RAJMICROCON 2025

4th ANNUAL CONFERENCE OF IAMM-RAJASTHAN CHAPTER

RAJMICROCON 2025

20-21 September 2025

Advances in Microbiology:
Shaping the future of Clinical Care Pre-conference workshop 19th Sep 2025

Organised by

Department of Microbiology SMS Medical College

Jaipur-302004

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Dr. Deepak Maheshwari
M.B.B.S., M.D. (Med.), D.M. (Cardiology)
Senior Professor, Department of Cardiology
S.M.S. Hospital, Jaipur-302004 (Rajasthan)

Principal & Controller
SMS Medical College & Attached Group of Hospitals
JLN Marg, Jaipur-302004 (Rajasthan)
Tel. : (O) 0141-2619020, 2518380
E-mail : principalsmsmc@rajasthan.gov.in

Date:- 10th Sep 2025.

Message

Since its inception after the bifurcation of Pathology in 1982, Microbiology has seen a remarkable transformation, moving from conventional methods to rapid molecular and automated diagnostics. The COVID-19 pandemic highlighted the vital role of PCR, while Artificial Intelligence now promises to revolutionize microbiology with faster, more presice and presonalized intervations.

This conference will spotlight advances in bacterial, virul, fungal and parasitic diagnostics, alongside the globle challenge of antimicrobial resistanc - a growing enigma that continues to perplex and challenge clinicians worldwide. May it serve as a platform for collaboration, innovation and excellance, setting new benchmarks for the Rajasthan Chapter of IAMM.

This 4th conference of the IAMM Rajasthan Chapter marks yet another milestone. I extand my best wishes to the organizers for its success and look forword to many more such endeavors in the future.

Wishing the event resounding success and enduring impact.

Thank you.

(Dr. Deepak Maheshwari)

Residence : 48/103, Rajat Path, Mansarovar, Jaipur-302020 (Rajasthan)
Mob. : +91 98290 10252 | Email : drdeepakmaheshwari@gmail.com

Message

Dr Mahantesh B Nagamoti
President IAMM - 2024-25.
Prof Microbiology JNMC KAHER.
Belagavi-10. (Karnataka)

I am happy to learn that, IV Annual Conference of IAMM Rajasthan – RAJMICROCON 2025, will be conducted in Department of Microbiology, SMS Medical College Jaipur from 20th, 21th Sept, 2025. The theme of the conference "Advances in Microbiology; Shaping the future of Clinical Care", is focusing on updates and uses of the present techniques for the future plans along with newer ideas.

It is also happy to note that, a Souvenir is being released to make the occasion more meaningful.

I hope the souvenir expose the recent advances made in the field of Medical Microbiology by eminent Medical Microbiologists and same would be very much useful to the learners and juniors in updating the knowledge in the field of medical sciences. The Pink city 'Jaipur' will definitely witness amalgamation of all the new ideas and generations with old ones during this time.

I wish the conference a grand success.

Dr Mahantesh B Nagamoti

Message

Dr Sonal Saxena
Secretary, IAMM

It gives me great pleasure to extend my warm greetings to the Rajasthan Chapter of IAMM on the occasion of their Annual Conference. Such academic gatherings play a vital role in fostering professional growth, sharing knowledge, and strengthening collaborations among microbiologists. The Rajasthan Chapter has always been active in promoting the vision and mission of IAMM, and this conference is yet another reflection of its commitment to academic excellence.

Over the past few years, IAMM has initiated several academic programs such as the PG Masterclass, Infection Prevention and Control Course, Antimicrobial Stewardship Course, short-term training, and hands-on workshops for microbiologists as well as technical staff, all of which are aimed at capacity building and addressing the evolving challenges in microbiology. Regional chapters like Rajasthan have been integral in carrying forward these efforts, providing platforms for postgraduates, young researchers, and faculty to learn, network, and showcase their talent.

I am confident that this conference will provide stimulating discussions, new perspectives, and valuable learning experiences for all delegates. I congratulate the organizers for their dedication and hard work in putting together this event and wish the conference great success. May it continue to inspire and empower the microbiology community.

Dr Sonal Saxena

डॉ. जितेन्द्र कुमार सोनी, आई.ए.एस.
DR. JITENDRA KUMAR SONI, I.A.S.

सत्यमेव जयते

जिला कलक्टर एवं जिला मजिस्ट्रेट
जयपुर - 302016
DISTT. COLLECTOR & DISTT. MAGISTRATE
JAIPUR - 302016

Organizers and Participants,

It is with great pleasure that I extend my warm greetings and best wishes for RAJMICROCON 2025, the 4th Annual Conference of the Rajasthan State Chapter of the Indian Association of Medical Microbiologists, scheduled for September 20-21, 2025, in Jaipur.

This esteemed event highlights the importance of scientific collaboration and innovation in microbiology, which will undoubtedly enhance diagnostic practices, infection control, and patient care across Rajasthan and beyond. I am confident Jaipur's vibrant environment will inspire meaningful discussions and valuable networking. I commend the Department of Microbiology for their efforts in organizing this significant conference and wish it great success. May it foster new insights and lasting collaborations in medical microbiology.

Warm regards,

(Dr. Jitendra Kumar Soni)

Department of Microbiology
SMS Medical College
Jaipur

Te.: +91 (141) 2209001 (0) Fax : +91 (141) 2209000 E-mail : dm-jaip-rj@nic.in

Message

Dr Bharti Malhotra
Ex-President & Founder Secretary, IAMM Rajasthan Chapter

On the occasion of the 4th Rajmicrocon 2025, it gives me immense pleasure to welcome all delegates, faculty, and students to this academic gathering of the IAMM Rajasthan Chapter.

Having been associated with the Chapter since its inception as Founder Vice President and later as President, it is heartening to see how this association has grown into a strong academic and professional platform. Rajmicrocon has become a symbol of collaboration, learning, and scientific progress in our state.

The theme this year, "Recent Advances in Microbiology: Shaping the Future of Clinical Care," is both timely and inspiring. With the rapid evolution of diagnostics, molecular tools, and the integration of artificial intelligence in microbiology, we stand at the threshold of a new era in patient care. AI-driven technologies are not only refining diagnosis and treatment decisions but are also revolutionizing surveillance, outbreak detection, and personalized medicine.

It is also my privilege to extend a special and warm welcome to our renowned and esteemed guest faculty — Dr. Pallab Ray, Dr. Priya Abraham, Dr. Shripad, Dr. Sonal Saxena, Dr. Shukla Das, Dr. Abhishek Mewara, Dr. Pragya Yadav, Dr. Shiva Prakash, Dr. Siddharth, and Dr. Vibhor Tak. Their presence and contributions will undoubtedly enrich the scientific deliberations and inspire our delegates.

I sincerely appreciate the efforts of the organizing team under the able leadership of Dr. S.K. Singh, Dr. Rajni Sharma, and Dr. R.K. Mishra, along with the entire faculty and residents of the Department of Microbiology, SMS Medical College, Jaipur, for their dedication in hosting this conference.

I wish the participants enriching scientific interactions, lasting friendships, and memorable experiences in the Pink City.

Dr Bharti Malhotra

Message

Dr S. K. Singh
President, IAMM-RC
Organizing President Rajmicrocon-2025

As President of the Rajasthan State Chapter of IAMM,and RAJMICROCON2025 it gives me immense pride to reflect on my journey with this esteemed body—beginning as a member of its Executive Committee, serving as Secretary, and today, leading as its President. Over the years, I have witnessed our chapter grow steadily stronger with the addition of new life members and through the various scientific activities conducted under the aegis of IAMM-RC. IAMM-RC News letter is also being released in the conference along with conference Souvenir.

It is indeed a privilege that the Department of Microbiology has had the honor of organizing not only the 1st Annual Conference, but also the 4th Annual Conference of our Chapter. This year, with great enthusiasm, we are hosting the 4th Annual Conference—RAJMICROCON 2025.

I feel deeply grateful to the dedicated organizing team whose untiring efforts will surely ensure the success of this mega event. I extend my warm congratulations and heartfelt thanks to all members, delegates, and our esteemed guests who are part of this significant gathering.

I wish the very best for the success of this conference.

Dr S. K. Singh

Message

Dr Rajni Sharma
Org Chairperson

I feel extremely happy & privileged to be a part of RAJMICROCON 2025 going to be held in Pink City, at Department of Microbiology, SMS Medical College, Jaipur.

The conference celebrates the theme "Advances in Microbiology", shaping the future of clinical care with focus upon future of clinical Microbiology.

Challenges in diagnosing infections - especially mycotic infections, newer & emerging parasitic and viral diseases, escalation of antimicrobial resistance & recent outbreaks has highlighted the need for rapid, clinically relevant &quality assured point of care testing.

From conventional Microbiology andMolecular techniques to Whole Genome Sequencing and AI driven diagnosis along with data interpretations, Clinical Microbiology has transformed patient care and infection control to a newer height.

I'm sure everyone who will become part of this two days academic fest will benefit immensely.

I congratulate organizing team of RAJMICROCON2025 for their untiring efforts in making this event so useful & grand.

I wish them all the best.

Dr Rajni Sharma

Message

Dr Aruna Vyas
Vice President, IAMM-RC

On the occasion of 4th Rajmicrocon 2025 We extend a warm welcome to all of you on behalf of Department of Microbiology, SMS Medical College, Jaipur, under the dynamic leadership of our esteemed President Dr. S.K. Singh, Organising Chairperson Dr. Rajni Sharma, Organising Secretary Dr. R.K. Mishra and Joint Secretary Dr Parul Sinha.

The faculty, residents and staff of Department of Microbiology have put in immense hardwork and dedication to ensure the successful organization of the conference. I want to personally acknowledge the commendable work done by coordinators and teams of different organizing committees, to present this wonderful academic & cultural feast in the pink city. I hope the participants return with happy and everlasting memories and knowledge of this conference.

Dr Aruna Vyas

Message

Dr Ramesh Mishra
Secretary IAMM-RC
Organizing Secretary Rajmicrocon-2025

On behalf of the organising committee, I warmly welcome each one of you to RAJMICROCON-2025. It is a privilege to gather here with esteemed colleagues, experts, and friends to share knowledge and celebrate advances in our field.

The theme of this conference, Advances in Microbiology: Shaping the Future of Clinical Care, reflects the rapidly evolving landscape of microbiological science and its crucial role in transforming patient care. By harnessing cutting-edge research and innovative technologies, we aim to enhance diagnostic accuracy, treatment outcomes, and public health strategies for a healthier tomorrow.

This conference brings together experts from Microbiology, Infectious diseases, and related disciplines to share knowledge, foster collaborations, and inspire innovations that will drive progress in healthcare and biomedical research.

When we decided to revive the state chapter in the year 2019, it appeared a herculean task but with the support of our founder president Dr. R.K.Maheshwari, it became easy. From there on,we have been fortunate in getting the unwavering support from whole of the fraternity in reaching this far ,that the first conference which was organized in the year 2022,now , the fourth annual event in sequence is being organized on 20th-21st Sep 2025.

Not the least, this event would not have been possible without the guidance of, Dr. Nitya Vyas, Dr. Bharti Malhotra, Dr S.K.Singh and support from Dr. Rajni Sharma, Dr. Aruna Vyas, Dr. Saroj Hooja, Dr. Taruna Swami, Dr. Dinesh Kumar Jain, Dr. Manish Bansal, Dr. Yogesh, and Dr. Gaurav Dalela. I am deeply thankful for their efforts and commitment.

I wish this conference to be a great success.

Dr Ramesh Mishra

Message

Dr Babita Sharma
Editor Souvenir Rajmicrocon 2025

It is my privilege to present the souvenir of the 4th Annual Conference of the Indian Association of Medical Microbiologists – Rajasthan Chapter, organized under the theme "Advances in Microbiology: Shaping the Future of Clinical Care."

This conference is a celebration of knowledge, innovation, and collaboration. Today, Microbiology with molecular diagnostics , infection control and novel therapeutic strategies is playing a pivot role in clinical care and is shaping the future of medicine. This gathering provides a unique platform to learn, share ideas, and strengthen our collective commitment to improve the patient outcome.

This souvenir is more than a compilation of abstracts and messages as it embodies the vision, dedication, and hard work of everyone involved in bringing this to fruition. The successful compilation of this publication would not have been possible without the unwavering support and endeavor of the editorial committee. I extend my sincere gratitude to all contributors and the organizing team for their tireless efforts and commitment.

I hope this publication serves as a valuable source of knowledge and inspiration, reminding us that every advancement in microbiology is a step toward a healthier life and better clinical care.

With warm regards and best wishes

(Dr Babita Sharma)

Executive Council of IAMM-RC 2025

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Dr Aruna Vyas
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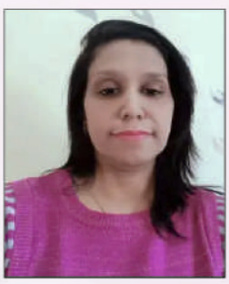

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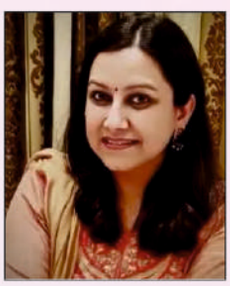

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Dr Rajendra Kumar Karadia
Executive Member

Dr Priyanka Soni Gupta
Executive Member

RAJMICROCON 2025

Core Organizing Committee

Left to Right : **Dr Sunita Agarwal, Dr Parul Sinha, Dr S. K. Singh, Dr. Ramesh Mishra**
Dr Rajni Sharma, Dr Bharti Malhotra, Dr Aruna Vyas

Department of Microbiology SMS Medical College, Jaipur

Department of Microbiology SMS Medical College, Jaipur

IAMM - RC EC 2025 BODY MEMBERS

IAMM - RC EC BODY MEMBERS

L to R Sitting - **Dr Rajendra Karadiya, Dr Rekha Bachhiwal, Dr Saroj Hooja, Dr S. K. Singh, Dr R. K. Mishra, Dr Aruna Vyas, Dr K. L. Verma**

L to R Standing - **Dr Malvika Sharam, Dr Nita Pal, Dr Parul Sinha, Dr Sandeep Gupta, Dr. Varunika Vijayvergiya**

DAY 1, 20TH SEPTEMBER 2025

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	TIME SLOT	TOPIC
1.	08:00AM - 10:00AM	ORAL PAPERS
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4.	09:45AM - 10:00AM	KEY NOTE ADDRESS: Redefining Clinical Microbiology for better
		Healthcare. (Dr. Rajni Sharma)
5.	10:00AM - 12:00PM	POSTER PRESENTATION
6.	10:00AM - 10:40AM	XDR Pathogens: Tracking the rise of Extensively Drug Resistant
		bacteria. (Dr. Sonal Saxena)
7.	10:40AM - 11:15AM	Clinical relevance of Microbiology in urgent and emergent health care
		situations. (Dr. Shripad)
8.	11:15AM - 11:23AM	Sponsored talk
9.	11:23AM - 11:55AM	Challenges in Diagnosing Tropical Fevers: What Every Clinician and
		Microbiologist Should Know. (Dr. Ravikant Porwal)
10.	11:55AM - 12:30PM	Neurocysticercosis: Emerging trends, challenges and innovations in
		the fight against a Neglected Tropical Threat. (Dr Abhishek Mewara)
11.	12:30PM - 12:38PM	Sponsored talk
12.	12:38PM - 01:15PM	Next-Gen Clinical Mycology: Molecular Diagnostics, Biomarkers, and
		AI Integration. (Dr. Shukla Das)
13.	01:15PM - 01:50PM	Navigating the Crosscurrents: Resistance, Toxicity and the
		Complexities of Antifungal Therapy.(Dr. Shiva Prakash)
14.	01:50PM - 02:35PM	LUNCH
15.	02:35PM - 03:15PM	Panel Discussion: CBME (Competency Based Medical Education) in
		Medical Microbiology prioritizes Clinical relevance over academic
		depth.
16.	03:15PM - 03:50PM	Microbial Medicine: Harnessing the gut microbiome in modern
		therapeutics (Dr. Pallab Ray)
17.	03:50PM - 03:58PM	Sponsored talk (BD Life sciences pvt. ltd)
18.	03:58PM - 04:30PM	Student QUIZ.
	06:00PM - 07:00PM	**Inaugural function, Lamp lighting, Welcome address**
	07:00PM onwards.	**Cultural evening and Cocktail dinner**

DAY 2, 21ST SEPTEMBER 2025

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RAJMICROCON 2025

Core Organising Committee

Dr. Deepak Maheshwari
Chief Patron

Dr. Bharti Malhotra
Patron

Dr. S.K Singh
Organising President

Dr. Rajni Sharma
Organising Chairperson

Dr. R.K Mishra
Organising Secretary

Dr. Parul Sinha
Jt. Organising Secretary

Dr. Aruna Vyas

Dr. Saroj Hooja
Advisor Scientific Committee

Dr. Rajendra Karadiya
Organising Treasurer

Dr. Sunita Agarwal
Jt. Organising Treasurer

Leading Associates

Dr. B. Lal
Head, Dr. B. Lal Labs, JPR
Founder member of IAMM RC.
Guiding Force for the
RAJMICROCON 2025

Dr. R.K Maheshwari
Founder President of
IAMM RCHOD,
Microbiology, NIMS, JPR

Dr. Nitya Vyas
Founder member of
IAMM RCProf, Microbiology,
MGMCH, JPR

Organising Committee (Co-ordinators & Team Members)

Dr. Rameshwari Bithoo (Inaugural Ceremony Co-ordinator)
Team Members: Dr. Surbhi Mittal, Dr. Ruchi

Dr. Rekha Bachhiwal (Panel Discussion Co-ordinator)
Team Members: Dr. Vijaylaxmi, Dr. Suman Meena

Dr. Nita Pal (Students' Quiz Co-ordinator)
Team Members : Dr. Pooja Gupta

Dr. Anita Rungta (Students' Symposium Co-ordinator)
Team Members: Dr. Shilpa Balodia, Dr. Pooja Chaudhary

Dr. Manju Yadav (Cultural Committee Co-ordinator)
Team Members: Dr. Malvika Sharma, Dr. Sandeep Gupta, Dr. Lalita Verma

Dr. Veena Balothia (Reg. Committee Co-ordinator)
Team Members : Dr. Aditi Agarwal

Dr. Shivra Batra (Awards & Mementos Co-ordinator)
Team Members : Dr. Simmi Bhatt

Dr. Nazneen Pathan (Awards & Mementos Co-ordinator)
Team Members : Dr. Simmi Bhatt

Dr. Varunika Vijayvergia (Website Co-ordinator)

Dr. Abhishek Sharma (Banquet Co-ordinator)

Dr. K.L Verma (Transportation & Accommodation Coordinator)
Team Member: Dr. Mahesh Yadav

Dr. Ashok Yadav (Food & Beverage Coordinator)
Team Member: Dr. Jitendra

RAJMICROCON GUEST SPEAKERS

Dr Pallab Ray
KIMS, Bhubaneswar

Dr Shripad Taklikar
LTMC MUMBAI

Dr Shivprakash M Rudramurthy
PGIMER, Chandigarh

Dr Shukla Das
UCMS DELHI

Dr Vibhor Tak
AIIMS JODHPUR

Dr Priya Abraham
Christian Medical College
Vellore

Dr Sonal Sexena
MAMC, New Delhi

Dr Ravikant Porwal
Manipal Jaipur

Dr Pragya D. Yadav
NIV PUNE

Dr Siddharth Sagar
Consultant Core Diagnostics
Consultant Agilus Diagnostics
Delhi

Dr Abhishek Mewara
PGIMER,CHANDIGARH

Dr Puneet Saxena
SMS, JAIPUR

PRE CONFERENCE WORKSHOPS: SEP 19, 2025

1. A Comprehensive Workshop on Sepsis Diagnosis: From Blood Culture to Biofire'
   Co-ordinators: Dr. Rajni Sharma, Dr. Rekha Bacchiwal (Bacteriology section, Dept. of Microbiology, SMS Medical College, Jaipur)

2. 'Invasive fungal infections: Clinical, Mycological, and Advanced Diagnostic Approach'.
   Co-ordinators: Dr. Shukla Das Professor and Head Dept. of Microbiology UCMS New Delhi, Dr. Aruna Vyas (Mycology section, Dept. of Microbiology, SMS Medical College, Jaipur)

3. 'Metagenomics: Unlocking the hidden world of microbes by Next Generation Sequencing'.
   Co-ordinators: Dr. S.K. Singh, Dr. R.K. Mishra (Genetic Lab and Research, 266/06 RHB Pratap Nagar, Jaipur)

4. 'M.D Microbiology Practical Examination as per the New CBME curriculum'.
   Co-ordinators: Dr. Sonal Saxena Professor and Head Dept. of Microbiology, MAMC, New Delhi, Dr. Saroj Hooja (Dept. of Microbiology, SMS Medical College, Jaipur)

5. 'Syndromic approach for diagnosis of infections'.
   Co-ordinators: Dr. Bharti Malhotra, Dr. Nita Pal (Advance Research Lab, Dept. of Microbiology, SMS Medical College, Jaipur)

6. 'Quality Assurance in Microbiology'
   Co-ordinator: Dr. Sunita Gupta (Santokba Durlabhji Memorial Hospital, Jaipur)

7. 'Basics of Antinuclear Antibodies and Autoimmune diseases: Navigating the future of diagnostics'.
   Co-ordinator: Dr. B. Lal (Dr. B.Lal Clinical Laboratories, Jaipur)

ORAL AND POSTER ABSTRACTS

Abstract code: **BO-01** Author Id **01**

Author Name: **Ankita Singh** Designation: **PhD Scholar**

Institutional Affiliation: **NIMS Jaipur, SLBSGMCH Mandi**

Coauthors: **Dr Priyanka Singh, Dr Sunite A Ganju**

Abstract category: **Bacteriology**

Abstract Title: Genotypic And Phylogenetic Profiling Of Biofilm-Forming Staphylococcus Isolates Recovered From Device-Associated Chronic Infections: A Case– Control Study From Northern India

Background: Biofilm forming Staphylococcus species are a major cause of persistent, device-associated infections, harbour multidrug resistance. Robust local data linking biofilm intensity, species distribution and antimicrobial profiles remain scarce. Several tests exist to detect biofilm production by Staphylococci include tissue culture plate (TCP), tube method (TM), Congo red agar (CRA), bioluminescent assay and fluorescence microscopic examination. However, these approaches are plagued with significant analytical constrains and are inadequate of measuring bacterial adherence. These diagnostic tests present problems, such as cost and response time, but more importantly, they often provide unreliable results. These criteria are met by methods based on molecular rather than phenotypic characters. One of these methods is microbial identification 16S rDNA based molecular method.

Material& Methods: This prospective case control study was performed in the Department of Microbiology, SLBSGMCH, Mandi tertiary-care, over a period of one year .200 non-duplicate Staphylococcus isolates from patients with indwelling medical devices ≥48 h cases and 50 isolates from community-onset uncomplicated infections controls were analysed. Species identification employed standard biochemical tests; methicillin resistance was screened with cefoxitin discs. Biofilm formation was quantified by TCP assay and compared with TM and CRA. Antibiotic susceptibility testing followed CLSI disk-diffusion guidelines(M100,2022).

Results: Staphylococcus aureus predominated. Biofilm positivity was significantly higher in cases than controls. TCP detected biofilm in 78.0 % of case isolates, outperforming TM 70.5 % and CRA 39.0 %. Methicillin-resistant staphylococci constituted 67.0 % of case isolates and were biofilm-positive in 80.6 %. Among biofilm producers, highest resistance was noted to penicillin G, cefoxitin and erythromycin, whereas linezolid susceptible and tetracycline susceptible.

Discussion: Device-associated infections in our setting are dominated by biofilm-forming, methicillin-resistant Staphylococcus spp. TCP assay offers the best laboratory yield. High resistance rates underscore the need for biofilm-targeted stewardship and reinforce linezolid as a reliable therapeutic option. Molecular typing of clonal complexes is warranted to elucidate transmission dynamics.

Abstract Code: **BO-02** Author ID: 02

Author Name: **Imran Ahmad Malik** Designation: **Ph.D. Scholar**

Institute Affiliation: **NIMS&R National Institute of Medical Sciences & Research Jaipur**

Co-Authors: **Siva Prasad Reddy B, Dr. Kiranjeet Kaur, Dr. Divya Soin**

Abstract Topic: **Bacteriology**

Abstract Title: Antimicrobial Resistance Profile Of Acinetobacter Baumannii From Clinical Samples In A Tertiary Care Hospital At Sri Ganganagar, Rajasthan

Background: Acinetobacter baumanni are emerging opportune pathogens significantly implicated in hospital-acquired infections, particularly in the Intensive Care Unit. Acinetobacter baumanni infections are difficult to control because of their multi-drug resistance properties, which also limit their therapeutic options. This study aimed to detect carbapenem resistance in clinical isolates of A. baumannii by VITEK-2 automated method.

Materials and Methods: This hospital-based, observational cross-sectional study was conducted over a 12-month period at Jansawa Hospital in Sri Ganganagar, Rajasthan. Clinical samples such as blood, urine, sputum, pus, body fluids, CVS and wound swab sample received in the microbiology laboratory have been processed according to standard procedures in the laboratory. The identification and antimicrobial susceptibility testing were done by VITEK-2 automated method.

Results: In this study, out of 750 culture-positive samples, 62 isolates were identified as Acinetobacter baumannii, with the highest isolation rate from tracheal aspirates 22/62(35.48%), followed by blood 11/62 (17.7%), and pus 7/62 (11.29%). Most isolates were from ICU patients 24/62 (38.7%), with higher prevalence in males 42/62 (68%) and patients aged 51–60 years 16/62 (25.8%). Antibiotic susceptibility testing showed highest sensitivity to colistin 55/62 (89%), followed by trimethoprim-sulfamethoxazole 28/62 (45%) and minocycline 23/62 (37%). High resistance rates were also seen with piperacillin/tazobactam (95%), ciprofloxacin (94%), gentamicin (94%), and ceftazidime (90%), indicating multidrug resistance. Alarmingly, resistance to carbapenems meropenem (95%) and imipenem (95%) was found in isolates, with 59/62(95%) identified as carbapenem-resistant A. baumannii (CRAB).

Conclusion: The study identified carbapenem-resistant Acinetobacter baumannii from various clinical samples by VITEK-2 AST automated method. Many isolates showed multidrug resistance, limiting treatment choices. These findings underscore the urgency for effective infection control and antibiotic stewardship.

Abstract code: **BO - 03** Author Id: **6**

Author Name: **Saroj Jat** Designation: **Ph.D Scholar**

Institutional Affiliation: **National Institute of Medical Sciences and Research, Jaipur,**

Co authors: **Dr. Rakesh Kumar Maheshwari**

Abstract category: **Bacteriology**

Abstract Title: Speciation And Antibiotic Resistance Profiling With Detection Of Metallo Beta Lactamase In Acinetobacter Species.

Background: Acinetobacter species are non- fermenter gram negative bacilli, which are important nosocomial pathogen involved in various outbreak in hospital due to widespread resistance to majority antibiotic. The aim of this study is to speciate Acinetobacter from various clinical specimens, to assess the antibiotic sensitivity pattern and to detect the production of Metallo beta lactamase by IMIPENEM EDTA Combined disc test.

Material & Method: A cross -sectional study was carried out that included clinically significant Acinetobacter isolates from ET, Sputum, Urine, Blood, Body fluid, Pus etc. samples from IPD and OPD patients. All samples were processed as per standard protocol in NIMS Hospital, Jaipur manually on blood agar, MacConkey agar and CLED (Cystine lactose electrolyte deficient agar) agar bio chemical tests and Muller Hinton agar for antibiotic susceptibility pattern, IMIPENEM EDTA Combined disc test for Metallo beta lactamase detection.

Result; A total of 215 samples of Acinetobacter were included in the study over 12 months. Out of them 210(97.6%) were Acinetobacter baumannii and 5 (2.3%) were Acinetobacter lwoffii. These isolates were obtained from ET 90(41.8%), blood 50(23.2%), sputum 22(10.2%), pus 17(7.9%), BAL 11(5.1%), CSF11(5.1%), urine 4(1.8%), fluid 3(1.3%), swab 2(0.9%), tip 2(0.9%), pleural fluid 1(0.4%), eye swab 1(0.4%), chest drain 1(0.4%). Antibiotic susceptibility testing showed highest susceptibility to colistin. Out of 215 Acinetobacter isolates 165(76.7%) showed resistance to Imipenem. Out of these 165 isolates 54(32.7%) were positive for Metallo beta lactamase production.

Conclusion; The most prevalent isolates in the investigation were Acinetobacter baumannii. The study help in understanding the antibiotic resistance pattern of isolates causing nosocomial infection. The prevalence of Metallo beta lactamase producing Acinetobacter strain detected in this study was 32.7%.

Abstract code: **BO-04** Author ID: **28**

Author Name: **Dr. Arushi Tiwari** Designation- **1ST year PG Resident**

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Abstract topic- Bacteriology

Abstract Title: Prevalence and epidemiological profile of Rifampicin Resistance among presumptive Tuberculosis patients in south western rajasthan – A retrospective cross sectional study of Government Bangur Hospital, Pali.

Background: In 2023, an estimated 10.8 million people developed tuberculosis globally, resulting in approximately 1.25 million deaths, making TB the leading killer among infectious diseases, surpassing COVID-19 (Lippincott journals). India alone accounted for 26% of the global TB burden, both in terms of incidence & mortality. The global caseload of Multidrug-resistant or rifampicin-resistant (MDR/RR-TB) remained at around 400,000 cases (range 360,000-440,000), according to the WHO report 2023. Rifampicin or Multidrug resistance was observed in approximately 3.2% of new TB cases & 16% of previously treated cases (ResearchGate). India bears the largest MDR/RR-TB burden, with an estimated 110,000 new DR-TB cases annually (WHO -2023). Multidrug-resistant tuberculosis (MDR-TB) continues to rise globally due to inappropriate treatment regimens coupled with poor treatment adherence, often leading to delayed diagnosis, prolonged therapy, & poor outcomes due to drug toxicity and resistance. The aim of study was to determine the prevalence & epidemiological profile of rifampicin resistance among presumptive tuberculosis patients in south western Rajasthan.

Materials and Methods: A retrospective cross sectional study was conducted from January 2024 to June 2025 involving all presumptive Tuberculosis patients presenting during this period. Patient data including age, sex, symptoms, tobacco use, HIV status, and sample characteristics were recorded using a pre-structured Performa. Detection of M. tuberculosis was done using sputum smear microscopy and resistance to rifampicin was identified using Cartridge-Based Nucleic Acid Amplification Test (CBNAAT).

Results: Among the 2844 presumptive tuberculosis patients tested during the study period, mycobacterium tuberculosis was detected in 500.Among these confirmed cases, 26 patients were found to e rifampicin resistant, accounting for a prevalence of 0.052% among all presumptive cases and 5.2% among TB-positive cases. Rifampicin Resistance was more prevalent among males, with 16 cases (61%), compared to 10 females (39%). The highest number of rifampicin-resistant cases: 12 patients (46%) – belonged to the 20-40 years age group, highlighting the vulnerability of the productive age population. All the 26 rifampicin-resistant patients were newly diagnosed and had no history of prior anti-tubercular treatment. Notably, 21 out of these 26 patients (80%) were also identified as people living with HIV (PLHIV), indicating a strong association between HIV infection and rifampicin resistance. Tobacco use was reported in 5 patients (19%). In terms of treatment adherence, 20 patients (77%) were found to be compliant with 99DOTS, a digital adherence monitoring technology, while 6 patients (23%) were non-adherent to the prescribed treatment protocol.

Conclusion: Rifampicin-resistant TB was found to be more common among males and in the productive age group of 20-40 years. A strong association was observed with HIV co-infection, highlighting the dual burden of TB & HIV. CBNAAT proved to be an effective and rapid molecular tool for the early diagnosis of TB and rifampicin resistance, facilitating timely initiation of appropriate therapy.

Abbreviations: TB – Tuberculosis; MDR/RR-TB – Multidrug-resistant or rifampicin-resistant Tuberculosis; DR-TB – Drug Resistant Tuberculosis ; CBNAAT – Cartridge-Based Nucleic Acid Amplification Test; 99DOTS – Directly Observed Therapy, short course.

Abstract Code: **BO-05** Author ID: **33**

Author Name: **Dr. Sonam Kamra** Designation: **2nd year PG Resident**

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Co-Author: Dr. Sonam Kamra , Dr. Taruna Swami

AbstractCategory: **Bacteriology**

Abstract Title: Evaluation Of Ceftaroline MICs Using Epsilometer Test (E-Test) In Coagulase Positive Staphylococci : A Microbiological Insight

Background: Staphylococcus aureus (S.aureus) is a major human pathogen responsible for a wide range of infections, particularly Bloodstream infections (BSI). Methicillin- Resistant Staphylococcus aureus (MRSA) infection is a significant global healthcare concern. Vancomycin is the drug of choice for treating severe MRSA infections. Ceftaroline, a fifth-generation cephalosporin has been approved by the United States Food and Drug Administration (US FDA) to treat certain infections like MRSA bacteremia.

Material and methods: This cross sectional study was conducted in the Department of Microbiology at Sardar Patel Medical College, Bikaner over a period of three months from January 2025 to March 2025. A total of 24 S.aureus isolates from blood specimen were screened for methicillin resistance by disc diffusion method using cefoxitin disc. Vancomycin susceptibility was evaluated using vancomycin screen agar and Linezolid susceptibility was assessed by disc diffusion method. The MIC of Ceftaroline was determined using E-strip method (Pfizer) following CLSI guidelines.

Result: Out of 24 S.aureus tested , majority of samples were from ICU (62.5%) followed by Wards(29.16%) and OPD(8.34%). Among the total isolates tested, 19 (79.16%) were MRSA and 5 (20.84%) were MSSA (Methicillin-Sensitive Staphylococcus aureus). All isolates were susceptible to Vancomycin and Linezolid. Ceftaroline MICs determined by E-test ranged from 0.032 to 0.75µg/mL which indicates that all were susceptible to Ceftaroline as well.

Conclusion: Ceftaroline showed excellent in-vitro activity against both MSSA and MRSA isolates, making it a promising alternative in the context of rising Vancomycin use and emerging resistance. Linezolid also demonstrated full susceptibility; however, isolated cases of resistance have been reported globally, underscoring the need for cautious use. Regular monitoring of resistance patterns is essential to guide appropriate and effective antibiotic therapy.

Abstract code: **BO-06** Author Id **34**

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Abstract category: **Bacteriology**

Abstract Title: Bacteriological Profile and Antibiotic Susceptibility Patterns in Neonatal Sepsis: An Observational Study from a Tertiary Care Hospital in Udaipur

Background: Neonatal sepsis remains a significant contributor to neonatal mortality worldwide. The causative organisms and their antimicrobial resistance patterns vary across regions and over time.

Material & Methods: A laboratory-based descriptive observational study was conducted in the Department of Microbiology, RNT Medical College, Udaipur, Rajasthan, from January to June 2025. 117 isolates obtained from clinically suspected cases of septicaemia from the NICU were cultured. Isolates were identified, and antimicrobial susceptibility testing was performed using the Kirby-Bauer disk diffusion method, following the latest Clinical and Laboratory Standards Institute (CLSI) guidelines.

Results: Out of 117 isolates, the predominant bacteria included Acinetobacter spp., Klebsiella pneumoniae, Enterococcus spp., Staphylococcus aureus, Escherichia. coli and Pseudomonas spp. These organisms exhibited over 50% resistance to commonly used antibiotics such as amoxicillin-clavulanic acid, ciprofloxacin, levofloxacin, and imipenem. Multidrug resistance (MDR) was observed in 74 isolates (63.2%).

Conclusions: The study highlights a high prevalence of multidrug-resistant gram-negative bacilli among Enterobacteriaceae and non-fermenters, as well as methicillin-resistant Staphylococcus aureus (MRSA) in neonatal septicaemia cases. These findings underscore the need for continuous surveillance, rational antibiotic use, and the development of effective antibiotic stewardship programs to combat the rising threat of antimicrobial resistance in neonatal intensive care units.

Abstract code- **BO-07** Author ID- **42**

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Abstract category – **Bacteriology**

Abstract Title- Bacteriological And Antibiotic Sensitivity Profile Of Wound Infections In A Tertiary Care Hospital.

Background : A wound is formed when the skin is damaged or broken, allowing bacteria to enter and potentially infect the deeper tissues beneath the surface. The presence of wound infection significantly impairs the healing process and increases the likelihood of wound rupture. Wounds can arise from various sources, including acute surgical wounds (such as surgical site infections), injuries from accidents or burns, and chronic conditions like diabetic foot ulcers associated with diabetes mellitus. A clear understanding of the factors contributing to wound infections is essential for guiding the selection of effective antimicrobial therapy and implementing appropriate infection control strategies within healthcare settings.

Materials And Methods : The observational study was conducted at C.U.Shah.Medical college, Surendranagar from May 2025 to July 2025. Total 100 clinical sample including swab, pus and tissue were collected. The data was processed and analysed in Microsoft excel.

Result : Out of 100 isolate gram positive was 59 (59%) and gram negative were 41 (41%). In gram positive most common was Staphylococcus aureus (S.aureus) (35%) followed by Coagulase negative staphylococcus (18%), Enterococcus spp. (3%), Staphylococcus lugdunensis (1%), Staphylococcus sciuri (1%) and Streptococcus agalactiae (1%). In gram negative most common was Escherichia coli (E.coli) (16%) followed by Klebsiella (6%), Pseudomonas spp.(5%), Acinetobacter baumannii complex (5%), Pseudomonas aeruginosa (4%), Morganella morganii (2%), Aeromonas sobria (1%), Serratia marcescens (1%) and Serratia fonticola(1%). S.aureus was most sensitive to Tigecycline followed by Teicoplanin,Rifampicin and Tetracycline. E.coli was most sensitive to Amikacin followed by Tigecycline and Cefoperazone/Sulbactam.

Conclusion : According to this study S.aureus was most common bacterial isolate followed by E.coli. This study identified a considerable number of multidrug-resistant (MDR) strains as the primary pathogens responsible for wound infections. Therefore, conducting regular microbiological examination of wound samples along with antibiotic susceptibility testing is strongly recommended. Such practices will assist healthcare providers in selecting effective empirical treatments and help curb the spread of antibiotic-resistant bacteria

Abstract Code: **BO-08** Author ID: **66**

Author Name: **Dr. Divya Verma** Designation: **2nd Yr PG Resident**

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Co-Author: **Dr. Rekha Bachhiwal, Dr. Rajni Sharma**

Abstract Category: **Bacteriology**

Abstract Title: Antimicrobial Susceptibility Pattern of Vancomycin Resistant Enterococci Isolated From Various Clinical Samples at SMS Medical College & Hospital, Jaipur.

Background: Enterococci species, a group of Gram-positive cocci, are significant contributors to healthcare-associated infections (HAIs). The two most clinically relevant species, Enterococcus faecalis and E. faecium, exhibit markedly different resistance profiles. While E. faecalis is more commonly associated with community-acquired infections1 and remains relatively susceptible to many antibiotics, E. faecium frequently displays multidrug resistance and is the primary species linked to vancomycin-resistant enterococci (VRE) in hospital settings. They predominantly infect immunocompromised patients and individuals with prolonged hospital stays or those exposed to invasive procedures, manifesting primarily as urinary tract infections (UTIs), bacteremia, endocarditis, and wound infections. The emergence of vancomycin-resistant enterococci (VRE) has intensified concerns worldwide, presenting treatment challenges due to the limited antibiotic options available.

Material & Method: This is a retrospective study from Jan2025 to June2025. Enterococcus spp. isolated were identified by standard microbiological procedures from various clinical samples were analyzed. Antibiotic susceptibility testing was done by modified Kirby Bauer disc diffusion method as per CLSI guidelines (2025).

Results: Out of 1525 isolate ,284 (18.62%) isolates revealed resistance to Vancomycin. Out of 284 VRE, isolates from IPD were more 248 (87.32%) than OPD 36 (12.67%). Isolates from male patients 162 (57.04%) were more than female 122 (42.95%). Maximum isolates were from urine sample 144(50.70%), followed by Blood 58 (20.42 %). Among 284 VRE, speciation of 214 Enterococcus (75.35%) could not be done, out of remaining 70 VRE isolates, Enterococcus faecalis were 40(57.14%) and Enterococcus faecium were 30(42.85%).

Overall susceptibility to various antimicrobial agent tested revealed susceptibility between 33.45% - 87.67%. Maximum susceptibility was seen with linezolid (87.67%), followed by teicoplanin (35.21%), doxycycline (33.45%), fosfomycin (40.27%), High gentamicin (17.95%), nitrofurantoin (19.44%), ciprofloxacin (7.39%), ampicillin (7.04%), and erythromycin (4.57%).

Conclusion: Vancomycin is the mainstay of treatment for serious enterococcal infections. Vancomycin resistance further complicates the treatment. Indiscriminate use of this antibiotic should be avoided to prevent resistance.

Abstract code:**BO-09** Author Id **67**

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Co-authors: **Dr Prachi Saban, Dr Rakesh Kumar Maheshwari, Mr. Nirbhay Nirmal**

Abstract Title: Stenotrophomonas maltophilia An Upcoming Super Bug In A Tertiary Care Hospital

Abstract category : **Bacteriology**

Background: Stenotrophomonas maltophilia is an emerging multidrug-resistant global opportunistic pathogen. It is associated with multiple nosocomial outbreaks, community-acquired respiratory and bloodstream infections mostly. The increasing incidence of this infection is of particular concern for immunocompromised individuals, as this pathogen is associated with significant fatality rate. This bacterium is found in aqueous habitats, including plant rhizospheres, animals, foods, water sources. Objectives: This study aimed to evaluate the isolation rates, resistance trends of S. maltophilia infections from various clinical samples.

Material & Methods: A prospective study was conducted in a tertiary care hospital from 1stApril to 31st July 2025. Out of 2800 samples, inoculated onto blood and macConkey agar medium and incubated overnight at 37°c only1676 showed growth. Those isolates were subjected to automated culture and sensitivity methods through VITEK.

Results: In total, 36 patients with S. maltophilia infection were identified. Maximum 27(75%) patients from ICUs followed by 8(22%) from ward and 1(3%) from intervention radiology . Isolates from male patients were more 23(63.9%) than females 13(36.1%). Maximum 33(91%) cases were isolated from blood samples followed by1(3%) from pus, 1(3%) from sputum and 1 (3%) from endotracheal tube. Overall susceptibility to various antimicrobial agents tested revealed maximum susceptibility to Levofloxacin 35(97%) followed by minocycline 34(94%) ,Co-trimoxazole 31(86%), piperacillin/Tazobactam 31(86%) , ciprofloxacin 25(69%), Ticarcillin/Clavulanate 11(30.5%), ceftazidime 3(8%) and Meropenem 2(6%).

As per national recommendations the drugs of choice are levofloxacin, minocycline and Co-trimoxazole which also match with our study.

Discussion: S. maltophilia , able to thrive in ICUs and device associated settings is emerging as a multi drug resistant nosocomial superbug ,leading to an urgent need for strict infection control measures

Conclusion: Treatment of S. maltophilia infections is difficult because this organism presents low susceptibility to various antibiotics. Swift global action is needed to address this superbug as the treatment is very limited.

Abstract code: **BO-10** Author ID: **80**

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Co-authors: Dr. Swati Gautam, Dr. Pratibha Sharma, Rashmi, Dr. Bharti Malhotra , Dr. Kumud Kant Awasthi

Abstract category: **Bacteriology**

Abstract Title: Detection Of Streptococcus pneumoniae by Real-Time PCR in Pediatric Patients Suspected of Acute Respiratory Infection Attending Tertiary Care Hospital in Jaipur

Background: Streptococcus pneumoniae is a gram-positive, encapsulated diplococcus and the leading bacterial cause of pneumonia, meningitis, otitis media, and septicemia, with the burden being especially high among infants, young children, and the elderly. The organism can colonize the nasopharynx and is typically transmitted from person to person via respiratory droplets. Accurate diagnosis of S. pneumoniae infections is critical for early intervention and effective disease control. The present study was conducted to detect S. pneumoniae in pediatric patients suspected of acute respiratory infections (ARI) in a tertiary care hospital in Jaipur, Rajasthan

Material and method: A total of 182 ARI suspected throat swab samples among 0-15 years of pediatric patients were collected from JK Lon Hospital, Jaipur. Ethical approval was obtained by the Ethics Committee of SMS Medical College, Jaipur, and consent from the parent/guardian before enrollment was obtained. Nucleic acid was extracted using an automated extraction system, and 5µL of eluate was used for the detection of S. pneumoniae by real-time PCR.

Results: Among 182 throat swab samples, S. pneumoniae was found positive in 33 (18.13%) patients. All the positive patients were symptomatic, where fever 33 (18.13%), cough 33 (18.13%), chills 31 (17.03%), and expectoration 23 (12.63%) were the most common symptoms. Among total positive cases, males were 19 (10.43%) and females were 14 (7.69%). Out of 33, 26 (14.28%) positive cases were 0-5 years age group, and 3 cases of death were reported from the same age group.

Conclusion: Real-time PCR helped in the rapid detection of the bacteria, as per the study. Rapid identification helps in treating patients, however, to know the serotype prevalent in the area, more studies are required in the geographical region.

Key Words: RT-PCR, S. pneumoniae, Pediatric population, Throat swab

Absract code: **BO - 11** Author Id- **95**

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Abstract category - Bacteriology

Abstract Title: Therapeutic Potential of a Bacteriophage Targeting Multidrug – resistant Pseudomonas aeruginosa.

Backgroud : The global rise in antibiotic resistance poses a significant threat, diminishing the efficacy of common antibiotics against widespread bacterial infections. WHO considered Carbapenem Resistant Pseudomonas aeruginosa (CRPA) as a high-priority pathogen, and in India its prevalence is a significant concern. Bacteriophages are promising antibacterial agents with the ability to lyse specific bacteria without affecting the normal human microbial flora.

Material& Methods: Twenty one Multidrug-resistant (MDR) P. aeruginosa were isolated from clinical samples like blood, endotracheal aspirate, bronchoalveolar lavage, pus, pleural fluid, and sputum, The Identification and antimicrobial susceptibility (as per CLSI guidelines) of P. aeruginosa were performed by Vitek-2. The bacteriophage was isolated from sewage water using standard procedure. The presence of phage was confirmed by spot assay and plaque assay. The phage was visualized by transmission electron microscopy (TEM). The host range of isolated bacteriophage was analysed on twenty MDR P. aeruginosa isolates.

Result and Discussion: A bacteriophage isolated against MDR P. aeruginosa from sewage sample, showed clear lytic zone on spot assay and produced plaques of 1.5 mm diameter. The TEM showed bacteriophage with an icosahedral head and a long, flexible, non-contractile tail, features of the family Siphoviridae. The Pseudomonas phage lysate exhibited a broad host range, effectively lysing 14 (70%) out of 20 MDR P. aeruginosa isolates.

Conclusion: The isolated bacteriophage showed a broad host range antibacterial activity, by lysing 70 % of tested MDR P. aeruginosa isolates, demonstrating its high lytic ability and suitability to be develop as a potential therapeutic agent with further characterization.

Abstract Code: **MO-01** Author ID: **37**

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Co-Author: **Dr. Preetam Singh, Dr. Geeta Tinna, Dr. Anjli Gupta, Dr. Taruna Swami, Dr. Sngeeta Gahlot**

Abstract Topic: **Mycology**

Abstract Title: Fungal Rhinosinusitis : Mycological Insights From A Tertiary Care Hospital In Bikaner

Background: Fungi are increasingly being recognised as a cause of Rhinosinusitis. Fungal Rhinosinusitis (FRS) is commonly seen in diabetics and immuno-compromised patients,however,it has also been reported in immunocompetent individuals. The aim of the study was to isolate and identify fungi causing Rhinosinusitis.

Material and methods: This retrospective study was conducted in the Mycology Section of Department Of Microbiology, Sardar Patel Medical College, Bikaner, Rajasthan from March 2024 to May 2025 and comprised patients of all age groups and either sex. A total of 60 samples suspected of Fungal Rhinosinusitis (FRS) were included in the study which were processed for direct microscopy by KOH mount and for culture as per standard mycological techniques. Specimens collected were nasal crust/exudates, nasal swabs, biopsy from nasal mucosa / hard and soft palate/ maxillary sinus and tissue specimens.

Result: Out of 60 samples, fungal elements were seen in 36 (60%) samples on KOH mount and 28 (46.67%) samples were culture positive. Most common fungal isolate was Aspergillus flavus (28.57%) followed by Mucor (21.42%). Higher prevalence was among fifth and sixth decade (n=22,57.89%) of life with a male predominance (n=25.65,78%). Diabetes mellitus was found to be the most common (n=18,47.36%) predisposing factor in our study.

Conclusion: Due to their non notifiable status, fungal infections are frequently overlooked, resulting in delayed diagnosis. Therefore, early diagnosis of Fungal Rhinosinusitis (FRS) is very important, not just because of its treatability in the initial phases, but also to prevent progression of the disease owing to its angio-invasive nature which may lead to serious complications and could prove fatal unless treated effectively.

Absract code : **MO 02**

Author ID **43**

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Coauthors : **Dr Ved Prakash Mamoria, Dr Prateet Kaur, Dr Nitya Vyas**

Abstract category: **Mycology**

Abstract Title: Clinicomycological Spectrum Of Phaeohyphomycosis In A Tertiary Care Centre In Western India: A Retrospective Analysis

Backgroud : Phaeohyphomycosis refers to a spectrum of infections caused by dematiaceous (melanin-producing) fungi, increasingly recognized in both immunocompromised and immunocompetent individuals. With rising awareness and enhanced diagnostic modalities, more cases are being identified, particularly in tropical and subtropical regions. This study aims to analyze the incidence, clinical spectrum, and causative agents of phaeohyphomycosis in our region.

Material& Methods: A retrospective study was conducted from January 2023 to December 2024 in the Department of Microbiology, Mahatma Gandhi Medical College and Hospital, Jaipur. Of 2058 specimens processed for fungal culture, 14 dematiaceous fungal isolates were identified. Direct microscopy, culture on Sabouraud Dextrose Agar, slide culture, and advanced diagnostics like MALDI-TOF and sequencing were utilized. Demographic, clinical, and treatment details were collected from medical records.

Results: The overall incidence of phaeohyphomycosis was 0.68%. Isolates included Cladosporium spp., Bipolaris spp., Alternaria spp., Scedosporium spp., and others, recovered from nail, pus, tissue, skin, bronchoalveolar lavage, and nasal mucosa. Subcutaneous involvement (35.7%) was most common, followed by deep-seated local infections (28.5%) and cerebral infections (14.2%). Median patient age was 41 years; 57% were male. Occupational exposure (farmers, laborers) and comorbidities (diabetes, steroid use) were notable risk factors. Diagnosis was aided by culture, microscopy, and MALDI-TOF/MS. Most patients (92%) responded well to antifungal therapy ± surgical intervention.

Conclusion: This study highlights the emergence of phaeohyphomycosis as an important fungal infection even in immunocompetent hosts. A high index of suspicion, especially in chronic subcutaneous lesions, is essential. Early identification using advanced diagnostics enables targeted therapy. Our findings emphasize the need for greater clinical awareness and incorporation of phaeohyphomycosis in differential diagnoses to improve patient outcomes.

Abstract Code: **MO-03**

Author ID: **48**

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Co-Authers: **Dr Nazneen Pathan, Dr Rekha Bachiwal**

Abstract category: **Mycology**

Abstract Title: An Observational Study On The Distribution Of Candida Species Isolates In Body Fluid Samples From Sterile Sites And Their Antifungal Susceptibility Pattern In Patients At Sawai Man Singh Medical College, Jaipur.

Background Candida infections in body fluids at sterile sites are increasing now a days especially due to growing number of immunocompromised patients causing significant mortality and morbidity especially in healthcare associated infections. We planned this study to evaluate the distribution profile of various Candida species implicated in body fluid infections at sterile sites along with their antifungal susceptibility pattern which can help the clinicians in selecting appropriate antifungal therapy.

Materials and Methods: The study was carried out at Mycology Lab and at Bacteriology Lab in SMS Medical College, Jaipur. Study Period was from 28th Nov 2024 to 25th Feb 2025. Study type was Hospital based observational cross sectional study. Study samples consisted of all body fluid samples from sterile sites of patients suspected of fungal infection.

Sterile body fluid samples other then blood was examined microscopically by preparing wet mount with 10% KOH and the specimens was cultured on SDA and kept at incubation at 25 degree centigrade and 35 degree centigrade for period upto 28 days. Gram staining of smears from the sample taken from blood culture bottle, which were positively flagged from automated blood culture system (BACT ALERT) was done and then the positive culture sample was inoculated on Blood Agar for 24-48 hrs. Further speciation of the Candida was done on CHROME agar/ MALDI-TOF as required and drug susceptibility profile was done on VITEK-2 system.

Data thus collected was classified, analysed, and evaluated by appropriate statistical methods as per the aim and objectives.

Results: Total 6296 sterile body fluid samples were received in the above mentioned period, out of which 6223 were blood samples(98.8%), 49 were Pleural Fluid samples(0.78%), 23 were CSF samples (0.37%) & 01 (0.02%) was VC Tap sample.

Candida isolates was identified in total 130 samples in the above mentioned period.

Blood= 123(94.62%), Pleural Fluid= 05(3.85%) , CSF= 01(0.77%), VC Tap= 01(0.77%). Thus overall Candidemia was 2.06 % in sterile body fluids.

The Candida species identified was as below:

C. tropicalis: 30.00%, C. glabrata: 23.84%, C. krusei: 15.38%, C. albicans: 12.31%, C. parapsilosis: 8.46%, C. utilis: 4.61%, C. rugosa: 1.54%, C. pelliculosa: 1.54%, C. norvegenesis and C. vishwanathii: 0.77% each.

Fluconazole resistance was found in 32.74%, Amphotericin B : 10.62%, Caspofungin: 10.62%, Micafungin: 14.16%(31% was intermediate resistant), Voriconazole: 07.96%, Flucytosine: 07.08%.

Among the total samples 53.73% belonged to neonates, approx. 25% belonged to late middle age and old age persons and rest to others. 63.85% males were affected and 36.15% females were affected among the total isolates.

Conclusion: Resistance to fluconazole is of great concern because it is most common azole used for treatment of disseminated candidiasis including candidemia. Increasing use of fluconazole had led to predominance of Non-albicans Candida species over C. albicans. Resistance to voriconazole, micafungin, caspofungin and flucytosine was also seen in this study due to decreased susceptibility to fluconazole (C. glabrata and C. krusei has gained intrinsic resistance to Fluconazole) and cross resistance to other azoles.

Abstract code : **MO-04**

Author ID: **75**

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Co-Authors : **Dr. Aruna Vyas, Dr. Nazneen Pathan, Dr. Malvika Sharma, Dr. Divya Shekhawat**

Abstract Category : **Mycology**

Abstract Title : Magnitude Of Invasive Fungal Infections Using (1-3)-β-D-Glucan Test In Suspected Cases In SMS Hospital, Jaipur, Rajasthan

Background: Invasive fungal infections (IFIs) pose a major health challenge, especially in immunocompromised patients. Delayed diagnosis due to limitations in conventional methods like culture and histopathology often worsens outcomes. This study was conducted to evaluate the magnitude of IFIs using the (1-3)-β-D-Glucan (BDG) test in clinically suspected patients admitted to SMS Hospital, Jaipur.

Material & Methods: A retrospective cross-sectional study was carried out over three months, from April 1, 2025 to 31 May, 2025. A total of 219 serum samples from clinically suspected cases of IFIs were tested using the (1-3)-β-D-Glucan assay via ELISA. Risk factors such as malignancy, HIV status, ICU stay, and neutropenia were recorded. BDG levels were interpreted as per standard guidelines: <60 pg/mL (negative), 60–79 pg/mL (indeterminate), and ≥80 pg/mL (positive).

Results: Out of the 219 samples, 105 (47.9%) tested positive for BDG. The majority of positive cases had underlying risk factors : ICU Stay(40%), Diabetes Mellitus (32.38%), Neutropenia(18%), Post malignancies(3.8%), PostTransplant status(2.85%), HIV(0.95%).The test was particularly effective in identifying probable cases of invasive candidiasis and aspergillosis.

Conclusion: The (1-3)-β-D-Glucan test demonstrated strong utility in the early diagnosis of invasive fungal infections in high-risk patients. Given its rapid turnaround and non-invasive nature, BDG testing should be considered an important adjunct to conventional diagnostic approaches for timely clinical intervention and better patient outcomes of IFI.

Abstract Code: **MO-05**

Author ID: **79**

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Designation: **PG Resident JR-1**

Institutional Affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-Authors: **Dr. R. K. Mishra, Dr. Rajni Sharma, Dr. Sanjay Soni**

Abstract Topic: **Mycology**

Abstract Title: **Mycological Profile Of BAL Samples Along with Speciation of Isolated Candida Species**

Background: Lower respiratory tract Infections (LRTIs) remain the most common infection seen in the community and among hospitalized patients. Despite treatment, most invasive pulmonary fungal infections are associated with high mortality rates of > 50%. As Bronchoalveolar lavage (BAL) fluid samples are generally useful specimens in the diagnosis of invasive pulmonary infections, this study was designed to evaluate the incidence of fungal elements in at-risk patients by direct microscopy and culture of BAL samples.

Materials and Methods: Total 187 BAL samples received in the Department of Microbiology from January 2025 to July 2025 were subjected to microscopy and culture. Samples were processed and isolates identified by standard techniques.

Results: Out of 187 samples of BAL, 63(33.69%) samples showed fungal growth. Of these, Candida species were isolated in 35(55.56%) samples, Aspergillus species in 19 (30.16%) samples and Fusarium species in 6 (9.52%) sample and Mucor species in 3 (4.76%) sample. Out of 35 samples from which candida species were isolated Candida albicans was most isolated (20 samples; 57.14%) followed by Candida tropicalis (12 samples; 34.29%) and Candida glabrata (2 samples; 5.71%) and Candida parapsilosis (1 sample; 2.86%).

Conclusion: Adequate measures need to be taken for the early identification and treatment of respiratory fungal infections which are associated with high rates of morbidity and mortality. These infections if diagnosed early can be treated effectively to prevent the progression of disease.

Abstract code: **VO-01** Author ID- **08**

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Institutional Affiliation: **Jawaharlal Nehru Medical College and Associated group of hospitals, Ajmer**

Co-authors: **Dr. Ranweer, Dr. Jyotsana Chandwani, Dr. Geeta Parihar**

Abstract category: **Virology**

Abstract Title: Indeterminate HIV Cases In a Tertiary Care Hospital, Ajmer, Rajasthan: A Retrospective Analysis (2021-2025)

Background: Indeterminate HIV test results pose significant diagnostic challenges in clinical settings, particularly in high-throughput tertiary care hospitals. This study aimed to determine the outcome of indeterminate HIV test results in a tertiary care hospital, Ajmer, Rajasthan.

Material & Methods: This retrospective study analyzed indeterminate HIV cases at a tertiary care hospital in Ajmer, Rajasthan, from January 2021 to May 2025. Tests were conducted in the State Referral Laboratory (SRL) i.e. Jawaharlal Nehru Medical College, Ajmer, Rajasthan, and Integrated Counselling and Testing Centres (ICTCs). A total of 155,335 rapid diagnostic tests (RDTs), including Meriscreen, Standard Q, and TRIDOT along with Combs AIDS RS, were performed, identifying 57 indeterminate cases (0.037% prevalence). These cases, characterized by discordant results among the three rapid tests, were sent for confirmatory Western blot testing at the National Referral Laboratory (NRL), Delhi. Patient data, including age, sex, risk zones, and follow-up outcomes, were analyzed.

Results: The mean age of patients was 43.5 years, with a male-to-female ratio of 1.7:1. Follow-up testing after two weeks was conducted for 12 patients, with 7 (58.3%) confirmed positive by Western blot. High-risk groups, including jail inmates and those in high-risk zones, were noted in 5 cases. The remaining 45 cases were lost to follow-up despite repeated reminders, phone calls, and counselling.

Discussion: The low indeterminate prevalence (0.037%) aligns with global estimates, often due to early seroconversion or cross-reactivity; however, high loss to follow-up (78.9%) highlights systemic barriers like stigma and delays, necessitating enhanced protocols and digital tracking for better HIV management in resource-limited settings.

Conclusion: The study highlights the low but significant prevalence of indeterminate HIV results, emphasizing the need for standardized follow-up protocols and confirmatory testing to ensure accurate diagnosis and timely management. Challenges such as loss to follow-up and diagnostic delays underscore the importance of robust diagnostic algorithms in resource-limited settings. It suggests we need better systems to support patients through this process, especially for counselling with proper follow-up and retesting.

Abstract code: **VO-02** Author ID: **29**

Author Name: **Dr. Simran** Designation- **1ST year PG Resident**

Institutional Affiliation: **Government Medical College, Pali.**

Co-Authors-**Dr. Priyanka Soni, Dr. Arushi Tiwari.**

Abstract topic- **Virology.**

Abstract Title- Correlation of Liver Function Parameters, PT-INR with Viral Load In Hepatitis B–Infected Patients of Government Bangur Hospital, Pali.

Background: Hepatitis B virus (HBV) infection is a major global health concern, affecting 254 million people and causing over 1.1 million deaths annually (WHO, 2022). HBV DNA quantification is a key marker of viral replication, while liver function tests (LFTs) and coagulation parameters such as prothrombin time (PT) and international normalized ratio (INR) reflect hepatic injury and synthetic dysfunction. This study evaluated the correlation between HBV DNA levels and liver function parameters in seropositive patients at Government Bangur Hospital, Pali.

Materials and Methods: This retrospective cross-sectional study included HBV-seropositive patients enrolled from June 2022 to July 2025. Patients were categorized by viral load: <20,000 IU/mL and ≥20,000 IU/mL. Parameters assessed included AST, ALT, ALP, total and direct bilirubin, PT, and INR. Spearman's correlation tested relationships between viral load and liver markers. Chi-square or Fisher's exact tests were used for group comparisons; $p < 0.05$ was considered significant.

Results: ALP levels were significantly higher in the <20,000 IU/mL group (75%) compared to the ≥20,000 IU/mL group (19.2%) ($\rho = 0.0192$). Spearman's correlation showed weak positive associations with AST ($\rho = 0.313$), ALT ($\rho = 0.303$), and PT ($\rho = 0.202$), and weak negative associations with total bilirubin ($\rho = -0.280$) and INR ($\rho = -0.326$); none were statistically significant.

Conclusion: No significant correlation was found between HBV DNA levels and liver function parameters or coagulation profile. Elevated ALP in the lower viral load group suggests a multifactorial hepatic response.

Abstract code: **VO-03** Author ID: **68**

Author Name: **Abhaya Sharma** Designation: **Ph.D. scholar**

Institutional Affiliation: **SMS Medical College, Jaipur**

Coauthors: **Dr. Pratibha Sharma, Dr. Swati Gautam, Dr. Farah Deeba, Dr. Nita Pal, Dr. Ruchi Singh, Dr. Ravi Prakash Sharma, Dr. Bharti Malhotra***

Abstract category: **Virology**

Abstract Title: Genomic Surveillance of SARS-COV-2 Variants Circulating in Rajasthan During 2024-2025

Background: SARS-CoV-2 continues to evolve, producing new variants that have the potential to impact virus transmission rates, disease severity, elevate the risk of reinfection, and diminish the effectiveness of neutralizing antibodies and vaccines. Genomic surveillance plays a vital role in detecting and monitoring these variants. This study focuses on genomic surveillance of SARS-CoV-2 in Rajasthan, India, to monitor the emergence and spread of these variants across the region.

Material & Methods: A total of 567 positive samples from different districts of Rajasthan received in SMS Medical College, Jaipur, Rajasthan from January 2024 to June 2025 and had passed the quality control criteria for Next Generation Sequencing (NGS) were included in the study. Processing was done as per protocol and the FASTA files obtained on sequencing were used for lineage determination using Nextclade and phylogenetic tree construction.

Results: Out of 567 samples sequenced, major lineages identified were XFG and its sublineages (162,28.57%), JN.1 and its sublineages (124,21.86%), PY.1 (61,10.75%), LF.7 and its sublineages (59,10.40%), KP.2 and its sublineages (33,5.82%), LB.1 and its sublineages (25,4.4%), PY.2 and its sublineages (21,3.7%) and 11(1.94%) were invalid. Majority (65.29%) belonged to 19–59 years of age. Cold and fever were the most common symptoms. Majority of the positive cases were from Jaipur district.

Conclusion: The genomic surveillance revealed a diverse array of SARS-CoV-2 variants in Rajasthan, with implications for public health response and vaccination strategies. The study underscores the critical importance of sustained genomic surveillance programs in Rajasthan and to track viral evolution in near real-time, mitigate transmission risks, and strengthen pandemic preparedness at both regional and national levels.

Absract code: **VO-04** Author Id-**76**

Author Name: **Dr. Tanu** Designation: **PG Resident**

Institutional Affiliation: **Saraswathi Institute of Medical Sciences, Hapur**

Coauthors : **Dr. Sanjeev Dimri, Dr. Krati Varshney**

Abstract category: **Virology**

Abstract Title: Prevalence Of High Risk Human Papilloma Virus Types In Cervical Samples By Polymerase Chain Reaction In A Tertiary Care Center In Western U.P.

Background : Cervical cancer growth is significantly influenced by the human papilloma virus (HPV). The two most common types of HPV that cause 70% of all HPV infections worldwide are HPV 16 and 18. In India, women with squamous cell carcinoma (SCC) have a 96% HPV prevalence rate, whereas women with adenocarcinoma (ADC) have a 100% HPV prevalence rate. Objective of our study is 1. To determine the prevalence of High Risk HPV genotype in cervical samples 2. To associate HPV genotype with cervical diseases.

Material& Methods: The cross sectional study was carried out for a period of 1 year in the Department of Microbiology, SIMS,Hapur. The sample was collected from 18 to 60 years age group females from the OPD of Obstetrics and Gynaecology, SIMS, Hapur. Cervical samples were taken by sterile swab, and was transported to PCR Virology Lab, Department of Microbiology by using VTM (Viral Transport media). The TRUPCR® HPV 16 & 18 real time PCR kit was used to detect HPV 16 & 18 DNA in cervical swabs.

Results: Out of 30 samples, 17 were positive for HPV. 9 were HPV 16 & 8 samples belongs to genotype 18

Conclusion- Prevalence of HPV is 56 % which is quite high in reproductive age group females. So it is necessary to screen females of reproductive age group for HPV for early diagnosis and detection of cervical cancer.

Abstract Code: **VO-06** Author ID: **89**

Auther Name: **Dr. Divya Gupta** Designation: **PG Resident**

Institutional Affiliation: **SMS Medical College, Jaipur**

Co-authors: **Dr Sandeep Gupta, Dr Abhishek Sharma, Dr Madhvi Vyas, Dr Sakshi, Dr Anisha, Dr Simi, Dr Nita Pal, Dr Bharti Malhotra**

Abstract Category: **Virology**

Abstract Title: Detection of Pathogens and Antimicrobial Resistance Genes in Lower Respiratory Tract Samples by BioFire Pneumonia Plus Panel in a Tertiary Care Hospital, Jaipur.

Background: Lower respiratory tract infections (LRTIs) are a common cause of morbidity and mortality world-wide. Accurate identification of the pathogens causing LRTIs is crucial for ensuring of diagnostic and antibiotic stewardship. The BioFire Pneumonia Plus Panel (BFPP) is an advanced molecular diagnostic test for rapid detection of various pathogens like bacteria, viruses and AMR genes directly from clinical samples.

Material and Methods: This hospital based retrospective study was undertaken from January to February 2025 in SMS Hospital, Jaipur. Total 50 sputum samples of LRTI were processed with BFPP as per manufactures protocol in ADRL laboratory.

Result: Out of 50 sputum samples tested, pathogens were detected in 96.0%. Single pathogen was detected in 18.0% and multiple pathogens in 78.0%. Out of 96.0% pathogens, 42.0% were bacterial agent, 6.0% viral agents and 48.0% were both bacterial and viral agents. Gram negative bacteria were most common (38.0%), among which Klebsiella pneumoniae were maximum (26.0%). Gram positive bacteria were 14.0%, Streptococcus pneumoniae being predominant (32.0%) and among viral agents Human Rhinovirus/Enterovirus were most commonly detected (24.0%).

Among antimicrobial resistance genes detected, carbapenamase producing GNB were in 75.0% as NDM (26.08%), VIM (21.73%), OXA-48 (18.47%), IMP (5.43%) and KPC (3.26%). Sixteen (17.39%) ESBL producing bacteria were CTX-M. Methicillin Resistant Staphylococcus aureus (mecA/C and MREJ) were detected in 70.0% strains.

Conclusion: The BioFire Pneumonia Plus Panel offers a rapid, accurate alternative to conventional diagnostics, with significant potential for early management of LRTIs with appropriate antibiotics and prevent the development of antibiotic resistance.

Abstract code: **VO-07** Author ID: **91**

Author Name: **Rashmi** Designation: **Ph.D. scholar**

Institutional Affiliation: **Vivekananda Global University, Jaipur, SMS Medical College, Jaipur**

Co-authors: **Dr. Pratibha Sharma, Dr. Neha Bhomia, Dr. Bharti Malhotra , Dr. Nita Pal, Dr. Kumud Kant Awasthi**

Abstract category: **Virology**

Abstract Title: **Detection of Respiratory Pathogens by Real-Time PCR in Pediatric Patients with ARI, Found Negative for SARS-CoV-2 And Influenza A**

Background: Acute respiratory infections (ARI) remain a major global health concern, particularly in pediatric populations. SARS-CoV-2 and Influenza A are the most common pathogens causing ARI, but there are many other pathogens which cause similar symptoms and are routinely not tested for. Prompt diagnosis and appropriate management are essential to reduce complications, improve patient outcomes, and support effective public health interventions. The present study was conducted to detect common respiratory pathogens in pediatric patients attending a tertiary care hospital in Jaipur, Rajasthan

Material and method: A total of 650 pediatric patients in the age group 0-15 years suspected of ARI, visiting the IPD/OPD of JK Lon Hospital, Jaipur, found negative for SARSCoV-2 and Influenza A were included in the study for the duration April 2023 to April 2024. Throat swabs/Nasopharyngeal swabs were collected in 3 ml of VTM. 500µL sample was used for total nucleic acid extraction. 5µL of extracted nucleic acid was used for the detection of RSV, Adenovirus, Mycoplasma pneumoniae, and Influenza B by real-time PCR.

Results: Among 650 samples tested, 197 (30.30%) were female and 453 (69.69%) were male patients. The most common age group among suspected patients was 0-5 years, 508 (78.15%). Fever 646 (99.38%), cough 639 (98.30%), and chill 599 (92.15%) were the most common symptoms. The most common pathogen found positive was Adenovirus 42 (6.46%), followed by RSV 17 (2.61%), Influenza B 5 (0.76%), and Mycoplasma pneumoniae 1 (0.15%) among the total tested.

Conclusion: The positivity for Adenovirus was found to be highest among the patients. A higher number of males than females were admitted. However, to compare outcomes, more studies are required in the geographical area, which can help aid in better policy development.

Key Words: RT-PCR, ARI, Adenovirus, Influenza B, RSV, Mycoplasma pneumoniae, Pediatric population

Abstract code: **IO-01** Author ID: **27**

Author Name: **Dr. Ankita Sharma** Designation- **Assistant Professor**

Institutional Affiliation: **Government medical college, Pali.**

Dr. Ankita Sharma1, Dr. Yachana Choudhary2.

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Abstract topic- Immunology.

Abstract Title- Awareness and Practices of adult vaccination among Medical students in Western Rajasthan

Background: Infectious diseases persist as serious public health problem globally and vaccine-preventable diseases affect many adults across the world,resulting in high morbidity,mortality,and economic burden.Awareness of advantages of adult vaccination needs encouragement among healthcare professionals,with issuing of new adult immunization guidelines.There are gaps in awareness and practices regarding adult vaccination among medical students.Hence,this study was conducted aiming to assess the current awareness and practices on adult vaccination and to improve awareness on adult vaccination among Medical students enrolled in the Medical College.

Materials and Methods: Study period:8 months (Feb 2025-Sep 2025),Setting & Location:GMC Pali, Rajasthan,Study design:Cross–sectional study,Study Population:All medical students of GMC Pali,Data Collection:Data collected in semi structured questionnaire on google form analysed using EpiInfo (version 7.2) & MS EXCEL software.

Results: Total 475 students enrolled,229 (48.2%) were males, 246(51.8%) females.Maximum students,124(26.1%) were from 2022 batch,121(25.5%) from 2023 batch,118(24.8%) from 2021 batch 84(17.7%) from 2020 batch & 28(5.9%) from 2024 batch.Almost 2/3rd students were aware about adult vaccination from medical school.472(99.4%) believed adult vaccination is important for healthcare professionals,448(94.3%)students agreed that adult vaccination should be part of National Immunisation Program,297(62.5%) believed that people with comorbidity should get immunised.385(89.3%) students would recommend their family members to receive adult vaccines.Multiple reasons of not being vaccinated 246(51.8%) were not aware,102(21.5%) had fear of side effects,75(15.8%)had no time,28(5.9%) said vaccines are costly and 24(5.1%) believed in myths like impotency (Results till now,data collection is still going on)

Conclusion: This study has helped us know the awareness and practices on adult vaccination among Medical students and will help motivate themselves and their family to get vaccinated against vaccine preventable infectious diseases right from the first year of the MBBS course.

Abstract Code: **PO-01** Author id **72**

Author Name: **Dr. Shaveta Kataria** Designation: **Associate Professor**

Institutional Affiliation: **Mahatma Gandhi University of Medical Sciences and Technology, Jaipur.**

Co-Authors: **Dr. Ved Prakash Mamoria**

Abstract Category: **Parasitology**

Abstract Title: Coccidian Co-Infections In Immunocompromised Patients: Prevalence, Clinical Impact, And Insights From A Tertiary Care Center

Background: Coccidian parasites are emerging as significant contributors to the changing etiological landscape of diarrheal diseases. These highly infectious protozoa primarily affect individuals from lower socioeconomic backgrounds and pose a particular threat to immunocompromised populations, where co-infections can lead-to considerable morbidity and mortality. Timely detection is essential for improving clinical outcomes; however, comprehensive data on associated risk factors, transmission routes, and socio-demographic patterns remain limited. To the best of our knowledge, this is the first study designed to investigate the prevalence and socio-demographic profile of Cryptosporidium and Cyclospora co-infections among immunocompromised patients attending a tertiary care center.

Material & Methods: A descriptive observational study was conducted between Aug to Oct 2024 on the stool samples of immune-compromised patients presenting with gastro-intestinal manifestations. The modified Ziehl-Neelsen staining technique was employed to confirm the simultaneous presence of Cryptosporidium and Cyclospora oocysts. The relevant medical records were reviewed and analyzed statistically.

Results: A total of 1,758 stool samples were received for routine microscopy, of which 82 were suspected to contain opportunistic coccidian parasites. Modified Ziehl-Neelsen staining confirmed co-infection with Cryptosporidium species (spp.) and Cyclospora spp. in 10 patients. The majority of co-infected individuals were aged over 60 years, with a male predominance, and this distribution was statistically significant ($p < 0.001$). Clinical profiles and associated risk factors were analyzed, revealing that transplant recipients presenting with diarrhea were the most commonly affected group.

Conclusion: The severity of enteric infections in patients is influenced by their socioeconomic status, demographic characteristics, and immune status. Stool microscopy remains the primary diagnostic modality, as molecular methods are not readily available. Moreover, clinicians often overlook requests for modified Ziehl-Neelsen staining, which is essential for detecting opportunistic coccidian parasites. A One Health approach—emphasizing collaboration among public health professionals, veterinarians, and clinicians—is critical for the prevention and control of these zoonotic infections.

Abstract Code: **BP- 01** Author ID: **3**

Author Name: **Dr. Mishi Khan** Designation: **2nd Year PG Resident**

Institutional Affiliation: **Sardar Patel Medical College, Bikaner**

Co-Author: **Dr. Abhishek Binnani, Dr. Anjli Gupta, Dr. Bhagirath Ram Bishnoi, Dr. Rubina Kochar, Dr. Praveen Prajapat**

Abstract Topic: **Bacteriology**

Abstract Title: **Study the Prevalence of Rifampicin Resistance among Pulmonary Tuberculosis patients by GENEXPERT Assay from a Tertiary Care Hospital, Bikaner.**

Background: Rifampicin-resistant (RIF-R) tuberculosis poses a significant challenge to global TB control efforts. As rifampicin resistance serves as a surrogate marker for multidrug-resistant TB (MDR-TB), this study aimed to assess the prevalence of RIF-R in pulmonary TB (PTB) cases over a one-year period at the TB C & DST Lab, Department of Microbiology, Sardar Patel Medical College, Bikaner.

Material and methods: A retrospective analysis was conducted from January 2024 to May 2025 on samples from clinically suspected PTB patients. All specimens underwent GeneXpert MTB/RIF assay for the detection of Mycobacterium tuberculosis and rifampicin resistance.

Result: Out of 5,892 specimens, 1,149 (19.5%) tested positive for MTB, while 4,203 (71.3%) were negative. Among MTB-positive cases:

·1,075 (93.6%) were RIF-sensitive (697 males, 376 females),

·43 (3.7%) were RIF-resistant (29 males, 14 females),

·31 (2.7%) showed indeterminate RIF resistance results (21 males, 10 females).

Conclusion: This study found a 3.7% rifampicin resistance rate among MTB-positive cases, lower than figures reported in other regions (e.g., 28% in Mumbai, 18% in Kangra and Una districts). The male predominance in RIF-R cases suggests a potential gender disparity. Regional differences in MDR-TB prevalence may be due to variable risk profiles and TB control strategies. The findings underscore the value of GeneXpert in rapid detection of TB and drug resistance, facilitating timely treatment. The majority of cases were RIF-sensitive, supporting the continued use of first-line therapy. Strengthening public awareness, early diagnosis, and adherence to treatment are crucial in combating drug-resistant TB.

Absract code : **BP-02** Author Id: **05**

Author Name: **Neha Sharma** Designation: **Ph.D Scholar**

Institutional Affiliation: **National Institute of Medical Sciences and Research, Jaipur, Rajasthan.**

Co authors : **Dr. Rakesh Kumar Maheshwari, Dr. Dinesh Kumar.**

Abstract category: **Bacteriology**

Abstract Title: Phenotypic Characterization Of Mupirocin Resistant Staphylococcus Aureus Isolated From Clinical Samples In Tertiary Care Hospital..

Background : Staphylococcal infections are among the most common bacterial infections which range from mild to fatal. Common infections due to Staphylococcus aureus are folliculitis, abscesses, osteomyelitis, pharyngitis, lung abscess and meningitis. They colonize skin, skin glands and mucus membranes. The most common sources of infection are patients and carriers. The aim of this study is to characterize the rates of high-level and low-level mupirocin resistance

in Staphylococcus aureus by phenotypic methods..

Materials and methods: This hospital based observational cross-sectional study was conducted over an 11-month period, from June 2024 to April 2025 at K.M medical college Mathura. Clinical samples including blood, urine, pus, body fluids, skin scrapings, and wound swabs were processed using standard protocols samples were inoculated on blood agar and DNase agar. The isolates were processed for gram stating, catalase and coagulase and positive isolates were further processed for biochemical reaction. identified staphylococcus aureus strains were processed for antimicrobial susceptibility.

Result: Five out of 150 isolates (3.33%) were high level mupirocin resistant and six were low level mupirocin resistant (4%) isolate were detected. 26 isolates (17.33%) were MRSA, and 124 were MSSA, there were no differences in the distribution of mupirocin resistance among MRSA and MSSA isolates (P>0.05).

Conclusion: The study identified mupirocin resistant staphylococcus aureus from various clinical samples using phenotypic methods. Many isolates showed multidrug resistance limiting treatment choices. These findings underscore the urgency for effective infection control and antibiotic stewardship.

Abstract code: **BP-03** Author ID: **07**

Author name: **Dr. Shakil Ahemad Mughal** Designation: **2nd Yr Resident**

Institutional Affiliation: **J.L.N. Medical College & Hospital, Ajmer**

Co-Authors: **Dr. Jyotsna Chandwani, Dr. Surbhi Mathur, Dr. Geeta Parihar**

Abstract category: **Bacteriology**

Abstract Title: Prevalence of Carbapenem-Resistant Klebsiella Pneumonia At a Tertiary Care Centre In Central Rajasthan.

Introduction-Detection of carbapenem resistance is essential to initiate appropriate treatment and effective management and prevent further dissemination. This study aimed to explore the prevalence of carbapenem-resistant klebsiella pneumoniae at a tertiary care center in central Rajasthan.

Material & Method-A cross sectional study was performed in month of August 2024 at JLN medical college & associated group of hospitals, Ajmer (Raj). A total of 1000 clinical specimens comprising urine 47.9%(479), pus and wound swab 35.6%(356), sputum and throat swab 8.7%(87), other samples7.8%(78), were collected following the standard guideline and were processed for culture by standard bacteriological methods. All these isolates were subjected to antibiotic sensitivity testing for carbapenem (Meropenem) by Kirby–Bauer disc diffusion method and result was interpreted following the CLSI guideline 2024.

Result-Of the 1000 specimens, 86% (860) showed significant growth of various other organisms. Of these, 14% (140) showed growth of klebsiella pneumoniae. The overall prevalence of carbapenem resistant klebsiella pneumoniae in the present study was found to be29% (40).

Conclusion- Carbapenem resistance in isolates in the present study was found to high our study highlights that there is an urgent need of proper monitoring, judicious use of antibiotics, and implementation of strict infection control practices in this region.

Abstract code: **BP-04** Author ID: **10**

Author name: **Dr. Sangeeta Jasmine** Designation: **PG 1st year Resident**
Institutional Affiliation: **Dr. S. N. Medical College, Jodhpur**

Co-Authors: **Dr. Smita Kulshrestha (Sr. Prof.), Dr. Kapil Choyal, Dr. Dimple Deora, Dr. Seema Bhamu**

Abstract category: **Bacteriology**

Abstract Title: Antibiotic Susceptibility Patterns of Pseudomonas aeruginosa at a Tertiary Care Hospital, MDM Hospital, Jodhpur

Background: Antimicrobial resistance in Pseudomonas aeruginosa poses a critical challenge globally, exacerbated by the indiscriminate use of antibiotics. This study evaluated the antibiotic susceptibility patterns of P. aeruginosa isolates at a tertiary care hospital in Jodhpur, India, to guide effective therapeutic strategies and mitigate resistance trends.

Material & Methods: Among 276 culture-positive clinical samples, 56 confirmed P. aeruginosa isolates from eight specimen types were analyzed. Antimicrobial susceptibility testing was performed via disk diffusion method using P. aeruginosa NCTC 10662 as the reference strain, adhering to Clinical and Laboratory Standards Institute (CLSI) guidelines.

Results: Urine (35.7%), pus (28.6%), and sputum (17.9%) showed highest P. aeruginosa prevalence. Monotherapies (penicillins, cephalosporins, fluoroquinolones) exhibited >70% resistance. Carbapenems (Imipenem+Cilastin: 92.9%) and β-lactamase inhibitor combinations (e.g., Piperacillin+Tazobactam: 85.7%) demonstrated superior sensitivity. Amikacin (82.1%) and polymyxins were effective in limited cases.

Conclusion: Endotracheal aspirates were key hospital-acquired sources. β-lactamase inhibitors enhanced antibiotic efficacy. Restrict Amikacin to severe infections to delay resistance. Periodic susceptibility testing and stewardship prioritizing carbapenems/reserve agents are critical.

Abstract Code: **BP-05** Author ID: **13**

Author Name: **Dr. Dimple Deora** Designation: **PG 1st year Resident**

Institutional Affiliation: **Dr. Sampurnanand Medical College, Jodhpur**

Co-Authors: **Dr. Smita Kulshresta (Sr. Prof.), Dr. Kapil Choyal, Dr. Seema Bhamu, Dr. Sangeeta Wasan.**

Abstract Catrgory : **Bacteriology**

Abstract Title: Detection Of Inducible Clindamycin Resistance In Staphylococcus Species By D-Test: A Simple Yet Crucial Tool In Antimicrobial Stewardship.

Background/Aim: Methicillin-resistant Staphylococcus aureus (S.aureus) (MRSA) is an important cause of nosocomial infections worldwide. The aim of this study was to determine the prevalence of MRSA and their antimicrobial susceptibility pattern in tertiary care hospital, MDM, JODHPUR from March 2025 to May 2025.

Materials and Methods: The bacterial isolates from various clinical specimens of patients admitted in our hospital were cultured as per standard protocol and all isolate of Staphylococcus aureus obtained were included in the study. The isolates were identified by standard methods like catalase test, slide and tube coagulase tests, and growth on Mannitol salt agar (HiMedia Lab, Mumbai). The antimicrobial susceptibility testing was performed by

Kirby–Bauer disc diffusion method. The D-test for inducible clindamycin resistance was performed. The isolates were tested for methicillin resistance by using cefoxitin disc by disc diffusion. The results were interpreted according to CLSI criteria.

Results: During a period of 3 month, a total of 142 isolates of S. aureus were studied and 44 (30.9%) were found to be methicillin-resistant. MRSA isolates showed greater resistance to multiple drugs than methicillin sensitive Staphylococcus aureus MSSA isolates. Inducible clindamycin resistance was 18.8% in MRSA as against 3.5% in MSSA. About 40–50% of MRSA were resistant to erythromycin, gentamicin, and chloramphenicol, while less than

30% were resistant to ciprofloxacin and amikacin. However, all strains were sensitive to vancomycin.

Conclusion: The regular surveillance of hospital-acquired infections of MRSA may be helpful in formulating and monitoring the antibiotic policy. This may also help in preserving antibiotics like vancomycin, only for life-threatening staphylococcal diseases.

Abstract code: **BP-06** Author ID: **14**

Author name: **Dr. Seema Bhamu** Designation: **PG 1st year Resident**

Institutional Affiliation: **Dr. S. N. Medical College, Jodhpur**

Co-Authors: **Dr. Smita Kulshrestha (Sr. Prof.), Dr. Kapil Choyal, Dr. Sangeeta Jasmine, Dr. Dimple Deora**

Abstract category: **Bacteriology**

Abstract Title: Detection of Extended-Spectrum Beta-Lactamase (ESBL) Producing

Escherichia coli in Clinical Isolates at a Tertiary Care Hospital, MDM Hospital, Jodhpur: A Rising Threat to Antibiotic Therapy

Background: Extended-spectrum beta-lactamase (ESBL) producing Escherichia coli have emerged as significant pathogens in both hospital and community-acquired infections. ESBLs hydrolyse third generation cephalosporins and monobactams, often leaving limited therapeutic options. Early detection of ESBLs is crucial for effective patient management and antibiotic stewardship.

Aim: To determine the prevalence of ESBL-producing E. coli in various clinical samples and to evaluate their antimicrobial susceptibility pattern at a tertiary care hospital in western Rajasthan.

Material & Methods: This prospective study was conducted over a period of three months in the Department of Microbiology. A total of 100 clinical isolates of E. coli were obtained from urine, pus, blood, sputum, and other body fluids. Identification and antimicrobial susceptibility testing were performed using standard CLSI guidelines. Phenotypic confirmation of ESBL production was carried out using the combined disc diffusion method with cefotaxime (30 µg) and cefotaxime-clavulanic acid (30/10 µg).

Results: Out of the 100 isolates, 38 (38%) were confirmed as ESBL producers. The majority of ESBL-positive isolates were from urine (65.8%), followed by pus and wound swabs. ESBL strains showed high resistance to ceftazidime (100%), ceftriaxone (100%), and ciprofloxacin (76.3%). However, imipenem and amikacin remained the most effective drugs, with sensitivity rates of 97% and 89%, respectively. The prevalence rate aligns with other regional studies showing ESBL rates ranging from 30–50%.

Conclusion: The high prevalence of ESBL-producing E. coli in our setting highlights an urgent need for routine ESBL detection in diagnostic laboratories. Regular surveillance and judicious use of antibiotics are essential to limit the spread of these resistant strains and to preserve the efficacy of higher-generation antimicrobials.

Abstract code: **BP-07** Author ID:**16**

Author Name: **Dr. Mohit Singh Meena** Designation: **PG Resident**

Institutional Affiliation: **Government Medical College, Kota**

Co-Author: **Dr. Bhupendra Kumar Mandawat**

Abstract Topic: **Bacteriology**

Abstract Title: **Antimicrobial Stewardship (Ams) Awareness Among Doctor At Tertiary Care Hospital, Kota, Rajasthan.**

Background: Antimicrobials are routinely used for variety of clinical conditions but are also misused leading to drug resistance bacteria in clinical practice. Consultants can gain the knowledge about Antimicrobial stewardship (AMS) and their prescribing behavior mainly depends on their attitude and understanding of AMS. Aim of this study is to evaluate the knowledge and beliefs about antibiotics prescribing among HCW (health care workers) in a tertiary care hospital of Govt medical college Kota.

Material & Methods: A cross-sectional study was carried from May 2025 to July 2025 was conducted among doctors of different department of Government Medical College Kota in the form of a pretested, semi-structured, questionnaire provided to 100 participants (junior residents, senior residents and faculty of different specialties) and responses were recorded.

RESULT: Out of 100 participants from 10 department of GMC Kota. response rate was 75% and gender wise 52% males and 48% female responded. Age group wise distribution demonstrated maximum participation from 22-30 years of age (81%) followed by 31-40 years (14%). The data showed maximum participation from the Department of Medicine (39%) followed by department of pediatrics (31%). Designation wise most participants were the junior residents (74%) followed by Assistant Professors (14%). After analyzing the responses, it was found that 98 % participants considered AMS leads to improving antimicrobial use for better clinical outcomes.

Conclusions: Education of antimicrobials prescriber is key role of the ASP (Antimicrobial stewardship program) team. The present study on antibiotic usage gives useful information about the knowledge, attitudes and practices of prescribers and help plan suitable educational modifications that aim at improving the antimicrobial prescribing and minimizing the development of drug resistance in our country

Abstract Code: **BP-08** Author Id: **17**

Author Name: **Dr. Abdul Malik** Designation: **PG Resident 2nd yr**

Institution Affiliation: **Government Medical College, Kota**

Co-Author: **Dr. Bhupendra Kumar Mandawat**

Abstract Category: **Bacteriology**

Abstract Title: Prevalence of Pediatric Tuberculosis (Pulmonary and Extra Pulmonary) by Cartridge Based Nucleic Acid Amplification Test (CB-NAAT) Method and Rifampicine Resistance in this Group.

Background: Tuberculosis is a highly contagious and mortal disease.India has one of the highest tuberculosis (TB) burdens globally. Children contribute a significant proportion of TB burden. The diagnosis of TB is difficult in children due to the lack of a standard clinical and radiological description.This study aimed to evaluate the pattern and outcome of pulmonary and extra-pulmonary tuberculosis and rifampicin resistance in children by Cartridge Based Nucleic Acid Amplification Test (CBNAAT) method.

Materials & Methods: This was a cross sectional study in which 135 samples of pulmonary tuberculosis and extra pulmonary tuberculosis was collected and analyzed from May 2023 to July 2024. The collected samples were transported to the Department of Microbiology at Govt. Medical College, Kota in appropriate and sterile container where they were further processed by CBNAAT(cartridge based nucleic acid amplification tests).

Results : Out of 135 samples, pulmonary tuberculosis (PTB) was 101(74.81%) and extra-pulmonary tuberculosis (EPTB) was 34 (25.18%). Prevalance was 20% among peadiatric group. Out of 34 EPTB samples, 5 (14.7%) were positive and all 5(100%) were rifampicin sensitive and out of 101 PTB sample 23(22.7%) were positive and out of 23 positive cases 18(78.26%) were rifampicin sensitive and 5(21.73%) were rifampicin resitant. Out of total 28 positive cases pulmonary tuberculosis 23(82.1%) is more common tuberculosis in childrens then EPTB samples 5(17.8%) .Out of total EPTB positive samples majority samples were pus 4(80%) followed by pleural fluid 1(20%).

Conclusion: The study showing high burden of tuberculosis in peadiatric population in our region, there is need to use advanced diagnostic methods for better patient management and educate about the transmission and risk factors for this disease.

Abstract code: BP-09

Author Id: **18**

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Abstract Category: **Bacteriology**

Abstract Title: Bacteriological Profile and Cross-Infection of Clinical Thermometer used by Health Care Workers at Tertiary Care.

Background: Nosocomial infections are those infections which are acquired during hospitalization. The main sources of infection in hospitals are patients, attendants, visitors and HCW (health-care workers). Clinical Thermometer is a medical tool which used to measure body temperature typically oral and rectal by health care workers universally for examining patients and can be a probable cause for cross infection among patients and health care workers if not disinfected properly. So, clinical thermometer can be possible source of Cross-infection in the hospitals.

The aim and objective of this study was to determine the magnitude of cross infection by clinical thermometer in wards at hospital.

Material and Methods: Swab samples were collected from the ends of thermometer used in different wards in Govt medical college and attached hospital Kota. The bacterial identification was carried out by conventional identification from cultures.

Results: Out of 100 swab sample, 60 were found to be contaminated. Gender wise

distribution was 25(41.66%) male and 35(58.33%) females. Age wise distribution was 38(63.33%) from age group 1-14 yrs of age followed by 50-60 years of age 22(36.66%). 20(33.33%) were oral thermometer and 40(66.66%) were rectal. The type of bacteria isolated from the oral thermometer includes Streptococci spp.15 (75%), CoNS 5(25%), while in rectal thermometer includes Enterococcus spp.11(27.5%), E. coli 10(25%%), Klebsiella 6 (15%) , CoNS 4(10%),Salmonella spp.3 (7.5%),Staphylococcus aureus 3(7.5%), Pseudomonas aeruginosa 3(7.5%) were isolated.

Conclusion: The clinical thermometers are used on multiple patients by health care providers, The potential for transmission of pathogens is more without cleaning and proper sterilization. Single-use disposable clinical thermometers provide the best efficacy in infection control.

Keyword: Cross infection, CONS, HCW,

Abstract code:**BP-10**

Author ID:**19**

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Coauthors : **Dr. Sarthika Gautam, Dr. Annu mahi**

Abstract category : **Bacteriology**

Abstract-title: Prevalence Of High Level Gentamicin Resistance Among Various Enterococcus Isolates At Atertiary Care Hospital,Rajasthan

Background: Enterococci are organisms with inherently low virulence; however, this is offset by their intrinsic resistance to several antibiotics and their remarkable ability to acquire resistance to a wide range of broad-spectrum antimicrobial agents among which High-level aminoglycoside resistance(HLAR) is an emerging concern though all acquired resistance of this organism is not significant clinically. This is because; severe enterococci infections are treated with combination of cell wall acting agent like vancomycin and an aminoglycoside. High level aminoglycoside resistance predicts resistance to this combination therapy. The present study was undertaken to determine the antimicrobial susceptibility pattern of the enterococcus spp. with special reference to High Level Gentamicin Resistance (HLGR).

Materials and Methods: The present study was done at super speciality hospital Government Medical College, Kota, A total of 86 enterococcal isolates which were identified by standard microbiological techniques from both OPD and IPD patients over a period of seven month between January to July 2025 were included in the study. For blood samples,sub-culture was done for up to 7 days before reporting a negative result .Anti microbial susceptibility pattern of all the isolates were determined according to standard CLSI guidelines.High level gentamicin resistance was detected by disc diffusion method using 120µg gentamicin disc.(Himedia).

Result & Discussion: In the present study most of the enterococci were isolated from urine 67 (78%) followed by pus 9 (10%), blood 4 (5%),sterile fluids 4 (5%), sputum 2(2%). Higher incidence of enterococcal infections was found in females45 (52%) than in males 41(48%).Enterococcal infections was more common in IPD 69 (80%) than in OPD cases 17 (20%).The total isolates of enterococci, which showed HLGR was 50 (58%)

The present study highlights the clinical significance of Enterococcus as an important pathogen, particularly in urinary tract infections, as the majority of isolates were recovered from urine (78%).A slightly higher incidence of infection in females (52%) compared to males (48%) may be attributed to anatomical and physiological factors predisposing women to urinary infections.In the present study, the majority of infections were detected among inpatients (80%) rather than outpatients (20%). This emphasizes the role of Enterococcus as a nosocomial pathogen, commonly associated with risk factors such as prolonged hospital stay, use of invasive devices, prior antimicrobial therapy, and immunocompromised states. Previous studies have also noted similar inpatient predominance, underlining the organism's importance in hospital-acquired infections.Of particular concern is the high prevalence of high-level gentamicin resistance (HLGR) observed in 58% of isolates. HLGR is clinically significant because it abolishes the synergistic effect between aminoglycosides and cell-wall active agents.

Conclusion:This study demonstrates a high occurrence of high-level aminoglycoside resistance(HLAR)among clinical enterococcus isolates,highlighting the need for routine screening to guide the effective treatment of enterococcal infections.

Absract code: **BP-11**

Author ID - **20**

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Abstract category -**Bacteriology**

Abstract Title: Contamination Of White Coat With Potential Pathogens And Their Antibiotic Resistance Pattern Among Health Professionals: A Cross Sectional Study At Tertiary Care Center At South East Rajasthan

Background White coats worn by medical students and health care professionals can be contaminated at hospitals and act as a potential reservoir for pathogens, including multidrug resistance bacteria which might lead to cross infection. To identify the contamination rates of white coats worn by medical students and health care professionals with potential pathogens and their antibiotic resistant pattern.

Material& Methods This cross-sectional study was conducted in Diagnostic and Research Microbiology Lab, Super Specialty hospital, GMC Kota. A total of 104 white coats samples was collected from participants who were divided into 4 groups; medical students, interns, PG resident and faculty; 26 sample from each group. Saline moistened swabs were collected from the pockets areas of the white coats and were cultured on microbiological media. Microorganisms isolated were identified using biochemical characterization methods along with antibiotic culture and sensitivity. A set of questionnaires was given to assess student's perception towards contamination, the way they handle and clean as well as the duration of wearing white coats.

Results Pseudomonas was the main pathogen isolated from white coats with the positivity rate of about (28%) followed by Staphylococcus aureus (23%). Further, screening of these S aureus isolates revealed that about (5%) of them were Methicillin-resistant Staphylococcus aureus (MRSA) other were CoNS (18%) Klebsiella (13%), Micrococcus (9%) Enterococcus (4%). Maximum organisms were isolated from PGs followed by medical students, interns and faculty. Notably high rate of contamination among PG students is probably because they wore it for a relatively longer period of time. All the isolates were sensitive to commonly used antibiotics as per CLSI standard except MRSA which poses a concern. White coat harbor potential contaminants and these play an important role in the transmission of pathogenic micro-organism and resistant determinants

Conclusion We found that clinical white coats worn by various health care workers recruited for the study were contaminated predominantly with Pseudomonas followed by S aureus, MRSA, and Enterococcus species. The isolates were more prevalent on white coats from surgical wards than on those from medical wards. Females overcoat were more contaminated than male. The isolates showed good sensitivity for the commonly used antibiotics but MRSA rate is of concern. Hence overcoats may be transmitting agent for bacterial pathogens. Health care worker should be aware of the proper usage and frequency of laundering of white coats

Abstract Code: **BP-12**

Author I.D.: **21**

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Co-Authors-**Dr Rajni Sharma, Dr. Rekha Bachhiwal**

Abstract Category: **Bacteriology**

Abstract Title: Phenotype-Genotype Association Distribution of Key Virulence Factors in Vancomycin Resistant Enterococci Isolated From Urinary Tract Infections

Background: Enterococci express high degree of resistance towards wide range of antibiotics. Production of many virulence factors along with drug resistance makes eradication of infection difficult from urinary tract. The present study aimed to determine phenotypic and genotypic association of Virulence Factors in Vancomycin Resistant Enterococci (V.R.E.).

Materials and methods: Study was conducted from June 2022 to April 2024 in Bacteriology Lab of Department of Microbiology in S.M.S Medical College, Jaipur. Enterococci isolated in significant number from urine samples were included. Enterococcus was identified by biochemical reactions and antimicrobial susceptibility of 250 Urinary isolates of Enterococci was performed. V.R.E. were reported in 37(14.8%) of isolates and production of virulence factors such as Gelatinase, Hemolysin, Slime layer formation was detected by Phenotypic methods and Genotypes Asa1 (Aggregation Substance), CylA (Cytolysin A), GelE(Gelatinase) were investigated by P.C.R. in V.R.E. isolates.

Results: Out of 14.8% of Vancomycin-resistant Enterococci (VRE) isolates Phenotypic expression of Hemolysin, Gelatinase, Slime Layer were 8(21.6%), 4(10.08%), 11(29.02%). Asa 1, Cyl A, Gel E genes were detected in 5(13.5%), 6(16.2%), 9(24.3%) of strains .Slime Layer was phenotypically detected in 29.72% of VRE isolates and Asa1 in 13.5% of isolates and the association was statistically significant.

Conclusion: This study highlights the association between phenotypic expression and genotypic presence of virulence factors in V.R.E. isolates. Statistical significance was observed between Slime layer formation and Asa1 gene. Findings suggest that phenotypic expression may not always reflect the genetic profile for certain virulence traits. The results emphasize the critical role of Slime Layer production in the pathogenesis of V.R.E. and support its importance as a potential pathogen.

Keywords: Enterococcus, Vancomycin-resistant Enterococci

Abstract code :**BP-13**

Abstract ID-**22**

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Institutional Affiliation: **Dr. Sampurnanand Medical College, Jodhpur**

Abstract category:**Bacteriology**

Abstract Title: A study to find out prevalance of causative agents and anti microbial susceptibility of urinary tract infection in pregnant females in a tertiary care centre, Umaidhospital, jodhpur

Background : Urinary tract infections are common bacterial infections that affect approximately 150 million people worldwide each year. Serious sequelae such as frequent recurrences, pyelonephritis, renal damage, preterm birth and complications caused by frequent antimicrobial use, such as antibiotic resistance and clostridium difficile colitis can occur. The most common organism causing UTI is uropathogenic Escherichia coli (UPEC). Uncomplicated UTIs are caused by UPEC followed by Klebsiella pneumoniae, Staphylococcus saprophyticus, Enterococcus faecalis, Group B streptococcus (GBS), Proteus mirabilis, Pseudomonas aeruginosa, Staphylococcus aureus, and Candida spp. Complicated UTIs are caused by UPEC followed by Enterococcus spp., K. pneumoniae, Candida spp., S. aureus, P. mirabilis, P. aeruginosa, and GBS. The anatomy of the urinary tract undergoes significant changes during pregnancy with hormonal and mechanical factors contributing to ureteral dilation, dilation of the renal calyces, and urinary stasis, all of which predispose pregnant patients to urinary tract infections (UTIs). Progesterone

relaxes smooth muscles, and the gravid uterus compresses the bladder, decreasing bladder capacity. Vesicoureteral reflux, increased residual urine in the bladder, and urinary stasis may be seen. Any of these changes lead to an increased risk of UTI in pregnancy.

Material and Methods : In this study using data of all pregnant female patient admitted to Umaid hospital and presenting urine culture between Jan to July 2025 . Under all aseptic precautions, midstream urine was collected in urine culture bottle. The culture bottle was then transferred to the department of microbiology where the urine was then treated with cysteine-lactose-electrolyte-deficient agar and incubated at 37°c. Antimicrobial susceptibility testing was performed via disk diffusion method. All common organism isolated from urine showed high sensitivity to nitrofurantoin, fosfomycin, gentamicin ,vancomycin ,ampicillin in majority of patient.

Result : In this study 523 samples of urine of pregnant females were cultured out of 523 ,18 Entercoccus species, 22 E.coli ,15 Klebsiella species,15 CONS ,7 Candida species , 5 Staphylococcal species found .

Conclusion : Organisms causing UTI in pregnancy are the same uropathogens that commonly cause UTI in non-pregnant patients. Escherichia coli is the most common organism isolated in an 18-year retrospective analysis found E. coli to be the causative agent in 60% to 82.5% of cases of pyelonephritis in pregnant patients .other bacteria that may be seen include Klebsiella pneumonia (11%), Proteus (5%), Staphylococcus, Streptococcus, and Enterococcus species.

Group B streptococcus (GBS) is commonly isolated from urine cultures in the third trimester of pregnancy and may be even more common than E. coli.

Abstract Code: **BP- 14**

Author Id: **23**

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Co-Authors: **Dr. Anita E. Chand, Dr. B.K. Mandawat**

Abstract Category: **Bacteriology**

Abstract Title: Knowledge, Attitude and Practice (KAP) study on Good Laboratory Practices among Healthcare Workers at a Tertiary Care Hospital, Kota

Background: Good Laboratory Practices (GLP) are crucial for ensuring the quality, integrity, and reliability of laboratory data, directly impacting patient safety and healthcare outcomes. The Revised Guidelines for Good Laboratory Practices by ICMR aimed to establish minimum criteria which should be followed by clinical/research laboratories in routine sample processing/research. This study aimed to assess the Knowledge, Attitude, and Practice of Healthcare Workers (HCW) regarding GLP within their laboratory settings.

Materials & Methods: A cross-sectional descriptive study was conducted using a structured questionnaire on various aspects of GLP among HCWs in Laboratory (Microbiology, Pathology and Biochemistry), Government Medical College, Kota, from 15/05/2025 to 18/06/2025 in online google forms. The data was analyzed using descriptive statistics and Bloom's cut-off criteria for cognitive learning to summarize the key findings.

Results: Total 64 responses received, indicated a high level of knowledge and adherence to GLP among the surveyed HCWs with an average score of 21.45 out of 25. A vast majority of respondents (93.75%) demonstrated awareness of GLP concepts. Regarding practices, high compliance was observed in specimen labelling (93.75%), following Standard Operating Procedures (90.62%), proper biomedical waste disposal (96.88%), and accurate results recording (92.19%). In terms of attitude, overwhelming majority (95.32%) believe that GLP improves the safety of healthcare workers. Most common challenges faced in GLP were "Inadequate staffing" (23.74%), "Lack of training" (22.30%), and "Poor infrastructure" (19.42%).

Conclusion: This study concluded that HCWs in this study possess a commendable level of knowledge and positive attitudes towards GLP, translating into generally good practices. The above-mentioned challenges can be overcome through enhanced training programs, improved resource allocation, and infrastructural upgrades, to further strengthen GLP compliance.

Absract code : **BP-15**

Author ID: **24**

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Coauthors : **Dr.Dinesh Verma, Dr.Bhupendra K. Mandawat , Dr.Saurabh Sharma**

Abstract category - **Bacteriology**

Abstract Title: A Comparative Study Between Non Catheterised And Catheter Associated Urinary Tract Infections Caused By Extended Spectrum Beta Lactamases (Esbl) Producing Escherichia coli At a Tertiary Care Centre.

Backgroud : Urinary tract infection is the most common bacterial infection that accounts for 40% of all hospital acquired infections(HAI). Extended Spectrum β Lactamases (ESBL) producing Enterobacteriaceae particularly Klebsiella pneumoniae and Escherichia coli, pose a significant challenge in treating urinary tract infections due to limited treatment options. ESBLs are enzymes that confer resistance to most beta-lactams such as penicillins, cephalosporins (1st, 2nd, 3rd) and aztreonam but sensitive to cephamycins like cefoxitin and carbapenem. Hydrolysis can be inhibited by β- lactamase inhibitor such as clavulanic acid.

Material& Methods: This cross sectional study was conducted at the SSH Lab, Microbiology Department , Government Medical College, Kota, from June 2025 to August 2025. A total of 100 positive urinary isolates of Escherichia coli each from catheterised and non-catheterised patients attending hospital were identified by standard microbiological techniques and antimicrobial susceptibility testing was performed according to CLSI guidelines. Escherichia coli isolated were tested for ESBL production by phenotypic confirmatory method of double disk synergy test using a disc of amoxicillin-clavulanate (30µg), ceftriaxone(30µg)and ceftazidime(30µg) .

Results: Out of 100 positive urinary isolates of Escherichia coli from CAUTI , 65.33% were ESBL producing isolates whereas out of 100 positive urinary isolates of Escherichia coli from non-catheterized UTI, 47.66% were ESBL producing isolates. The results were highly significant (p=<0.001).

Conclusion: Results showed that frequency of ESBLs were higher in catheterized patients as compared to non-catheterized patients. This is suggestive of a need for regular screening and surveillance for ESBL producing organisms. Patients infected with these organisms should be nursed with contact precautions to avoid the spread of nosocomial infection.

Abstract code :**BP-16**

Abstract ID-**25**

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Designation:**PG Resident**

Co-Authors:**Dr.R.S.Parihar(Sr.Prof). Dr.Divya Agarwal**

Institutional Affiliation: **Dr. Sampurnanand Medical College, Jodhpur**

Abstract category:**Bacteriology**

Abstract Title: **A CSF CULTURE AND SENSITIVITY TEST IN PAEDIATRIC PATIENTS AT TERTIARY CARE HOSPITAL, UMAID HOSPITAL, JODHPUR.**

Background : Bacterial infections reaching the CNS are relatively rare but can be very serious, with potential for severe morbidity and mortality.CNS infections can lead to meningitis, encephalitis, or brain abscesses. early diagnosis and treatment are crucial for improving outcomes.

the common organisms isolated from csf were streptococcus Pneumoniae, Neisseria Meningitidis, Haemophilus Influenzae, staphylococcus, and Escherichia coli.

A CSF culture and sensitivity test is helps determine the specific pathogen and its susceptibility to different antibiotics, guiding appropriate treatment.

Objective : In clinically suspected bacterial meningitis cases, the CSF culture positivity rate varies. this study shows how many CSF cultures are positive and negative from the total number of clinically suspected patients and what kind of organism reach the CNS.

MATERIAL AND METHODS

This is a cross-sectional descriptive study using data of all paediatric patients admitted to umaid hospital and presenting with CSF culture between february 2025 and july 2025. in this study a total of 454 samples of CSF were cultured.19 samples have pathogens that grew on blood agar and macconkey agar. antibiotic sensitivity testing of isolated pathogens was done using mueller hinton agar by the kirby-bauer method

Result : Results of CSF culture and sensitivity from february 1, 2025, to july 31, 2025, from 454 CSF samples of paediatric patients, and out of them 19 were positive with bacterial growth and 435 were sterile. from 19 samples, 4 were gram-positive bacillus, 4 were acinetobacter, 4 were cons, and 4 were klebsiella. 1 enterococcus, 1 MSSA, and 1 pseudomonas were detected.

Conclusion : The common organisms isolated from CSF were Pseudomonas, CoNS, klebsiella, Acinetobacter, and gram-positive bacilli. all common organisms isolated from CSF showed high sensitivity to Meropenem, Cefepime, Vancomycin, Linezolid, and Levofloxacin.

In clinically suspected bacterial meningitis cases, CSF cultures are positive in only 4% of cases.

this study shows clinically suspected infective patients have rare CNS involvement.

Note: A sterile CSF culture doesn't always mean the absence of infection. it can be a sign of a viral or fungal infection, or a bacterial infection that has been treated with antibiotics.

Negative cultures may prompt clinicians to investigate other potential causes of the patient's symptoms or to use more sensitive diagnostic methods, such as PCR (polymer chain reaction). in some cases, negative cultures can lead to the discontinuation of antibiotics, potentially reducing the risk of antibiotic resistance and adverse effects.

Abstract code- **BP-17** Author ID – **32**

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Institutional Affiliation : **Dr. S.N. Medical College, Jodhpur**

Coauthor: **Dr. Prabhu Prakash, Dr. R. S. Parihar**

Abstract Category - **Bacteriology**

Abstract Title: Antimicrobial Susceptibility Pattern Of Acinetobacter Baumannii Isolated From Positive Blood Cultures In The Paediatric Population At a Tertiary Health Care Centre – Umaid Hospital

Background Acinetobacter baumannii is an aerobic, gram-negative coccobacillus increasingly recognized as a major cause of nosocomial infections, particularly in critically ill and immunocompromised patients. It is known for its ability to survive in the hospital environment for prolonged periods and for its resistance to desiccation and disinfectants, making it a persistent source of healthcare-associated infections in paediatric patients, bloodstream infections caused by A. baumannii can lead to significant morbidity and mortality. The organism exhibits a remarkable capacity to acquire resistance to multiple antibiotic classes, posing a serious challenge in clinical management. This study aims to assess the antimicrobial susceptibility profile of A. baumannii isolates from positive blood cultures in paediatric patients at Umaid Hospital, a tertiary care teaching hospital, in order to inform local antibiotic stewardship strategies.

Materials and methods: A retrospective study was conducted from January 2025 to July 2025 at Umaid Hospital. A total of 654 paediatric blood culture samples were collected and processed using the BACTEC automated blood culture system. Culture-positive samples were subjected to standard microbiological techniques for the identification of Acinetobacter baumannii. Antimicrobial susceptibility testing (AST) was conducted using the Kirby-Bauer disc diffusion method in accordance with CLSI guidelines. The antibiotics tested included cefepime, ciprofloxacin, levofloxacin, piperacillin-tazobactam, ampicillin, meropenem, gentamicin, and ceftazidime.

Results: Out of the 654 blood culture bottles, 140 (21.4%) were positive for Acinetobacter baumannii. the antimicrobial susceptibility among these isolates were as follows:

- Cefepime: 68 (48.6%) Resistant
- Ciprofloxacin: 26 (18.6%) Resistant
- Levofloxacin: 20 (14.3%) Resistant
- Piperacillin-Tazobactam: 60 (42.9%) Resistant
- Ampicillin: 82 (58.6%) Resistant
- Meropenem: 6 (4.3%) Resistant
- Gentamicin: 42 (30%) Resistant
- Ceftazidime: 100 (71.4%) Resistant

Conclusion: The high incidence of Acinetobacter baumannii in paediatric bloodstream infections, along with its considerable resistance to key antibiotics particularly beta-lactams and cephalosporins underscores its role as a formidable hospital-acquired pathogen. The relatively low resistance to meropenem offers a viable therapeutic option; however, reliance on carbapenems alone may drive future resistance. To combat the spread and impact of A. baumannii, a multifaceted approach is essential, including rigorous infection control practices, regular surveillance of resistance patterns, rational antibiotic use guided by susceptibility testing, and strengthening of antibiotic stewardship programs within healthcare facilities. Investing in education of healthcare workers, environmental disinfection protocols, and timely isolation of infected patients will also be key to reducing the burden of this emerging threat.

Abstract code- BP-18 Author id-36

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Institutional affiliation -**Government Medical College, Bharatpur**

Abstract category- Bacteriology

Abstract Title-Prevalence And Susceptibility Of Uropathogens: a Observational Study At a Teaching Hospital In Bharatpur

Background Urinary tract infection (UTI) remains as one of the most common bacterial infections and second most common infectious disease in community practice.

The present study was aimed to determine the current status of prevalence and antimicrobial susceptibility of uropathogens isolated in a teaching hospital in Bharatpur.

Material and Methods A retrospective analysis was done at the department of Microbiology at RBM Hospital, Bharatpur during January 2024 to December, 2024. Uropathogens were identified by standard and specific microbiological techniques and antimicrobial susceptibility pattern was determined by Kirby Bauer Disc diffusion method.

Results : Culture yielded a total of 89 (44.5 %) significant growths of uropathogens. Escherichia coli was the predominant isolate (65%), followed by Klebsiella pneumoniae (20%), Staphylococcus saprophyticus (5 %), Enterococcus cloacae (5%), Pseudomonas aeruginosa (2 %), Proteus vulgaris (1.5 %) and Enterobacter faecalis (1.5 %). Very high frequency of resistance ranging from 75.1 to 91.53 % to cotrimoxazole, ciprofloxacin, cefuroxime, cephradin, amoxicillin and nalidixic acid, moderately high resistance to ceftriaxone (50.08 %) and gentamicin (32.4 %) and low resistance to nitrofurantoin (18.4 %) were shown by Escherichia coli. Similarly, Staphylococcus saprophyticus and Enterococcus faecalis showed low resistance (19.2%) to nitrofurantoin, but moderately high against cefaclor, gentamycin, cefuroxime and ceftriaxone. Klebsiella pneumoniae and Proteus vulgaris were 74.2% and 68.67 % susceptible, respectively to gentamycin only. Peudomonas aeruginosa was 75 % susceptible to nitrofurantoin only and showed 75–100 % resistance to all other agents.

Conclusion : The present study reported the highest rate of susceptibility of uropathogens to nitrofurantoin and gentamicin which can be adapted for empirical treatment of urinary tract infections.

Abstract Code: **BP-19** Author ID :**38**

Author name: Dr Asneet kaur Designation: **PG Resident**

Institutional Affiliation: **RUHS College of Medical Sciences, Jaipur**

Co-Authors: **Dr Gaurav Dalela , Dr Shyam goyal ,Dr Abhishek gupta, Dr Arushi Arya**

Abstract Topic :**Bacteriology**

Abstract Title- Comparative Analysis Of CBNAAT, TRUENAT, And Smear Microscopy Over Three Years For Diagnosing Pulmonary Tuberculosis At RUHS College Of Medical Sciences, Jaipur.

Background : Timely and accurate diagnosis of active tuberculosis (TB) is critical, especially in high-burden countries like India. The Cartridge-Based Nucleic Acid Amplification Test (CBNAAT), also known as the GeneXpert assay, is an automated real-time PCR-based method that complements conventional Ziehl-Neelsen (ZN) staining and the TrueNat assay. These diagnostic tools play a pivotal role in detecting pulmonary TB and identifying rifampicin resistance promptly.

Material & Methods: This prospective study was conducted in the Department of Microbiology, RUHS College of Medical Sciences, Jaipur, over three years (July 2022–July 2025). A total of 4,449 clinical specimens were analyzed, including sputum (4,212), pleural fluid (116), pus (34), bronchoalveolar lavage (33), gastric aspirate (18), CSF (14), ascitic fluid (11), FNAC samples (7), and lymph node aspirates (4). All samples underwent ZN staining and were tested using TrueNat/ CBNAAT.

Result : A total of 4,449 clinical samples were examined using Ziehl-Neelsen (ZN) staining, with 448 (10%) tested positive for acid-fast bacilli (AFB) and 4,001 (90%) tested negative. Positive samples were graded as: 73 scanty, 166 (1+), 74 (2+), and 125 (3+). Of these, 3,379 (76%) were tested by TrueNat, showing 852 (25%) positives, 2,477 (73%) negatives, and 50 (2%) invalid. Among positives, rifampicin resistance was not detected in 526 (61%), indeterminate in 296 (34%), detected in 21 (2%), and invalid in 9 (1%). Additionally, 732 (16%) samples were tested by CBNAAT, with 199 (27%) positives, 529 (72%) negatives, and 4 (1%) invalid. Rifampicin resistance was not detected in 170 (85%), indeterminate in 13 (7%), detected in 9 (5%), and invalid in 7 (3%).

Conclusion: While ZN staining remains rapid and economical, its sensitivity is limited. TrueNat and CBNAAT offer superior detection rates and enable early identification of rifampicin resistance. Combining molecular and conventional methods enhances diagnostic accuracy and supports prompt treatment decisions, especially in TB-endemic settings like India.

Abstract code: **BP-20** Author ID: **44**

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Co-authors: **Parul Sinha, Rekha Bacchiwal, Rajni Sharma**

Abstract category: **Bacteriology**

Abstract Title: An Observational Study Of Bordetella Species In Suspected Cases Among Infants, Using Real Time Pcr And Enzyme Linked Immunosorbent Assay At Sawai Man Singh Medical College, Jaipur.

Background: Whooping cough (Pertussis), caused by Bordetella pertussis, remains a significant public health concern, particularly among unvaccinated infants and in settings with re-emergence despite high vaccination coverage. Accurate and timely diagnosis is essential for disease control. Direct methods such as Real-Time PCR (RT-PCR) and indirect methods like Anti-pertussis toxin (PT) IgG Enzyme Linked Immunosorbent Assay (ELISA) are commonly employed. This study aimed to determine the occurrence of Bordetella species in suspected infant cases using both RT-PCR and ELISA.

Materials and Methods: A cross-sectional study was conducted over one year (July 2024–June 2025) in the Department of Microbiology. Paired nasopharyngeal swab (NPS) and serum samples from 69 infants with clinically suspected pertussis were received from various districts in Rajasthan. RT-PCR was used to detect B. pertussis, B. parapertussis, and B. holmesii DNA, while ELISA quantified serum IgG antibodies against pertussis toxin.

Results: RT-PCR detected Bordetella species in 13 of 69 samples (18.84%), including 6 (8.70%) toxigenic and 7 (10.14%) non-toxigenic B. pertussis. Ajmer district accounted for 46.2% of positive cases. ELISA showed low seropositivity: 2 (2.90%) positive, 12 (17.39%) intermediate, and 55 (79.71%) negative. Mean IgG level was 22.83 ± 37.16 IU/ml. A statistically significant difference in IgG levels was found across categories ($p < 0.00001$), but no association with sex ($p = 0.897$). Among RT-PCR positives, 12 were ELISA-negative and 1 intermediate; conversely, only one RT-PCR positive case was among the 14 ELISA positive/intermediate samples.

Conclusion: RT-PCR revealed a notable burden of Bordetella infection among infants, particularly in Ajmer, while ELISA showed low antibody levels. Since RT-PCR is most sensitive early in infection and ELISA later, the lack of overlap highlights the need for combined molecular and serological testing for effective pertussis surveillance and control strategies.

Abstract code: **BP-21** Author ID: **45**

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Institutional Affiliation: **Geetanjali Medical College and Hospital, Udaipur Rajasthan**

Coauthors: **Dr Parul Chaturvedi, Dr Anamika Vyas**

Abstract category: **Bacteriology**

Abstract Title: Prevalence of Carbapenem-Resistant Enterobacterales, Acinetobacter baumannii, and Pseudomonas aeruginosa in a Tertiary Care Hospital of Southern Rajasthan

Background: Carbapenems are observed as the preceding line of resistance for medicating multidrug-resistant infections however, their effectiveness has been compromised by the emergence of Carbapenem-resistant Enterobacterales (CRE) representing significant public health threat & posing significant concerns in therapeutic methods. Therefore, early detection of carbapenem resistance for implementing suitable infection prevention strategies has become the need of the hour.

Materials and Methods: -A retrospective study was conducted for a period of 1 year from July 2024 to July 2025 in the Department of Microbiology of Geetanjali Medical College and Hospital, Udaipur on all clinical specimens brought to the laboratory during the study period. These samples were examined and processed following all standard guidelines and procedures. The gram-negative bacilli suspected to be resistant to carbapenems were screened as per CLSI 2024 guidelines.

Results: Out of the 6176gram negative isolates analysed 1908(30.89%) were found to be carbapenem resistant. Amongst these,1209(63.36%) were carbapenem resistant Enterobacterales,282(14.77%) were carbapenem resistant Acinetobacter baumannii and 97(5.08%) were carbapenem resistant Pseudomonas aeruginosa. Isolates from ICU patient samples exhibited the highest carbapenem resistance 55.04%. Sample wise analysis revealed notable carbapenem resistant in Escherichia coli isolates from blood (28.22%) and urine (51.82%) whereas Klebsiella spp. (45.54%) predominated as the most carbapenem resistance pathogen in respiratory specimens.

Conclusion: Thus, the current research highlights an overall prevalence of 30.89% carbapenem resistant gram-negative isolates, out of which 25.71% were, Carbapenem-resistant A.baumannii, P.aeruginosa and Enterobacterales which aligns with the previously reported data from India under scoring the urgent need for enhanced antimicrobial stewardship and infection control strategies.

Abstract Code: **BP-22** Author Id:**46**

Author Name: **Dr. Pramod Kumar** Designation: **PG Resident**

Institutional Affiliation: **Jhalawar Medical College, Jhalawar**

Co-Authors : **Dr. Ruby Naz , Dr. Harikant Singh**

Abstract Topic: **Bacteriology**

Abstract Title : ANTIBIOTIC SUSCEPTIBILITY PATTERN AMONG PSEUDOMONAS AERUGINOSA IN SAMPLES ISOLATED FROM OUTDOOR AND INDOOR PATIENTS OF JHALAWAR MEDICAL COLLEGE JHALAWAR AND ATTACHED GROUP OF HOSPITALS

Background : Pseudomonas is an important pathogen among hospital acquired infections Pseudomonas is also an opportunistic pathogen which is commonly found in samples from Intensive care unit ,so to identify organism prevailing in intensive care unit and its antibiotic susceptibility pattern this study is being conducted.

Material And Methods : This prospective study was conducted from 23/01/25 to 22/07/25 for the period of 6 months. Clinical samples including urine, pus, endotracheal tube and body fluids were received in laboratory of Microbiology department, Jhalawar medical college. Identification and antimicrobial susceptibility testing were performed according to standard procedures and latest CLSI (2024) guidelines.

Result: In this study, 76% of the samples were from ICU, 34 % of sample was among age group of 21 to 40 years of patient, 44 % of the sample were pus samples, 62% of sample were of male patients. 92% of samples were sensitive to piperacillin - tazobactam, 78% of samples were susceptible to polymixin–B , 66% of samples were sensitive to gentamicin and 56 % of samples were susceptible to amikacin .

Conclusion : The present study highlights that Pseudomonas species remain a major cause of hospital –acquired infections .Multi drug resistance was observed in most of the strains which makes the therapeutic options more difficult. Strict infection control practices are necessary.

Abstract Code: **BP-23** Author I.D.: **50**

Author Name: **Shally Kasana** Designation: **PG Resident 2nd Year**

Institutional Affiliation: **Geetanjali Medical College, Udaipur**

Co-Authors-**Dr. Anamika Vyas Professor And Head microbiology, GMCH Udaipur Dr. Megha Gupta Assistant Professor microbiology, GMCH Udaipur**

Abstract Title: **Prevalence And Antimicrobial Susceptibility Pattern Of Enteroccoci Isolated From Clinical Samples In A Tertiary Care Hospital**

Background: Enterococci are important human pathogens that cause many infections including nosocomial infections. Their increasing resistance to multiple antibiotics, especially vancomycin, poses serious therapeutic challenges. The current study aimed to assess the prevalence of Enterococcus species in clinical samples and evaluate their antimicrobial resistance patterns, with a particular focus on vancomycin resistance.

Materials and methods: A descriptive cross-sectional study was carried out from July 2024 to July 2025 in the Microbiology Department of Geetanjali Medical College and Hospital, Udaipur, India. All Enterococcus isolates obtained from urine, blood, pus, and other clinical specimens during the study period were included. Identification and antimicrobial susceptibility testing were performed according to standard procedures and Antimicrobial Susceptibility Test was carried out according to latest CLSI 2024 guidelines.

Results: Out of 7570 clinical specimens received in laboratory 266 specimens were culture-confirmed Enterococcus isolates, urine samples contributed the highest number (60.5%), followed by blood (20.3%) and pus (10.5%). Most isolates were from male patients over 60 years and primarily from ICU patients (65%), followed by inpatient wards for 35% of cases. The enterococcal species exhibited high resistance to levofloxacin (79%), ciprofloxacin (75%). Thevancomycin resistant enterococci (9%, 24/266) demonstrated high resistance to ciprofloxacin (91.7%, 22/24), levofloxacin (87.5%, 21/24) and benzylpenicillin (66.7%, 16/24).

Conclusion: The high burden of multidrug-resistant Enterococcus emphasizes the need for continuous surveillance and stringent antimicrobial stewardship. Vancomycin resistance, though low, warrants routine monitoring due to its clinical implications in critical care settings

Abstract Code: **BP-24** Author ID: **51**

Author Name: **Dr. Needa Saneef** Designation: **PG Resident**

Institutional Affiliation: **Jhalawar Medical College, Jhalawar**

Co-Authors : **Dr. Ruby Naz , Dr. Aditi Gour**

Abstract Topic: **Bacteriology**

Abstract Tittle: Comparison of CBNAAT with microscopy in diagnosis of mycobacterium Tuberculosis from sputum samples in tertiary care centre Jhalawar Medical College and Hospital

Background : Tuberculosis (TB) remains a major global health problem. Ziehl–Neelsen (ZN) smear microscopy is simple but less sensitive. Cartridge-Based Nucleic Acid Amplification Test (CBNAAT) detects TB and rifampicin resistance rapidly. This study evaluates and compares the diagnostic performance of CBNAAT versus smear microscopy.

Material And Methods : This prospective study was conducted from January to June 2025 ,On 100 sputum samples from clinically suspected pulmonary TB patients attending OPD and IPD at the TB Laboratory, Department of Microbiology, Jhalawar Medical College. Samples were processed by ZN smear microscopy and CBNAAT. The results of both methods were compared in terms of sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV).

Result: Of 100 samples, CBNAAT detected M. tuberculosis in 38 cases, whereas smear microscopy detected 26. CBNAAT identified 15 additional cases missed by microscopy, showing higher sensitivity (92.7% vs. 63.4%, $p < 0.01$). All smear-positive samples were CBNAAT-positive. CBNAAT also detected rifampicin resistance in 4 cases.

Discussion: CBNAAT showed higher sensitivity than smear microscopy and also detected rifampicin resistance, making it a more reliable tool for early and accurate TB diagnosis.

Conclusion : CBNAAT is better than smear microscopy for finding TB, especially when there are fewer bacteria in the sample. It also quickly finds rifampicin resistance, which helps in treating drug-resistant TB early. Using CBNAAT regularly can improve TB detection and control.

Abstract code: **BP 27** Author ID: **62**

Author Name: **Dr. Manish Kumar Gahanela** Designation: **PG Resident**

Institution affiliation: **Sawai Man Singh Medical College and Hospital, Jaipur.**

Co-author: **Dr. Veena Balothia, Dr. Rajni Sharma**

Abstract category: **Bacteriology**

Abstract Title: **Prevalence Of Linezolid Resistant Enterococci In Sterile Body Fluids**

Background: Enterococci are facultative anaerobic, gram-positive cocci non- motile, non- sporing. Enterococcus are normal flora of gastrointestinal tract of human and animal and female genital tract. Enterococcus species are increasingly implicated in both hospital-acquired (nosocomial) and community-acquired infections. The emergence of linezolid-resistant enterococci (LRE), especially against a backdrop of vancomycin resistance, limits treatment options and poses serious clinical and epidemiological challenges.

Materials and Methods: A laboratory-based observational study was conducted at the Department of Microbiology, SMS Medical College, period time of 4 months from february 2025 to may 2025. Samples from various departments received in Bacteriology laboratory were cultured on aerobic culture media like blood agar, MacConkey's agar and chocolate agar then incubated over night at 370 C and screened for Enterococcus species except blood. Blood first processed in BacT/ALERT 3D system (Biomerieux) then subculture on culture media and incubate after positive sign of BacT/ALERT. Isolates were identified by colony morphology, Gram staining, biochemical reactions, growth on 6.5% NaCl and bile esculin tests using standard microbiological methods and underwent antimicrobial susceptibility testing using the Kirby-Bauer disc diffusion method as per CLSI guides, with special emphasis on resistance to vancomycin and linezolid.

Results: Out of 1829 sterile body fluid samples showing positive growth, 201 (10.98%) were positive for Enterococcus species. Most positive isolates were from inpatients (IPD: 198, 98.50%) compared to outpatients (OPD: 3, 1.49%). The gender distribution among positive cases was male predominant (males: 126, 62.68%; females: 75, 37.31%). Among positive isolates, 52 (25.87%) were identified as vancomycin-resistant enterococci (VRE), with a slight male predominance (33males, 19 females). Notably, 4 isolates (2%) were linezolid-resistant (2 blood samples, 1 pleural fluid and 1 CSF sample) with 1 (75%) occurring in males and 3 (75%) in females. The study also found that Enterococcus isolates exhibited maximum resistance to ciprofloxacin (83.58%), followed by Erythromycin (75.12%), ampicillin (73.36%), high-level gentamicin (65.67%), and a lower resistance to teicoplanin (23.38%).

Conclusion: The detection of linezolid-resistant enterococci among both hospital and community-acquired infections signifies a rising antimicrobial resistance threat. The higher burden of resistance in the inpatient group underscores the role of healthcare settings in the propagation of multidrug-resistant enterococci. Growing resistance to both vancomycin and linezolid, in males and female, calls for ongoing surveillance and improved infection control, along with judicious use of antibiotics to prevent further escalation of resistance in this critical pathogen.

Absract code : **BP-28** Author I.D. : **63**

Author Name : **Chanchal Joshi** Designation : **2nd Year M.Sc.(Medicine)**

Microbiology student

Institutional Affiliation : Rajasthan University of Health and Sciences

Co-Authors : Dr. Gaurav Dalela

Abstract Category : Bacteriology

Abstract Title: Bacterial Profile, Antibiotic Resistance Pattern And Their Mechanism In Patients With Urinary Tract Infection Attending Ruhs Hospital Of Medical Sciences, Jaipur

Background: Urinary tract infections are common in community and hospital settings. Rising antibiotic resistance from misuse has reduced treatment efficacy. This study identifies causative agents, resistance patterns, and underlying resistance mechanisms of antibiotic resistance.

Materials and Methods: A retrospective study at RUHS College of Medical Sciences, Jaipur from March 2024 to February 2025 analyzed 1,255 urine specimens. Bacteria were identified by standard methods, and antimicrobial susceptibility with resistance mechanisms was assessed using Kirby–Bauer disc diffusion per CLSI guidelines.

Results: Out of 1,255 specimens, 445(35.46%) were culture-positive, yielding 278 isolates (62.47%) and 167 contaminants (37.53%) with more than three types of colonies. Gram-negative bacilli (GNB) were the most common, comprising 181 isolates (65.11%), predominantly Escherichia coli 110(60.77%), followed by Klebsiella pneumoniae 45(24.86%), Pseudomonas aeruginosa 8(4.42%), Pseudomonas spp. 7(3.87%), Pantoea 4(2.21%), Acinetobacter 2(1.10%), Enterobacter 2(1.10%), Hafnia 2(1.10%), Morganella 1(0.55%), and Citrobacter spp. 7(3.87%). Gram-positive cocci (GPC) accounted for 57 isolates (20.50%), including Staphylococcus aureus 25(43.86%), coagulase-negative staphylococci 15(26.32%), Enterococcus spp. 10(17.54%), and Streptococcus spp. 7(12.28%). Yeast isolates included Candida spp. 25(8.99%), with non-albicans Candida predominating, and Trichosporon 8(2.88%).

Gram-positive cocci exhibited highest sensitivity to linezolid (82%), teicoplanin (62%), and nitrofurantoin (66%), with moderate response to amoxiclav (35%), but high resistance to azithromycin (82%) and nalidixic acid (81%); 29.8% were methicillin-resistant (Cefoxitin-resistant, MRS). Gram-negative bacilli showed maximum sensitivity to gentamicin (67%), followed by piperacillin–tazobactam (57%) and imipenem (43%), with resistance to doxycycline (42%), ceftriaxone (63%), and cotrimoxazole (48%). Extended-spectrum β-lactamase (ESBL) was detected in 32.5%, and metallo-β-lactamase (MBL) in 23.75% of isolates. Among non-albicans Candida, itraconazole sensitivity was 64%, with high resistance to clotrimazole (88%), fluconazole (24%), and ketoconazole (16%).

Conclusion: Excessive antibiotic misuse drives resistance; therefore, judicious prescribing and robust antimicrobial stewardship by clinicians and microbiologists across healthcare settings are essential to control its emergence and limit further spread.

Absract code : **BP-29** Author ID **64**

Author Name: **Dr. Amanvir** Designation: **P.G Resident**

Institutional Affiliation: **Geetanjali Medical College & Hospital, Udaipur**

Coauthors : **Dr. Anamika Vyas**

Abstract category Bacteriology

Abstract Title: Bacteriological Profile & Antimicrobial Susceptibility Pattern of Gram-Negative Bacilli in Bloodstream Infections.

Background: Illness associated with bacterial bloodstream infections are a frequent health problem ranging from self-limiting infections to life threatening sepsis that require rapid and aggressive antimicrobial treatment. Moreover, fatalities among infected patients with gram negative bacilli are higher than those who have gram positive cocci as causative agents of bacteremia. Therefore, early pathogen detection and susceptibility profiling are crucial for early diagnosis and effective treatment.

Material & Methods: A retrospective study was conducted in the department of microbiology of Geetanjali Medical College and Hospital, Udaipur for a period of 6 months from Jan 2025 to June 2025 on all the blood culture samples received in microbiology laboratory during the study period. All the samples were incubated in Bact-Alert automated system and identification and antibiotic susceptibility pattern of the pathogens was done by Vitek-2 compact System processed following standard protocols.

Result: A total of 546 positive blood culture were analysed of which 50.4 % (273) yielded gram negative bacilli. Amongst these Escherichia coli was the predominant pathogen (33.69%) followed closely by Klebsiella pneumoniae (32.33%) and Acinetobacter spp. (9.89%). The highest proportion of gram-negative isolates (78.38%) were recovered from intensive care unit patient samples, underscoring the burden of bloodstream infections in critical care settings. The overall antimicrobial susceptibility profiling revealed fairly good susceptibility towards colistin (95.6%) followed by carbapenems (73.65%) and aminoglycosides 71.78%, Notably a rising trend was observed against cephalosporin's (60.54 %) & β-lactam/β-lactamase inhibitor combinations (65.20%).

Conclusion: Thus this study highlights the high burden of gram negative bacilli in blood stream infections with E.coli (33.69%)being the predominant pathogen. Moreover, increasing rate of antimicrobial resistance and the changing pattern of antimicrobial usage calls for a strengthened antimicrobial stewardship and ongoing resistance monitoring.

Absract code: **BP-30** Author Id- **65**

Author Name: **Rakesh Kumar** Designation: **Ph.D. Scholar**

Institutional Affiliation: **National Institute of Medical Science & Research, NIMS University Jaipur, Rajasthan.**

Coauthors: **Dr Rakesh Kumar Maheshwari, Dr Suman Lata Virdi.**

Abstract category **– Bacteriology.**

Abstract Title: **Acinetobacter in Health Care Facility: A Sustained Headache to Contain.**

Backgroud: Acinetobacter baumannii is a significant opportunistic pathogen in healthcare settings, particularly in heavy burden units. Its ability to survive in harsh conditions and acquire resistance genes has led to the emergence of multidrug-resistant (MDR), extensively drug-resistant (XDR), and pan-drug-resistant (PDR) strains. Such resistance severely limits treatment options and poses a major challenge for patient management, making it a persistent "thorn in the flesh" for clinicians.

Material& Methods: This cross-sectional study was conducted at The White Medical College and Hospital, Pathankot, between May 2024 to May 2025. Identification and Antibiotic Susceptibility Testing (AST) of clinically significant isolates, recovered from blood, endotracheal aspirates, bronchoalveolar lavage, urine, and pus was performed using VITEK-2 (BioMérieux) system and Kirby–Bauer disc diffusion method and interpreted according to CLSI guidelines (2024, 34th edition).

Results and Discussion: 174 (7.2%) clinically significant A. baumannii were isolated from 2385 specimens, predominantly from endotracheal aspirates (41%), blood (22%), and pus (15%). Isolates showed resistance towards cephalosporins (92%), carbapenems (70%), and aminoglycosides (67%), whereas susceptibility to Colistin and Tigecycline remained at 97.3% and 83.4% respectively. 73% isolates fell under the MDR category, followed by 24% XDR.

Conclusion: High MDR and XDR A. baumannii underscores urgent need for preservation of tier 4 drugs such as colistin, with cascade reporting and rational use of available options. This study indicates proper formulation and timely implementation of sustainable infection control policies to contain the dissemination of such ubiquitous pathogens.

Abstract code: **BP-31** Author ID: **69**

Author name: **Dr Vijay Laxmi Togra** Designation: **PG Resident**

Institutional Affiliation: **SMS Medical College and Hospital, Jaipur**

Co-Authors: **Dr Veena Bhalothia, Dr Rajni Sharma**

Abstract Topic: **Bacteriology**

Abstract Title- **Antimicrobial Susceptibility Pattern Of Klebsiella Species From Urinary Isolates At a Tertiary Care Hospital In Western India**

Background Resistance to multiple antimicrobial agents in uropathogens (organisms causing urinary tract infections) have emerged as one of the most challenging threats in the field of infectious diseases. Thus, it is necessary to understand the antimicrobial susceptibility pattern of uropathogens (Klebsiella species being one of the most common causative organism after Escherichia coli).

Material and Methods: This study investigates the antimicrobial susceptibility patterns of Klebsiella species isolated from urine samples at a tertiary care Hospital between April and August 2025. A total of 113 culture positive urine samples were analysed with Klebsiella species as the causative organism. Antimicrobial susceptibility testing was performed using 0.5 McFarland standard turbidity broth culture on Mueller-Hinton agar medium and Kirby-Bauer disc diffusion method & interpreted by Clinical and Laboratory Standards Institute (CLSI 2025) Guidelines.

Results: In the present study, a total 113 culture positive urine samples were analyzed with Klebsiella species as the causative organism out of which 80 (70.79%) were Klebsiella pneumonae. The results showed that Klebsiella species exhibited significant resistance to ampicillin, amoxiclav, and piperacillin/tazobactam with 85%, 69%, and 62% respectively, while higher sensitivity was observed for fosfomycin and nitrofurantoin with 79.64% and 52.21% respectively.

Conclusion: This study revealed antimicrobial susceptibility pattern of Klebsiella species can serve as a useful tool for appropriate use of antibiotics and thus minimizing the evolution of drug resistance strains in future. Antimicrobial susceptibility of microorganisms varies time to time and from place to place. Hence regular monitoring of bacterial susceptibility to antibiotics is essential and antibiogram should be prepared regularly.

Abstract code: **BP-32** Author Id: **70**

Author name: **Dr. Akanksha sharma** Designation: **PG Resident**

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Co-Authors: **Dr Suman Meena, Dr Saroj Hooja, Dr Rekha Bachhiwal, Dr Rajni Sharma**

Abstract Topic: **Bacteriology**

Abstract Title – **Antimicrobial Susceptibility Pattern of Pseudomonas species from Sputum Isolates at a Tertiary care hospital in Western India.**

Introduction: Pseudomonas is an ultimate example of the opportunistic nosocomial pathogen, which in immune compromised patients causes a broad range of infections and contributes to severe morbidity. The mortality due to nosocomial pseudomonal pneumonia is around 70 percent, despite therapy. Pseudomonas displays resistance to several antibiotics, thus endangering the option of effective therapy. This study investigates the antimicrobial susceptibility patterns of Pseudomonas species isolated from sputum samples at a Tertiary care Hospital.

Material and Methods: Pseudomonas sp. were isolated from Sputum samples in the SMS hospital. Identification of Pseudomonas sp. was done by biochemical tests. Antimicrobial susceptibility test (AST) method was done by Kirby-Bauer disc diffusion method as per CLSI (clinical and laboratory standards institute)2025 criteria. All the analysis was performed using the simple percentage method.

Results: Identification of Pseudomonas sp. was done by biochemical tests. Antimicrobial susceptibility test (AST) was done by Kirby Bauer disc diffusion method. According to CLSI (clinical and laboratory standards institute)2025 criteria Extended-spectrum β lactamase (ESBLs) production was detected by the combined disc diffusion test. Maximum susceptibility was seen with colistin and polymyxin B (95%) followed by meropenem (86.58%) and piperacillin-tazobactam (82.92%). Highest resistance was seen in cefixime (82.92%) followed by co-trimoxazole, cefoperazone/sulbactam and ciprofloxacin with (80.48%), (59.75%), (39.02%) respectively.

Discussion: The occurrence of antimicrobial susceptibility pattern of pseudomonas species in sputum in tertiary care hospital.

Conclusion: This study revealed antimicrobial susceptibility pattern of Pseudomonas species can serve as a useful tool for appropriate use of antibiotics and thus minimizing the evolution of drug resistance strains in future. Antimicrobial susceptibility of microorganisms varies time to time & from place to place. Hence regular monitoring of bacterial susceptibility to antibiotics is essential & antibiogram should be prepared regularly.

Abstract code: **BP-33** Author ID:**71**

Author name: **Dr Anisha Khan** Designation: **PG Resident**

Institutional Affiliation: **SMS Medical College and Hospital,Jaipur**

Co-Authors: **Dr Pooja Gupta,Dr Rekha Bachhiwal,Dr Saroj Hooja,Dr Rajni Sharma**

Abstract Topic : **Bacteriology**

Abstract Title- **Incidence Of Inducible Clindamycin Resistance Among Staphylococcus Aureusl solates From Pus Samples At A Tertiary Care Hospital In North-West India**

Introduction: Clindamycin is most commonly used drug in treatment of erythromycin resistant Staphylococcus aureus(S.aureus) causing skin and soft tissue infections. In vitro routine tests for clindamycin susceptibility may fail to detect inducible clindamycin resistance leading to treatment failure. Thus,it is necessary to detect such resistance by simple D test on regular basis. This study aimed to detect inducible clindamycin resistance S.aureus among isolates from pus samples.

Material & Methods: This hospital based prospective cross-sectional study was undertaken to evaluate clindamycin resistance among isolates from June to July2025. A total of 105 S.aureus isolates identified by standard microbiological procedure from pus samples were included in the study. All isolates were tested for Methicillin resistance S.aureus [MRSA] using Cefoxitin disc (30µg) by Kirby Bauer disc diffusion method. D test was performed on all isolates as per Clinical and Laboratory standards institute2025 [CLSI]guidelines.

Result: Among 105 tested, Methicillin sensitive S.aureus [MSSA] isolates were 47(44.7%) as compared to MRSA isolates which were 58(55.2%). Among the 105 isolates, 33 (31.42 %), showed Inducible clindamycin resistance of which 27(81.81%) were MRSA, 6(18.18%) were MSSA. Inducible clindamycin resistance was significantly higher in MRSA isolates as compared to MSSA isolates. Incidence of Inducible Clindamycin resistance among S.aureus isolates at tertiary care hospital.

Conclusion: This study showed that D test should be done as routine disc diffusion test to detect inducible clindamycin resistance in S.aureus strains so that clindamycin therapeutic failure can be reduced.

Abstract code: **BP-34** Author ID: **73**

Author Name: **Dr Lokender Singh Shekhawat** Designation: **PG Resident**

Institutional affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-authors: **Dr Rekha Bachhiwal, Dr Rajni Sharma**

Abstract Category: **Bacteriology**

Abstract Title: **Antibiotic susceptibility pattern of Serratia species isolated from clinical samples at SMS medical college, Jaipur.**

Background: Serratia spp are Gram-negative bacilli belonging to the Enterobacterales order. S. marcescens is the species most commonly isolated. Although Serratia spp displays relatively low virulence, it causes nosocomial infections and outbreaks in severely immunocompromised or critically ill patients. The most frequent site of infection is the bloodstream, followed by respiratory system, surgical site infections and gastrointestinal tract. Objective of study was to determine the antibiotic Susceptibility profile of Serratia spp isolated from various clinical specimens.

Material & Methods: This is a retrospective study carried out in the Microbiology department at SMS Medical College, Jaipur, from 1st Jan 2024 to 30th Apr 2025. A total of 56 Serratia spp isolated from various clinical samples were analyzed. Antibiotic susceptibility testing was done by Modified Kirby Bauer disc diffusion method as per CLSI guidelines.

Results: Out of 56 isolates, most isolates 46(82.1%) were from IPD cases. Isolates were more from male patients 38(67.8%). Maximum isolates were from the age group of 31-40yrs 16(28.5%). Isolates were maximum from pus 27(48.2%) followed by urine 8(14.2%), respiratory samples 9(16.07%) and blood 5(8.9%). Serratia marcescens was the predominant species 53(94.6%) followed by Serratia rubidaea 3(5.4%). Overall Susceptibility to various antimicrobial agent tested revealed susceptibility between 57%-85.7%. Maximum susceptibility was seen with Piperacillin-Tazobactem and Tigecycline (85.7%)followed by Cotrimoxazole (83.9%), Gentamicin (80%), Imipenem (76.7%) and least with Cefipime (57%).

Conclusion: Clinical management of Serratia spp infection is challenging due to its intrinsic and acquired resistance to different classes of antimicrobials. In view of high resistance seen in our study it is imperative to know antibiotic susceptibility pattern so as to institute targeted antimicrobial agent.

Abstract Code: **BP-35** Author I.D: **74**

Author: **Ishika Khandelwal** Designation: **Msc (Medicine) Microbiology**

Institutional Affiliation: **RUHS-CMS, Jaipur**

Co-Authors: **Dr. Nilofer Khayyam, Dr. Gaurav Dalela**

Abstract: **Bacteriology**

Abstract Title: **Antimicrobial Susceptibility Pattern Of Pseudomonas Aeruginosa From Various Samples At A Tertiary Care Hospital In Jaipur, Rajasthan**

Background: Pseudomonas aeruginosa is one of the most important pathogens isolated from various samples. It is also an opportunistic pathogen which causes chronic infections in humans, hospital acquired infections and infection in immunocompromised patients.

The aim of study is to assess the antimicrobial susceptibility pattern of Pseudomonas aeruginosa isolated from aerobic culture of various samples.

Materials And Method: A Retrospective study was conducted in the department of Microbiology involving OPD and IPD patients of RUHS-HMS, Jaipur, over a period of 1 Year from April 2024 to MARCH 2025. A total of 82 Specimens of sputum (50), blood (2), Ear swab (15), Bronchoalveolar lavage (1), pus (6), Urine (8) were collected. Pseudomonas aeruginosa was isolated by conventional methods and disc diffusion to determine the AST pattern.

Results: Out of 82 clinical samples, Extended-Spectrum Beta-Lactamase and Metallo beta-lactamase were detected in 41 (50%) and 36 (44%) isolates, respectively. High resistance seen to Oxacillin (90%) and higher sensitivity seen to Piperacillin-sulbactum (91%). The antibiotic resistance pattern is as follows nalidixic acid (89%), Ceftazidime (52%), Imepenam (50%), Polymixin-B (34%), Cefepime (26%), Ceftazidime+clavulanic acid (20%), Imepenam+EDTA (20%), Netilimicin (17%), Aztreonam (16%), Tobramycin (16%), Gentamicin (12%), Colistin (10%), Piperacillin (9%), Piperacillin+tazobactum (3%).

Conclusion: The increasing antibiotic resistance trends of Pseudomonas aeruginosa underscore the importance of implementing antimicrobial stewardship practices. Judicious selection, dosing, and duration of antimicrobial therapy, coupled with effective infection control measures, are essential to prevent the emergence and spread of drug-resistant strains."

Abstract code: **BP-36** AuthorID: **77**

Author name: **Dr. Amit Patawat** Designation: **PG Resident**

Institutional Affiliation: **Sawai Man Singh Medical College and Hospital , Jaipur**

Co-Authors: **Dr.Rameshwari Bithu, Dr.Rajni Sharma , Dr.Aditi Agarwal**

Abstract Category : **Bacteriology**

Abstract Title : A Study on the Bacteriological Profile and Antibiotic Susceptibility Pattern of Ascitic Fluid Isolates from Chronic Liver Disease Patient's at SMS Hospital, Jaipur

Background : Chronic liver disease (CLD) is often associated with the accumulation of ascitic fluid, which marks a significant disease progression. The presence of ascitic fluid in CLD patients not only reflects advanced liver dysfunction but also poses a risk for serious infections. Early detection and identification of clinically relevant microorganisms in ascitic fluid culture and determination of antimicrobial susceptibility pattern for appropriate administration of antimicrobial therapy have been shown to reduce mortality and morbidity associated with ascitic fluid infection.

Materials and Methods : A retrospective cross sectional study was conducted onAscitic fluids samples received in the bacteriology laboratory at the Department of Microbiology. The duration of study was 3 months from April 2025 to June 2025. A total of 100 cases of ascites due to chronic liver disease admitted in the sms hospital were included in the study.. Within one hour of receiving the samples, they were inoculated on blood agar and MacConkey agar and incubated for 18-24 hours at 37°C. identification was done based on conventional methods. Antibiotic susceptibility testing was performed using the Kirby-Bauer disk diffusion method.

Results : In this study, a total of 100 ascitic fluid samples were collected, of which only thirty (30%) showed growth. Among the 30 isolates, 28 were Gram-negative bacilli (GNB) and 2 gram positive cocci. 10 of the GNB were Escherichia coli (35%) while the remaining wereKlebsiellaspp (32%) and pseudomonas spp (32%). Both Gram-positive cocci were Staphylococcus aureus. All the GNB isolates were susceptible topiperacillin-tazobactam, and meropenem, with varying susceptibilities to other drugs. Both Gram-positive isolates were found to be methicillin-sensitive Staphylococcus aureus.

Conclusions : Gram-negative organisms were the predominant organisms in cases of ascitic fluid infection. Gram negative isolates showed higher sensitivity to gentamycin ,tigecyclin and were moderately sensitive to carbapenems. Majority of the gram positive organisms were sensitive to vancomycin, linezolid and moderate susceptibility was seen to aminoglycosides. . Early diagnosis and treatment of ascitic fluid infection in cirrhotic patient leads to decreased mortality/morbidity and economic burden of the patient.

Abstract code: **BP-37** Author Id- **81**

Author Name: **Dr. Nikhlesh Siwasiya** Designation: **PG Resident 1st year**

Institutional Affiliation: **SMS Medical College and Hospital Jaipur, Rajasthan.**

Coauthors **Dr Anita Singhal (Rungta), Dr Rajni Sharma.**

Abstract category – **Bacteriology.**

Abstract Title: **Urine Isolates and Their Susceptibility Pattern**

Background: Urinary tract infections (UTI's) are among the most common infections encountered in healthcare settings, both community-acquired and nosocomial. The increased prevalence of antimicrobial resistance among Uropathogens poses a significant challenge for effective UTI management, often necessitating empirical treatment before culture results are available. Continuous monitoring of local antimicrobial susceptibility patterns is crucial to guide appropriate antibiotic selection and combat the rise of MDR strains this study aimed to identify the bacterial isolates from urine samples and determine their susceptibility pattern in UTI patients.

Material& Methods: A laboratory based observational study was conducted at the Department of Microbiology, SMS Medical College, Over a time period of 3 months from April 2025 to June 2025. Urine samples from various departments received in Bacteriology laboratory were cultured and screened for different organisms including Bacterial species and fungal elements. Isolates were Identified using standard microbiological methods and Antimicrobial susceptibility testing was done using the Kirby-Bauer disk diffusion method as per CLSI guidelines.

Results and Discussion: Total urine samples collected were 9519 out of which 5011(52.64%) were sterile, 578(6.07%) contaminants and 3918(41.15%) showed positive growth. In total positive samples 2366(60.39%) were males and 1552(39.60%) were female patients. Most positive samples were from inpatients (IPD 2504, 63.92%) compared to outpatients (OPD 1413, 36.07%). Positive samples received from ICU 1417(14.88%). In positive isolates GNB's were 1777 (45.35%), GPC 550(14.03%), GNCB 94(2.39%) and 612 (15.62%) were Candida. In GNB's most common was E. coli 1096(27.97%. The study showed GNB exhibited maximum resistance to ciprofloxacin (87%), followed by Ampicillin (86%), Cefotaxime (67%), Nitrofurantoin (57%), Gentamicin (51%) and least to Tetracycline (3.2%). GPC's showed maximum resistance to Ciprofloxacin (85%), followed by Tetracycline (66%), Nitrofurantoin (58%), High Gentamicin (56%), Ampicillin (50%) and least to Teicoplanin (8%).

Conclusion: Higher of antibiotic resistance to ciprofloxacin in both GNB & GPC highlights the urgent need for updated empirical therapy guidelines, enhanced antimicrobial stewardship, and continuous surveillance programs. The high positivity of urine cultures and the immediate relief sought by patients requires a local empirical therapy plan to be in place.

Abstract Code: **BP- 38** Author ID: **82**

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Institutional Affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-Author: **Dr. Rekha Bachhiwal , Dr. Rajni Sharma, Dr. Suman Meena**

Abstract Topic: **Bacteriology**

Abstract Title: Antimicrobial Susceptibility Pattern of Methicillin Resistant Staphylococcus aureus Isolated From Various Clinical Samples at SMS Hospital,Jaipur

Background: Staphylococcus aureus is a leading cause of pyogenic infections. the emergence of Methicillin-resistant strain presents a therapeutic challenge due to limited antibiotic options. This study evaluates the magnitude of methicillin resistant Staphylococcus aureus with analysis of antimicrobial susceptibility pattern of MRSA. MRSA is prevalent in India with incidence rate varying from 25% in western parts to 50% in south India.

Material and methods: A retrospective study was conducted at Microbiology Laboratory of SMS medical college Jaipur for one year from July 2024 to June 2025. a total of 1660 isolated staphylococcus aureus were analyzed for magnitude of MRSA and antimicrobial susceptibility pattern of MRSA as per CLSI guidelines.

Result: Among 1660 Staphylococcus aureus isolates, 48.13% (784) were MRSA and 48.99% (798) were MSSA. Most MRSA cases occurred in 0–14 years (34.69%) and 15–29 years (22.19%), with male predominance (58.16%). In-patient departments accounted for 70.28% of MRSA cases, followed by OPD (23.09%) and ICU (6.63%) with the highest departmental yield from General Surgery (13.4%). Isolates were maximum in pus specimen (79.79%), followed by blood (15.72%). MRSA showed complete susceptibility to Linezolid and Vancomycin (100%) followed by Teicoplanin (82.80%), Cotrimoxazole (82.23%), Doxycycline (80.03%), Gentamicin (57.54%), Clindamycin (48.69%) and least to Erythromycin (36.59%).

Conclusion: Study highlights the higher magnitude of methicillin resistance in staphylococcus aureus along with resistance to most used antibiotics. This study demonstrates preserved susceptibility to Linezolid, Vancomycin, Teicoplanin and Cotrimoxazole, but markedly higher resistance to several other agents. As a major cause of nosocomial staphylococcus aureus infections, its multidrug resistance profile limits therapeutic options. Continued reliance on glycopeptides and oxazolidinones is warranted, with strict infection control and local antibiogram-guided prescribing is essential to curb further resistance.

Abstract code: **BP-39** Author ID: **83**

Author Name: **Dr. Bhagwan Saini** Designation: **PG Resident**

Institution Affiliation: **SMS Medical College and Attached Hospitals, Jaipur**

Co-author: **Dr. Anita Singhal, Dr. Rajni Sharma**

Abstract category: **Bacteriology**

Abstract Title: **Study of Bacterial Isolates and Antimicrobial Susceptibility Pattern of Pus Sample in a North West Indian Tertiary Care Hospital.**

Background: Pus is feature of a pyogenic infection characterised with accumulation of dead leukocytes & infectious agent. Various studies from different part of the globe have reported predictable bacteriological profile in pus samples. This guides the clinician in starting empirical therapy while awaiting specific reports. However, this profile may vary in different geographical areas along with change in antibiotic susceptibility pattern. Hence periodical monitoring of bacterial profile and their antibiotic susceptibility pattern is important.

Objective: To determine the commonly encountered pathogens in pus samples along with their antibiotic susceptibility pattern.

Materials and Methods: This study was conducted from March, 2025 to April, 2025, in SMS Medical college Bacteriology lab. Pus samples received for diagnostic microbiology were processed and identified by standard protocols. Antibiotic susceptibility test was done by Kirby Bauer disc diffusion method as per CLSI guidelines.

Result: Out of 439 pus samples received for culture and sensitivity in the microbiology laboratory, 336 (76.5%) cases yielded positive culture while 103(23.4%) cases had no aerobic growth. Out of 336 samples 32(9.5%) were normal commensals. Among the remaining 304 culture positive pus samples, 287(94.4%) yielded pure bacterial isolates and 17(5.6%) yielded mixed infection. So, a total number of 11 types of organisms were isolated out of 304 pus samples Escherichia coli (44%) was the most common isolates followed by Klebsiella spp., Pseudomonas spp. and Acinetobacter spp. Among the Gram-positive isolates, clindamycin(88%), gentamycin(82%) cotrimoxazole(46%) were the most susceptible drugs whereas among the Gram-negative isolates, the most susceptible drugs were levofloxacin(82%), cephoperazone(70%), imipenem(67%).

Conclusion: Changing antimicrobial patterns and resistance pose challenge in treating pyogenic infections. Appropriate and judicious selection of antibiotic would limit the emerging drug-resistant strains in the future to treat these clinical conditions successfully.

Abstract code: **BP40** Author ID: **84**

Author Name: **Dr Arvind Kumar Meena** Designation: **PG Resident**

Institutional Affiliation: **SMS Medical College and Hospital Jaipur.**

Co-author: **Dr Shivra Batra, Dr Rekha Bachhiwal**

Abstract category: **Bacteriology**

Abstract tittle: An Observational Study To Datect Proportion Of Toxigenic And Non-Toxigenic Straian Of Crynebacterium Diphtheriae

Background: Diphtheria, caused by Corynebacterium diphtheriae, remains a significant public health concern, especially in regions with low vaccination coverage. Differentiating between toxigenic and non-toxigenic strains is essential for guiding clinical management and public health interventions The objective of this study was to Evaluate and compare the Toxigenic and non-Toxigenic Strains of Corynebacterium diphtheriae and its seasonal variation.

Material and Methods -RTPCR

1. Sample are received at Bacteriology laboratory of Microbiology department, samples are registered and given a unique identification number.

2. All the samples were be processed for lysis with QIAGEN Protease or proteinase K.

3. Nucleic acid extracted (purified) using QIAamp Mini spin columns in a standard microcentrifuge, on a vacuum manifold, or fully automated on the QIAcube.

4. Purified DNA will be then eluted from the QIAamp Mini spin column in a concentrated form in either Buffer AE or water.

5. Master mix was prepared with the primers and probes for the real-time PCR standardised by the Department of Clinical Microbiology, Christian Medical College,

6. After addition of elute to mastermix, samples will process for PCR run and data interpretation will be done based on CT Values.

Results: Among Total 450 Patients ,154(34%) were positive Toxigenic strains and 48(10%) sample were non-toxigenic and 248(55%) were negative

Conclusion : Toxigenic C. diphtheriae is associated with more severe clinical outcomes compared to non-toxigenic and negative cases. Early diagnosis and differentiation are critical for patient management and infection control. This study underscores the importance of vaccination and coveillance to prevent outbreaks and reduce morbidity

Abstract code: **BP-41** Author Id- **85**

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Institutional Affiliation: **SMS medical college and Hospital Jaipur, Rajasthan.**

Coauthors **Dr. Rekha bachhiwal, Dr. Rajni Sharma, Dr Suman Meena, Dr. Pooja Gupta.**

Abstract category – **Bacteriology.**

Abstract Title: **Microbial Profile And Antimicrobial Susceptibility Pattern Of Bacteria Isolated From Patients Of Ear Discharge at SMS Medical College & Hospital, Jaipur**

Background: Ear discharge is the most common presenting symptom in (CSOM) pt. Spread of infection from ear causes intracranial and extracranial complications. The present study aims to assess the spectrum of bacterial infection among CSOM cases and detect the isolated organism's antibiotic sensitivity pattern among patients attending ENT department of SMS hospital, Jaipur.

Material& Methods: This is a retrospective study conducted in bacteriology department of SMS medical college Jaipur for 3 months from April 2025 -June 2025. A total of 307 bacterial isolates from ear discharge sample received in bacteriology lab were analysed for antimicrobial susceptibility testing

Results and Discussion: Out of 307 bacterial isolates, 220(71%) were from adults >18 year with male preponderance of 54%. Most frequent isolate was Pseudomonas 158(51.4%) followed by Staph. Aureus 70(22.8%), Enterobacterales 40(13%), CoNS 22(.07%) & others 17(.05%). Overall susceptibility of 158 Pseudomonas was ranging from 81% to 41% with maximum susceptibility to ceftazidime & least to ciprofloxacin. Enterobacterales showed maximum susceptibility to imipenem followed by Piptaz.All GNB were susceptible to Colistin. All 70 Staph. Aureus showed100% susceptibility to linezolid and Vancomycin and 50 (70%) were methicillin resistant. Out of 3 isolates of Enterococci 1 was resistant to vancomycin.

Conclusion: Pseudomonas is the predominant bacterial isolate in patients with CSOM ear discharge, exhibiting significant resistance to commonly used antibiotics. The findings highlight the pressing need for routine antimicrobial susceptibility testing to guide effective treatment strategies and address the emerging threat of multidrug resistant organism.

Abstract Code: **BP-42** Author ID: **88**

Author Name: **Dr. Seema Paliwal** Designation: **PG Resident**

Institutional Affiliation: **J.L.N. Medical College & Hospital Ajmer**

Co-Authors: **Dr. Vijaylatha Rastogi, Mudit Singh, Bhawana Jhorawat, Dr. Neha Agarwal**

Abstract category: **Bacteriology**

Abstract Title: **In-Vitro Antibacterial Efficacy Of Crude Ethnobotanical Fumigant Extract On Carbapenem-Resistant Gram-Negative Bacteria Isolated From Clinical Samples**

Introduction: Carbapenem-resistant Gram-negative bacilli (CR-GNB) have emerged as one of the most challenging threats in the field of infectious diseases due to their resistance to multiple antibiotics, ability to spread quickly and cause healthcare associated infections with limited treatment options. This study was undertaken to know the prevalence of carbapenem resistance in clinical isolates and determine their susceptibility to a novel ethnobotanical fumigant extract in a quest to search for antibacterial alternatives.

Material & Methods- A total of 710 patient samples received for bacteriological culture were processed prospectively using standard techniques and isolates identified by MALDI-TOF. Screening for carbapenem resistance was done by Kirby Bauer disk diffusion method following CLSI 2023 guidelines using Meropenem 10 µg disk. Modified carbapenems inactivation method was performed as confirmatory test for detection of carbapenems production in these isolates. Klebsiella pneumoniae ATCC BAA1705 & BAA1706 were used as positive and negative control respectively. Essential oil (EO) extract was prepared from crude ethnobotanical fumigant mixture. Chemical profiling was done by Gas Chromatography–Mass Spectrometry (GC-MS). EO 16-256 µg/mL was then tested against CRGNB by the microbroth dilution method.

Results- Escherichia coli and Klebsiella pneumoniae were the most commonly identified pathogens. All carbapenem resistant strains showed resistance to a broad range of antibiotics. 100 % growth inhibition was seen on all strains at MIC of 256 µg/mL. GC-MS results revealed an array of bioactive compounds known to have antibacterial and holistic health benefits.

Conclusion- Crude ethnobotanical fumigant extract showed 100% efficacy against all carbapenem resistant isolates at the highest MIC tested. This opens up avenues for novel drug discovery in the management of difficult to treat CRGNB.

Abstract Code: **BP-43** Author Id:**93**

Author:**Parveen** Designation: **Ph.D. Scholar**

Institutional Affiliation: **National Institute of Medical Sciences & Research, Jaipur**

Co-authors: **Dr. Shama Tomor**

Abstract Title: **Antimicrobial Susceptibility Pattern and Serotyping of Isolates Isolated From Urinary Tract Infection Patient Admitted In Tertiary Care Hospital**

Abstract category: **Bacteriology**

Background: Urinary tract infections (UTIs) are among the most prevalent bacterial infections worldwide, frequently complicated in hospitalized patients due to comorbidities, invasive procedures, and antimicrobial resistance. Escherichia coli and Klebsiella pneumoniae remain the leading uropathogens, with multidrug resistance and extended-spectrum β-lactamase (ESBL) production posing significant therapeutic challenges. Serotyping of isolates provides epidemiological insights and aids in surveillance of virulent clones.

Aim: To determine the antimicrobial susceptibility pattern and serotyping of bacterial isolates from urinary tract infection patients admitted in a tertiary care hospital.

Methods: This prospective observational study was conducted at NIMS Hospital, Jaipur, from February 2022 to January 2023. A total of 640 urine samples were collected from admitted patients with clinically suspected UTIs. Standard microbiological methods were used for culture, identification, and antimicrobial susceptibility testing (CLSI guidelines). Serotyping was performed for major isolates.

Results: Of the 640 samples, significant growth was observed in 233 (36.4%) cases, while 407 (63.6%) showed no growth. Gram-negative isolates predominated (198, 30.9%) compared to Gram-positive isolates (35, 5.4%). Escherichia coli was the most common pathogen (124, 62.6% of Gram-negatives), followed by Klebsiella pneumoniae (20, 10.1%), Klebsiella spp. (18, 9.1%), and Pseudomonas spp. (25, 12.6%). Among Gram-positives, Staphylococcus aureus (23, 65.7%) and Enterococcus spp. (10, 28.6%) were dominant. Antimicrobial susceptibility revealed high resistance to ampicillin, cephalosporins, and fluoroquinolones, with better sensitivity to nitrofurantoin, Fosfomycin, amikacin, and carbapenems. Serotyping of E. coli isolates identified predominant O-serogroups associated with multidrug resistance, underscoring their clinical relevance.

Conclusion: This study highlights E. coli as the principal UTI pathogen in hospitalized patients, with rising multidrug resistance posing therapeutic challenges. Nitrofurantoin, Fosfomycin, and aminoglycosides remain effective options. Regular surveillance of susceptibility patterns and serotyping is essential for guiding empirical therapy, strengthening antimicrobial stewardship, and preventing dissemination of high-risk clones in tertiary care settings.

Keywords: Urinary tract infection, antimicrobial susceptibility, multidrug resistance, E. coli, serotyping, tertiary care hospital.

Abstract Code: **VP-01** Author Id:**11**

Author: **Dr. Anamika Sharma** Designation:**P.G. Student II Year**

Co-Author: **Dr.GeetaParihar, Dr.Jyotsana chandwani, Dr.Vijaylatha Rastogi.**

Institute: **Jawahar Lal Nehru Medical College & Hospital, Ajmer**

Abstract Category :**Virology**

Abstract Title: A Rare Case Report of Indeterminate Case of HIV from a Tertiary Care Hospital in Central Rajasthan.

Background: "HIV infection has always been a scourge of mankind and an increase in indeterminate cases, have increased the challenge of diagnosis, especially in this case". If the specimen gives a reactive result with two E/R (enzyme/recombinant) and non-reactive Result with the third assay, it is reported as "indeterminate". A high-risk individual having one test result reactive and other two tests result non-reactive considered as "indeterminate". This study discusses about such a case, involving a patient with a high-risk exposure to HIV. Despite this significant risk, repeated testing continues to show these unclear, indeterminate results. This isn't common, especially with a strong exposure history. It forces us to investigate further. This case truly shows the complexities of HIV diagnosis.

Material &Method: In August 2024,a 34-year-old woman visited the Medicine OPD at JLN Medical College, Ajmer, with symptoms including mild fever, weakness, oral ulcers, and signs of peptic ulcer disease. In this case three tests used for diagnosis these are first test Combs based on (Enzyme immunoassay)-second test Standard based on (Immunochromatography), third test Tridot based on (Immunoconcentration).

Result: HIV testing at the ICTC lab showed discordant results: the first and third tests were non-reactive, while the second was reactive. Following NACO Strategy III, a repeat test was advised. As results remained indeterminate, the sample was referred to the National Reference Laboratory, where Western blot confirmed HIV positivity, still the first test suppose to be the most sensitive test remaining non reactive.

Conclusion: This case highlights the limitations of the current three-test algorithm and Stresses the need for standardized protocols and continuous follow-up in indeterminate cases to improve diagnostic accuracy and detect possible seroconversion.

Abstract code:**VP-02** Author ID: **12**

Author name: **Dr. Payal Tailor** Designation: **2ndyr Resident**

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Co-Authors: **Dr.Surbhi Mathur, Dr.Rohitash Sharma, Dr.Jyotsana Chandwani, Dr.Geeta Parihar**

Abstract category: **Virology**

Abstract Title: **A rare case of measles with superimposed infection of diphtheria**

Background: Measles is an infectious disease caused by Morbillivirus, with a secondary attack rate in excess of 80% that usually affects children. Diphtheria is a potentially fatal, toxin-mediated, infectious disease of children caused by Corynebacterium diphtheriae, which confirmed by further detailed clinical & laboratory evaluation. As per reported data both infections found separately, But on detailed clinical examination patient suspected a rare case of measles with superimposed infection of diphtheria, because of which this case was discussed.

Material & Method: An unvaccinated 3 years old child presented with measles-like symptoms and respiratory distress. Laboratory investigations confirmed superimposed Corynebacterium diphtheriae infection, highlighting the significance of microbiological diagnosis in managing co-infections in unimmunized patients. A throat swab from a clinically suspected diphtheria case was processed using Gram stain, Albert stain, culture on Loffler's serum slope and blood agar, and biochemical tests.

Result: Microscopy revealed pleomorphic, gram-positive bacilli in cuneiform V and L-shaped arrangements. Characteristic colony morphology and positive urease and sugar fermentation confirmed Corynebacterium diphtheriae. Toxin analysis was not performed due to resource constraints. The child was admitted to PICU, received antitoxin and modified antimicrobial therapy, resulting in clinical recovery.

Conclusion: This case underscores the importance of classical microbiological methods in resource-limited settings and highlights the need for immunization to prevent severe, vaccine-preventable infections and co-infections.

Policymakers must ensure high vaccine coverage, while public health authorities should promote awareness to enhance acceptance and eliminate measles and diphtheria as vaccine-preventable diseases.

Abstract code: **VP-03** Author ID: **41**

Author name: **Dr Archana Choudhary** Designation: **PG Resident**

Institutional Affiliation: **SMS medical college Jaipur**

Coauthors :**Dr S.K. Singh , Dr Bharti Malhotra, Dr Nita Pal**

Abstract category: **Virology**

Abstract Title: **Observational Study of Influenza virus A and its Subtype H1N1 in Pediatric Patients in a Tertiary CareHospital, Jaipur**

Introduction: Influenza Virus A, particularly its H1N1 subtype, is a significant cause of respiratory illness in children worldwide. Paediatric populations are especially vulnerable to complications leading to increased hospitalization and morbidity. This observational study aimed to evaluate the prevalence, clinical presentation and outcomes of Influenza A and H1N1 infections in paediatric patients in a tertiary care hospital.

Objective: To study the occurrence of Influenza A and its subtype H1N1 among paediatric patients in a tertiary care hospital.

Methods: A hospital-based observational study was conducted over a period of one year in the microbiology department of a tertiary care hospital. A total of 50 children aged 6 months to 15 years, presenting with influenza-like illness (ILI), were enrolled. Nasopharyngeal swabs were collected and tested using real-time reverse transcriptase polymerase chain reaction (RT-PCR) for Influenza A and H1N1 sub-typing. Clinical details and outcomes were recorded and analysed.

Results: Out of the 50 paediatric patients included in the study, Influenza A virus was detected in 32 cases (64%), of which 18 cases (56.25%) were confirmed to be the H1N1 subtype through RT-PCR testing. The remaining 14 Influenza A positive cases were non-H1N1 subtypes. The age distribution ranged from 6 months to 15 years, with the highest incidence observed in the 1–5 years age group (40% of total cases). A slight male predominance was noted with 28 males (56%) and 22 females (44%).

Discussion: The occurrence of Influenza A virus and its subtype H1N1 in paediatric patients in a tertiary care hospital.

Conclusion: Influenza A, particularly the H1N1 subtype, continues to affect a significant proportion of paediatric patients, especially during seasonal peaks. Early diagnosis using RT-PCR and timely antiviral treatment play a crucial role in reducing disease severity and improving outcomes in children.

Keywords: Influenza A, H1N1, paediatric, respiratory infection, RT-PCR.

Abstract code: **VP-04** Author ID: **52**

Author Name: **Dr Rakesh Kumar Saini** Designation: **PG Resident**

Institution Affiliation: **SMS Medical College and Attached Hospitals, Jaipur**

Co-author: **Dr. S.K Singh, Dr. Pooja Choudhary**

Abstract category: **Virology**

Abstract Title:-**Incidence of Rubella Infection in Vaccinated Vs Nonvaccinated**

Population (0–15 Years) Over a 6-Month Period at a Tertiary Care Centre

Background: Rubella, a mild viral illness, can have serious public health implications due to its potential to cause congenital rubella syndrome when contracted during pregnancy. Routine childhood immunization with the rubella-containing vaccine has significantly reduced disease burden, yet gaps in vaccination coverage continue to permit outbreaks. This study evaluates the incidence of rubella infection in vaccinated versus nonvaccinated children aged 0–15 years at a tertiary care centre over a 6-month period.

Objective: To assess and compare the incidence of laboratory-confirmed rubella infection among vaccinated and non-vaccinated children aged 0–15 years.

Methods: A prospective observational study was conducted over 6 months in the Pediatric Department of a tertiary care hospital. Children aged 0–15 years presenting with fever, rash, and lymphadenopathy were screened. Vaccination status was documented via immunization records or caregiver interview. Blood samples were tested for rubellaspecific IgM antibodies. The study population was divided into vaccinated and nonvaccinated groups, and incidence rates were calculated and compared statistically.

Results: Out of 3356 children screened,1312(39.09%) were vaccinated, and 2044 (60.90%) were non-vaccinated. Rubella IgM was positive in 15 vaccinated children (1.14%) and in 26 non-vaccinated children (1.27%). The difference in incidence was statistically significant ($p < 0.001$), indicating a strong protective association with vaccination.

Conclusion: This study highlights a significantly higher incidence of rubella infection among nonvaccinated children, emphasizing the effectiveness of rubella vaccination in the 0–15 year age group. The results underscore the urgent need to strengthen routine immunization programs, improve vaccine coverage, and address hesitancy, particularly in underserved areas. Targeted public health interventions are crucial to achieving rubella elimination goals.

Abstract code: **VP-05** Author ID: **54**

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Institutional Affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-Authors: **Dr. Rameshwari Bithu, Dr Manju Yadav, Dr Mahesh Yadav**

Abstract category: **Immunology**

Abstract Title: **Seroprevalence And Seasonal Variation of Hepatitis A Infection At A Tertiary Care Hospital, Jaipur.**

Background: Hepatitis A virus (HAV) is an important and common cause of viral hepatitis worldwide with major differences in geographical endemicity and clinical characteristics. It is usually a self-limited disease but can result in fulminant hepatitis and death and it is a significant cause of morbidity and socioeconomic losses in many parts of the world. So, the aim of our study is to determine the seroprevalence and seasonal variation of hepatitis A infection among patients attending at a tertiary care hospital at Jaipur.

Material & Methods: A retrospective cross-sectional study was conducted on individuals who were prescribed for anti-HAV testing. A total of 5956 serum samples of suspected patients of HAV were collected for over a period of 1 year from January 2024 to December 2024 and analyzed for IgM antibodies of HAV by ELISA method.

Results: Out of the 5956 patients tested, 1.02% (61) were positive. Males constituted the majority 60.65% of the total positive samples. Age group of 15-30 years showed the highest positivity. Hepatitis A cases were commonly observed in the month of June to October. Highest number of hepatitis A cases were observed in the month of September.

Conclusion: HAV infections are prevalent infections among clinically suspected acute viral hepatitis patients and remain a major health problem in developing countries. The study shows that outbreaks mainly occur during June - October and highlights the key role of hygiene and sanitary in the transmission of hepatitis A virus.

Abstract code: **VP-06** Author ID: **58**

Author Name: **Dr. Sonali Gowal** Designation: **PG Resident**

Institutional Affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-Authors: **Dr. S.K. Singh, Dr. Pooja Choudhary**

Abstract Category: **Virology**

Abstract Title- Study On Prevalence Of Measles In Population Of Rajasthan In A Tertiary Care Hospital, Jaipur

Background: Measles highly infectious and potentially fatal viral infection affecting children characterised by fever, respiratory symptoms and maculopapular rashes and the leading cause of child mortality in India which is vaccine preventable . A critical component of laboratory surveillance for Measles is by detecting IgM antibodies.

Measles is preventable through vaccination and the Measles – Rubella (MR) vaccine is a part of routine immunization program. Global and national efforts aim at eliminating measles through widespread immunization, surveillance and outbreak response.

Material and Methods: The present study is based on the serum samples received from January 2025- June 2025 (six months data for measles serology)in Measles Rubella Laboratory, Department of Microbiology, SMS Medical College, Jaipur from the various districts of Rajasthan. A total of 3356 Serum or plasma samples were tested using ELISA for IgM Antibodies against Measles virus nucleoprotein.

Results: Out of 3356 samples received, 717 samples were positive for Measles, 60 samples were equivocal for Measles.127/717 (17.71%) subjects unknown to their vaccination history, 253/717(35.28%) of the subjects are vaccinated and 263/717(36.68%) have not been vaccinated and 74/717(10.32%) were not in the eligible vaccination age group.

Conclusion: Measles continues to affect a significant proportion of paediatric patients especially during seasonal peaks. Increased vaccine coverage, timely investigation and application of specific control measures can control the outbreak. Special attention is required for high risk areas like urban slums, migratory population, minority settlements, etc.

Abstract code: **VP-07** Author ID: **60**

Author Name: **Dr.Arinish Vineet Massey** Designation: **PG Resident**

Institutional affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-authors: **Bharti Malhotra, Nita Pal, Abhishek Sharma, Sandeep Gupta, Madhavi Vyas, Sakshee Gupta, Simmi Bhatt , Anisha Chawla**

Abstract category: **Virology**

Abstract Title: **An Observational study to identify Microbial Profile causing Menigoencepalitis using Biofire ME panel at SMS Medical College and attached hospital, Jaipur**

Background: Meningoencephalitis is a life-threatening clinical condition caused by a wide range of microbial agents including bacteria, viruses, and fungi. Prompt identification of the causative pathogen is essential for early and appropriate treatment. Traditional diagnostic methods are often time-consuming and may lack sensitivity. The BioFire® FilmArray® Meningitis/Encephalitis (ME) Panel is a rapid multiplex PCR-based diagnostic tool that simultaneously detects 14 common pathogens directly from cerebrospinal fluid (CSF).

Materials and Methods: This hospital-based prospective study was conducted in Advance Research Lab at Department of Microbiology, SMS Medical College and Attached Hospitals, Jaipur between July 2024 and May 2025. A total of 130 CSF samples were collected from patients clinically suspected of meningoencephalitis. The samples were tested using the BioFire FilmArray ME Panel, and the distribution of viral, bacterial, and fungal pathogens was analyzed. Clinical correlation and demographic details were also recorded.

Results: Out of 130 samples tested, 44 (33.8%) were positive. Viral infections were predominant, accounting for 61.4% of positives, followed by bacterial (31.8%) and fungal (6.8%) causes. Among children (n=15), the most common pathogens were CMV (n=4), HSV-1 (n=3), and Streptococcus pneumoniae (n=2). In adults (n=29), VZV (n=8), Streptococcus pneumoniae (n=6), and HSV-1 (n=4) were the leading agents. Fungal infection with Cryptococcus was identified in one adult case. Overall, HSV-1 (n=7) and Streptococcus pneumoniae (n=8) were the most frequent pathogens detected across both age groups.

Conclusion: The BioFire FilmArray ME Panel is a valuable molecular diagnostic tool for the rapid and accurate detection of pathogens causing meningoencephalitis. Its integration into routine clinical practice can significantly improve patient outcomes by enabling timely therapeutic interventions, especially in resource-constrained settings.

Abstract code: **VP-08**

Author Id- **86**

Author Name: **Dr. Shrey Gupta**

Designation: **PG Resident 1st year**

Institutional Affiliation: **SMS medical college and Hospital Jaipur, Rajasthan.**

Coauthors: **Dr. Sarita Sharma, Dr. Himanshu Sharma, Dr. Pratibha Sharma, Dr. Nita Pal, Dr. Bharti Malhotra**

Abstract category – **Virology.**

Abstract Title: **Seroprevalence and seasonal variation of suspected cases of Hepatitis Virus Infection in patients with raised liver enzymes at a tertiary care hospital, Jaipur**

Background: Acute viral hepatitis (AVH) is a major public health problem and is an important cause of morbidity and mortality, so the study was conducted to determine the prevalence of hepatitis A virus (HAV), hepatitis B virus (HBV), hepatitis C virus (HCV) and hepatitis E virus (HEV) as causes of AVH in a tertiary care hospital in Jaipur.

Material & Methods: A prospective cross-sectional study was conducted on suspected cases of hepatitis having clinical signs & symptoms and raised liver enzymes. A total of 780 serum samples of suspected cases were collected and tested in advance research lab VRDL for over a period of 1 year from January 2024 to December 2024 and ELISA was done.

Results and Discussion: Out of the 780 samples tested, 153 (19.6%) were found positive out of which 6.7% (53/780) were HAV IgM positive, 10.7% (84/780) were HBsAg positive, 1.9% (15/780) were anti-HCV positive cases and 1 case was found HEV IgM positive. Hepatitis cases were more prevalent in the month of June to October. Highest number of Hepatitis cases were observed in the month of August.

Conclusion: Hepatitis Virus infections remain a major health problem in developing countries. The study shows that maximum cases occur during June - October and Safe blood practices helps in the reduction of Hepatitis B & C cases and proper hygiene and sanitation management helps in reduction of Hepatitis A& E cases of viral infection.

Absract code : **MP-01**

Author Id: **04**

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Institutional Affiliation: **National Institute of Medical Sciences and Research, Jaipur, Rajasthan.**

Co authors : **Dr. Siva Prasad Reddy B, Dr. Nisha Rathor, Dr. Sanjeev Attry, Dr. Kamlesh Kumar**

Abstract category: **Mycology**

Abstract Title: **Case Report: A Case Of Cryptococcal Meningitis In a Male Patient With Old Pulmonary Tuberculosis.**

Introduction: Cryptococcus is an important opportunistic pathogen. Recent data reveals a significant prevalence of cryptococcal infections in developing nations like India. Cryptococcal meningitis is uncommon in patients with normal immune systems and is mainly a disease of patients who are immunocompromised, the majority presenting with minor symptoms.

Case report: We describe a case of 72-years-old male patient with a normal immune system who presented to the Neurology department at NIMS Hospital Jaipur, India, with acute onset of altered sensorium, headache, fever, abnormal body movement, left upper limb weakness, and neck rigidity. Cryptococcal antigen test of cerebrospinal fluid was positive, India ink showed capsulated yeast cells and Sabouraud's dextrose agar culture also showed positive growth. High resolution computerized tomography (HRCT) of chest showed signs of old Koch's chest. He was treated with amphotericin B and discharged nearly after one week of hospital stay because patient's family members took leave against medical advice (LAMA). But patient died at home after 10 days due to respiratory failure as the patient refused to take medicines at home.

Discussion: Cryptococcus belongs to the genus basidiomycetes fungi comprising over 30 species that are widely present almost everywhere. Cryptococcus neoformans and

Cryptococcus gattii are more common in causing cryptococcosis in humans. Cryptococcus neoformans has distributed worldwide. There are more than 1 million cases of cryptococcal meningitis reported worldwide with more than 600,000 deaths annually. Mortality rates in patients with normal immune systems are high due to delayed diagnosis and treatment of fungal infections.

Conclusion: Cryptococcal meningitis in immunocompetent individuals is rare. However, a high clinical suspicion and early diagnosis avoids infections with high rate of mortality and morbidity. In cases of insidious headache, neck stiffness, and profoundly altered mental status, a history of pulmonary tuberculosis, cryptococcal meningitis should be considered, even in patients with normal immune systems.

Abstract code: **MP- 02**

Author ID:**39**

Author name: **Dr Sonam singh**

Designation:**PG Resident**

Institutional Affiliation:**SMS Medical College and Hospital, Jaipur**

Co-Authors:**Dr R.K. Mishra , Dr Rajni Sharma**

Abstract Topic :**Mycology**

Abstract Title- **Detection Of Endogenous Fungal Infection In Endophthalmitis Patients In SMS Medical College And Hospital, Jaipur (Rajasthan)**

Introduction: Endogenous fungal endophthalmitis is a rare but sight threatening intraocular infection resulting from hematogenous dissemination of fungal organism to the eye. It is most commonly associated with systemic candidemia and occurs in immunocompromised individuals , intravenous drug users or patients with indwelling catheters. Early diagnosis and timely antifungal treatment are essential to prevent irreversible vision loss.

Material & Methods: A retrospective cross sectional study was conducted on patients presenting with clinical features of endogenous endophthalmitis.A total of 50 samples of Vitreous and Aqueous tap of suspected endogenous fungal endophthalmitis patients were collected over a period of 6 month from January 2025 to June 2025 and analyzed for fungal element by KOH mount , Grams staining , culture and species identification by Maldi TOF

Result and Discussion: Out of 50 samples analyzed , fungal growth was detected in 5 cases(10%) , all identified as Candida species.The remaining 45 samples (90%) showed no fungal growth.Among the positive cases , Candida albicans was the most common isolate, present in 3 cases(60%) , followed by Candida glabrata in 1 case(20%) and Candida parapsilosis in 1 case(20%)

Conclusion: Endogenous fungal endophthalmitis remains a diagnostic and therapeutic challenge.High clinical suspicion and microbiological investigations are important for effective management.Rapid diagnostic tools and antifungal therapies may improve patients outcomes.Visual prognosis was poor in cases with delayed diagnosis

Abstract Code: **MP-03**

Author ID: **40**

Author Name: **Dr. Salam Jashida Devi**

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Institutional Affiliation: **Sardar Patel Medical College, Bikaner**

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Abstract category: **Mycology**

Abstract title: **Prevalence And Distribution Of Aspergillus Species In Respiratory Samples: A Retrospective Study At a Tertiary Care Hospital In Bikaner, Rajasthan**

Background: Aspergillus species are ubiquitous environmental fungi that can cause a spectrum of respiratory illnesses ranging from allergic reactions to invasive pulmonary aspergillosis, particularly in immunocompromised individuals. Early detection and speciation is critical for appropriate management. This study aimed to determine the prevalence of Aspergillus and distribution of various Aspergillus species in respiratory samples processed in the Microbiology Department.

Materials & Methods: A retrospective analysis was conducted on 619 respiratory samples including sputum, bronchoalveolar lavage, endotracheal aspirates and pleural fluid collected over a period of 6months i.e.from January2025 to June 2025 . Samples were cultured on Sabouraud Dextrose Agar with or without antibiotics and incubated for fungal growth. Identification of Aspergillus species was performed using standard morphological and microscopic criteria.

Results: Out of 619 respiratory samples, 349samples (56.4%) showed positive fungal growth. Among these, Aspergillus species were isolated in 75 cases (21.5% of fungal positives). The most frequently isolated species was Aspergillus fumigatus (34 cases, 45.3%), followed by A. flavus (18 cases, 24.0%), A. niger (18 cases, 24.0%), and A. terreus (5 cases, 6.7%).

Conclusion: This study demonstrates a notable prevalence of Aspergillus species in respiratory samples, with A. fumigatus being the most common isolate. These findings emphasize the importance of fungal cultures in the diagnostic work-up of patients with suspected fungal respiratory infections, especially in high-risk populations such as immunocompromised patients for timely diagnosis and appropriate management of aspergillosis.

Abstract code: **MP-04** Author ID: **47**

Author Name: **Dr. Anita Sabarwal** Designation: **PG Resident**

Institutional affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-authors: **Dr. Aruna Vyas, Dr. Nazneen Pathan, Dr. Malvika Sharma, Dr. Divya Shekhawat**

Abstract Category: **Mycology**

Abstract Title: **Magnitude Of Cryptococcal Infection Using Cryptococcal Antigen Detection Kit In Suspected Cases Of Meningitis in SMS Hospital, Jaipur, Rajasthan.**

Background: Cryptococcosis is a potentially life-threatening systemic disease caused by encapsulated basidiomycetous yeast belonging to genus Cryptococcus. Cryptococcosis primarily affect immunocompromised patients, due to lack of effective cell mediated immunity, the infection disseminate to extra-pulmonary sites through hematogenous route to different body parts particularly CNS. So, the aim of our study was to detect the magnitude of cryptococcal infection using a cryptococcal antigen detection kit in suspected cases of meningitis in SMS Hospital, Jaipur.

Material & Methods: A retrospective cross-sectional study was conducted to detect the magnitude of cryptococcal infection using cryptococcal antigen detection kit in suspected cases of meningitis. A total of 101 CSF/serum samples of suspected patients of meningitis were collected for over a period of 1yr from July 1, 2024 to June 30, 2025 and analyzed for cryptococcal infection using a cryptococcal antigen detection kit (Lateral flow immunochromatographic test). In addition to antigen detection, Indian ink staining and culture were also carried out.

Results: Out of the 101 patients tested, 6.93% (7) were positive for cryptococcal antigen. 57.14%(4) samples that tested positive for cryptococcal antigen also yielded positive result with indian ink staining, and only 28.57% (2) of cryptococcal antigen positive patient showed a positive culture result. Among the positive samples, 71.43% (5) of patients were HIV-positive with CD4 counts below 200, while the remaining 28.57% (2) were tuberculosis patients.

Conclusion: Cryptococcal meningitis is a leading cause of infectious morbidity and mortality in immunocompromised patients. As the finding of present study indicated, infection with Cryptococcus species is a significant challenge in immunocompromised patients. So the cryptococcal antigen detection by "Lateral flow immunochromatographic test" can enhance early diagnosis, early treatment, and ultimately improve clinical outcomes compared to the traditional diagnostic test.

Abstract code: **MP-05** Author Id: **57**

Author name : **Dr. Divya Choudhary** Designation: **JR-1 PG Resident**

Institutional Affiliation: **SMS Medical College, Jaipur**

Coauthors: **Dr. Malvika Sharma, Dr. Divya Shekhawat, Dr. Nazneen Pathan , Dr. Aruna Vyas**

Abstract category: **Mycology**

Abstract title: **Prevalence of Aspergillus species in Various Clinical Samples .**

Background : In recent times, it has become important to determine the prevalence of different Aspergillus species in clinical samples in view of difference in antifungal susceptibility noted in some species.Invasive fungal infections have increased in last two decades due to greater numbers of immunocompromised patients. It is important to detect Aspergillus for initiation of timely therapy. The objective of the study was to determine the species prevalence of Aspergillus isolates in various clinical samples received in the Mycology Laboratory , Microbiology department , SMS Medical College, Jaipur.

Material and Methods : The study was carried out in a time span of 3 months with a sample size of 1125 samples of suspected fungal infections received in Mycology Laboratory , Department of Microbiology , SMS Medical College , Jaipur. Samples were processed and cultured on Sabouraud Dextrose Agar (SDA) . Cultures were incubated at 25 °C and 37°C and monitored for fungal growth over 21 days . Aspergillus species were identified from the growth obtained based on macroscopic colony morphology and microscopic characteristics using lactophenol cotton blue staining.

Results : Among the 1125 patient samples received , 89 (7.9%) samples were positive for Aspergillus species . Out of the total positive samples, 33(37%)patients were immunocompromised, 21 (23%)patients were diagnosed cases of tuberculosis and 11(12%)patients had history of chronic lung disease . Out of total positive samples , 65 (73%) were males and 24(27%) were females. Among the positive samples 50 (56%) were Aspergillus niger, 18 (20.22%) were Aspergillus flavus, 16 (18%) were Aspergillus fumigatus

Conlusion : Aspergillus , particularly in immunocompromised individuals remain a significant cause of morbidity and mortality . Early diagnosis and prompt initiation of appropriate antifungal therapy is critical for improving patient outcome.

Abstract code : **MP – 06** Author code : **59**

Author name : **Dr. Sonam Sharma** Designation : **JR -1 PG Resident**

Institutional Affiliation : **SMS Medical college, Jaipur.**

Coauthors : **Dr. Malvika sharma, Dr. Nazneen pathan, Dr Divya shekhawat, Dr. Aruna vyas.**

Abstract Title : **Percentage of Positivity of Zygomycetes in Tissue Samples Received in the Mycology Laboratory, Microbiology Department, SMS Medical College, Jaipur.**

Aim And Objectives: Background: Zygomycetes are opportunistic fungi, can cause mucormycosis, especially in immunocompromised patients. Commonly includes Rhizopus, Mucor, Lictheimia (Absidia).

Tissue invasion is a hallmark: Zygomycetes exhibit strong angioinvasion - causing thrombosis, ischemia, and extensive necrosis.

KOH examination is a key to early diagnosis and for further speciation Fungal culture can be done. The objective of this study was to determine the percentage of positivity of Zygomycetes in tissue samples received in the Mycology laboratory, Microbiology department, SMS Medical College, Jaipur.

Material And Method : A total of 63 samples were received from suspected cases of mucormycosis in the span of 6 months (Feb to July 2025) .

KOH examination performed followed by Fungal culture at mycology department of microbiology, SMS Medical college , Jaipur.

Results : Out of total 63 samples tested for Zygomycetes, 11 (17.46%) were positive on both KOH and Fungal culture and 9 (14.2%) were positive on Fungal culture.

8 isolates were identified as rhizopus species.

3 isolates were identified as mucor species.

Out of total positive samples, 8(72%) were males and 3(27%) females.

Conclusion : Zygomycetes remain a significant cause of invasive Fungal infection in at-high risk patients. Screening high risk patients for early tissue sampling may improve survival rates. Early diagnosis is helpful in antifungal therapy and surgical intervention.

Abstract code: **MP-07** Author ID: **61**

Author Name: **Dr. Rishikesh Meena** Designation: **PG Resident**

Institution Affiliation: **SMS Medical College and Attached Hospitals, Jaipur**

Co-author: **Dr. R. K. Mishra, Dr. Rekha Bachhiwal, Dr. Rajni Sharma**

Abstract category: **Mycology**

Abstract Title: **Unmasking Candida: Epidemiological Insights and Resistance Trends in Tertiary ICUs at SMS Hospital, Jaipur, Rajasthan**

Background: Candidemia, a bloodstream infection by Candida species, is a major cause of morbidity and mortality in ICU patients. Rising cases of non-albicans Candida and antifungal resistance complicate treatment. Early species identification and susceptibility profiling are vital for guiding therapy and improving outcomes.

Materials and Methods: The hospital-based prospective study was conducted in the Bacteriology Lab at SMS Medical College and Attached Hospitals, Jaipur, between July 2024 and May 2025. All patients admitted to the ICU with clinical suspicion of bloodstream infection were included. A total of 110 Blood cultures were processed using automated methods for species identification (MALDI-TOF MS) and antifungal susceptibility (VITEK 2 AST). Data on patient demographics, clinical parameters, and outcomes were collected and analyzed.

Results: Among 110 Candida isolates, neonates and infants were most affected (70%), with male predominance (72.7%). Non-albicans Candida accounted for 89.1% of cases, chiefly C. krusei and C. tropicalis (each 32.7%), followed by C. glabrata (17.3%), C. albicans (10.9%), and C. parapsilosis (6.4%). C. krusei (89%) and C. glabrata (79%) showed high resistance to fluconazole and flucytosine. C. tropicalis had moderate flucytosine resistance (61%) but low fluconazole resistance (11%). C. albicans and C. parapsilosis remained largely susceptible. Amphotericin B and echinocandins retained high efficacy across species.

Conclusion: This study identifies a shift in ICU candidemia at SMS Hospital, Jaipur, toward non-albicans Candida and a rising incidence of antifungal resistance. Routine species-level identification and susceptibility testing are crucial for personalized therapy, improved survival, and limiting the spread of resistant strains. Establishing continuous surveillance and antifungal stewardship in ICUs is essential to effectively mitigate and manage this emerging clinical threat in critically ill patients.

Abstract Code: **MP-09** Author Id: **94**

Author: **Mr. Dhananjay Kumar** Designation: **Ph.D. Scholar**

Institutional Affiliation: **National Institute of Medical Sciences & Research, Jaipur**

Co-authors: **Dr. R.K. Maheshwari, Dr. Rakesh Thakuriya**

Abstract Title: **Study of Antifungal Susceptibility Pattern of Candida spp. Isolated from Clinical Specimens at a Tertiary Care Hospital**

Abstract category: Mycology Background: Fungal infections pose a significant threat to healthcare, with diagnostics often unaffordable in resource-limited settings. The emergence of antifungal resistance and limited antifungal options highlight the need for awareness, preventive measures, and early diagnosis. With this background this study was done on clinical specimens from outpatients and inpatients at NIMS hospital, Jaipur, Rajasthan.

Material and Methods: This study was done from September 2024 to February 2025 on clinical specimens of all ages and both sexes received in Microbiology laboratory were processed as per the standard microbiological procedures. Candida isolates were identified by conventional microbiological techniques and confirmed by Vitek-2 Compact system (BioMerieux) and Anti-Fungal Susceptibility of Candida isolates was also done by Vitek-2.

Result; A total of 129 Candida isolates were recovered from different clinical samples out of which C. albicans 46(35.65%) and non-albicans Candida were 83(64.34%). Voriconazole (90.69%) was found as most sensitive followed by Flucytosine (88.37%), Amphotericin B (78.29%) and Fluconazole (69%) was found as least sensitive.

Conclusion: The present study demonstrated the distribution of Candida species in different clinical specimens where the isolation rate of non-albicans Candida species were comparable to Candida albicans. The high resistance rate of fluconazole and Amphotericin B may demonstrate that the treatment of candidiasis empirically is questionable.

Abstract code: **PP-01** Author ID: **15**

Author Name: **Anubhuti Sharma** Designation: **PG Resident**

Institutional affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-authors: **Saroj Hooja, Lalita Verma, Nita Pal, Rajni Sharma**

Abstract category: **Parasitology**

Abstract Title: **Diagnostic Performance of Mini Parasep® Solvent Free Faecal Parasite Concentrator against Formalin Ethyl-Acetate Sedimentation Concentration for Diagnosis of Intestinal Parasitic Infections**

Background: Intestinal parasitic infections (IPIs) are the most prevalent diseases in the world, particularly affecting developing countries due to overcrowding, inadequate sanitation, scarcity of potable drinking water and poor socioeconomic conditions. To enhance the parasitic recovery various concentration techniques are used. Of these, formalin ethyl-acetate sedimentation concentration (FEC) is the most common technique done in laboratories. Various commercial faecal concentration devices are available that have reduced processing time. The aim of this study was to assess the performance of Mini Parasep® solvent free faecal parasite concentrator in comparison to the currently used FEC.

Materials and Methods: This hospital based prospective study was undertaken to evaluate the diagnostic performance of Mini Parasep® solvent free faecal parasite concentrator against FEC for diagnosis of IPIs between July 2024 and May 2025.

A total of 100 stool samples from patients of diarrhoea aged between 0-18 years attending Sir Padampat Mother and Child Health Institute, Jaipur, Rajasthan were collected. Saline and iodine wet mount preparations were made from unconcentrated as well as after FEC and concentration using Mini Parasep® solvent free faecal parasite concentrator. Modified ZN staining was performed on all smears of direct and concentrated stool samples. Stool was examined for presence of trophozoite, cyst, ova, larvae of parasites.

Results: Out of 100 samples tested 14.0% samples were positive by direct microscopy, whereas 17.0% and 20.0% samples were positive by FEC and Mini Parasep® methods, respectively. In samples processed with Mini Parasep® a better yield of Giardia lamblia and Cryptosporidium species was observed than FEM.

Conclusion: Mini parasep® is a solvent free faecal parasite concentrator which is very easy to use and time saving as compared to other stool concentration techniques. It holds potential for application as a routine concentration procedure in clinical parasitology laboratories with heavy sample load.

Abstract code: **PP-02** Author ID: **35**

Author Name: **Ashish Verma** Designation: **PG Resident**

Institutional affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-authors: **Saroj Hooja, Lalita Verma, Nita Pal, Rajni Sharma**

Abstract category: **Parasitology**

Abstract Title: **Comparison of microscopy and ELISA for detection of Intestinal Cryptosporidiosis in children with diarrhoea**

Background: According to World Health Organization, about 3.5 billion people are affected by parasites worldwide, of which 450 million people suffer from enteric parasitic infections. Cryptosporidiosis is also recognized as human waterborne pathogen. Cryptosporidium is generally found in young children and newborns. The symptoms range from asymptomatic infections to serious fatal illness. Microscopy is the most widely used method for detection of Cryptosporidium species. Various techniques based on Cryptosporidium copro-antigen detection in stool like enzyme linked immunosorbent assay (ELISA) have been developed that offer higher sensitivity, specificity and higher diagnostic index than stool microscopy. The aim of the present study was to compare modified acid fast stain (Kinyoun's) and ELISA for detection of Cryptosporidium cysts from stool samples of children presenting with diarrhoea.

Materials and Methods: This hospital based prospective study was undertaken to compare modified acid fast stain (Kinyoun's) and ELISA for detection of Cryptosporidium cysts from stool samples of children presenting with diarrhoea between December 2024 and May 2025.

A total of 60 stool samples from patients of diarrhoea aged between 0-8 years attending Sir Padampat Mother and Child Health Institute, Jaipur, Rajasthan were processed. Fresh stool samples (5 ml) were collected according to standard procedure and transported to laboratory. Modified ZN staining was performed on all smears of direct and concentrated stool samples and ELISA was done as per standard protocol. Sensitivity and specificity of both techniques was assessed.

Results: Out of 60 samples tested 10% samples were positive by microscopy and ELISA. Both diagnostic methods showed a sensitivity and specificity of 100%.

Conclusion: This study showed that Modified acid fast staining (Kinyoun's) and ELISA had equal sensitivity and specificity. Both techniques are equally good for detection of Cryptosporidium species in stool samples.

Abstract code: **PP-03** Author Id **90**

Author Name: **Dr Ishan Sharma** Designation: **PG Resident 2nd Year**

Institutional Affiliation: **Mahatma Gandhi University of Medical Science and Technology, Jaipur**

Co-Authors: **Dr Shaveta Kataria, Dr Ashina Singla, Dr Anjana Mittal**

Abstract category: **Parasitology**

Abstract Title: **The Burden Of Cyclospora Infection In Immunocompromised Patients: A Growing Public Health Issue And Lessons From Case Studies**

Background: Cyclospora cayetanensis is an emerging food-and waterborne coccidian parasite which causes gastrointestinal disease in humans. Even now, detailed information about its biology, associated risk factors, and routes of transmission remain poorly understood and the lack of comprehensive epidemiological data on cyclosporiasis in developing countries underscores the critical need for targeted research to guide effective prevention and control. To the best of our knowledge, this is the first study evaluating the incidence and socio-demographic profile of Cyclospora infections among immunocompromised patients attending a tertiary care center.

Material and Methods: A descriptive observational study on stool samples of immunocompromised patients presenting with gastro-intestinal manifestations over a period of 6 months from May 2024 to October 2024. A total of 1758 stool samples were directly subjected to routine microscopy. Modified Ziehl-Neelsen staining was done to further confirm the presence

of oocysts of Cyclospora spp. The relevant medical records were reviewed and p value < 0.05 was considered as statistically significant.

Results: 1758 stool samples were received and acid variable oocysts of Cyclospora spp. were found in 16 samples. It was predominant in 51-60yrs (males), and the results were found to be statistically significant ($p<0.001$). Most of isolates were reported in month of October. Among positive patients, clinical profile and risk factors attributable towards this coccidian parasite was analyzed and transplant recipients presented with diarrhea being the most common.

Conclusion: The severity of enteric infection in patients depends upon their socioeconomic, demographic profile and immune status of patients. Stool microscopy is predominant diagnostic modality as we don't have over the counter kits available for PCR and the Stool for Modified ZN staining for opportunistic Coccidian parasites is not asked by clinicians. Therapeutic options in this group of patients are limited, making their management exceptionally challenging. Awareness must be spread among the clinicians about the occurrence of Cyclospora infection.

Abstract code: **PP-04** Author ID: **92**

Author Name: **Lalita Verma** Designation: **Senior Demonstrator**

Institutional affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-authors: **Manish Kumar Gahanela, Vipul Suthar, Nita Pal, Saroj Hooja.**

Abstract category: **Parasitology**

Abstract Title: **Prevalence of intestinal parasitic infections among patients attending a tertiary care hospital.**

Background: Intestinal parasitic infections (IPIs) remain a significant public health concern, particularly in developing nations where inadequate sanitation and poor hygiene practices prevail. Globally, IPIs affect about 3.5 billion people, causing illness in 450 million and leading to over 200,000 deaths each year. Common parasitic infections such as amoebiasis, giardiasis, trichuriasis, hookworm infection, and hymenolepiasis are associated with complications including iron deficiency anemia, chronic diarrhea, and impaired growth in children, along with other comorbidities. This study aimed to determine the prevalence of intestinal parasitic infections and to identify temporal trends over a one-year period among patients attending a tertiary care hospital in Rajasthan, India.

Material Methods: A retrospective analysis was carried out in the Parasitology Laboratory, Department of Microbiology, SMS Medical College, Jaipur. Stool samples collected from clinically suspected cases of parasitic infections between August 2022 and July 2023 were included. Patient demographic details were retrieved from laboratory records. Saline and iodine wet mounts, as well as Modified ZN staining, methods were employed for parasite detection.

Results : Among the 1254 patients examined, 59.0% were male and 41.0% were female. The overall prevalence of IPIs was 3.26%. The highest infection rate was observed in the 21–30-year age group (29.26%), followed by the 31–40-year group (19.51%). The lowest prevalence was found in the 0-20 age group, accounting for 7.3%. Among 41 positive stool samples Giardia lamblia emerged as the most common parasite, detected in 15(37.0%), followed by hookworm in 11 (27.0%) of cases. Entamoeba histolytica, Ascaris lumbricoides, Hymenolepis nana were detected in 7(17.0%), 3(7.0%), and 2(5.0%) cases respectively. A progressive annual increase in prevalence was noted during the study period.

Conclusions : The study revealed a rising trend of intestinal parasitic infections, with Giardia lamblia being the most prevalent parasite. Strengthening sanitation, safe water access, periodic deworming, and public health education are crucial to reduce the burden of these infections.

Abstract code: **IP-01** Author ID- **9**

Author Name: **Dr. Bhawana Saini** Designation: **PG Resident**

Institutional Affiliation: **JLN Medical College and Associated Group of Hospitals, Ajmer**

Co-authors: **Bhawana Jorawat, Dr. Vijaylatha Rastogi, Dr. Geeta Parihar, Dr. Mukul Chaurasia**

Abstract category: **Immunology**

Abstract Title: **Seroprevalence of Torch Infections In Paediatric Patients And Women Of Reproductive Age: a Cross- Sectional Study**

Background: TORCH infections (Toxoplasmosis, Rubella, Cytomegalovirus, and Herpes simplex virus) are a significant concern in pediatric patients and reproductive age group females, as they can lead to severe consequences including fetal and neonatal complications. This study aimed to determine the seroprevalence of TORCH infections in pediatric patients and women of reproductive age at Jawaharlal Nehru Medical College and Hospital, Ajmer.

Material & Methods: A cross-sectional study was conducted among 116 pediatric patients and 55 women of reproductive age from March 2024 to April 2025 using the ELISA-based Chorus trio system. Blood samples were collected and tested for IgM and IgG antibodies against Toxoplasma, Rubella, HSV and CMV using ELISA. The study included women of reproductive age and pediatric patients.

Results: The overall seroprevalence of IgM antibodies in TORCH infections among pediatric patients and women of reproductive age was 16.37%. Infants were the most commonly affected group. CMV was the most commonly detected agent, followed by rubella, toxoplasma and HSV. On the other hand, IgG antibodies were highest in CMV, followed by rubella, HSV and toxoplasma.

Conclusion: This study underscores the importance of routine screening and preventive strategies for TORCH infection among pediatric patients and women of reproductive age to prevent fetal and neonatal complications.

Abstract Code: **IP-02** Author ID: **26**

Author Name: **Deepika Suthar** Designation: **MSc 3rd year**

Institutional Affiliation: **S. P. Medical College and AG PBM Hospital Bikaner**

Co-Authors: **Dr. Anjli Gupta, Dr. Geeta Tinna, Dr. Taruna Swami**

Abstract category: **Immunology**

Abstract Title: **Seroprevalence Of Human Brucellosis Infection Using IgM ELISA, Among Patients Visiting Various OPDs With Symptoms Of Fever And Joint Pain In a Tertiary Care Hospital In Bikaner (Rajasthan).**

Background: Brucellosis is an anthropozoonosis of both public health and economic significance in most developing countries (WHO 2006). India ranks first in milk production and has the largest bovine population in the world owing to which there is an inordinate exposure of workers in this industry to these animals and their products. The arid climate coupled with low economic investments in this part of Western Rajasthan makes the majority of rural households rely on livestock for sustaining the household expenses. Early detection and treatment of brucellosis cases can be achieved by early recognition of the probable cases.

Material & Methods- Blood samples from different wards, ICUs & outdoors were collected in appropriate sterile containers for a period of 7 months (Jan 2025 to July 2025), and processed in the microbiology laboratory for qualitative detection using IgM ELISA according to the kit provided by calbiotech inc. guidelines. Seroprevalence was calculated using the standard formula as per the positive cases.

Results - In the eight months period a total of 1516 serum samples were screened for Brucellosis, of which, 99 were found positive. Hence, seroprevalence of human Brucellosis was found 6.5%. maximum number of positive cases were found to be in the age group 46-60 year that was 25 (25.3%), followed by age group 16-30 year that was 24 (24.2%), age group 31-45 year that was 23 (23.2%), age group 0-15 years that was 17 (17.2%) and age group 61-75 years that was 10 (10.1%). the number of positive cases for Brucellosis were found to be higher in females 53 (53.54%) as compared to males 46 (46.46%). The male and female ratio being 1:1.14.

Conclusion- Our study shows moderate seroprevalence (6.5%). This could be because of agricultural activities, cattle rearing and dairy farming were the main occupations of the cases included in the study. Maximum number of positive cases were found to be in the age group 46-60 year that was 25 (25.3%). Also the number of positive cases were found to be higher in females (53.54%) as compared to males.

Abstract Code : **IP-03** Author ID : **30**

Authors : **Dr. Digvijay Singh Rao** Designation : **P.G. Student 2nd Year**

Co-Author : **Dr. Sushil Kumar Sahu**

Institute : **RNT Medical College, Udaipur**

Abstract Category : **Immunology**

Abstract Title: **Sero-Positivity of Seasonal Trend of Scrub Typhus at a Tertiary Care Hospital, Udaipur.**

Background - Scrub Typhus is a rickettsial infection which is caused by Orientia tsutsugamushi and transmitted by the bite of the chigger of several species of Trombiculid mite. Scrub Typhus is grossly under-diagnosed in India due to its non-specific clinical presentation, limited awareness, and low index of suspicion among clinicians and the lack of diagnostic facilities.

To study the sero-positivity and seasonal trends of scrub typhus as a causative factor in Fever of unknown origin cases by qualitative detection of IgM antibodies with ELISA.

Methods and material- From July 2024 to June 2025, 7982 serum samples of Fever of unknown origin cases were analyzed for IgM antibodies to Orientia tsutsugamushi. 2-3 ml of blood sample was collected. Serum was separated and tested for scrub typhus using IgM ELISA.

Results - In our 1-year study from July 2024 to June 2025, total 7982 serum samples were tested for IgM antibodies for scrub typhus. IgM antibodies were detected in 1138 (14.25%) serum samples. Total samples from July to November months were 6148 and total positivity was 1076 (17.5%).

Conclusion - The present study emphasizes the importance of scrub typhus among cases of fever of unknown origin especially during rainy season to early cooler months. This study provides valuable, regional data about scrub typhus in Southern Rajasthan, which can inform clinical and public health decisions at a local level.

Abstract Code : **IP-04**

Author ID : **31**

Author : **Dr. Rajesh Das.**

Designation : **P.G. Student 2nd Year.**

Co-Author : **Dr. Anshu Sharma.**

Name of Institution : **RNT Medical College, Udaipur**

Abstract Category : **Immunology.**

Abstract Title : **Seroprevalence of Dengue Virus Infection in Tertiary Care Hospital In Southern Rajasthan.**

Background: Dengue fever is an acute viral illness commonly found in tropical and subtropical regions. It is transmitted by mosquitoes, mainly Aedes aegypti and sometimes Aedes albopictus. The dengue virus has four different serotypes: DENV-1, DENV-2, DENV-3, and DENV-4.

Objective: To assess the trend and prevalence of dengue virus infection and understand the disease pattern for timely and effective control measures.

Materials and Methods: A prospective laboratory-based study was conducted at MBGH Hospital over one year. Patients with fever and symptoms like joint pain, rash, muscle pain, pain behind the eyes, severe headache, or bleeding were tested. Dengue NS1 antigen and IgM antibodies were detected using standard diagnostic kits.

Results: Out of 4364 samples tested for IgM, 487 (11.15%) were positive.

Out of 5935 samples tested for NS1 antigen, 883 (14.87%) were positive. Seasonal peaks were noted:

IgM cases were highest from August to October.

NS1 antigen cases peaked from September to November.

Conclusion: Despite control efforts, dengue virus infection remains common in urban areas of Udaipur. The infection shows a clear seasonal trend, aligning with the monsoon period, which favors mosquito breeding.

Abstract code: **IP-05**

Author ID: **49**

Author Name: **Dr. Sunaina Singh**

Designation: **PG Resident**

Institutional affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-authors: **Dr. Rameshwari Bithu, Dr. Manju Yadav, Dr. Ruchi Jain**

Abstract category: **Immunology**

Abstract Title: **Detection of Anti-Nuclear Antibody immunofluorescence pattern in suspected patients of Autoimmune Disease and it's correlation With Immune Profile using Line Immune Assay**

Background: Autoimmune diseases (AD) are an immunological response of the body to antigens of the self leading to damage of tissues in the body. The Indirect immunofluorescence assay (IIFA) is the gold standard for detection of anti-nuclear antibody(ANA). According to the International Consensus on ANA Patterns (ICAP), there are 29 recognised discrete HEp-2 cell IIF patterns and are further classified into nuclear, cytoplasmic and mitotic patterns (CMP's). Line Immune Assay (LIA) allows the confirmation of the specific antibody.

Materials and Methods: This was a hospital based observational study conducted in the Central Laboratory, Department of Microbiology at the Sawai Man Singh Hospital, Jaipur, from July 2024 and June 2025. A total of 100 patients were enrolled in the study. Blood samples from suspected patients of autoimmune disease below 60 years of age, were subjected to IIF and positive IIF samples to LIA.

Slide was prepared from serum. Positive ANA samples are further subjected to line immune assay for specific antibody detection.

Results: A total of 100 samples from patients suspected of having ADs were subjected to IIF and positive IIF to LIA. (25%) had positive ANA screening by IIF and of these positive ANA-IIF, (88%) were also line immunoassay positive. Among the patterns observed on IIF, Speckled (72%) was the most common ANA screening pattern, followed by homogenous (24%). The most common autoantibody found in total ANA profile-positive samples were anti-SS-A/Ro60 and anti-SS-A/Ro52. In the homogenous pattern noted by IIF, the most common clustered antigen identified by LIA was dsDNA, and in the speckled pattern, the identified antigen was SS-A/Ro60.

Conclusion: ANA-IFA can be useful for the initial prediction of clinically relevant antibodies in suspected autoimmune disease. This could be a cost-effective and accurate screening test for patients with an autoimmune disease. ANA profile can be reserved for clinically suspected cases with uncommon presentation or overlap syndrome.

Abstract code: **IP-06**

Author ID: **53**

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Institutional Affiliation: **Sawai Man Singh Medical College, Jaipur**

Co-Authors: **Dr. Manju Yadav, Dr. Rameshwari Bithu**

Abstract Topic: **Immunology**

Abstract Title- **Seroprevalence and Seasonal Trend of Dengue Infection Among Patients At A Tertiary Care Hospital, Jaipur.**

Background : Dengue fever is an emerging acute febrile illness, transmitted by the bite of Aedes aegypti, presenting with wide spectrum of clinical manifestations ranging from self-limiting asymptomatic infection to severe fatal infection like Dengue hemorrhagic shock with unpredictable outcome. Dengue is one of the important mosquito borne infections causing high mortality and morbidity of humans. So, the aim of the study was to determine the seroprevalence and seasonal trend of dengue infection among patients attending at a tertiary care hospital at Jaipur.

Material & Methods: A retrospective study was conducted on individuals who were prescribed for IgM antibody by ELISA tests and any variations in disease reporting by gender, age and season were assessed. A total of 34903 serum samples of suspected patients of dengue were collected for over a period of 1 year from January 2024 to December 2024 and analyzed for IgM antibody by ELISA method (TRUSTwell Dengue IgM ELISA kit).

Result: Out of the 34903 patients tested, 1353(3.88 %) were positive. Males constituted the majority 61.9 % of the total positive samples. Age group of 16-30 years showed the highest positivity (50.8%). Dengue cases were commonly observed in the month of September to November with maximum rate of positivity in October (7.1%).

Conclusion: This retrospective study shows that dengue was highest during the late monsoon and post monsoon season. Regular surveillance of dengue virus infection is therefore essential for early detection of outbreak and to initiate timely preventive and control measures for management of public health in dengue endemic areas.

Absract code : **IP-07**

Author ID: **87**

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Institutional Affiliation: **Sawai Man Singh Medical College, Jaipur**

Coauthors : **Dr. Rajni Sharma, Dr. Rameshwari Bithu, Dr. Manju Yadav**

Abstract category: **Immunology**

Abstract Title: **Seropositivity And Seasonal Trends of Scrub Typhus Fever In A Tertiary Care Hospital of Rajasthan.**

Background : Scrub typhus is a vector borne Rickettsial disease caused by Orientia tsutsugamushi. It is a re-emerging pathogen in India including the state of Rajasthan. It is transmitted to humans and rodents by some species of trombiculid mites.

Material& Methods: A total of 20,049 samples were collected for the testing of scrub typhus during the period of june 2024 to june 2025 by detection of IgM Antibodies by ELISA at central lab department of Microbiology , SMS medical college , Jaipur.

Results & Conclusion: Out of total 20049 patients tested for scrub typhus , 1563 (7.79%) were positive for IgM scrub typhus. A 62% (n=970) of positive patients were male. About 50% of infected patients were in the age group of 20-40. Maximum cases were found in the rainy season.

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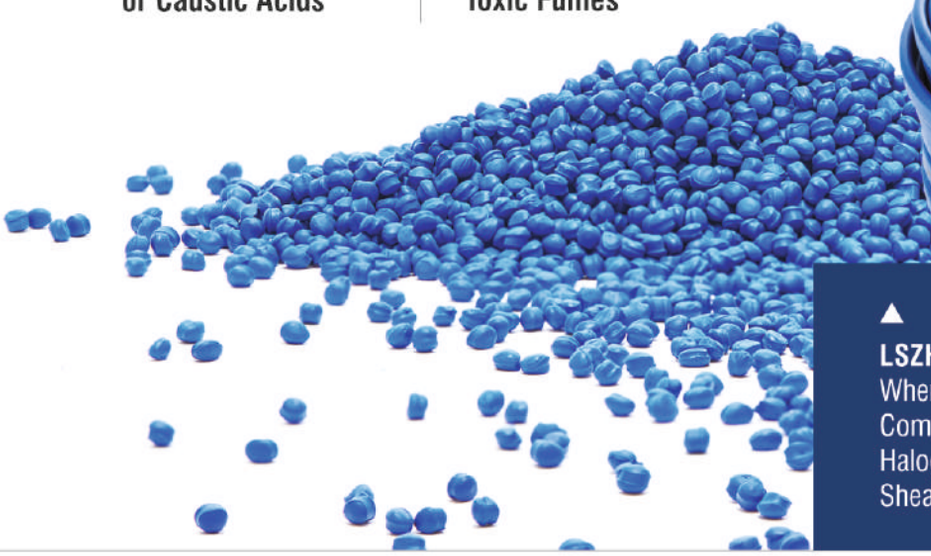

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