland EJ. Cornea. 2nd ed. London: Elsevier Mosby; 2005. 1014 p.
10. Bimoch Projna Paty, Maitreyi T. Sanghamitra Padhi, Banojini Parida, Clinico-microbiological profile of infective keratitis in a tertiary care hospital, eastern India, Int. j. clin. biomed. res. 2019;5(4):14-17.
11. Puri LR, Shrestha GS. Microbial keratitis: A five years retrospective clinical study in tertiary eye hospital of eastern region of Nepal, Journal of Kathmandu Medical College, Vol. 4, No. 4, Issue 14, Oct.-Dec., 2015
12. Augustin JB, Suresh Baboo V. K. Etiological profile and clinical outcomes of bacterial keratitis from a tertiary care centre in North Kerala. International Journal of Research and Review. 2021; 8(3): 287-296.
13. Acharya M. Farooqui JH. Gaba T. Gandhi A, Mathur U. Delhi infectious keratitis Study: Update on clinico-microbiological profile and outcomes of infectious keratitis. J Curr Ophthalmol 2020;32:249-55.
14. Henry CR, Flynn HW Jr, Miller D, Forster RK, Alfonso EC. Infectious keratitis progressing to endophthalmitis: a 15-year study of microbiology, associated factors, and clinical outcomes. Ophthalmology. 2012;119(12):2443–9.
15. M. McDonald and J. M. Blondeau, "Emerging antibiotic resistance in ocular infections and the role of fluoroquinolones," Journal of Cataract and Refractive Surgery, vol. 36, no. 9, pp. 1588–1598, 2010.

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Prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital

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Abstract

Background: The goal of cataract surgery is to achieve a desirable refractive outcome with minimal surgically induced astigmatism (SIA) after cataract surgery. However, the presence of preoperative corneal astigmatism continues to challenge the final visual outcome. Present study was aimed to study prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital. **Material and Methods:** Present study was prospective, observational study, conducted in patients of age > 40 years, either gender, posted for cataract surgery. **Results:** In present study, 644 patients/ 460 eyes considered for evaluation, mean age was 68.1 ± 10.2 years, gender ratio (Male: Female) was 1:1.22. Majority of cataracts were mixed type (44.57 %) & nuclear sclerosis (38.04%) other less common types were posterior sub capsular opacification (8.7 %), mature cataract (5.75 %), cortical cataract (2.48 %) & developmental cataract (0.47 %). Mean keratometry values were K1 - 43.97 D & K2 - 42.45 D and range was 36-55 D. Mean corneal astigmatism 0.91 ± 0.80 D & range was 0-5.72 D. Mean sphere was 1.75 ± 1.67 D, mean cylinder 0.54 ± 0.45 D & range of cylinder was 0-2.43 D. No astigmatism was noted in 7.45 %, while oblique astigmatism was in 10.71 % cases. Majority of cases had with the rule astigmatism (WTR) (43.79 %), followed by against the rule astigmatism (ATR) (38.04 %). **Conclusion:** Majority patients posted for cataract surgery have preoperative corneal astigmatism, commonly with the rule (WTR) as well as against the rule astigmatism (ATR), which can affect the quality of vision after cataract surgery.

Keywords: cataract surgery, preoperative corneal astigmatism, against the rule astigmatism, quality of vision

Introduction

Ocular astigmatism is a refractive condition which occurs because of unequal curvatures of the cornea and the crystalline lens, decentration or tilting of the lens, or unequal refractive indices across the crystalline lens and in some cases, alterations of the geometry of the posterior pole.[1]

Cataract is the cause of the half of blindness worldwide and cataract extraction is one of the most commonly performed surgeries.[2] Cataract surgery has undergone great refinement in recent years, with improvements and advances in operating techniques, instruments and technical aids, the patients' as well as the surgeons' demands and expectations are continuously increasing. Postoperative astigmatism can be either surgery induced or residual

of preoperative corneal astigmatism. Surgically induced astigmatism has greatly been reduced by the use of small phacotips and smaller incisions. However, the presence of preoperative corneal astigmatism continues to challenge the final visual outcome.[3]

The goal of cataract surgery is to achieve a desirable refractive outcome with minimal surgically induced astigmatism (SIA) after cataract surgery. Some of the factors affecting SIA are site of incision, surgical skill and to a great extent, pre-existing corneal astigmatism.[4,5] Present study was aimed to study prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital.

Material And Methods

Present study was prospective, observational study, conducted in Department of Ophthalmology, JIIU's Indian Institute of Medical Science & Research, Warudi; India. Study duration was of 1 year (January 2022 to December 2022). Study approval was obtained from institutional ethical committee.

Inclusion criteria

- Patients of age > 40 years, either gender, posted for cataract surgery at our hospital, willing to participate in present study

Exclusion criteria

- Patients with corneal diseases, irregular astigmatism,
- History of ocular inflammation, corneal or intraocular surgery

Study was explained to patients in local language & written consent was taken for participation & study. All cases underwent history taking (present, past medical/surgical), general/systemic examination followed by complete ophthalmological evaluation (visual assessment, slit lamp anterior segment examination and ophthalmoscopy through the dilated pupils). Corneal curvature was assessed by IOL. The keratometric values were collected by an experienced technician for the consecutive patients and an average of three measurements of the parameters was subjected to analysis.

Corneal astigmatism (CA) was categorised as with the rule (WTR) when meridian of maximum curvature was within 308 of vertical 908 or against the rule (ATR) when meridian of maximum curvature was within 308 of horizontal 1808 and oblique (OBL) if it was neither WTR nor ATR. Data was collected and compiled using Microsoft Excel. Statistical analysis was done using descriptive statistics.

Results

In present study, 644 patients/ 460 eyes considered for evaluation, mean age was 68.1 ± 10.2 years, gender ratio (Male: Female) was 1:1.22. Majority of cataracts were mixed type (44.57 %) & nuclear sclerosis (38.04%) other less common types were posterior sub capsular opacification (8.7 %), mature cataract (5.75 %), cortical cataract (2.48 %) & developmental cataract (0.47 %).

Table 1: General characteristics

Characteristic	Number of cases (n=644)	Percentage (%)
Mean age (Mean ± SD)	67.8 ± 13.8 years	
Gender		
Male	290	45.03 %
Female	354	54.97 %
Gender ratio (Male: Female)	1:1.22	
Types of cataract		
Mixed type	287	44.57 %
Nuclear sclerosis	245	38.04 %

Posterior sub capsular opacification	56	8.7 %
Mature cataract	37	5.75 %
Cortical cataract	16	2.48 %
Developmental cataract	3	0.47 %

Mean keratometry values were K1 - 42.19 D & K2 - 42.91 D and range was 32-51 D. Mean corneal astigmatism 0.89 ± 0.82 D & range was 0- 5.61 D. Mean sphere was 1.51 ± 1.92 D, mean cylinder 0.39± 0.59 D & range of cylinder was 0-2.51 D.

Table 2: Keratometry values

Keratometry values	**Value / Mean ± SD**
Mean keratometry (D)	
K1	43.97
K2	42.45
Mean corneal astigmatism (D)	0.91 ± 0.80
Range of corneal astigmatism (D)	0- 5.72
Range of Keratometry	36-55
Mean sphere (D)	1.75 ± 1.67
Mean cylinder (D)	0.54 ± 0.45
Range of cylinder (D)	0-2.43

In present study, no astigmatism was noted in 7.45 %, while oblique astigmatism was in 10.71 % cases. Majority of cases had with the rule astigmatism (WTR) (43.79 %), followed by against the rule astigmatism (ATR) (38.04 %).

Table 3: Distribution of different types of corneal astigmatism

Types of astigmatism	**Numbers (n)**	**Percentage (%)**
With the rule	282	43.79 %
Against the rule	245	38.04 %
Oblique astigmatism	69	10.71 %
No astigmatism	48	7.45 %

Discussion

The preoperative assessment of patients with cataract should include corneal astigmatism (CA), and it should be addressed either at the time of cataract surgery or afterward to provide the best visual performance. Techniques to measure astigmatism include keratometry (manual or automated), corneal topography (eg, placido-based or based on the reflection of multicolor, light-emitting diode [LED] points), and corneal tomography (eg, slit-scan imaging, Scheimpflug imaging). Additionally, the use of intraoperative aberrometry has been documented to improve the astigmatic outcomes.[6,7]

Various factors such as physiological changes in the corneal curvature as age advances, pressure from eyelids, pressure by intraocular pressure, and of the extraocular muscles have been anticipated to be responsible factors for changes in ATR and WTR with age. There exist a variety of surgical techniques to reduce or eliminate the CA including corneal relaxing incisions (CCIs), limbal relaxing incisions (LRIs), opposite clear corneal incisions, femtosecond laser-assisted astigmatic keratotomy, excimer laser keratectomy, and toric IOL implantation.[8,9]

Arun B K[10] studied 460 patients/ 460 eyes, mean age was 67.8 ± 13.8, gender ratio (Male: Female) was 1.23:1. Majority of cataracts were mixed type (45.43%) and nuclear sclerosis (38.91%) other less common types were posterior sub capsular opacification (7.61%), mature cataract (5.22%), cortical cataract (2.39%) and developmental cataract (0.43%). Mean

keratometry values were K1 - 42.19 D and K2 - 42.91 D and range was 32-51 D. Mean corneal astigmatism 0.89 ± 0.82 D and range was 0- 5.61 D. Mean sphere was 1.51 ± 1.92 D, mean cylinder 0.39± 0.59 D and range of cylinder was 0-2.51 D. In present study, no astigmatism was noted in 8.04%, while oblique astigmatism was in 14.78% cases. Majority of cases had with the rule astigmatism (41.09%), followed by against the rule astigmatism (36.09%).

Chaudhary M[11] studied 225 eyes of 185 subjects, 61.3% were female eyes. The mean age of the subjects was 64.45±12.89 years. Mean amount of corneal astigmatism in our study was 0.84±0.80 D. 16.9% had no significant corneal astigmatism while 65.3% had corneal astigmatism between 0.25 and 1.50 diopter and 17.8% had corneal astigmatism of 1.50D or higher. With-the-rule astigmatism (axis of correcting cylinder 180±30 degrees) was present in 44.4% eyes, 40.04% of the eyes had against-the-rule (ATR) astigmatism (correcting minus cylinder 90±30 degrees), and 12.9% of the eyes had oblique astigmatism.

Gupta PS et al.,[12] studied 370 eyes of 370 patients, mean age was 60.43 ± 9.9 years. Nearly 50.54% were males and the rest were females. The mean of K, K1, and K2 was 44.23 ± 1.65 D, 43.75 ± 1.68 D, and 44.71 ± 1.74 D, respectively. Almost 82.16% of the studied population had mean corneal astigmatism <1.5 D. The corneal astigmatism was against the rule (ATR) in 52.16%, with the rule (WTR) in 27.29%, and oblique in 17.83%. With increasing age, there is a gradual shift of astigmatism from WTR to ATR, in both males and females, which peaks in the sixth decade of life.

Anuj Sharma et al.,[13] studied 3597 eyes, 1810 (50.3%) were females and mean age was 59.121±15.19 years. The mean corneal astigmatism among all patients was 1.17±1.15 D (range 0–12.5 D). There was no astigmatism in 99 eyes (2.78%), with-the-rule (WTR) in 1062 eyes (29.83%), against-the-rule (ATR) in 1843 eyes (51.72%) and oblique astigmatism (OA) in 555 eyes (15.59%). The tendency of a gradual change from with the rule (WTR) to against the rule (ATR) astigmatism was noted as the age advanced.

Studies have indicated that corneal diameter can be a factor which can predict the incidence of astigmatism in patients who undergo cataract surgery. It was shown that those patients with a higher white to white corneal diameter was less at risk of developing corneal astigmatism as compared to patients with lesser diameter.[14] Shorter axial length, shallow anterior chamber, lower intraocular pressure and advancing age, has been shown as risk factors for SIA, in those undergoing cataract surgeries.[15]

With the improvement in the quality of healthcare and better age expectancy more number of patients would require quality vision following cataract surgery, which can only be achieved if pre-operative astigmatism correction is taken into consideration.

Conclusion

Majority patients posted for cataract surgery have preoperative corneal astigmatism, commonly with the rule (WTR) as well as against the rule astigmatism (ATR), which can affect the quality of vision after cataract surgery. Preoperative assessment & correction of corneal astigmatism is important component of cataract surgery.

References

1. Koch DD, Ali SF, Weikert MP, Shirayama M, Jenkins R, Wang L. Contribution of posterior corneal astigmatism to total corneal astigmatism. J Cataract Refract Surg 2012;38:2080- 7.
2. Resnikoff S, Pascolini D, Etya'ale D, Kocur I, Pararajasegaram R, Pokharel GP, et al. Global data on visual impairment in the year 2002. Bull World Health Organ 2004;82(11): 844-51.

3. Mozayan E, Lee JK. Update on astigmatism management. Curr Opin Ophthalmol 2014;25:286- 90.
4. W. Chen, C. Zuo, C. Chen etal.Prevalence of corneal astigmatism before cataract surgery in Chinese patients.J cataract refract surg.2013;39:188–192.
5. K. Lekhanont, W. Wuthisiri, P. Chatchaipun, and A. Vongthongsri.Prevalence of corneal astigmatism in cataract surgery candidates in Bangkok, Thailand.J cataract refract surg.2011; 37:613–5.
6. Kanellopoulos AJ, Asimellis G. Distribution and repeatability of corneal astigmatism measurements (magnitude and axis) evaluated with color light emitting diode reflection topography. Cornea. 2015;34(8): 937–944.
7. Davison JA, Potvin R. Preoperative measurement vs intraoperative aberrometry for the selection of intraocular lens sphere power in normal eyes. Clin Ophthalmol. 2017;11:923–929.
8. Nichamin LD. Astigmatism control. Ophthalmol Clin North Am 2006;19:485- 93.
9. Khan MI, Muhtaseb M. Prevalence of corneal astigmatism in patients having routine cataract surgery at a teaching hospital in the United Kingdom. J Cataract Refract Surg 2011;37:1751- 5.
10. Arun B Kolap. Study of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital. MedPulse International Journal of Ophthalmology. November 2021; 20(2): 25-28.
11. Chaudhary M , Dahal HN, Prevalence and types of corneal astigmatism in patients undergoing cataract surgery, Journal of Institute of Medicine, April, 2017, 39:1
12. Gupta PS, Sidhu NK, Verma PV, Singla IJ. Prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital of Malwa region of Northern India. Kerala J Ophthalmol 2021;33:51-5.
13. Anuj Sharma, Sonia Phulke, Anugya Agrawal, Isha Kapoor, Rakesh Kumar Bansal, Prevalence of Astigmatism in Patients Undergoing Cataract Surgery at a Tertiary Care Center in North India, Clinical Ophthalmology 2021:15
14. Theodoulidou S, Asproudis I, Kalogeropoulos C, Athanasiadis A, Aspiotis M. Corneal diameter as a factor influencing corneal astigmatism after cataract surgery. Cornea 2016;35:132-6.
15. Chang SW, Su TY, Chen YL. Influence of ocular features and incision width on surgically induced astigmatism after cataract surgery. J Refract Surg 2015;31:82-8.

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Original Research Article

ETIOLOGICAL DIAGNOSIS OF MICROBIAL KERATITIS IN A TERTIARY CARE HOSPITAL

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Abstract

Background: Microbial keratitis is a serious cause of ocular morbidity in India second only to cataract. The etiological and epidemiological features of Infective keratitis depend on host factors, geographical location, and climate also tends to vary with time. Present study was aimed to study etiological diagnosis of microbial keratitis in a tertiary care hospital. Material and **Methods:** Present study was prospective, observational hospital-based study, conducted in patients of any age/gender, clinically diagnosed with microbial keratitis. **Results:** Among 44 patients, majority were from age group of 41-60 years (34.09 %) & male to female ratio of 3.4:1 Predisposing and associated risk factors noted were trauma (77.27 %), previous medications (topical steroid/ topical antibiotic + steroid combinations) (22.73 %), diabetes mellitus (20.45 %), exposure keratopathy (6.82 %), chronic dacryocystits (4.55 %) & recurrent conjunctivitis (2.27 %). Patients had history of, patients were using either topical steroid or topical steroid and antibiotic combinations (18.92%) and patient was using systemic steroid (2.7%). In majority of patients vision of hand movement with intact perception of light (PL) and Projection of rays (PR) (29.55 %) was noted followed by visual acuity between 6/9-6/18 (27.27 %) and only 1 patient had No PL at the time of presentation. On detailed examination, common ulcer location was paracentral (47.73 %) & central (34.09 %). Majority had corneal ulcer of size > 3 mm (50 %), involved <50% of the corneal stromal depth (63.64 %). Hypopyon was present in 13.64 % of patients. Corneal sensation was absent in 17 patients (38.64 %). Corneal scraping was done in all patients, culture positivity rate was 56.82 %, fungal growth was seen in 10 patients (22.73 %) & bacterial growth was seen in 15 patients (34.09 %). **Conclusion:** Trauma, previous ophthalmological medications, diabetes mellitus, exposure keratopathy were common etiologies observed for microbial keratitis.

INTRODUCTION

Microbial keratitis is a serious cause of ocular morbidity in India second only to cataract. It assumes a greater importance in pediatric population because of risk of irreversible ocular sequelae like visual deprivation or amblyopia.[1,2] Bacterial keratitis is a potentially devastating ocular infection that may occur when the corneal epithelial barrier is compromised due to injury or trauma, leading to ulceration and infiltration of inflammatory cells.[3]

Keratitis rarely occurs in the normal eye because of the cornea's natural resistance to infection. However, predisposing factors such as trauma, contact lens wear, dry eyes, ocular surface disorders, and immune suppression may alter the defense mechanism of the outer eye and permit bacteria to invade the cornea.[4]

Even though most community-acquired corneal ulcers are resolved with appropriate treatment, severe infections may result in acute perforation, scleritis, or endophthalmitis, or lead to blinding sequelae such as secondary glaucoma, corneal scarring, corneal perforation, or phthisis bulbi.[5] The etiological and epidemiological features of Infective keratitis depend on host factors, geographical location, and climate also tends to vary with time.[6] Present study was aimed to study etiological diagnosis of microbial keratitis in a tertiary care hospital.

MATERIAL AND METHODS

Present study was prospective, observational hospital-based study, conducted in department of ophthalmology, at JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist: Jalna, India.Study duration was of 2 years (January 2021 to December 2022). Study was approved by institutional ethical committee.

Inclusion Criteria

- Patients of any age/gender, clinically diagnosed with infectious keratitis, Willing to participate in present study

Exclusion Criteria

- Patients with impending perforating or perforated corneal ulcer.
- Patients who are unwilling to participate in the study.

Study was explained to patients in local language & written consent was taken for participation & study. Demographic & clinical data was recorded in case record proforma. Detailed history including onset, duration and associated risk factors, medical co-morbidities were noted. General, systemic & ophthalmic examination findings were noted. Distant vision of patient was tested with Snellen's chart and Landolt's C chart. Detailed anterior segment examination was done on Slit-lamp, corneal ulcer characteristics such as size, depth, location, margins, floor, infiltration, vascularization and fluorescein staining of cornea were noted. Corneal sensation was checked with a cotton wisp. Sac patency was checked by Sac syringing under topical anesthesia.

Microbiology evaluation was done by corneal scraping performed on a slit lamp under topical anaesthesia with No. 15 Bard Parker surgical blade from the edge and base of the ulcer. Scraping material plated on 2 slides and sent for Gram and 10% KOH staining and directly inoculated on Blood agar, Chocolate agar and Sabouraud agar for culture.

Data was collected and compiled using Microsoft Excel, analysed using SPSS 23.0 version. Statistical analysis was done using descriptive statistics.

RESULTS

In present study, 44 patients with corneal ulcer were included. Majority were from age group of 41-60 years (34.09 %) followed by age group of 21-40 years (29.55 %). Majority were males (77.27 %) & male to female ratio of 3.4:1.

Table 1: General characteristics

	No. of patients	Percentage
Age groups (in years)		
≤ 20	5	11.36
21-40	13	29.55
41-60	15	34.09
61-80	11	25
>80	0	0
Mean age (mean±SD)		
Gender		
Male	34	77.27
Female	10	22.73

Common clinical features observed were pain (97.73 %), redness (97.73 %), blurred vision (77.27 %), discharge (75 %), photophobia (70.45 %) &itching (47.73 %).

Table 2: Clinical features

Clinical features	No of Patients	Percentage
Pain	43	97.73
Redness	43	97.73
Blurred Vision	34	77.27
Discharge	33	75
Photophobia	31	70.45
Itching	21	47.73

Predisposing and associated risk factors noted were trauma (77.27 %), previous medications (topical steroid/ topical antibiotic + steroid combinations) (22.73 %), diabetes mellitus (20.45 %), exposure keratopathy (6.82 %), chronic dacryocystits (4.55 %) & recurrent conjunctivitis (2.27 %). Patients had history of, patients were using either topical steroid or topical steroid and antibiotic combinations (18.92%) and patient was using systemic steroid (2.7%). In 6 patients (13.62 %), there were no predisposing factors or associated risk factors noted.

Table 3: Risk Factors

Risk factors	No of Patients	Percentage
Trauma	34	77.27

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Trauma With Vegetative Matter	21	
Trauma With Other Than Vegetative Matter	13	
Topical steroid/ Topical Antibiotic + Steroid Combinations	10	22.73
Diabetes Mellitus	9	20.45
Exposure Keratopathy	3	6.82
Chronic Dacryocystits	2	4.55
Recurrent Conjunctivitis	1	2.27

In our study, all patients had unilateral involvement of eyes. In majority of patients vision of hand movement with intact perception of light (PL) and Projection of rays (PR) (29.55 %) was noted followed by visual acuity between 6/9-6/18 (27.27 %) and only 1 patient had No PL at the time of presentation. On detailed examination, common ulcer location was paracentral (47.73 %) & central (34.09 %). Majority had corneal ulcer of size > 3 mm (50 %), involved <50% of the corneal stromal depth (63.64 %). Hypopyon was present in 13.64 % of patients. Corneal sensation was absent in 17 patients (38.64 %).

Table 4: Ophthalmological examination findings

Ophthalmological examination findings	No of Patients	Percentage (%)
Visual Acuity		
<6/9	2	4.55
6/9 - 6/18	12	27.27
6/24 - 6/60	11	25
Finger Count 1Meter – 6Meter	5	11.36
HM PL+ PR Accurate	13	29.55
NO PL	1	2.27
Location of Corneal Ulcer		
Paracentral	21	47.73
Central	15	34.09
Peripheral	4	9.09
Paracentral + Peripheral	2	4.55
Limbal To Limbal	2	4.55
Corneal Ulcer Size (mm)		
> 3 MM	22	50
≤ 3 MM	13	29.55
Limbal to Limbal	2	4.55
Stromal depth of corneal Ulcer (%)		0
<50%	28	63.64
>50%	14	31.82
Not Appreciable	2	4.55
Hypopyon		0
Present	6	13.64
Absent	36	81.82
No view of anterior chamber	2	4.55
Corneal Sensation		
Present	15	34.09
Reduced	12	27.27
Absent	17	38.64

Corneal scraping was done in all patients, culture positivity rate was 56.82 %, fungal growth was seen in 10 patients (22.73 %) & bacterial growth was seen in 15 patients (34.09 %). Majority of bacterial isolates were of gram positive bacteria such as *staphylococcus aureus (33.33 %), coagulase negative staphylococcus (26.67 %), streptococcus pneumonia (13.33 %) & other streptococcus* (6.67 %), while only gram negative bacteria islotaed was *pseudomonas*
(20 %). Among fungal isolates organisms noted were fusarium species (40 %), fusarium. solani (20 %), fusarium oxysporum (10 %), f. dimerium (10 %), aspergillus fumigata (10 %) & trichophyton species (10 %).

Table 5: Culture findings

Culture Findings	No of Patients	Percentage (%)
Culture positives	25	56.82
• Bacterial	15	34.09
• Fungal	10	22.73
Culture negatives	19	43.18
Bacterial Results (n=15)		
Gram Positive Bacteria		
• Staphylococcus aureus	5	33.33
• Coagulase Negative staphylococcus	4	26.67
• Streptococcus pneumonia	2	13.33
• Other streptococcus	1	6.67

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Gram Negative Bacteria		
• Pseudomonas	3	20
Fungal Isolates (n=10)		
• Fusarium species	4	40
• Fusarium. Soloni	2	20
• Fusarium. oxysporum	1	10
• F. Dimerium	1	10
• Aspergillus Fumigata	1	10
• Trichophyton Species	1	10

DISCUSSION

Microbial keratitis is defined as loss of the corneal epithelium, with underlying stromal infiltration and suppuration associated with signs of inflammation with or without hypopyon. Microbial keratitis is an ocular emergency that requires prompt diagnosis and appropriate management to ensure the best visual outcome for the patient.[2]

It presents clinically with pain, photophobia, redness, infiltration, corneal edema, corneal ulceration, and anterior chamber reaction. If left untreated, it can lead to endophthalmitis and even corneal perforation and blindness.[8] Active corneal infection triggers inflammatory and immune responses to preserve ocular integrity, which may lead to loss of transparency and regularity of cornea, visual acuity decreases in a large percentage of cases due to corneal scars.[9]

In study by Paty BP *et al.*,[10] out of 45 patients,35were males. Majority of the patients belonged to age group of 50-60 years. Pain, Redness, Hypopyon was most commonly seen in Bacterial keratitis. In Fungal Keratitis, Redness (80%), Blurred vision (80%) was seen. Most common occupation was Farmers (66.6%). Trauma was the most common risk factor (23 isolates). Majority were bacterial isolates (29 isolates,64.4%) followed by fungal (5 isolates, 11.1%). Predominant isolate was Staphylococcus aureus (68.9%). All the gram- positive isolates showed 100% senitivity to Linezolid and Vancomycin.

Puri LR[11], conducted a retrospective clinical study among 1897 subjects with microbial keratitis, majority of subjects (71.2%) belonged to the age group of 26 to 55 years (71.2%), presented after two weeks (82.3%) and used non-prescription eye drops (71.9%) before visiting to the eye hospital. Ocular trauma (54.5%) was the most commonly reported predisposing factor. The central and paracentral ulcers comprised of 72.8% of ulcers with size greater than 2mm in 2.7% and moderate ulcer in 71.1%. Microbiological test revealed fungal ulcers in 78.1% subjects. Presenting visual acuity better than 6/18 was reported in 7% only.

Augustin JB[12] studied 120 cases, a total of 27 cases were culture positive. 17.5% were bacterial, 5 % were polymicrobial and 18.34 % were fungal. Among bacterial actiology, *Pseudomonas aeruginosa* was most common 33.34 % followed by Coagulase negative *Staphylococcus*-22.23% and *Streptococcus pneumoniae*-18.51%. Trauma was the major risk factor. Diabetes mellitus, contact lens usage, exposure keratitis were the other comorbidity / risk factors. Out of the total 27 culture positive bacterial corneal ulcer cases none healed completely, 77.78% improved clinically with opacity and 22.22% ended with recurrence/complications.

Acharya M *et al.*,[13] studied 625 patients, 68.2% were male and 31.8% were female. The age group affected most was the sixth decade; 21.9% (137 cases). Trauma was the most common associated risk factor in 151 cases (24.2%) followed by previous ocular surgery in 111 (17.8%). Out of the 625 corneal scrapings, 393 (62.9%) were culture-positive. Bacterial culture accounted for 60.6% (238/393) and fungal cultures were 143 (36.4%). More than 50% of the bacterial keratitis cases and more than 60% of the fungal cases had a favorable outcome. Staphylococcus sp. And Fusarium sp. were the most common bacteria and fungus isolated, respectively. Only one-third of the cases required surgical intervention, and the remaining two-thirds were managed medically.

Pre-existing dry eye disease, blepharo-conjunctivitis, corneal perforation, recent trauma or surgery, immunosuppression and local or systemic steroid therapy have all been identified as risk factors of progression to endophthalmitis in initially corneal infections.[14] Microbial resistance to antibiotic agents is becoming increasingly prevalent in ocular infections. Clinicians should prescribe antibiotic agents only when clearly indicated and should order susceptibility testing whenever possible to prescribe the most appropriate agent.[15]

For prevention & treatment of microbial keratitis, important areas to target are, improved access to timely and effective medical treatment for this condition; improving patient awareness of the disease and available eye care services, educating the community health workers who provide initial treatment and referral prior to attending the eye hospital, and increasing the affordability and accessibility of available treatment.

CONCLUSION

Trauma, previous ophthalmological medications, diabetes mellitus, exposure keratopathy were common etiologies observed for microbial keratitis.

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Prompt diagnosis and specific treatment according to the etiological agent is the best path to a better visual prognosis.

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REFERENCES

1. Hsiao CH, Yeung L, Ma DH, Chen YF, Lin HC, Tan HY, *et al.* Pediatric microbial keratitis in Taiwanese children: A review of hospital cases. Arch Ophthalmol 2007;125:603-9.
2. Olivia MS, Schottman T, Gulati M. Turning the tide of corneal blindness. Indian J Ophthalmol 2012;60:423-7.
3. G. Pachigolla, P. Blomquist, and H. D. Cavanagh, "Microbial keratitis pathogens and antibiotic susceptibilities: a 5-year review of cases at an urban county hospital in North Texas," Eye and Contact Lens, vol. 33, no. 1, pp. 45–49, 2007.
4. Lin A, Rhee MK, Akpek EK, Amescua G, Farid M *et al.* (2019) Bacterial keratitis PPP. The American Academy of Ophthalmology Preferred Practice Pattern Cornea/External Disease Committee 126(1):1–55
5. Joshi RK, Goyal RK, Kochar A (2017) A prospective study of clinical profile, epidemiology and etiological diagnosis of corneal ulcer in North-West Rajasthan. International Journal of Community Medicine and Public Health 4(12):4544–4547
6. Panda A, Satpathy G, Nayak N, Kumar S, Kumar A. Demographic pattern, predisposing factors and management of ulcerative keratitis: evaluation of one thousand unilateral cases at a tertiary care centre. Clin Exp Ophthalmol. 2007;35(1):44–50.
7. Puri LR, Burn H, Roshan A, *et al.* Epidemiology and clinical outcomes of microbial keratitis in South East Nepal: a mixed-methods study. BMJ Open Ophthalmology 2022;7:e001031.
8. Suwal S, Bhandari D, Thapa P, Shrestha MK, Amatya J (2016) Microbiological profile of corneal ulcer cases diagnosed in a tertiary care ophthalmological institute in Nepal. BioMed Central ophthalmology 16(1):209.
9. Krachmer JH, Mannis MJ, Holland EJ. Cornea. 2nd ed. London: Elsevier Mosby; 2005. 1014 p.
10. Bimoch Projna Paty, Maitreyi T, Sanghamitra Padhi, Banojini Parida, Clinico-microbiological profile of infective keratitis in a tertiary care hospital, eastern India, Int. j. clin. biomed. res. 2019;5(4):14-17.
11. Puri LR, Shrestha GS, Microbial keratitis: A five years retrospective clinical study in tertiary eye hospital of eastern region of Nepal, Journal of Kathmandu Medical College, Vol. 4, No. 4, Issue 14, Oct.-Dec., 2015
12. Augustin JB, Suresh Baboo V. K. Etiological profile and clinical outcomes of bacterial keratitis from a tertiary care centre in North Kerala. International Journal of Research and Review. 2021; 8(3): 287-296.
13. Acharya M. Farooqui JH. Gaba T. Gandhi A. Mathur U. Delhi infectious keratitis Study: Update on clinico-microbiological profile and outcomes of infectious keratitis. J Curr Ophthalmol 2020;32:249-55.
14. Henry CR, Flynn HW Jr, Miller D, Forster RK, Alfonso EC. Infectious keratitis progressing to endophthalmitis: a 15-year study of microbiology, associated factors, and clinical outcomes. Ophthalmology. 2012;119(12):2443–9.
15. M. McDonald and J. M. Blondeau, "Emerging antibiotic resistance in ocular infections and the role of fluoroquinolones," Journal of Cataract and Refractive Surgery, vol. 36, no. 9, pp. 1588–1598, 2010.

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Prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital

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Abstract

Background: The goal of cataract surgery is to achieve a desirable refractive outcome with minimal surgically induced astigmatism (SIA) after cataract surgery. However, the presence of preoperative corneal astigmatism continues to challenge the final visual outcome. Present study was aimed to study prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital. **Material and Methods:** Present study was prospective, observational study, conducted in patients of age > 40 years, either gender, posted for cataract surgery. **Results:** In present study, 644 patients/ 460 eyes considered for evaluation, mean age was 68.1 ± 10.2 years, gender ratio (Male: Female) was 1:1.22. Majority of cataracts were mixed type (44.57 %) & nuclear sclerosis (38.04%) other less common types were posterior sub capsular opacification (8.7 %), mature cataract (5.75 %), cortical cataract (2.48 %) & developmental cataract (0.47 %). Mean keratometry values were K1 - 43.97 D & K2 - 42.45 D and range was 36-55 D. Mean corneal astigmatism 0.91 ± 0.80 D & range was 0-5.72 D. Mean sphere was 1.75 ± 1.67 D, mean cylinder 0.54 ± 0.45 D & range of cylinder was 0-2.43 D. No astigmatism was noted in 7.45 %, while oblique astigmatism was in 10.71 % cases. Majority of cases had with the rule astigmatism (WTR) (43.79 %), followed by against the rule astigmatism (ATR) (38.04 %). **Conclusion:** Majority patients posted for cataract surgery have preoperative corneal astigmatism, commonly with the rule (WTR) as well as against the rule astigmatism (ATR), which can affect the quality of vision after cataract surgery.

Keywords: cataract surgery, preoperative corneal astigmatism, against the rule astigmatism, quality of vision

Introduction

Ocular astigmatism is a refractive condition which occurs because of unequal curvatures of the cornea and the crystalline lens, decentration or tilting of the lens, or unequal refractive indices across the crystalline lens and in some cases, alterations of the geometry of the posterior pole.[1]

Cataract is the cause of the half of blindness worldwide and cataract extraction is one of the most commonly performed surgeries.[2] Cataract surgery has undergone great refinement in recent years. with improvements and advances in operating techniques, instruments and technical aids, the patients' as well as the surgeons' demands and expectations are continuously increasing. Postoperative astigmatism can be either surgery induced or residual

of preoperative corneal astigmatism. Surgically induced astigmatism has greatly been reduced by the use of small phacotips and smaller incisions. However, the presence of preoperative corneal astigmatism continues to challenge the final visual outcome.[3]

The goal of cataract surgery is to achieve a desirable refractive outcome with minimal surgically induced astigmatism (SIA) after cataract surgery. Some of the factors affecting SIA are site of incision, surgical skill and to a great extent, pre-existing corneal astigmatism.[4,5] Present study was aimed to study prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital.

Material And Methods

Present study was prospective, observational study, conducted in Department of Ophthalmology, JIIU's Indian Institute of Medical Science & Research, Warudi, India. Study duration was of 1 year (January 2022 to December 2022). Study approval was obtained from institutional ethical committee.

Inclusion criteria

- Patients of age > 40 years, either gender, posted for cataract surgery at our hospital, willing to participate in present study

Exclusion criteria

- Patients with corneal diseases, irregular astigmatism,
- History of ocular inflammation, corneal or intraocular surgery

Study was explained to patients in local language & written consent was taken for participation & study. All cases underwent history taking (present, past medical/surgical), general/systemic examination followed by complete ophthalmological evaluation (visual assessment, slit lamp anterior segment examination and ophthalmoscopy through the dilated pupils). Corneal curvature was assessed by IOL. The keratometric values were collected by an experienced technician for the consecutive patients and an average of three measurements of the parameters was subjected to analysis.

Corneal astigmatism (CA) was categorised as with the rule (WTR) when meridian of maximum curvature was within 308 of vertical 908 or against the rule (ATR) when meridian of maximum curvature was within 308 of horizontal ł808 and oblique (OBL) if it was neither WTR nor ATR. Data was collected and compiled using Microsoft Excel. Statistical analysis was done using descriptive statistics.

Results

In present study, 644 patients/ 460 eyes considered for evaluation, mean age was 68.1 ± 10.2 years, gender ratio (Male: Female) was 1:1.22. Majority of cataracts were mixed type (44.57 %) & nuclear sclerosis (38.04%) other less common types were posterior sub capsular opacification (8.7 %), mature cataract (5.75 %), cortical cataract (2.48 %) & developmental cataract (0.47 %).

Table 1: General characteristics

Characteristic	Number of cases (n=644)	Percentage (%)
Mean age (Mean ± SD)	67.8 ± 13.8 years	
Gender		
Male	290	45.03 %
Female	354	54.97 %
Gender ratio (Male: Female)	1:1.22	
Types of cataract		
Mixed type	287	44.57 %
Nuclear sclerosis	245	38.04 %

Posterior sub capsular opacification	56	8.7 %
Mature cataract	37	5.75 %
Cortical cataract	16	2.48 %
Developmental cataract	3	0.47 %

Mean keratometry values were K1 - 42.19 D & K2 - 42.91 D and range was 32-51 D. Mean corneal astigmatism 0.89 ± 0.82 D & range was 0- 5.61 D. Mean sphere was 1.51 ± 1.92 D, mean cylinder 0.39± 0.59 D & range of cylinder was 0-2.51 D.

Table 2: Keratometry values

Keratometry values	Value / Mean ± SD
Mean keratometry (D)	
K1	43.97
K2	42.45
Mean corneal astigmatism (D)	0.91 ± 0.80
Range of corneal astigmatism (D)	0- 5.72
Range of Keratometry	36-55
Mean sphere (D)	1.75 ± 1.67
Mean cylinder (D)	0.54 ± 0.45
Range of cylinder (D)	0-2.43

In present study, no astigmatism was noted in 7.45 %, while oblique astigmatism was in 10.71 % cases. Majority of cases had with the rule astigmatism (WTR) (43.79 %), followed by against the rule astigmatism (ATR) (38.04 %).

Table 3: Distribution of different types of corneal astigmatism

Types of astigmatism	Numbers (n)	Percentage (%)
With the rule	282	43.79 %
Against the rule	245	38.04 %
Oblique astigmatism	69	10.71 %
No astigmatism	48	7.45 %

Discussion

The preoperative assessment of patients with cataract should include corneal astigmatism (CA), and it should be addressed either at the time of cataract surgery or afterward to provide the best visual performance. Techniques to measure astigmatism include keratometry (manual or automated), corneal topography (eg, placido-based or based on the reflection of multicolor, light-emitting diode [LED] points), and corneal tomography (eg, slit-scan imaging, Scheimpflug imaging). Additionally, the use of intraoperative aberrometry has been documented to improve the astigmatic outcomes.[6,7]

Various factors such as physiological changes in the corneal curvature as age advances, pressure from eyelids, pressure by intraocular pressure, and of the extraocular muscles have been anticipated to be responsible factors for changes in ATR and WTR with age. There exist a variety of surgical techniques to reduce or eliminate the CA including corneal relaxing incisions (CCIs), limbal relaxing incisions (LRIs), opposite clear corneal incisions, femtosecond laser-assisted astigmatic keratotomy, excimer laser keratectomy, and toric IOL implantation.[8,9]

Arun B K[10] studied 460 patients/ 460 eyes, mean age was 67.8 ± 13.8, gender ratio (Male: Female) was 1.23:1. Majority of cataracts were mixed type (45.43%) and nuclear sclerosis (38.91%) other less common types were posterior sub capsular opacification (7.61%), mature cataract (5.22%), cortical cataract (2.39%) and developmental cataract (0.43%). Mean

keratometry values were K1 - 42.19 D and K2 - 42.91 D and range was 32-51 D. Mean corneal astigmatism 0.89 ± 0.82 D and range was 0- 5.61 D. Mean sphere was 1.51 ± 1.92 D, mean cylinder 0.39± 0.59 D and range of cylinder was 0-2.51 D. In present study, no astigmatism was noted in 8.04%, while oblique astigmatism was in 14.78% cases. Majority of cases had with the rule astigmatism (41.09%), followed by against the rule astigmatism (36.09%).

Chaudhary M[11] studied 225 eyes of 185 subjects, 61.3% were female eyes. The mean age of the subjects was 64.45±12.89 years. Mean amount of corneal astigmatism in our study was 0.84±0.80 D. 16.9% had no significant corneal astigmatism while 65.3% had corneal astigmatism between 0.25 and 1.50 diopter and 17.8% had corneal astigmatism of 1.50D or higher. With-the-rule astigmatism (axis of correcting cylinder 180±30 degrees) was present in 44.4% eyes, 40.04% of the eyes had against-the-rule (ATR) astigmatism (correcting minus cylinder 90±30 degrees), and 12.9% of the eyes had oblique astigmatism.

Gupta PS et al.,[12] studied 370 eyes of 370 patients, mean age was 60.43 ± 9.9 years. Nearly 50.54% were males and the rest were females. The mean of K, K1, and K2 was 44.23 ± 1.65 D, 43.75 ± 1.68 D, and 44.71 ± 1.74 D, respectively. Almost 82.16% of the studied population had mean corneal astigmatism <1.5 D. The corneal astigmatism was against the rule (ATR) in 52.16%, with the rule (WTR) in 27.29%, and oblique in 17.83%. With increasing age, there is a gradual shift of astigmatism from WTR to ATR, in both males and females, which peaks in the sixth decade of life.

Anuj Sharma et al.,[13] studied 3597 eyes, 1810 (50.3%) were females and mean age was 59.121±15.19 years. The mean corneal astigmatism among all patients was 1.17±1.15 D (range 0–12.5 D). There was no astigmatism in 99 eyes (2.78%), with-the-rule (WTR) in 1062 eyes (29.83%), against-the-rule (ATR) in 1843 eyes (51.72%) and oblique astigmatism (OA) in 555 eyes (15.59%). The tendency of a gradual change from with the rule (WTR) to against the rule (ATR) astigmatism was noted as the age advanced.

Studies have indicated that corneal diameter can be a factor which can predict the incidence of astigmatism in patients who undergo cataract surgery. It was shown that those patients with a higher white to white corneal diameter was less at risk of developing corneal astigmatism as compared to patients with lesser diameter.[14] Shorter axial length, shallow anterior chamber, lower intraocular pressure and advancing age, has been shown as risk factors for SIA, in those undergoing cataract surgeries.[15]

With the improvement in the quality of healthcare and better age expectancy more number of patients would require quality vision following cataract surgery, which can only be achieved if pre-operative astigmatism correction is taken into consideration.

Conclusion

Majority patients posted for cataract surgery have preoperative corneal astigmatism, commonly with the rule (WTR) as well as against the rule astigmatism (ATR), which can affect the quality of vision after cataract surgery. Preoperative assessment & correction of corneal astigmatism is important component of cataract surgery.

References

1. Koch DD, Ali SF, Weikert MP, Shirayama M, Jenkins R, Wang L. Contribution of posterior corneal astigmatism to total corneal astigmatism. J Cataract Refract Surg 2012;38:2080- 7.
2. Resnikoff S, Pascolini D, Etya'ale D, Kocur I, Pararajasegaram R, Pokharel GP, et al. Global data on visual impairment in the year 2002. Bull World Health Organ 2004;82(11): 844-51.

3. Mozayan E, Lee JK. Update on astigmatism management. Curr Opin Ophthalmol 2014;25:286- 90.
4. W. Chen, C. Zuo, C. Chen etal.Prevalence of corneal astigmatism before cataract surgery in Chinese patients.J cataract refract surg.2013;39:188–192.
5. K. Lekhanont, W. Wuthisiri, P. Chatchaipun, and A. Vongthongsri.Prevalence of corneal astigmatism in cataract surgery candidates in Bangkok, Thailand.J cataract refract surg.2011; 37:613–5.
6. Kanellopoulos AJ, Asimellis G. Distribution and repeatability of corneal astigmatism measurements (magnitude and axis) evaluated with color light emitting diode reflection topography. Cornea. 2015;34(8): 937–944.
7. Davison JA, Potvin R. Preoperative measurement vs intraoperative aberrometry for the selection of intraocular lens sphere power in normal eyes. Clin Ophthalmol. 2017;11:923–929.
8. Nichamin LD. Astigmatism control. Ophthalmol Clin North Am 2006;19:485- 93.
9. Khan MI, Muhtaseb M. Prevalence of corneal astigmatism in patients having routine cataract surgery at a teaching hospital in the United Kingdom. J Cataract Refract Surg 2011;37:1751- 5.
10. Arun B Kolap. Study of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital. MedPulse International Journal of Ophthalmology. November 2021; 20(2): 25-28.
11. Chaudhary M , Dahal HN, Prevalence and types of corneal astigmatism in patients undergoing cataract surgery, Journal of Institute of Medicine, April, 2017, 39:1
12. Gupta PS, Sidhu NK, Verma PV, Singla IJ. Prevalence of corneal astigmatism in patients undergoing cataract surgery in a tertiary care hospital of Malwa region of Northern India. Kerala J Ophthalmol 2021;33:51-5.
13. Anuj Sharma, Sonia Phulke, Anugya Agrawal, Isha Kapoor, Rakesh Kumar Bansal, Prevalence of Astigmatism in Patients Undergoing Cataract Surgery at a Tertiary Care Center in North India, Clinical Ophthalmology 2021:15
14. Theodoulidou S, Asproudis I, Kalogeropoulos C, Athanasiadis A, Aspiotis M. Corneal diameter as a factor influencing corneal astigmatism after cataract surgery. Cornea 2016;35:132-6.
15. Chang SW, Su TY, Chen YL. Influence of ocular features and incision width on surgically induced astigmatism after cataract surgery. J Refract Surg 2015;31:82-8.

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National Medical Commission Regional Center, IMETTT
Maharashtra University of Health Sciences (MUHS), Nashik.

Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that **Dr. Prashant Ghorpade**, *Assistant Professor, Department of Ophthalmology, from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the "Revised Basic Course Workshop & AETCOM" held during 05th October to 07th October 2021 under supervision of NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS), Nashik.*

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STUDY OF THE ANATOMICAL AND VISUAL RESULTS OF THERAPEUTIC PENETRATING KERATOPLASTY

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ABSTRACT

BACKGROUND

Therapeutic penetrating keratoplasty for corneal infections restores anatomical integrity. Improvement in instrumentation and surgical techniques, better postoperative management have improved corneal transplant outcome. Purpose of the study was to know what are the anatomical and visual results after therapeutic keratoplasty and to judge what could be the factors affecting the results.

MATERIALS AND METHODS

Prospective, non-comparative, observational cohort study was done in 56 patient (56 eyes) operated for therapeutic penetrating keratoplasty at tertiary care institute .Patients were reviewed for demographic data, postoperative best-corrected visual acuity, graft clarity, and complications. Pre-operative treatment in bacterial infections included Cefazolin 50 mg/ml and Tobramycin 1.4 % or gentamicin 1.4% half hourly, 1% atropine drops. Fungal infections were treated with Natamycin 5% suspension. Debridement was done. Amphotericin B was used against yeasts. Voriconazole (1%) eye drops were given in Aspergillus species. With full aseptic precautions penetrating keratoplasty was carried out. The graft was 0.5 mm larger than the lesion. Keratoplasties were evaluated for (1) Graft clarity at 1 month and 1 year postoperative. (2) Cure of the infectious disease after surgery. (3) Anatomical success rate and visual results.

RESULTS

At the end of one year clear graft with bacterial keratitis was seen in 23 eyes (74.19%) out of 31 eyes. In fungal keratitis clear graft was seen in 10 eyes (45.45%) out of 22 eyes. 48.22% patients had vision of FC 1m-6/60 compared to preoperative vision at the end of one year. At the end of one year anatomical integrity was maintained in 53 (94.64%) cases and it was lost in 5.36% patients.

CONCLUSION

Patients who underwent keratoplasty with 7.5 mm graft size had maximum graft clarity at the end of one year. Graft was clear in 27 patients (48.2%) out of total 56 patients. At the end of 1 year vision improved to FC 1 mt - 6/60 in 48.22% patients.

KEYWORDS

Therapeutic Keratoplasty, Bacterial Infections, Fungal Keratitis, Graft Clarity, Anatomical Integrity.

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BACKGROUND

Therapeutic penetrating keratoplasty for corneal infections is successful in restoring anatomic integrity in most eyes.[1-3] Ever since the first successful human full-thickness corneal transplant, or penetrating keratoplasty, by Eduard Zirm in 1906,[4] it has been regarded as one of the most frequently performed tissue transplantations in humans.[5] Improvement in instrumentation and surgical techniques, systematic and efficient tissue banking, and better postoperative management that includes anti-inflammatory and immunosuppressive drugs.[6-9] have collectively improved corneal transplant outcome.[10]

Therapeutic keratoplasty has a definitive role in the management of progressive microbial keratitis refractory to medical therapy.

Virulent and resistant forms of infectious bacteria, fungi, and Acanthamoeba spp. can cause keratitis to progress, even with maximum medical therapy.

Purpose of the study was to know what the anatomical and visual results are after therapeutic keratoplasty and to judge what could be the factors affecting the results.

Aims and Objectives

1. To determine anatomical and visual results of therapeutic penetrating keratoplasty
2. To determine the factors that affect the success or failure in therapeutic keratoplasty.

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MATERIALS AND METHODS

Study Design- Prospective, non comparative, observational cohort study.

Study Population- 56 patient (56 eyes) operated for therapeutic penetrating keratoplasty at our tertiary care institute between August 2013 to July 2014 and those who completed 1 year follow up were included for analysis and were reviewed for demographic data, postoperative best-corrected visual acuity, graft clarity, and complications.

Sample Size- 56 patients (56 eyes).

Inclusion Criteria

All patients between the age of 11 to 70 years who were diagnosed with infective keratitis clinically and with corneal scraping for microbial cultures and who underwent therapeutic penetrating keratoplasty.

Exclusion Criteria

- Patients with age less than 11 years and more than 70 years.
- Patients who underwent regraft.
- Patients with less than 1 year of follow-up.

The study was approved by the ethics committee for research on human subjects at the institute. Written informed valid consent was taken.

Evaluation of the Patients and Data Collection

1. History

- Time and mode of onset of symptoms of infection (diminution of vision, redness, pain, watering, discharge, swelling), progress and duration of disease.
- History of local trauma, viz. foreign body entering into the eye, or injury with vegetable matter.
- History of treatment taken, local and systemic with detail of the ongoing medications and their dosage, any ocular surgery, steroids, any other surgery, systemic disease.

2. Examination- Visual acuity on Snellen's chart.

Local Examination

Torch and slit lamp examination with diffuse and focal illumination was done. Following points were noted: Lids, conjunctiva, cornea, anterior chamber, iris, pupils, lens, intraocular tension– digital, lacrimal sac syringing, staining of the corneal ulcer with fluorescein. Direct and indirect ophthalmoscopy was done in possible cases.

Systemic Examination was done.

3. Local Investigations

a) Corneal scraping from the edge of ulcer (Gram's stain), culture (McConkey's and blood agar), antibiotic sensitivity, KOH mount for hyphae in the wet preparation, fungal culture was done in Sabouraud medium.

Routine systemic investigations and ENT, dental, medicine and gynaecological reference were done.

Medical Treatment of the Infective Keratitis/Corneal ulcers (Pre-operative)

a) Bacterial Infections

Fortified antibiotics (cefazolin 50 mg/ml) and (tobramycin 1.4 % or gentamicin 1.4%) half hourly, 1% atropine drops 2 to 3 times a day were given.

Capsule Amoxicillin, systemic analgesic/ anti-inflammatory treatment, oral acetazolamide were given.

b) Fungal Infections

Natamycin 5% suspension was used for filamentous fungal keratitis, every half to one hourly initially and slowly tapered to two hourly, four hourly every two days. Surface debridement was done. Amphotericin B was used against yeasts. Voriconazole (1%) eye drops were given in Aspergillus species, Fusarium species and Candida species keratitis.

Tablet Itraconazole 100 mg twice daily orally or Tablet ketoconazole 200 mg twice daily orally was added in patients refractory to medical therapy.

Acanthamoeba Ulcer

Eye drops Chlorhexidine (0.2%) were added.

Principles of Surgical Technique for Therapeutic Penetrating Keratoplasty-

- The donor tissue was brought to room temperature.
- With full aseptic precautions penetrating keratoplasty was carried out.
- The criteria of taking graft size were: The graft size was 0.5 mm larger than the lesion. The pupil was placed in center of graft and care was taken so that graft did not appear optically eccentric.
- Peripheral buttonhole iridectomy was done superiorly.
- Donor graft was secured on host bed with 16 interrupted 10-0 monofilament nylon sutures and the knots were buried.

Post-operative Management

- Tab Diclofenac was given in a dose of 50 mg twice a day for 5 days.
- Injection Cefotaxime was given 1 gm intravenous twice a day in adults and in children 500 mg intravenous twice a day for 5 days.
- Oral Acetazolamide was continued and Eye drops moxifloxacin (0.5%) were given hourly.

Systemic and local antibiotics/antifungals were continued and modified depending upon the microbiological smear and culture and antibiotic sensitivity reports.

When the smear/culture report of the corneal button showed fungal hyphae,

Tablet Ketoconazole was given systemically 200 mg twice a day for 21 days and Natamycin eye drops (5%) were instilled locally 5 times a day.

Eye drops Chlorhexidine (0.2%) were given in acanthamoeba cases.

Follow-up- After discharge, patients were followed up weekly for a month, then every 15 days for 1 month and then monthly for 1 year.

Keratoplasties were evaluated for three major criteria of success-

1. Graft clarity at 1 month and 1 year postoperative.
2. Cure of the infectious disease after surgery.
3. Anatomical success rate and visual results.

Visual acuity was assessed. Patients were examined on slit lamp daily during their stay in the ward and at each follow up visit. Graft clarity, suture status, secondary infection, anterior chamber exudates, were looked for. Intraocular pressure was checked digitally.

Anatomical success was considered if the integrity of the eye was restored and maintained in perforated or non-perforated corneas at the end of one year.

RESULTS

	Number	Percentage
Male	35	62.5
Female	21	37.5
Total	**56**	**100**

Table 1. Gender wise Distribution of Cases (n=56)

Age Group (Years)	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
0-10	0	0.0	0	0.0	0	0.0
11-20	1	2.9	0	0.0	1	1.8
21-30	3	8.6	1	4.8	4	7.1
31-40	7	20.0	7	33.3	14	25.0
41-50	13	37.1	8	38.1	21	37.5
51-60	8	22.9	4	19.0	12	21.4
61-70	3	8.6	1	4.8	4	7.1
Total	**35**	**62.5**	**21**	**37.5**	**56**	**100**

Table 2. Age wise Distribution of Cases (n=56)

Causative Agent	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
Staph. Aureus*	12	34.3	9	42.8	21	37.5
Pseudomonas	5	14.3	1	4.8	6	10.7
E. coli†	3	8.6	1	4.8	4	7.1
Fungal	13	37.1	9	42.8	22	39.3
Acanthamoeba	2	5.7	1	4.8	3	5.4
Total	**35**	**100**	**21**	**100**	**56**	**100**

Table 3. Causative Agents for Corneal Infection (n=56)

*Staph. Aureus: Staphylococcus aureus, †E. coli: Escherichia coli.

Vision	Number	Percentage
HMCF*	27	49
†PL, PR	29	51
Total	**56**	**100**

Table 4. Pre-operative Vision of Cases (n=56)

*HMCF- Hand movements close to face, †PLPR- Perception of light, Projection of Rays.

Groups	Indication	Male		Female		Total	
		Number	Percentage	Number	Percentage	Number	Percentage
Group 1	Refractory Corneal Ulcer with Hypopyon	16	45.7	8	38.1	24	42.9
Group 2	Perforated corneal ulcer	11	31.4	8	38.1	19	33.9
Group 3	Total corneal abscess	8	22.9	5	23.8	13	23.2
Total		**35**	**100**	**21**	**100**	**56**	**100**

Table 5. Indications for Penetrating Therapeutic keratoplasty (n=56)

Sl. No.	Complications	Male		Female		Total	
		Number	Percentage	Number	Percentage	Number	Percentage
1	Corneal graft Epithelial defect	13	37.1	9	42.9	22	39.3
2	Shallow AC*	9	25.7	6	28.6	15	26.8
3	Weak wound	2	5.7	1	4.8	3	5.4
4	Vascularisation of graft	12	34.3	5	23.8	17	30.4
5	Sec. glaucoma†	5	14.3	3	14.3	8	14.3
6	Reinfection in the graft	6	17.1	2	9.5	8	14.3
7	Complicated cataract	7	20.0	5	23.8	12	21.4
8	Graft ectasia	2	5.7	1	4.8	3	5.4
9	Phthisis bulbi	2	5.7	1	4.8	3	5.4

Table 6. Complications of Penetrating Therapeutic Keratoplasty (n=56)

*AC: Anterior chamber, †Sec. glaucoma: Secondary glaucoma.

Graft Size (mm)	Clear Graft	Hazy Graft	Opaque Graft	Total
7.5	27 (48.2%)	5 (8.9%)	1 (1.7%)	33 (58.8%)
8	3 (5.3%)	0 (0%)	4 (7.1%)	7 (12.4%)
8.5	4 (7.1)	1 (1.7%)	4 (7.1%)	9 (15.9%)
9	2 (3.5%)	3 (5.3%)	0 (0%)	5 (8.8%)
9.5	0 (0%)	1 (1.7%)	0 (0%)	1 (1.7%)
10	0 (0%)	1 (1.7%)	0 (0%)	1 (1.7%)
Total	**36 (64.3)**	**11 (19.6%)**	**9 (16.1%)**	**56 (100%)**

Table 7. Graft Size and Clarity of Graft at the end of one Year

Age Group in Years	Number of Patients	Clear Graft	Hazy Graft	Opaque Graft
11-20	1	1 (100%)	0	0
21-30	4	1 (25%)	3 (75%)	0
31-40	14	11 (78%)	2 (14%)	1 (8%)
41-50	21	15 (71%)	4 (19%)	2 (10%)
51-60	12	6 (50%)	2 (16.67%)	4 (33.33%)
61-70	4	2 (50%)	0	2 (50%)
Total	**56**	**36 (64%)**	**11 (19.5%)**	**9 (16.5%)**

Table 8. Age wise Distribution and Graft Clarity

Group of Patients	Graft Clarity				Anatomical Integrity Lost	Visual Acuity at One Year			
	Clear	Hazy	Opaque	Total	Phthisis Bulbi	No PL*	PL*,PR†	‡HMCF	§Fc 1m-6/60
Total corneal abscess	11 (85%)	1 (7.5%)	1 (7.5%)	13 (23.2%)	1	1 (7%)	0	4 (32%)	8 (61%)
Hypopyon with corneal ulcer	14 (58%)	5 (21%)	5 (21%)	24 (42.8%)	1	1 (4%)	2 (8%)	10 (43%)	11 (45%)
Corneal Perforation	11 (57%)	5 (27%)	3 (16%)	19 (34%)	1	1 (5%)	4 (21%)	6 (31.5%)	8 (42.5%)
Total	**36 (64.29%)**	**11 (19.6%)**	**9 (16.07%)**	**56**	**3 (5.36%)**	**3 (5.36%)**	**6 (10.71%)**	**20 (35.71%)**	**27 (48.22%)**

Table 9. Graft Clarity, Anatomical Integrity and Visual Outcome at the End of One Year

*PL: Perception of light, †PR: Projection of rays, ‡HMCF: Hand movements close to face, §Fc: Finger counting.

	Clear Graft		Hazy Graft		Opaque Graft	
	Number	Percentage	Number	Percentage	Number	Percentage
Staph. aureus	19	33.9	0	0.0	2	3.6
Pseudomonas aeruginosa	0	0.0	4	7.1	2	3.6
E.coli	4	7.1	0	0.0	0	0.0
Fungal	10	17.9	7	12.5	5	8.9
Acanthamoeba	3	5.4	0	0.0	0	0.0
Total	**36**	**64.3**	**11**	**19.6**	**9**	**16.1**

Table 10. Clarity of graft with respect to causative agent. (n=56)

*Staph Aureus- Staphylococcus aureus. †E. coli- Escherichia coli.

At the end of one year clear graft with bacterial keratitis was seen in 23 eyes (74.19%) out of 31 eyes.
In fungal keratitis clear graft was seen in 10 eyes (45.45%) out of 22 eyes.
Opaque graft was seen 5 eyes (22%) out of 22 eyes.
All 3 (100%) cases of Acanthaoemeba had clear graft.
Out of 21 patients infected with staphylococcus infection, 19 (90.4%) patients had clear graft.

Visual acuity	Male		Female		Total	
	Number	Percentage	Number	Percentage	Number	Percentage
No PL*	2	5.7	1	4.8	3	5.36
PL, PR†	5	14.3	1	4.8	6	10.71
HM – FCCF‡	10	28.6	10	47.6	20	35.71
§Fc 1m- 6/60	18	51.4	9	42.8	27	48.22
>6/60	0	0.0	0	0.0	0	0.0
Total	**35**	**100**	**21**	**100**	**56**	**100**

Table 11. Post-operative Visual acuity (n=56)

*PL: Perception of light,
†PR: Projection of rays,
‡HM-FCCF: Hand movements to finger counting close to face.
§Fc: Finger counting.

Number of Patients (%)	Before Surgery	After surgery at the End of One Year
Vision Hand movements close to face (HMCF)/PLPR/No PL	56 (100%)	29 (51.78%)
vision FC 1 mt – 6/60	0	27 (48.22%)

Table 12. Preoperative Vision and Post Operative Vision at the end of One Year

*FC: Finger counting

After therapeutic penetrating keratoplasty 48.2% patients had vision of FC 1 mtr-6/60 compared to preoperative vision at the end of one year.

At the end of one year anatomical integrity was maintained in 53 (94.64%) cases. Out of which, 36 patients (64.3%) had clear graft, 11 patients (19.6%) had hazy graft, 9 patients (16.1%) had opaque graft. 3 patients (5.36%) had phthisis bulbi at the end of one year.

Figure 1. Hazy corneal Graft

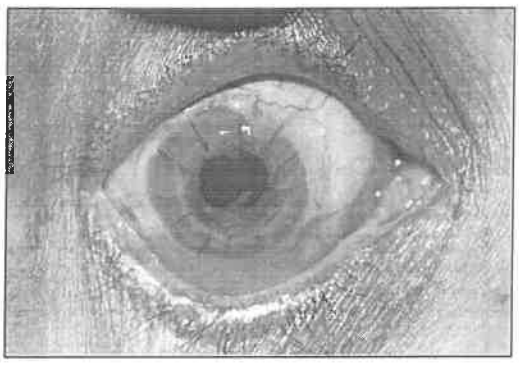

Figure 2. Clear Corneal Graft

DISCUSSION

Success of the therapeutic graft depends upon several factors.[11]

1. Age of the patient.
2. Interval between death and enucleation and the interval between the enucleation and keratoplasty.
3. Condition of recipient cornea at the time of presentation.
4. Type and Virulence of organisms.
5. Graft size.
6. Systemic immunity of the host.
7. Operative technique.
8. Postoperative complications.

1. Age of the Patient

In our study the most common age group affected was between 41-50 years (37.5%) (Table 2)

In our study 1 (100%) patient was there in the age group of 11-20 who had clear graft. (Table 8).

Patients in a young age group of 21-30 years 25% had clear graft.

Age group between 31-40 years had clear graft in 11 out of 14 (78%).

In the age group 51-60 years maximum patients had failed graft.

In 2000 Aasuri MK.[12] et al studied the analysis of 154 penetrating keratoplasties performed in 140 children, aged 14 years or younger. Grafts remained clear in 102 (66.2%) of 154 eyes. Most grafts failed because of allograft rejection (42.3%), infectious keratitis (26.9%), or secondary glaucoma (13.4%).

2. Time Interval between death and enucleation and between the enucleation and keratoplasty.

All the enucleations were done within 2 to 6 hours of death. There was no time lapse between availability of corneo-scleral donor button and keratoplasty surgery.

So in our study, postoperative failure of graft was not related to the time interval between enucleation and keratoplasty surgery.

3. Slit Lamp and Specular Microscopy Examination

Corneo-scleral donor button used for all 56 cases were of good to fair quality. All had endothelial count between 1500 to 1700 cells/mm^2. As keratoplasty was needed in the patients on an emergency basis, the available corneas were used. 64.3% of the patients had clear graft at the end of one year. So, the quality of corneo-scleral button could be the factor for poor outcome in some patients.

4. Condition of Recipient cornea at the Time of Presentation

In India, poverty and ignorance still prevail. The patients with corneal ulcers came late to the hospital to seek medical advice. By that time, the disease had already progressed and in some cases there was impending perforation, or the ulcers had already perforated. The corneal ulcers with impending perforation did not have successful outcome following surgery.

In our study, most of the cases (Group 1) presented with non-healing corneal ulcer with hypopyon (42.9%), (Group 2) perforated corneal ulcer (33.9%), and (Group 3) total corneal abscess (23.2%).

This is similar to the study done by Palaksha D et al[13] for 25 cases, the most common indication for keratoplasty in their study was non-healing corneal ulcer (56%) followed by perforated corneal ulcer (28%).

In our study patients, the group with total corneal abscess had a better prognosis with respect to graft clarity (85% cases had clear graft) and vision (61% cases had vision between FC 1 metre to 6/60) out of the three groups in the study.

5. Type and Virulence of Organism

In our study the most common cause of corneal infections was bacterial keratitis (55.36%). followed by fungal cause (39.3%). (Table 3) Acanthamoeba was present in (5.4%) patients. The most common bacterial cause was Staphylococcus aureus (37.5%) followed by Pseudomonas aeruginosa and E.Coli.

At the end of one year graft clarity was high in cases with bacterial infection which was 23 (41%) patients out of 56 (Table 10). At the end of 1 year, out of the 31 cases of bacterial infection, clear graft was seen in 23 patients (74.19) cases. Out of the bacterial infection, 21 patients infected with staphylococcus aureus, 19 patients (90.4%) had clear graft. None of the patients with pseudomonas infection had clear graft. Out of 22 cases of fungal infection, clear graft was seen in 10 patients (45.45%), all the 3 cases (100%) of acanthamoeba had clear graft.

Compared to Chen WL.[14] study in cases of bacterial keratitis they reported 68.75% clear graft as compared to our study in which 74 % of the bacterial keratitis had clear graft. In study by Chen WL.[14] at 1 year post-operative period, the grafts remained clear as follows: In 22/32 (68.75 %) of grafts of bacterial keratitis, 20/39 (51%) of fungal keratitis, and 11/14 (78%) of acanthamoebic keratitis.

So in our study bacterial keratitis had a better prognosis with respect to graft clarity. 74 % cases of bacterial keratitis had a clear graft.

6. Graft Size-

(Table 7) 33 patients (58.8%) undergoing keratoplasty had graft size of 7.5 mm.

27 (48.2%) out of 56 patients with a 7.5 mm graft size had a clear graft.

All patients with more than 9.5 mm graft had hazy graft.

The larger the graft size, the more the chances of graft opacity, because of the increased chances of immunological graft rejection, vascularisation, peripheral anterior synechiae as well as secondary glaucoma.

Chen WL et al[14] stated that higher percentage of graft clarity at 1 year postoperatively was achieved when grafts were 8.5 mm or less compared with larger grafts.

7. Systemic Immunity of the Host

In our study, all the patients had normal systemic examination. Diabetics are more prone to wound infection.

HIV positive patients, Koch's patients and those on immunosuppressants are more prone to reinfection.

8. Operative Technique

All the patients underwent full thickness penetrating keratoplasty. Donor graft was secured on host bed with 16 interrupted 10-0 monofilament nylon sutures and the knots were buried. So in our study, postoperative failure of graft was not related to operative technique.

9. Postoperative Complications

- **Epithelial Defect.**[15,16,17,18] In our study, most common early postoperative complication was epithelial defect which was present in 39.3% cases.

  Palaksha D et al[13] showed similar result, epithelial defect was present in 10 eyes (40%) of the cases.

  Thomas M et al[19] did a study on 22 eyes which showed 3.3% cases had epithelial defect.

- **Vascularisation and Rejection**

Second most common complication was vascularisation of graft. In our study 30.4% of the patients had vascularization.

Mittal et al[20] noted such rejection in up to 50% of the grafts with severe vascularisation.

- **Secondary Glaucoma**

In our study, out of 56 cases, 8 eyes (14.3%) developed secondary glaucoma.

In Arentsen's study.[21] uncontrolled glaucoma was the cause of failure in 20% of failed grafts.

- **Reinfection**

In our study out of 56 cases, 8 (14.3%) developed re-infection in the graft. Exposed, broken, or loose sutures, epithelial defects caused due to microbial keratitis are suggestive of reinfection.

- **Cataract**

In our present study the lens was not visible preoperatively in 32 cases. In 8 cases cataractous changes were seen intraoperatively. At the end of 1 year 12 (21.4%) cases showed cataractous changes.

The main aim of therapeutic keratoplasty in our study was to restore the anatomical integrity of eyeball. Anatomical integrity was maintained in 53 (94.64%) cases. Out of total 56 cases in our study, 36 (64.3%) cases had clear graft, 11 (19.6%) cases had hazy graft, 9 (16.1%) cases had opaque graft. 3 (5.36 %) cases had phthisis bulbi at the end of one year.

In our study, acquiring useful visual acuity was the secondary goal. In our study 27 (48.22%) cases had postoperative vision better than preoperative vision and in 20 (35.71%) cases vision remained the same. In 9 (16.07%) cases vision worsened.

At the end of one year following surgery 27 (48.22%) cases had vision FC 1m-6|60. 20 (35.71%) cases had vision hand movement close to face. 6 (10.71%) cases had vision perception of light and projection of rays. 3 (5.36%) cases had no perception of light.

CONCLUSION

Most common postoperative complication was epithelial defect in the graft seen in 39.3% patients followed by graft vascularization in 30.4% patients. Secondary glaucoma was seen in 14.3% of the patients. Clear graft was seen in 64.3% patients. Hazy graft was seen in 19.6% patients. Opaque graft was seen in 16.1% patients.

Patients who underwent keratoplasty with 7.5 mm graft size had maximum graft clarity at the end of one year. Graft clarity was less in the patients of more than 8 mm graft size.

Post-operatively, at the end of 1 year vision improved to FC 1mt - 6/60 in 48.22% patients while 35.71% patients had vision hand movements close to face. In 10.71% patients visual acuity was perception of light and projection of rays. 5.36% patients had no perception of light (Table 11).

Anatomical integrity was maintained in 94.64% patients and it was lost in 5.36% patients (Table 9)

Fungal keratitis had poor postoperative results.

REFERENCES

[1] Sukhija J, Jain AK. Outcome of therapeutic penetrating keratoplasty in infectious keratitis. Ophthalmic Surg Lasers Imaging 2005;36(4):303-309.

[2] Sony P, Sharma N, Sen S, et al. Indications of penetrating keratoplasty in northern India. Cornea 2005;24(8):989-991.

[3] Vanathi M, Sharma N, Sinha R, et al. Indications and outcome of repeat penetrating keratoplasty in India. BMC Ophthalmol 2005;5:26.

[4] Al-Mezaine H, Wagoner MD, King Khaled Eye Specialist Hospital Cornea Transplant Study Group. Repeat penetrating keratoplasty: indications, graft survival, and visual outcome. Br J Ophthalmol 2006;90(3):324-327.

[5] Yalniz-Akkaya Z, Nurozler BA, Yildiz E, et al. Repeat penetrating keratoplasty: indications and prognosis, 1995-2005. Eur J Ophthalmol 2009;19(3):362-368.

[6] Maier AK, Ozlügedik S, Rottler J, et al. Efficacy of postoperative immunosuppression after keratoplasty in herpetic keratitis. Cornea 2011;30(12):1398-1405.

[7] Tabbara KF. Pharmacologic strategies in the prevention and treatment of corneal transplant rejection. Int Ophthalmol 2008;28(3):223-232.

[8] Sloper CM, Powell RJ, Dua HS. Tacrolimus (FK506) in the management of high-risk corneal and limbal grafts. Ophthalmology 2001;108(10):1838-1844.

[9] Banerjee S, Dick AD. Recent developments in the pharmacological treatment and prevention of corneal graft rejection. Expert Opin Invest Drugs 2003;12(1):29-37.

[10] Reis A, Reinhard T. Current systemic immunosuppressive strategies in penetrating keratoplasty. In: Reinhard T, Larkin DFP, eds. Cornea and external eye disease. Heidelberg: Springer 2006:109-122.

[11] Wilson SE, Kaufman HE. Graft failure after penetrating keratoplasty. Surv Ophthalmol 1990;34(5):325-356.

[12] Aasuri MK, Garg P, Gokhle N, et al. Penetrating keratoplasty in children. Cornea 2000;19(2):140-144.
[13] Palaksha D, Gangasagara SB, Durgappa R, et al. Therapeutic penetrating keratoplasty for non-healing fungal keratitis: a retrospective clinical study at a tertiary eye care centre in south India. J Evid Based Med Health care 2015;2(9):1229-1234.
[14] Chen WL, Wu CY, Hu FR, et al. Therapeutic penetrating keratoplasty for microbial keratitis in Taiwan from 1987 to 2001. American Journal of Ophthalmology 2004;137(4):736-743.
[15] Saini JS, Reddy MK, Jain AK, et al. Perspectives in eye banking. Indian J Ophthalmol 1996;44(1):47-55.
[16] Chou L, Cohen EJ, Laibson PR, et al. Factors associated with epithelial defects after penetrating keratoplasty. Ophthalmic Surg 1994;25(10):700-703.
[17] Klöess PM, Stulting RD, Waring GO, et al. Bacterial and fungal endophthalmitis after penetrating keratoplasty. Am J Ophthalmol 1993;115(3):309-316.
[18] Sugar A Meyer RF, Hood I. Epithelial downgrowth following penetrating keratoplasty in aphake. Arch Ophthalmol 1977;95(3):464-467.
[19] Thomas M, Amin H, Pai V, et al. A clinical study on visual outcome and complications of penetrating keratoplasty. IOSR 2015;6(14):49-60.
[20] Mittal PC, Nahata MC, Moghe R. Factors affecting transparency of graft in keratoplasty. Indian J Ophthalmol 1983;31(5):674-679.
[21] Arentsen JJ, Morgan B, Green WR. Changing indications for keratoplasty. Am J Ophthalmol 1976;81(3):313-318.

Department of ENT

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
OPHTHALMOLOGY	Dr. Vilas Kirdak (M.S. E.N.T)	Professor & HOD	Regular	JIIU's IIMS&R Same Institute					09
	Dr. Sajid Khan (M.S. E.N.T)	Associate Professor	Regular	JIIU's IIMS&R Same Institute					08
	Dr. Nitesh Shire (M.S. E.N.T)	Assistant Professor	Regular	GMC, Aur.	JIIU's IIMS&R				10
	Dr. Punam Kinge (M.S. E.N.T)	Assistant Professor	Regular	GMC, Aur.	Kolh apur	JIIU's IIMS&R			09
			Regular					JIIU's IIMS&R	
			Regular						
			Regular						

Department of ENT Publications

Sr. No.	Faculty Name	Publication in Vancouver referencing style	Indexing System
1	Dr. Vilas Kirdak (M.S. E.N.T)		
2	Dr. Sajid Khan (M.S. E.N.T)		
2	Dr. Nitesh Shire (M.S. E.N.T)		
4	Dr. Punam Kinge (M.S. E.N.T)		**Index Medicus**

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Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD05S13192395

Department of Anesthesiology

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/ permanent or contract/ outsourced	Details of service in the last 5 years					No of lectures taken/ year, small teaching group with Topics covered
				1	2	3	4	5	
Anesthesiology	Dr. Mrs. Lonikar MP Qualification- MD IMR No- 65682	Professor DOP-01-09-2020	REGULAR	√	√	√	√	√	6→ 1) Boyle's machine 2) Breathing circulates 3) Equipment for airway management 4) Obesity & anesthesia 5) Anesthesia for laparoscopy 6) Importance of 2D echo in PAC
Anesthesiology	Dr. Sikchi Sneha Qualification- MD IMR No 2009/03/0849	Associate Professor DOP-	REGULAR	√	√	√	√	√	4 → 1) Fluid therapy 2) Blood transfusion 3) Types of blood transfusion 4) transfusion reaction
Anesthesiology	Dr. RT Guthe Qualification- MD IMR No 56507	Associate Professor DOP-23-06-2023	REGULAR	√	√	√	√	√	3 → 1) Central neuraxial blockade (Anatomy spine) 2) Spinal anesthesia 3) Epidural anesthesia
Anesthesiology	Dr. Aarif Rangrez Qualification- MD IMR No- 2006/10/3200	Assistant Professor DOP-	REGULAR	√	√	√	√	√	4 → 1) Pain clinical principles & setup 2) Types of pain relief therapy 3) radio-frequency ablation 4) USG guided nerve block
Anesthesiology	Dr. Sushma Chandane	Assistant Professor	REGULAR	√	√	√	√	√	4 →1) Inhalational anesthesia

	Qualification- MD IMR No-2009/03/0879	DOP-	REGULAR						agents 2) Physiology of NM junction 3) Types of neuromuscular blocks 4) Neuromuscular blocking drugs & reversal agents
Anesthesiology	Dr. Prasad Deshpande Qualification- MD IMR No- 85664	Assistant Professor DOP-	REGULAR	X	X	X	√	√	4 → 1) Introduction to anesthesia 2) Physiology of CVS 3) Physiology of RS 4) Role of anesthesiologist outside operation theatre
Anesthesiology	Dr. Santosh Deshmukh Qualification- MD IMR No- 67783	Assistant Professor DOP-	REGULAR	X	X	X	√	√	3→ 1) CPR COLS/BLS/ACLS 2) Post anesthesia care unit management 3) Regional anesthesia & nerve blocks
Anesthesiology	Dr. Muktadir Hashmi Qualification- DNB IMR No- 2011/07/2345	Assistant Professor DOP-	REGULAR	X	X	X	√	√	3→ 1) post operative hypoxemia 2) Ventilatory therapy 3) anatomy of larynx laryngoscopy & endotracheal
Anesthesiology	Dr. Nikita B. Phaphagire Qualification-MD IMR No-2017/10/4802	Assistant Professor DOP-	REGULAR	X	X	X	√	√	-

DEPARTMENT OF ANAESTHESIOLOGY
LIST OF PUBLICATIONS

SR NO.	*FACULTY NAME*	*PUBLICATIONS*	*INDEX SYSTEM*
1	DR MADHURI P LONIKAR	1. Epidural Analgesia-A comparative study for post-operative pain relief with 0.125%Bupivacaine plain v/s 0.125%Bupivacaine and ketamine combination in infraumbilical surgeries. Journal of cardiovascular disease & research. Vol 14,issue06,2023.	Embase
		2. Comparative analysis of efficacy and post-operative analgesia with hyperbaric Bupivacaine and Nalbuphine combination versus hyperbaric Bupivacaine and fentanyl combination in infraumbilical surgeries. Indian Journal of Anaesthesia & Analgesia Vol10,No.2 April June 2023	Directory of open Access Journals. (DOAJ)
		3. Study of spinal Anaesthesia with Ropivacaine for lower abdominal and Perineal surgeries. Medpulse International Journal of Anaesthesiology Vol 23,issue 2,August 2022 pp 36-39	Index Copernicus . Open Access.

2	DR RAVINDRAKUMAR TUKARAMPANT GUTHE	1. Effect of EMLA(Eutectic Mixture of Local Anaesthetic)for Reduction of pain associated with Intravenous Cannulation in paediatric patients. European Journal of Molecular & Clinical Medicine(EJMCM). Volume 10 Issue 01,2023.	Embase Indexed
		2. A Clinical Comparison between 0.5% Ropivacaine and 0.5%Ropivacaine Tramadol Combination in Brachial Plexus by Supraclavicular Approch. European Journal of Cardiovascular Medicine. Volume 13 Issue 2-2023.	Embase Indexed
3	DR SK.MOHD.MUDASSIR	1. Comparative study of attemptation of needle prick pain of Spinal Anaesthesia by local infiltration analgesia V/S EMLA skin patch. Perspective in Medical Research Jan-April 2023 Volume 11 Issue 1	Open Access
		2. Comparison of two different doses of dexmedetomidine in attempting Cardiovascular responses during Tracheal intubation. Journal of Cardiovascular disease Research Volume 13 Issue 05-2022.	Embase
		3. Study of efficacy of Ropivacaine alone V/S Ropivacaine with Dexamethasone in Supraclavicular Brachial Plexus Block in Maharashtra population. Medpulse	Copernicus Open Access.

		International Journal of Anaesthesiology. August 2022.	
		4. Study of Ilioinguinal,iliohypogastric and genitofemoral nerve block by blind localization through Anatomical landmark for Inguinal hernia repair at a tertiary hospital. Medpulse International Journal of Anaesthesiology. Volume 23 Issue 03 september 2022.	Copernicus Open Access.
4	DR RANGREZ AARIF A.A.R	1. Comparative analysis of efficacy and postoperative Analgesia with hyperbaric Bupivacaine and Nalbuphine combination versus hyperbaric Bupivacaine and Fentanyl combination in Infraumbilical Surgeries. IJAA,Volume-10 No.2 April-June 2023.	DOAJ (Directory of Open Access Journals)
		2. Comparison between Intrathecal Dexmedetomidine & Clonidine as an adjuvant to Bupivacaine in PIH patient for LSCS. IJAR, Volume 12 Issue 08August 2022	Pubmed
		3. Effect of adding Intrathecal Dexmedetomidine ,Neostigmine and clonidine as an adjuvant to hyperbaric bupivacaine for Elective caesarean section European Journal of Molecular & clinical Medicine. Volume 9 Issue 04,2022	Embase

Department of OBGY

Department	Name of the faculty Qualification IMR Number	Current Designation & Date of promotion	Nature of employment Regular/ permanent or contract / Outsourced	Details of service in the last 5 year					Number of lectures taken per year Topics covered
				1	2	3	4	5	
Obstetrics & Gynecology	Dr. Swati N. Nagapurkar M.D.OBGY IMR NO-62854	Professor & Head of the Department Date of promotion 02.05.2018	Regular	√	√	√	√	√	13 lectures, small teaching group SDL /SGT 22
Obstetrics & Gynecology	Dr. Sujata Jadhav M.D.OBGY IMR NO-2000/07/2403	Professor Date of promotion 01.11.2021	Regular	√	√	√	√	√	10 lectures, small teaching group SDL /SGT 16
Obstetrics & Gynecology	Dr. Ishrath Fatema M.S.OBGY 88444	Professor Date of promotion 19.01.2019	Regular	√	√	√	√	√	09 lectures, small teaching group SDL /SGT 17
Obstetrics & Gynecology	Dr. Anjanadevi Santpure M.S.OBGY 0354/01/2004	Associate Professor Date of promotion 22.03.2017	Regular	√	√	√	√	√	11 lectures, small teaching group SDL /SGT 15
Obstetrics & Gynecology	Dr. Mahesh Tandale M.D.OBGY IMR NO-2001/02/371	Associate Professor Date of promotion 08.03.2019	Regular	√	√	√	√	√	10 lectures, small teaching group SDL /SGT 18
Obstetrics & Gynecology	Dr. Govind Zanwar Assistant Professor MS. OBGY	Assistant Professor	Regular	-	-	-	√	√	3 lectures, small teaching group SDL /SGT 9
Obstetrics & Gynecology	Dr. Mohammadi Khanam MD.OBGY Assistant Professor	Assistant Professor	Regular	√	√	√	√	√	3 lectures, small teaching group SDL /SGT 8

Obstetrics & Gynecology	Dr. Dhiraj Kotecha Assistant Professor MBBS IMR NO-492/02/2004	Assistant Professor	Regular	√	√	√	√	√	3 lectures, small teaching group SDL /SGT 9
Obstetrics & Gynecology	Dr. Seema Khan Assistant Professor MS.OBGY	Assistant Professor	Regular	-	-	-	√	√	3 lectures, small teaching group SDL /SGT 8
Obstetrics & Gynecology	Dr. Ghansham Magar D.G.O, DFP, DNB.	Assistant Professor	Regular	√	√	√	√	√	3 lectures, small teaching group SDL /SGT 9
Obstetrics & Gynecology	Dr. Renuka Alsi loya MS. OBGY	Assistant Professor	Regular	-	-	-	-	√	2 lectures, small teaching group SDL /SGT 9
Obstetrics & Gynecology	Dr. Subuhi Nishat Naser	Assistant Professor	Regular	-	-	-	-	√	2 lectures, small teaching group SDL /SGT 5

ANNEXURE-1

Sr.no.	Faculty name	Publication in Vancouver referencing style.	Indexed Yes/no	Pubmed/ Scopes
01	Dr. Swati Nagapurkar	**Yes**	**Yes**	**-**
02	Dr. Sujata Jadhav	**Yes**	**Yes**	**-**
03	Dr. Ishrath Fatima	**Yes**	**Yes**	**-**
04	Dr. Anjanadevi Santpure	**Yes**	**Yes**	**-**
05	Dr. Mahesh Tandale	**Yes**	**Yes**	**-**
06	Dr. Govind Zanwar	**Yes**	**Yes**	**-**
07	Dr. Mohammadi Khanam	**No**	**No**	**-**
08	Dr. Dhiraj Kotecha	**No**	**No**	**-**
09	Dr. Seema Khan	**No**	**No**	**-**

10	Dr. Ghansham Magar	**No**	**No**	**-**
11	Dr. Renuka Alsi Loya	**No**	**No**	**-**

List of publications

Dr. S. N. Nagapurkar (Professor & HOD Dept. of OBGY)

Sr. No.	Title of paper	Publication	Indexed yes / no	Pubmed / Scopes
1	Study of incidence of oligoydramnios during pregnancy at IIMSR Medical College, Warudi	Medpulse- International journal of gynecology Dec -2017 Vol.no.4 Page no.51 to 53.	Yes	-
2	Evaluation of maternal and prenatal morbidity and mortality in previous caesarean section	Medpulse- International journal of gynecology Jan -2018 Vol.no.5 issue 1, Page no.60 to 80 ISSSN2579-0870	Yes	
3	Outcome of trial of labor & scar in patient with previous caesarean section	Medpulse- International journal of gynecology Jan -2018 Vol.no.5 issue 1, Page no.19 to 22 ISSN2579-0870	Yes	
4	Study of Biosocial factors affecting laparoscopic tubul ligation in rural Maharashtra, India	International journal of Reproduction, Contraception , Obstetrics & Gynecology Dec- 2016 Vol.no.5 issue 12 , Page no.4461 – 4465 ISSN 2320-1770 ESSN 2320-1789	Yes	
5		International journal of	Yes	

	Female sexual dysfunction amongst rural postmenopausal woman	Reproduction, Contraception , Obstetrics & Gynecology Dec- 2016 Vol.no.5 issue 12, Page no.4385-4389 ISSN 2320-1770 ESSN 2320-1789		
6	Clinical study of outcome induction of labor	Medpulse- International journal of gynecology Mar -2014 Vol.1 issue 3,	Yes	
7	Risk factors for antipartum hemorrhage. A Hospital based study	International Journal of Recent Trends in Science and Technology Jun-2015 Vol.15 issue 2,	Yes	
8	A comparative study of absorbable synthetic versus chromic catgut in the repair of episiotomy	Medpulse- International journal of gynecology Nov-2015 Vol.2 issue 2,	Yes	
9	Histopathological study of endometriam in dysfunctional uterine bleeding	International Journal of Recent Trends in Science and Technology Dec-2015 Vol.17 issue 2,	Yes	
10	Study of varicocele repair in men with secondary infertility in rural population	Medpulse –International journal of Surgery Aug-2019 Vol.11 (2) issue 2.	Yes	
11	Extra corporal shockwave lithotripsy (ESWL) – A study in the Marathwada Zone Maharashtra India.	Medpulse –International journal of Surgery Aug-2019 Vol.11 (2) issue 2.	Yes	

List of publications

Dr. Sujata Jadhav (Professor Dept. of OBGY)

Sr. No.	Title of paper	Publication	1st author /Second author
1	A study of various gynecological problems in adolescent girls	International Journal of Recent Trends in Science and Technology Dec-2014 ISSN 2277-2812,Vol 13, Issue2, page 418-421	First author
2	Profile of adolescent girls with obstetrics problem of illegitimate pregnancy	International Journal of Recent Trends in Science and Technology Dec-2014 ISSN 2277-2812,Vol 13, Issue2, page 427-430	First author
3	Association of thyroid dysfunction and anemia in pregnancy : A cross sectional study	International Journal of health science 2022 Vol.6 (s1) Page no. 61042-6114	Second author
4	Pregnancy complications and side effects of Aspirin alone and Aspirin Plus low molecular Heparin in patients of Bad Obstetrics History with elevated anti phospolipid antibodies	European Journal Of Molecular & Clinical Medicine Vol.9 issue 03, 2022 Page no. 3030-3038	Third author

List of publications

Dr. Anjanadevi Santpure
(Associate Professor Dept. of OBGY)

Sr. No.	Title of paper	Publication	1st author /Second author
1	Female sexual dysfunction amongst rural postmenopausal woman	International journal of Reproduction, Contraception , Obstetrics & Gynecology Dec- 2016 Vol.no.5 issue 12, Page no.4385-4389 ISSN 2320-1770 EISSN 2320-1789	Second author
2	Study of Biosocial factors affecting laparoscopic tubul ligation in rural Maharashtra, India	International journal of Reproduction, Contraception , Obstetrics & Gynecology Dec- 2016 Vol.no.5 issue 12 , Page no.4461 – 4465 ISSN 2320-1770 EISSN 2320-1789	First author
3	Evaluation of thromboprophylaxis in bad obstetric history patients with elevated antiphospholipid antibodies	Medpulse- International Medical journal May-2015 Vol.2 Issue 5, Page no. 292-295 ISSN 2348-2516 EISSN-2348-1897	First author
4	Study of maternal mortality in tertiary care center	Medpulse- International Medical journal	First author

		Oct-2015 Vol.2 , Issue 10, Page no. 672-674, ISSN 2348-2516 EISSN-2348-1897	

List of publications

Dr. Ishrath Fatima (Professor Dept. of OBGY)

Sr. No.	Title of paper	Publication	1st author /Second author
1	Efficacy of hysteroscopy and endometrial biopsy in post menopausal bleeding cases with endometrial thickness	Med pulse Gynecology ISSN2579-0870 Vol 8, Issue 2 Page no 97 -101 Oct-2018	First author
2	Assessment of post menopausal cases with hysteroscopy	Med pulse Gynecology ISSN2579-0870 Vol 9, Issue 2 Page no 53-56 Feb 2019	Second author

List of publications

Dr. Mahesh Tandale
(Associate Professor Dept. of OBGY)

Sr. No.	Title of paper	Publication	1st author /Second author
1	Evaluation of maternal and prenatal morbidity and mortality in previous caesarean section	Medpulse- International journal of gynecology Jan -2018 Vol no.5, Issue 1,page 16-18, ISSSN2579-0870	Second author
2	Outcome of trial of labor & scar in patient with previous caesarean section	Medpulse- International journal of gynecology Jan -2018 Vol.no.5, issue 1, page19-22, ISSN2579-0870	First author
3	Pregnancy in elderly Primigravida : clinical profile	European Journal Of Molecular & Clinical Medicine Vol.9 issue 2, 2022 Page no 2694-2699	Second author
4	The outcome of pregnancy in elderly Primigravida at Teritary care Hospital	European Journal Of Molecular & Clinical Medicine Vol.9 issue 2, 2022 Page no-2700-2707	Second author
5	Association of thyroid dysfunction and anemia in pregnancy : A cross sectional study	International Journal of health science 2022 Vol.6 (s1) Page no. 61042-6114	Fourth author
6	Pregnancy complications and side effects	European Journal Of Molecular & Clinical	Third author

	of Aspirin alone and Aspirin Plus low molecular Heparin in patients of Bad Obstetrics History with elevated anti phospolipid antibodies	Medicine Vol.9 issue 03, 2022 Page no. 3030-3038	

Online Certification

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DR SWATI NAGAPURKAR

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Basic Course in Biomedical Research

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Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

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MAHARASHTRA - 431005
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Online Assignments	**93 %**	**Proctored Examination**	**82 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director-General, Indian Council of Medical Research
New Delhi, India

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MUHS

National Medical Commission Regional Center, IMETTT
Maharashtra University of Health Sciences (MUHS), Nashik.

Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Mahesh S. Tandale****, Associate Professor, Department of OBGY, from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 05th October to 07th October 2021 under supervision of* ***NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

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To

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13/14 B , SANTPURE HOSPITAL
SEVEN HILLS
AURANGABAD
MAHARASHTRA - 431001
PH. NO :8806772333

Online Certification

This certificate is awarded to

ANJANADEVI SHIVKUMAR SANTPURE

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a consolidated score of 63 %

Online Assignments	**93 %**	**Proctored Examination**	**53 %**

MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD04S13110029

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MUHS

JIIU's Indian Institute of Medical Science and Research

Warudi, Badnapur, Jalna

Certificate of Participation

Revised Basic Course Workshop and Training in Attitude, Ethics & Communication (AETCOM)

This is to certify that ***Dr. Anjanadevi S Santapure,*** *Associate Professor, Department of OBGY, JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***'Revised Basic Course Workshop & AETCOM (rBCW)-II'*** *held during 06th July to 08th July 2021 under supervision of* ***NMC Nodal/Regional Centre, MUHS,*** *Nashik (M.S.).*

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Azhar Ahmed Siddiqui
Dean
JIIU'S IIMSR

Dr. Anjali Shete
NMC Observer

icmr NIE

Online Certification

This certificate is awarded to

BHAGYASHRI RANJWAN

for successfully completing

Basic Course in Biomedical Research

As mandated by the National Medical Commission (NMC)

With a score of 50 % in Proctored Examination

Apr 2022

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

Prof. Balram Bhargava
Secretary to Govt. of India, Dept. of Health Research &
Director General, Indian Council of Medical Research
New Delhi, India

swayam

Roll no: NPTEL21MD05543111001

Department of Dental

Department	Name of the faculty Qualification IMR number	Current designation and date of promotion	Nature of employment Regular/permanent Or contract/outsourced	Details of services in last 5 years					No of lecture s taken per year Small teaching group with topics covered
				1	2	3	4	5	
Dentistry	1.Dr Vijay Deshmukh MDS Reg No: A-3750	Professor 01/08/2015	Regular	√	√	√	√	√	1) Introduction of dentistry 2) Maxilofacial Trauma 3) Oral Cancer 4) Cleft lip & palate
	2. Dr. Shankar P. Dange MDS Reg No: A-3143	Professor 03/11/2023	Regular	X	X	X	X	√	1) Dental caries & its management 2) Gingival & Periodontal Diseases 3) Root Canal Treatment
	3. Dr. Shaikh Amjad MDS, Ph.D Reg No. A-14010	Associate professor 01/01/2020	Regular	√	√	√	√	√	1) Jaw Pathology 2) Oral manifestations of systemic diseases & its management 3) Management of mandible fracture 4) Odontogenic tumours & cysts

Department of Dental Publications

Sr. No	Faculty Name	Publications in Vancouver Referencing style	Pub med Index
1	Dr. Vijay Deshmukh	1.Vijay Deshmukh. Gunshot injury to the mandible. Dental Dialogue, Journal of Maharashtra state branch IDA. 1991;16:1-2	No
		2. Vijay Deshmukh. A Review of dry socket and its management. JIDA.1994;65(11):	No
		3. Vijay Deshmukh. Open reduction of condylar fractures-A right treatment perspective? IJOMS;36(11):1072	No
		4.Priya shirish Joshi, Vijay deshmukh, someshwar Golgire. Gorlin Goltz Syndrome. Dental research Journal. 2012;9(1):100-106	No
		5.Vadgaonkar V, Gangurde P, Deshmukh V,et al. Orthodontic and surgical perspectives in management of severe skeletal open bite.BMJ Case report. Doi:10.1136/bcr-2013-200069.	No
		6. . Ajinath Jadhav, Vijay Deshmukh. Effect of location of fracture line and surgically visible nerve entrapment in recovery of infraorbital nerve following zygomatico maxillary complex fracture- a prospective study. Medpulse International journal of Dentistry. 2017,2(1):9-13	No
		7. Jadhav AN, Shushma G, Deshmukh VD. Efficacy of Tranexamic acid in prevention of alveolar osteitis following surgical removal of impacted manibular third molar. National Journal of Maxillofacial surgery 2021;XX: XX-XX	Yes
Chapters in Book			
		1.Odontogenic infections of Head and neck. : Textbook of Oral and maxillofacial surgery edited by Dr Vinod Kapoor, 2 nd editionArya (Medi) Publishing house, ISBN 81-86809-08-2	
		2. Oral Squamaous cell Carcinoma- Diagnosis and Treatment Planning : Oral and maxillofacial surgery for clinicians, edited by Krishnmurthy B et al. 1st edition 2021, springer open, ISBN 978-981-15-1345-9. DOI 10.1007/978-981-15-1346-6	

2.	Dr. Shaikh Amjad	1.R. Kumar, G.S Hashmi,S.M. Amjad, M.K. Ansari International journal of health science and research, Adenomatoid odontogenic cyst of mandible: A rare case report. may 2015;5(5); 490-494 ISSN: 2249-9571 Index Copernicus Google scholar	No
		2. Shaikh Amjad Khan ,Munir, Md Kaleem ,Ansari, Sajjad A.R. Sayed S. Ahmed Primary extra nodal Non-Hodgkin's lymphoma of anterior mandible: A Rare Case Report University Journal of Dental Science Oct-Dec 2015, 91 (3); 92-94	No
		3. Abdul Salik, Amjad Shaikh, Anoop Gore, Mohmed Yunis Saleembhat. Prevalence of Halitosis and its correction with various intraoral etiological factors : A cross- sectional Study Annals of international medical and dental Research July-2016 2(5) 20-24ISSN (Online) : 2395-2822 ISSN (Print) : 2395-2814 Index Copernicus ,Index medicus Global index medicus	No
		4. Amjad Shaikh, Abdul Salik, Amol Manoj Kararde ,Aasima Gupta, Clinical And radiographic evaluation of influence of autologous platelet concentrates on healing infra-bony detects , International Journal of Contemporary medical research Sept. 2016 3(9) 2736-2739 ISSMCE (e) 2393 – 915X,ISSM(P) 2454 – 7379,Index medicus,Index Copernicus	No
		5. Shaikh Amjad ,Zuberi HR[2],Azhar Ahmed 5[3]. Study of Mandibular foramen from different bony land marks in dry human mandibles, IP Indian Journal of Anatony and surgery of head, neck and Brain, April-June 2018; 4(2): 40-43, ISSN : 2581-5210 e-ISSN : 2581-5229 Index Copernicus ,Index – IP,Google Scholar	No

		6. Md. KalimAnsari ,Shaikh Amjad ,ShariqueAlam ,Tabishur Rahman , Management of odontoqenic Buccal Space infection in patient with Severe Hemophilia A-Case report , Internation Archives of Oral and maxillofacial surgery August 2018 2(1) 1-4 , Cross ref ,Google scholar	No
		7. Abdul Salik, ,Shaikh Amjad ,MD. Kalim Ansari ,TabisharRarman. Scholars journal of Dental Sciences Jan-2019, 6 (1) 10-18, ISSN(P) 2394-4951 ,ISSN (O) 2394.490X ,Index colenicus ,Google Scholar ,Cross ret	No
		8. Abdul Salik,,Shaikh Amjad,Zuberi HR ,AzharAhmads, Study of Atatomical Variations of mental foramen in mandible and its clinical importance in maharashrian population, International journal of dental Health Sciences., , 2019,06(01)22-27 ISSN : 2348-52F0 ,Index Copernicus,Google Scholar.	No
		9. . Abdul Salik1 Shaikh Amjad,*, Tabishur Rahman, Kalim Ansari, Study of complications of surgical removal of maxillary third molar, Journal of Oral Medicine, Oral Surgery, Oral Pathology and Oral Radiology , January - March, 2019; 5(1): 1 – 3, Print ISSN:-2395-6186 Online ISSN:-2395-6194,Index Copernicus, Google Scholar, I, National ScienceLibrary, J- gate, ROAD, CrossRef, Microsoft Academic, Indian Citation Index (ICI).	No
		10. Shaikh Amjad1*, Zuberi Hussain Riyaz2*, Azhar Ahmed Siddiqui3, MD Kalim Ansari Orbital dimensions of Maharashtrian population a direct measurement study using dry skulls,International Dental Journal of Student Research, October-December, 2019;7(4):103-106 Print ISSN:-2394-708X Online ISSN:-2278-3784,CODEN : IDJSB7	No
		11. Shaikh Amjad*, Kalim Ansari1, Syed S. Ahmad1, Tabishur Rahman1.Comparative study of outcomes between locking plates and	Yes

		three-dimensional plates in mandibular fractures, National Journal of Maxillofacial Surgery, ISSN -Print: 0975-5950, Online: 2229-3418	
		12. Shaikh Amjad*, Govind R. Changule, Majid Ansari, Shaikh Mudassir, Parotid Duct Sialolithiasis - A Case Report and Critical Review, *International Journal of Dental Science and Innovative Research (IJDSIR)*3(3), May - 2020, Page No. : 426 – 433 ISSN: 2581-5989 PubMed - National Library of Medicine - ID: 101738774	Yes
		13. Md Kalim Ansari, SharíqueAlam, Fatima Meraj, Syed Sayeed Ahmed, Shaikh Amjad Khan Munir*Clinicopathological Analysis of 847 Odontogenic Cysts in North Indian Population Examined Over 10 Years' Period: A Retrospective Study, *Indian Journal of Oral Health and Research,*6(2)2020ISSN:2393-8692.	No
		14.ShaikhAmjad, LaxmanMalkunje, Imran Pathan, Kalim Ansari, Complications of surgical removal of mandibular third molar: A Retrospective Study, University Journal of Maxillofacial Surgery and Oral Sciences Official Publication of Aligarh Muslim University, Aligarh. India, J Maxillofac Oral Sci. 2021; 1(1)	No
		15. Mubashir Ahmed Shaikh, Shaikh Amjad, Shahnawaz Mulani, PaulChalakkal Assessment of outcome of orthodontic Mini dental implants: An observational study Univ J Maxillofac Oral Sci. 2021;1(2)	No
		16. Dr. Mubasshir Ahmed Shaikh, Dr. ShahnawazMulani, Dr. Shaikh Amjad Assessment of outcome of orthodontic Mini dental implants: An observational study, Journal of Advanced Medical and Dental Sciences Research(29-30) July 2021	No

National Medical Commission Regional Center, IMETTT,
Maharashtra University of Health Sciences (MUHS), Nashik.

MUHS

JIIU'S INDIAN INSTITUTE OF MEDICAL SCIENCE & RESEARCH,

Warudi, Tal, Badnapur, Dist. Jalna

Revised Basic Course Workshop in Medical Education Technology & Training in Attitude, Ethics & Communication (AETCOM)

Certificate of Participation

This is to certify that ***Dr. Shaikh Amjad,*** *Associate Professor, Department of Dentistry from JIIU's Indian Institute of Medical Science & Research, Warudi, Tq. Badnapur, Dist. Jalna has participated in the* ***"Revised Basic Course Workshop & AETCOM"*** *held during 21st February to 23rd February 2023 under supervision of* ***NMC Regional Centre, IMETTT, Maharashtra University of Health Sciences (MUHS),*** *Nashik.*

Dr. Azhar Ahmed Siddiqui
Organizing Chairman
Dean JIIU'S IIMSR

Dr. Zuberi Hussain Riyaz
Organizing Secretary
MEU Coordinator, IIMSR

Dr. Ganesh Chaudhari
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AMBAJOGAI
MAHARASHTRA - 431517
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MAR - JUN 2021

Dr. Manoj V Murhekar
Director and Scientist G
ICMR - National Institute of Epidemiology
Chennai, Tamil Nadu, India

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