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JUBICON 2025

REDEFINING FUTURE HEALERS

THE 3rd EDITION

CONSPECTUS

JUBICON RESEARCH REPERTOIRE

EDITORS:
Dr. Radhika Kannan
Dr. Jaziya Jabeen
Dr. Sam Emmanuel Sabu
Ms. Aoife Maria Jaison
Ms. Krishnanjali Jayakumar
Mr. Bentin Joy

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JUBILEE CENTRE FOR MEDICAL RESEARCH

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Conspectus

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JUBICON

JUBICON was born from the dedication and brilliance of a few visionaries whose passion inspired many around them. What began as a modest initiative has now matured into the fourth edition of JUBICON, a national conclave of students from across India, celebrating not only academic excellence but also the ideals of art, technology, and innovation.

Through perseverance and continuous refinement, this vision has grown beyond its origins in our student clubs to become a vibrant forum where research, creativity, and medical progress converge. It stands today as a symbol of collaboration, drawing strength from the enthusiasm of our students and the guidance of our mentors. Each idea, no matter how small at its inception, carries within it the seeds of transformation.

With the unwavering support of our faculty advisors, including Dr. Biju Bahuleyan and Dr. Ranjith S., and the encouragement of our Principal and colleagues from various departments, JUBICON has flourished into a platform that nurtures curiosity, fuels innovation, and inspires the brightest minds in India's medical science community.

The Jubilee Centre for Medical Research (JCMR) remains the cornerstone of this initiative. As a DSIR-recognised and KUHS-approved research centre, acknowledged by the Ministry of Finance and Ministry of Corporate Affairs, JCMR has spearheaded multiple funded research projects supported by ICMR, DRDO, DST, DHR, KSCSTE, and others. This strong foundation enables us to sustain and expand the scope of JUBICON year after year.

Our vision continues to be the same: to redefine medical thinking through research, innovation, and technology, laying the groundwork for India's scientific community to flourish. JUBICON 2025 is not merely an event—it is a growing movement of students and mentors united by a common purpose: to change the future of health care and science through ideas that inspire and endure.

FOREWORD

I am delighted to see Jubilee students once again bringing together *Conspectus* during the event of JUBICON 2025. Each year, this conclave grows stronger as a platform where young minds express their creativity, research, and vision for the future of medicine. This year's Conspectus is a thoughtfully curated collection of scholarly work prepared by the students. This booklet captures curiosity, and the early sparks of inquiry that will shape the next generation of health care professionals. I wholeheartedly applaud the energy and dedication of our undergraduates in organizing this event.

The theme, *"Redefining Future Healers"*, captures the essence of what it means to be a doctor in today's world—blending science with compassion, and tradition with innovation. With diverse sessions spanning neuroscience, cytogenetics, clinical medicine, artificial intelligence, and emergency care, this year's JUBICON truly equips students to reimagine the clinician, reinvent the science, and reload the future of health care. I congratulate the student authors for their intellectual courage and the faculty mentors for guiding rigorous enquiry while nurturing independent thinking. I encourage readers to approach Conspectus not only as a record of student achievement but as an invitation to dialogue, collaboration, and further research.

It is heartening to witness the high standards of academic inquiry and organizational excellence set by our students. I extend my best wishes to

the organizing team, the contributors of *Conspectus*, and all participants of JUBICON 2025. May this edition continue to inspire a generation of healers who embody knowledge, skill, and empathy. I wish the contributors every success as they continue their journey from curious learners to confident clinicians and talented investigators.

Dr. D.M. Vasudevan, MD, FRCPath, FAMS
Research Director, JMMC & RI
Recipient, BC Roy Award
Author, Textbook of Biochemistry for Medical Students

CONFLICT OF INTEREST

We declare that neither the editors of this publication nor the staff advisory committee, participated in the screening of abstracts in any capacity that could compromise the integrity of the selection process or grant undue advantage to any party.

All potential conflicts of interest that may have arisen during the screening — such as instances where a reviewer was found to be a co-author of an abstract — were appropriately managed by reassigning the abstract to an independent reviewer, thereby ensuring a fair, impartial, and unbiased selection process.

FROM THE EDITORS DESK

We are delighted to unveil the third edition of Conspectus—a milestone that celebrates the remarkable journey of grassroots medical research at Jubilee Mission. This publication, aligned with the fourth edition of JUBICON, represents not just a compilation of research articles, but a living testament to the passion, perseverance, and intellectual curiosity of our young medical community.

Balancing research with clinical responsibilities has always been a formidable challenge. Yet, the students and budding researchers contributing to Conspectus continue to prove that these youthful sparks can ignite an enduring flame of innovation, curiosity, and advancement in medicine. Each article here is more than data on paper—it is a reflection of commitment, resilience, and a vision for the future of health care.

By fostering early involvement in research, we nurture analytical minds capable of breaking down complex concepts, building strong scientific portfolios, and establishing themselves as credible contributors in the wider medical community. This continuity from one edition to the next reflects the steady evolution of JUBICON, from its inception to its current form as a respected platform for sharing knowledge and inspiring collaborative inquiry.

We extend our deepest gratitude to the faculty mentors, reviewers, and organizers who have guided this process, and above all, to the students from across the nation whose findings enrich these pages. Their dedication embodies our shared mission to create a vibrant culture of scientific exploration, inquiry, and excellence.

As we present Conspectus 2025, we look forward to the profound impact these contributions will have—shaping the future of health care, advancing research, and inspiring generations of medical professionals to come.

Editorial Board
JUBICON 2025

FROM THE EDITORS DESK

Research is the cornerstone of medical progress. In an era where evidence-based medicine defines clinical practice, cultivating research skills at the student level nurtures a mindset of curiosity, critical thinking and problem-solving. These qualities strengthen academic growth and shapes compassionate and competent clinicians who can adapt to the ever-changing landscape of medicine.

JUBICON, the undergraduate national medical students' conclave has become a vibrant platform for young minds to showcase their ideas, creativity and scientific spirit. At the outset, I wish to place on record my heartfelt congratulations to the organizing committee of JUBICON 2025 for their dedication and tireless efforts in bringing this event to life. Beyond the walls of lecture halls, this exposure instills confidence, broadens perspectives and inspires lifelong learning.

The CONSPECTUS published along with the event showcases the research ideas presented in the program. May this ignite new ideas, foster collaborations and encourage every student to embrace research as an integral part of their professional journey.

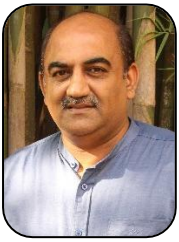
Dr Radhika Kannan
Assistant Professor
Department of Community Medicine, JMMC & RI

FROM THE STAFF ADVISORY

To heal is noble, but to inquire, innovate, and investigate is what propels medicine forward. 'CONSPECTUS' aims to be the platform that motivates young minds to dare to question, explore and bring forth novelty to conventionality. Here, seeds of progress are sown, shaping the next strides in medicine and strengthening the ideals of excellence.

'CONSPECTUS' is simply more than our annual abstract book, it stands as a testament to the determination of young medical students who aspire to do more than just confine their days to clinical rotations and lecture halls. Within conspectus you will find a collection of exceptional research articles, which truly offer glimpses into the passion and promise of the next generation of healers. May their spirit of inquiry and innovation guide the future of health care to greater heights.

In closing, we extend our sincere gratitude to the authors, editors, and contributors who brought this dream to fruition. May their dedication inspire us all to strive for excellence in the pursuit of knowledge.



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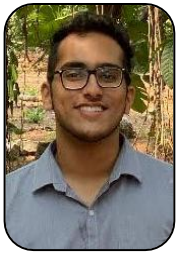

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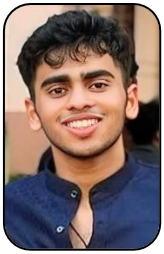

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RESEARCH PAPERS

SELF-MEDICATION PRACTICES IN CENTRAL KERALA AFTER THE REGULATION OF OVER-THE-COUNTER ANTIBIOTIC SALES

Shahzad S[1] Sebastian Abraham[1] Sudhiraj TS[2]
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Background: Self-medication may reduce the health care burden for minor ailments, but unchecked use can delay diagnosis, cause adverse events, and drive antimicrobial resistance. To address this, Kerala launched Operation AMRITH in 2024, restricting non-prescription antibiotic sales. This study explores patterns of self-medication and the regulation's early impact.

Objectives: To assess the prevalence, patterns and motivations of self-medication and antibiotic use in central Kerala, and to evaluate the impact of Operation AMRITH before and after its implementation.

Methodology: A cross-sectional study was conducted in July–August 2024 using systematic random sampling. The sample size was 169, based on an outpatient load of 500/day ($k = 500/169 \approx 3$). Bystanders attending outpatient services (9 am–4 pm, weekdays) formed the sampling frame. The first participant was chosen using a random number table, then every third until the target was met. Data were collected via a semi-structured questionnaire and analysed in Jamovi.

Results: Ever-prevalence of self-medication was 142 (78%); 95% CI: 71.46–83.42. One-year prevalence of antibiotic self-medication (before AMRITH) was 123 (67.2%); 95% CI: 60.48–73.96. After AMRITH, six-month prevalence of over-the-counter antibiotic availability fell to 24 (13.41%); McNemar Chi-square=88.110, $p<0.0001$, though misuse persisted. Pharmacists were the source in 39 (31.7%); $p < 0.009$, OR 2.96.

Among participants, 127 (70.63%) completed full antibiotic courses, yet 25 (14.12%) reported perceived reduced effectiveness. Awareness of the regulation was 62.71%. Leading reasons for self-medication were the perception of minor illness (58.2%) and reliance on past experience (17%).

Conclusion: Self-medication remains widespread in Central Kerala, with significant antibiotic misuse despite regulatory measures. Stronger awareness initiatives and stricter enforcement are crucial to limit irrational use and prevent antimicrobial resistance.

Keywords: *Self-Medication, Over-The-Counter Drugs, Antibiotics, Antimicrobial Resistance, Public Health.*

VITAMIN D AND METACOGNITION IN YOUNG ADULTS: EXPLORING POTENTIAL ASSOCIATIONS

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Background: Vitamin D plays an important role in calcium homeostasis and bone health but is increasingly being recognized as having other physiological effects, including possible functions in cognitive processes. Although the association of vitamin D deficiency with cognitive decline has been reported in older populations, its effects on metacognitive functions in young adults have not been adequately investigated.

Objectives: To assess the vitamin D and metacognition status of young adults, and to determine whether vitamin D levels have any correlation with metacognitive abilities in this population.

Methodology: A cross-sectional study involving 61 participants aged 18–24 years was conducted. Serum 25(OH)D was measured to assess vitamin D levels, and metacognitive abilities were evaluated using a prevalidated questionnaire, the Metacognitive Awareness Inventory (MAI). Descriptive statistics, Spearman's rho correlations, and ANOVA tests were performed to analyse the relationships between vitamin D levels and metacognitive functions.

Results: Half of the participants (50.8%) were vitamin D deficient. In terms of overall metacognitive awareness, 7 participants (11.5%) demonstrated low awareness, 39 (63.9%) had moderate awareness, and 15 (24.6%) had high awareness. No significant associations were found between vitamin D levels and metacognitive abilities. However, metacognitive knowledge was significantly positively correlated with regulation of cognition ($r = 0.965$, $p < 0.01$), indicating that greater

knowledge of one's cognitive processes was associated with better regulation of cognition.

Conclusion: This study found no evidence of a direct relationship between vitamin D levels and metacognitive abilities in young adults. Larger longitudinal studies are required to better understand the potential long-term effects of vitamin D on metacognition.

Keywords: *Metacognition, Vitamin D, Cognition, Neurocognition, Mental Health.*

PERCEPTIONS AND BARRIERS TO RESEARCH AMONG MEDICAL STUDENTS IN CENTRAL KERALA - A MIXED METHODS STUDY

Iynes Jose Gino[1] Radhika Kannan[2]
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Background: Medical research forms the foundation of scientific progress and quality health care. Early exposure to research in medical education fosters critical thinking, undergraduate participation remains limited, often due to poorly understood barriers.

Objectives: To assess perceptions of and barriers to research among medical students in central Kerala.

Methodology: An explanatory mixed-methods (QUAN–QUAL) design was used. The quantitative component was an analytical cross-sectional study with 542 students from Phase II, Phase III Part 1, Phase III Part 2, and house surgeons. Data were collected using the validated Revised Attitudes Towards Research (R-ATR) questionnaire, which comprises three domains: research usefulness, anxiety, and positive predisposition, all measured on a 7-point Likert scale. For the qualitative component, five students were purposively sampled for in-depth interviews, adopting a phenomenological approach. Quantitative data were analysed using SPSS v24, and qualitative transcripts underwent inductive coding and thematic analysis with NVivo v14.

Results: The mean age was 22.1 ± 1.7 years; 71.8% were female. Most students (83.4%) considered research useful, 79.9% believed it would benefit future practice, over half disagreed that it was stressful, and 62.5% found the courses interesting. R-ATR scores were: usefulness 21.4 ± 4.4, anxiety 19.4 ± 6.3, and predisposition 18.0 ± 4.9. Gender and year of study influenced usefulness ($p = 0.04$) and anxiety ($p = 0.007$).

opportunities but cited mentorship gaps, inadequate training, financial constraints and workload as barriers.

Conclusion: Medical students valued research but faced barriers arising from curricular gaps. Strengthening mentorship, research training, and funding support is essential to translate student enthusiasm into active engagement, thereby cultivating future clinician-scientists in India.

Keywords: *Mixed-Methods, Medical Education, Perceptions, Barriers, Undergraduate Research.*

ALCOHOL IN SUICIDE VICTIMS: INSIGHTS FROM AUTOPSY CASES IN SOUTH KERALA

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Background: Excess alcohol consumption is strongly associated with suicide, with risk increasing markedly during acute use. Kerala, with one of the highest per capita alcohol consumption rates in India, may face a significant alcohol–suicide link. Policy interventions such as alcohol taxation and restrictions on availability could have a major impact on suicide prevention in such populations.

Objectives: The primary objective is to estimate the proportion of blood alcohol positivity in victims of suicide brought for medicolegal autopsy at a tertiary care hospital in South Kerala. The secondary objective is to estimate mean blood alcohol concentration (BAC) in various methods of suicide.

Methodology: A record-based cross-sectional study was conducted on 219 suicide victims subjected to medicolegal autopsy between 2019 and 2025. All cases assessed by the department of forensic medicine with documented blood alcohol levels were included.

Results: The mean age of victims was 44.1 years (SD 15.6), with 83.6% being men. Overall, 40.6% (89 cases) had a positive BAC, ranging from 12 to 280 mg/dL. Prevalence was highest among men aged 45–54 years. BAC positivity was detected in 46.4% (85 cases) of men. The odds of BAC positivity were ten times higher in men compared to women.

Conclusion: A high prevalence of blood alcohol positivity among suicide

victims in a district with elevated suicide rates highlights the urgent need for alcohol-control policies. Screening for Alcohol Use Disorder (AUD) in clinical settings, especially among men, and assessing suicide risk in individuals seeking treatment for AUD may help identify high-risk groups and enable timely interventions.

Keywords: *Suicide, Alcohol Use, Blood Alcohol Concentration, Medicolegal Autopsy, Alcohol Use Disorder.*

ARTIFICIAL INTELLIGENCE-ASSISTED CLINICAL AUDIT IN EMERGENCY TRAUMA CARE: A PROSPECTIVE RANDOMIZED CONTROLLED EVALUATION

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Background: Clinical audits play a critical role in ensuring adherence to emergency trauma care standards. Manual clinical audits, though effective, are time-consuming and prone to human error. New developments in artificial intelligence (AI) provide a potential solution for enhancing accuracy and efficiency in clinical audit exercises.

Objectives: To compare AI-augmented clinical audits versus manual clinical audits for accuracy and efficiency.

Methodology: A prospective, crossover randomized controlled trial was conducted at a tertiary care teaching hospital in rural Kerala. Case records of 1,021 major trauma patients (32 data points per case; 32,672 data points total) were analyzed using the WHO Trauma Checklist. AI-assisted audit utilized Google Gemini Advanced, while manual audit was performed by physicians. A consultant-led gold standard served as the reference. Accuracy was assessed using binomial proportion tests and agreement statistics, while efficiency was compared using paired time analyses.

Results: The AI-augmented audit accurately flagged 27,608 out of 32,672 data points with an overall accuracy of 84.5% (95% CI: 84.1–84.9%) at an error rate of 15.5% (95% CI: 15.1–15.9%). Agreement analysis yielded Cohen's kappa of approximately 0.70. Efficiency

showed a considerable time benefit: manual audit took 2.4 minutes per case, whereas AI completed the same in 15 seconds (0.25 minutes), saving an average of 2.15 minutes per case (~90% reduction; $p < 0.001$). This resulted in a total time saving of 2,195 minutes (~36.6 hours) for 1,021 cases.

Conclusion: AI auditing demonstrated high accuracy and significant efficiency gains over traditional manual audits. Optimization enhanced reliability, achieving 84.5% concordance with consultant review. This method has the potential to automate emergency department audits and reduce clinician workload in low-resource environments.

Keywords**:** *Artificial Intelligence, Clinical Audit, Emergency Medicine, Trauma Care, Large Language Models.*

A STUDY ON SEVERITY OF OBSTRUCTIVE SLEEP APNEA [OSA] AMONG PERIOPERATIVE PATIENTS AND ITS POST-OPERATIVE OUTCOMES IN A TERTIARY CARE TEACHING HOSPITAL IN KERALA

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Background: Obstructive sleep apnea (OSA) is a prevalent yet underdiagnosed condition linked to significant perioperative risks such as respiratory and cardiovascular complications. Early detection using tools like the STOP-BANG questionnaire can improve outcomes. This study explores the severity of OSA among surgical patients in Kerala and examines its correlation with postoperative complications, thereby enhancing patient safety.

Objectives: To assess the severity of obstructive sleep apnea using the STOP-BANG questionnaire, to assess the postoperative outcomes of OSA and to determine the correlation between obstructive sleep apnea and postoperative outcomes.

Methodology: A longitudinal study was conducted at a tertiary care centre involving 86 patients aged >40 years admitted to the surgery and gynecology wards. Patients with known sleep disorders or chronic illnesses were excluded. The STOP-BANG questionnaire was used to categorize OSA risk (low: <3, moderate: 3–5, high: 6–8). Postoperative complications (pulmonary, cardiac, neurological) were recorded. Data were analyzed using SPSS v23, with associations tested via Chi-square and Fisher's exact tests (significance at 5%).

Results: Of 86 patients (mean age 60.38 ±11.54 years, 55.8% male), 29.1% had low, 57.0% moderate, and 14.0% high OSA risk. Postoperative complications occurred in 15.1% of patients,

predominantly pulmonary (12.8%) and cardiac (3.5%). High OSA risk was significantly associated with postoperative complications (38.5% vs. 0% in low-risk, p=0.001) and pulmonary complications (36.4% vs. 0%, p=0.006). Cardiac complications showed a non-significant trend (p=0.065).

Conclusion: High OSA risk, as assessed using the STOP-BANG questionnaire, is significantly associated with postoperative complications, particularly pulmonary. Routine OSA screening in perioperative patients is essential to ensure patient safety by identifying at-risk individuals.

Keywords**:** *Obstructive Sleep Apnea, Perioperative Patients, STOP-BANG, Postoperative Complications, Tertiary Care Hospital.*

PREVALENCE OF MENOPAUSAL SYMPTOMS AND QUALITY OF LIFE AMONG WOMEN AGED 45-60 YEARS RESIDING IN A RURAL AREA OF PATHANAMTHITTA DISTRICT

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[2]Professor and Head, Department of Community Medicine, Government Medical College, Konni, Pathanamthitta, Kerala

Background: Menopause is a significant transition in a woman's life, accompanied by physical and psychological symptoms that adversely impact quality of life. Menopausal health remains under-researched, particularly in rural communities. Addressing this gap is vital to improve the well-being of midlife women.

Objectives: To estimate the prevalence of menopausal symptoms among women aged 45–60 years in Aruvapulam Panchayat and to assess the quality of life in peri- and postmenopausal women using the Menopause Rating Scale.

Methodology: A community-based cross-sectional study was conducted among 178 women aged 45–60 years in Aruvapulam Panchayat, Pathanamthitta district, Kerala. Data were collected using a pretested structured questionnaire comprising the Menopause Rating Scale. Statistical analysis was carried out using Jamovi.

Results: The overall prevalence of menopausal symptoms was 98.35% (95% CI: 98.318–98.281). The prevalence of individual symptoms was as follows: hot flushes (56.7%), heart discomfort (40.4%), sleep problems (47.2%), depressive mood (62.4%), irritability and tension (64%), anxiety (57.3%), physical and mental exhaustion (61.2%), sexual problems (3.4%), bladder problems (19.1%), vaginal dryness (11.8%), and joint and muscular pain (77%). Quality of life assessed using the Menopause Rating Scale revealed that about 37% of participants had

poor quality of life. Menopause Rating Scale revealed that about 37% of participants had poor quality of life. The presence of comorbidities was found to worsen quality of life.

Conclusion: The study highlights the high burden of menopausal symptoms among rural women and the need for proper guidance to improve quality of life. It underlines the importance of integrated menopausal health services at the primary care level.

Keywords: *Quality of Life, Rural Women, Menopause Rating Scale, Symptoms, Prevalence.*

DECADAL AGE TRENDS OF COMMON CANCER CASES AT A TERTIARY CARE HOSPITAL IN CENTRAL KERALA: 2014-2024

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[3]Assistant Professor, Department of Pathology, Jubilee Mission Medical College and Research Institute, Thrissur, Kerala

Background: Cancer patterns vary across different hospitals and regions in India. However, data on age-specific cancer trends in tertiary care hospitals of central Kerala remain limited. Understanding these trends is crucial for tailoring public health strategies, optimizing screening programs, and ensuring appropriate resource allocation.

Objectives: To determine the decadal age trends of breast, colorectal, thyroid, endometrial, and lung cancers in a tertiary care hospital of Kerala from 2014 to 2024.

Methodology: A retrospective secondary data analysis was conducted on 10,969 pathologically confirmed, newly diagnosed carcinomas and sarcomas. Only complete records from 2014–2024 were included. Descriptive statistics were applied, and temporal trends were depicted using tables and line graphs.

Results: From 2014–2024, cancer incidence showed a clear rise. The mean age at diagnosis was 57.14 ± 14.72 years (range 1–97), with 52% of patients aged 50–70 years. The five leading cancers were breast (16.2%), colorectal (15.4%), thyroid (10%), endometrial (6.3%), and lung (5.5%). Lung cancer had the highest mean diagnostic age (62.31 ± 10.90), while thyroid cancer had the lowest (42.07 ± 13.42). Mean diagnostic age rose gradually across all cancers, with the most significant

increase seen in breast cancer (from 50.7 to 56.3 years), while colorectal cancer showed the least change (from 60.2 to 61.5 years).

Conclusion: Breast, endometrial, colorectal, and lung cancers occurred predominantly in individuals over 50 years of age, while thyroid cancer showed a higher proportion under 50 years. These findings support age-specific screening strategies targeting those above 50 for breast, endometrial, colorectal, and lung cancers, while adopting a younger screening approach for thyroid cancer. Further multicenter studies are needed to validate these findings.

Keywords: *Decadal Age Trends, Breast Cancer, Colorectal Cancer, Thyroid Cancer, Lung Cancer.*

BURDEN OF MUSCULOSKELETAL DISORDERS AND ITS EFFECT ON QUALITY OF LIFE: A CROSS-SECTIONAL STUDY AMONG SCHOOL TEACHERS IN KANNUR DISTRICT OF KERALA

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[2]Assistant Professor, Department of Orthopaedics, MES Medical College, Perinthalmanna, Kerala

Background: Musculoskeletal disorders (MSDs) are soft tissue injuries caused by sustained exposure to repeated movements, force, vibration, and awkward positions, with symptoms persisting for 12 months or more and leading to functional impairment. The teaching profession is considered one of the high-risk groups for developing work-related MSDs. These disorders can result in disability, reduced work productivity and performance, and impose an economic burden on health care systems.

Objectives: To assess the prevalence of musculoskeletal disorders among school teachers in Kannur district, Kerala, and to assess their effect on teachers' quality of life.

Methodology: A cross-sectional study was conducted among 306 school teachers in Kannur district, Kerala. Data were collected through Google Forms using the Standardised Nordic Musculoskeletal Questionnaire and the SF-12 Questionnaire. Data were analyzed using SPSS, and associations were tested using the Chi-square test.

Results: A total of 306 school teachers participated in the study, with ages ranging from 25 to 62 years (mean 38.87 ± 9.38). The overall prevalence of musculoskeletal disorders was 74.5%. The most commonly affected regions were the knees (44.7%), followed by the neck (37.9%). Teachers with MSDs showed decreased values in both the physical and mental components of quality of life.

Conclusion: The high prevalence of MSDs (74.5%) and their negative impact on the quality of life of school teachers make this a significant occupational health problem. The findings emphasize the need for preventive and supportive measures such as ergonomic interventions, physical training, and organizational support.

Keywords: *Musculoskeletal Disorders, Quality of Life, School Teachers, Prevalence, Functional Impairment.*

FUNCTIONAL DISABILITY OF STROKE AND ITS ASSOCIATION WITH DIABETES MELLITUS AMONG PATIENTS ATTENDING A TERTIARY CARE HOSPITAL IN THRISSUR - A CROSS-SECTIONAL STUDY

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Background: Stroke remains a major cause of disability and mortality, with diabetes emerging as a significant risk factor. Region-specific data on these conditions remain scarce, underscoring the need to explore this association for better outcomes and reduced disease burden.

Objectives: To assess functional disability among stroke patients attending a tertiary care hospital in Thrissur, Kerala, and to compare outcomes between patients with and without type 2 diabetes mellitus (T2DM).

Methodology: A cross-sectional study was conducted among 247 stroke patients admitted to a tertiary care hospital, selected by purposive sampling. Data were collected from neurology inpatient registers and medical records, and supplemented by telephonic interviews after obtaining informed consent. Socio-demographic details, stroke characteristics, diabetes history, and functional outcomes were assessed using a validated structured questionnaire (Modified Rankin Scale – MRS). Data were entered in MS Excel, coded, and analyzed using SPSS v24.

Results: The majority of patients (31.6%) were aged 60–69 years, 55.1% were male, and 57.1% were from rural areas. Ischemic stroke accounted for 93%, with 32.4% presenting to the hospital more than 4 hours after onset. About 36% experienced recurrent stroke. Numbness and weakness

of the arm (83.8%) were the most common symptoms. The majority (58.3%) were diabetic. Functional outcomes showed that 29.9% had slight disability and were able to perform daily activities without assistance but were unable to carry out previous activities. MRS revealed that 59.9% had good functional recovery. Good functional recovery was more frequent among stroke patients without T2DM compared to those with T2DM, showing a statistically significant association ($p<0.0001$).

Conclusion: The majority of patients had good functional recovery from stroke. This study highlights poorer functional outcomes among diabetics and a statistically significant association between stroke outcomes and diabetes.

Keywords: *Stroke, Diabetes, Modified Rankin Scale, Functional Disability, Cross-Sectional Study.*

RESEARCH POSTER

INCIDENCE AND MICROBIAL PROFILE OF SURGICAL SITE INFECTIONS FOLLOWING TOTAL ABDOMINAL HYSTERECTOMY: A RETROSPECTIVE COHORT STUDY

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Background: Surgical site infections (SSIs) are one of the most prevalent hospital-acquired infections. SSIs occur in 1-4% of all cases following hysterectomy, the second most common surgical procedure in women, often due to organisms like *Staphylococcus aureus* and *Escherichia coli*. Through this study, we aim to determine the incidence, microbial profile, and risk factors for SSIs after total abdominal hysterectomy (TAH).

Objectives: The primary objective is to determine the incidence and microbial profile of SSIs following TAH. The secondary objective is to determine the risk factors associated with the development of SSIs after TAH.

Methodology: A retrospective cohort study was conducted at a tertiary care hospital for a period of three months. 322 women, above 18 years of age, who underwent TAH between 1st June 2023 and 31st August 2024 were recruited. Demographic details, clinical history, SSI occurrence, causative organisms, and antimicrobial susceptibility patterns were obtained from hospital records and laboratory reports. Results were expressed as ratios and percentages. Appropriate statistical tests were applied to identify associated risk factors.

Results: The overall incidence of SSIs was 4.03% (13/322). Among

these, three were caused by MRSA (23.1%), three by *Enterococci* (23.1%), three by Gram-negative bacilli (23.1%- two by *E.coli* and one by *Klebsiella)* and four by Coagulase-Negative *Staphylococcus* (30.7%). The risk factors for development of SSIs after TAH included endometriosis as the surgical indication, thyroid disorders, drain placement, and intraoperative complications.

Conclusion: The incidence of SSIs after TAH was 4.03% with both Gram-positive and Gram-negative organisms implicated. Significant risk factors were endometriosis as surgical indication, thyroid disorders, drain placement, and intra-operative complications. Identifying these factors may help in targeted preventive strategies and improve postoperative outcomes.

Keywords: *Surgical Site Infections, Total Abdominal Hysterectomy, Microbial Profile, Risk Factors, Retrospective Cohort Study.*

EPIDEMIOLOGICAL PROFILE OF EOSINOPHILIA IN PAEDIATRIC DISORDERS IN A TERTIARY CARE CENTRE IN SOUTHERN KERALA

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Background: Eosinophils are acidophilic granulocytes differentiating from CD34+ pluripotent stem cells and their main function is defence against invading microbes. Eosinophilia, characterised by an elevated eosinophil count in the blood, plays a crucial role in diagnosing and understanding various paediatric disorders.

Objective: The primary objective is to find the epidemiological profile of eosinophilia in paediatric disorders in a tertiary care centre in Southern Kerala from past medical records. The secondary objective is to find the association between eosinophilia and various infections and to identify various risk factors of eosinophilia prevalent among the paediatric age group.

Methodology: This record-based retrospective comparative study was conducted in 224 paediatric eosinophilia cases with ages ranging from 1 month to 18 years, at a tertiary care centre from November 2024 to April 2025. Inclusion criteria were all paediatric OP and IP patients presenting with bacterial, viral, fungal, immunological, or haematological disorders, while those on antihistamines or steroids before evaluation were excluded. The calculated sample size was 195. Data was collected using a pretested, semi-structured questionnaire from patient records and chi-square test was used to assess association.

Results: The median age of participants was 4 years. Eosinophilia, though prevalent in respiratory tract infections and asthma, was not

statistically significant ($p \geq 0.05$). Parasitosis showed a significant association with severity of eosinophilia ($p \leq 0.01$). There was no significant difference in the incidence of eosinophilia between sexes and risk factors considered.

Discussion: Eosinophilia was more common in young rural males, mostly with normal BMI. Symptoms included cough, fever, and recurrent respiratory issues. LRTIs predominated, while allergy and parasitosis were rare. Most cases were mild; severe eosinophilia was strongly linked to parasitosis, with no significant gender or genetic correlation.

Conclusion: Eosinophilia in children was mostly mild, linked to respiratory infections; severe cases were rare but strongly associated with parasitic infections, highlighting environmental influence and screening importance.

Keywords: *Eosinophilia, Paediatric Disorders, Parasitosis, Respiratory Infections, Environmental Influence.*

THE HIDDEN RESERVOIR: MOBILE PHONES IN THE TRANSMISSION CHAIN OF MULTIDRUG-RESISTANT ORGANISMS

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Background: Mobile phones have become an indispensable accessory for professional and social life for a health care professional. This raises concerns about these devices serving as reservoirs for multidrug-resistant (MDR) organisms, contributing to the spread of nosocomial infections within health care facilities and the broader community. This study aimed to determine the colonization rate of MDR bacteria on mobile phones of health care workers (HCWs).

Objectives: To detect the colonization rate of multidrug resistant bacteria on mobile phones of health care workers.

Methodology: A cross-sectional study was conducted at a tertiary hospital in Kerala, India. Samples from the mobile phones of doctors and nurses in various wards and ICUs were collected using sterile swabs. Swabs were inoculated on blood agar and MacConkey agar, then incubated for 48 hours to identify MDR organisms using standard protocols. Sociodemographic data and mobile phone usage practices were collected via a questionnaire.

Results: MDR bacterial colonization was detected on 96 out of 200 mobile phones (48%). The most frequently isolated MDR organism was *Methicillin-resistant coagulase negative Staphylococci* (56.25%), followed by ESBL-producing *Acinetobacter baumannii* (26.04%), *Klebsiella pneumoniae* (8.333%), *Escherichia coli* (4.166%) and

Pseudomonas aeruginosa (2.08%). *Methicillin-resistant Staphylococcus aureus* was found on 3.12% of devices. Colonization appeared higher among male HCWs (25%), doctors (22%) those who used phones during clinical duties or in washrooms. More MDRs were isolated from staff working in medical specialities (23.8%) compared to surgical specialities (16.2%). MDR colonization was less in those practicing sanitization (15.2%) than those who did not (24.2%).

Conclusion: Mobile phones of health care workers may serve as vehicles for the transmission of MDR organisms. Infection control policies should include guidelines on mobile phone use and disinfection within hospital settings.

Keywords: *Multidrug-Resistant Organisms, Health Care Workers, Sanitization Practices, Mobile Phone Contamination, Infection Control.*

THE ASSOCIATION OF SERUM URIC ACID TO HDL RATIO AND MONOCYTE TO HDL RATIO WITH GLYCEMIC CONTROL IN SUBJECTS WITH TYPE 2 DIABETES MELLITUS - A CROSS-SECTIONAL STUDY

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Background: Type 2 diabetes mellitus (T2DM) is one of the most common metabolic disorders. The best marker of diabetic control is glycated hemoglobin (HbA1c), but its inability to reflect daily fluctuations in glucose regulation remains an important limitation.

Objectives: To assess the association of the serum uric acid to HDL ratio (UHR) and monocyte to HDL Ratio (MHR) with glycaemic control in subjects with T2DM, and to evaluate whether UHR and MHR can be used as predictive markers for glycaemic control in diabetic patients.

Methodology: After obtaining ethical clearance, a total of 165 participants meeting the inclusion and exclusion criteria were recruited for the study. Diabetes was diagnosed using ADA criteria. Each study group included 55 age- and sex-matched participants: (1) diabetes with HbA1c >7%, (2) diabetes with HbA1c <7%, and (3) healthy controls. After obtaining written informed consent, participants were anonymized and coded with numbers. Biophysical profiles of participants were recorded. Venous blood samples were collected, and biochemical and hematological parameters were estimated.

Results: The study found a significant difference in both UHR and MHR between the three groups. There was a significant positive correlation between UHR and HbA1c, and between MHR and HbA1c. However, there was no significant difference in UHR and MHR among diabetic

subjects with and without good glycemic control.

Conclusion: UHR and MHR are two biomarkers that can be easily estimated and provide insight into the inflammatory status of subjects with diabetes. While they cannot replace HbA1c in the assessment of glycemic control, their estimation could provide an additional benefit in the prognosis and management of the disease.

Keywords: *Type 2 Diabetes Mellitus, Monocyte, HDL, Uric Acid, Biomarker.*

CLINICAL PROFILE OF ACUTE STROKE PATIENTS BROUGHT TO EMERGENCY DEPARTMENT IN A TERTIARY CARE HOSPITAL IN NORTHERN KERALA

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Background: The clinical profile of stroke often varies across different regions due to differences in lifestyle, dietary habits, and prevalence of risk factors. A tertiary care hospital in Northern Kerala, where this study was conducted, has unique sociocultural and dietary practices that may influence the risk factor profile and stroke presentation. There is a lack of previous studies focusing specifically on this area, making this study significant as it addresses this gap.

Objectives: To describe the clinical profile of acute stroke patients and to assess the proportion of patients reaching within the window period and eligible for thrombolysis.

Methodology: Universal sampling of all acute stroke patients brought to the emergency department from 01/07/24 to 01/10/24 was carried out. Data were obtained through detailed history taking and clinical examination by a physician. Data were analyzed using SPSS.

Results: A total of 62 patients were analyzed. The 60-70 age group was most common. Hypertension was present in 66.1%, and diabetes in 48.4%. Only 14.5% were eligible for thrombolysis. The mean duration of hospital arrival after initial symptoms was 11.67 hours. However, among those with a history of TIA, 75% arrived within 6 hours. Patients with a previous history of stroke also presented earlier compared to others.

Conclusion: The high incidence of modifiable risk factors highlights the

need for lifestyle modifications. Limited eligibility for thrombolysis was largely due to delayed hospital arrival and neglect of early manifestations. Earlier hospital admission among those with a history of TIA suggests that awareness plays a crucial role. Similar awareness initiatives are necessary in the general population.

Keywords: *Stroke, Clinical Profile, Thrombolysis, Emergency Medicine, Risk Factors.*

AN ANALYTICAL STUDY TO ASSESS SLEEP HYGIENE PRACTICES AMONG MEDICAL AND NON-MEDICAL STUDENTS IN NORTH KERALA

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Background: Sleep hygiene refers to behaviors and environmental practices that can be modified to promote healthy sleep, which is vital for health and well-being. Due to academic pressures and rising use of digital devices, students often neglect sleep, adversely affecting their overall quality of life.

Objectives: To assess and compare sleep hygiene practices between medical and non-medical students in Northern Kerala. The secondary objective was to identify factors associated with sleep hygiene among these students.

Methodology: A cross-sectional study was carried out among medical and non-medical students aged above 18 years from two institutions in North Kerala. Using proportionate probability sampling, 298 participants (50% medical, 50% non-medical) were included. The Sleep Hygiene Index (0–52 scale) was used, with higher scores indicating poorer hygiene. Data were collected via google forms and analyzed using SPSS.

Results: Among 298 students, 51.3% were male and 48.7% female; 50% were medical and 50% non-medical students. Only 16.4% had good sleep hygiene, 61.4% normal, and 22.1% poor hygiene. Good sleep hygiene was seen in 43% of medical students and 39% of non-medical students.

Regarding sleep duration, 39.3% slept 6–7 hours, 38.6% more than 7 hours, and 22.1% less than 6 hours. Daytime fatigue was reported by 65.4%. Significant associations were observed for year of admission (p=0.009, medical college), sleep hours (p=0.033, non-medical), impact of sleep loss on physical performance (p=0.011, medical), and device use before bed (p=0.002, medical). No significant associations were found for gender, college, bedtime, wake-up time, pre-sleep routine, or calming activities.

Conclusion: Most students demonstrated suboptimal sleep hygiene with frequent fatigue. Medical students showed stronger associations between poor sleep hygiene and negative outcomes, highlighting the need for targeted interventions in both academic streams.

Keywords: *Sleep Hygiene, Medical Students, Non-Medical Students, Cross-Sectional Study, Kerala.*

PREVALENCE AND LEVEL OF DISABILITY CAUSED BY MIGRAINE AND ITS EFFECT ON ACADEMIC PERFORMANCE AMONG MEDICAL STUDENTS: A CROSS-SECTIONAL STUDY

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Background: Migraine is a neurological condition characterized by recurrent headaches that can interfere with daily activities. As stress is a major trigger, we aimed to understand the prevalence and effects of migraine among medical students.

Objectives: To estimate the prevalence of migraine and determine the level of disability it causes in medical students. The secondary objective was to determine the effect of migraine on academic performance among medical students.

Methodology: We conducted a cross-sectional study among medical students. For screening and diagnosis, the American Migraine Prevalence and Prevention (AMPP) Study Migraine Diagnostic Module was used, and the Migraine Disability Assessment (MIDAS) score was used to assess the level of disability.

Results: A total of 125 MBBS students participated in the study. About 44.8% (n=56) reported a history of recurrent severe headaches. The prevalence of previously diagnosed migraine cases was 20% (n=25). Using the AMPP diagnostic module, the prevalence of migraine was found to be 37.6% (n=47). Based on the MIDAS score, 38.2% (n=18) of participants with migraine had severe disability. Fisher's exact test showed a significant association (p=0.014) between migraine and academic performance.

Conclusion: The prevalence of migraine among medical students is substantially underdiagnosed. More screening measures are required for early diagnosis and to prevent disability caused by migraine.

Keywords**:** *Migraine, Students, Prevalence, Stress, Headache.*

A CROSS-SECTIONAL STUDY ON THE PREVALENCE AND DETERMINANTS OF PREHYPERTENSION AMONG MEDICAL STUDENTS

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Background: Prehypertension represents an early but usually neglected stage in the progression to hypertension and cardiovascular disease. In spite of medical training and awareness, undergraduate students remain at risk due to substance abuse, irregular sleep, and unhealthy diet.

Objectives: To assess the prevalence of prehypertension among MBBS students at a government institution in central Kerala and to identify associated risk factors.

Methodology: A cross-sectional study was conducted among 292 MBBS students across all academic years. Information regarding lifestyle behaviours (diet, physical activity, sleep), substance use, family history, anthropometry, and stress (assessed using the Hamilton Anxiety Rating Scale) was obtained using a semi-structured questionnaire via interview format. Blood pressure was measured using an aneroid sphygmomanometer in the sitting position. Data were analysed with SPSS version 29; $p<0.05$ was considered statistically significant. Students aged ≥18 years who provided written consent were included. Exclusion criteria were a history of hypertension, present use of antihypertensive medication, and those who did not provide consent.

Results: Prehypertension was observed in 12.3% of participants, with higher prevalence in males (27.0%) compared to females (7.3%). Binary logistic regression analysis identified significant associations with reduced physical activity (OR 5.61), prolonged screen time (OR 5.07), and tobacco use (OR 2.22). These findings are consistent with studies

done in rural Patna, Bihar. Additional associations obtained in univariate analysis were frequent caffeine consumption, high intake of fast food (specifically shawarma) and insufficient sleep.

Conclusion: A relevant proportion of medical students exhibited prehypertension, signifying the need for early recognition and preventive interventions. Institutional reforms and familial support in promoting healthy routines, together with the inclusion of physical activity, adequate rest, and balanced nutrition, are necessary to mitigate risk.

Keywords: *Medical Students, Prehypertension, Hypertension, Lifestyle, Risk Factors.*

KNOWLEDGE ON ANTIMICROBIALS AND PATTERN OF THEIR USE ACROSS HUMAN AND NON-HUMAN SECTOR IN A VILLAGE POPULATION

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Background: Antimicrobials have played a critical role in treating infections in humans, animals, and plants. However, irrational use contributes to the emergence of antimicrobial resistance (AMR), posing a significant public health threat both globally and in India. In India, poor awareness, self-medication, weak regulations, and spillover use from the non-human sector worsen AMR. This study aims to assess the knowledge and usage patterns of antimicrobials across human, animal, and agricultural sectors in a rural population.

Objectives: To assess the knowledge about antimicrobials among households in a village in Palakkad. The secondary objective was to assess the reported patterns of antimicrobial use among the same households, as well as in animals and agriculture.

Methodology: A cross-sectional study was conducted among 300 households in the Puthupariyaram Panchayath, Palakkad district, using a validated semi-structured questionnaire designed to address the study objectives.

Results: The study showed that 72.6% reported knowledge of antimicrobials, primarily from doctors and hospitals. Only 66% knew antimicrobials treat bacterial infections, with limited awareness regarding their use against viral, fungal, and parasitic infections. Knowledge and use of antimicrobials in animals and agriculture were low. Notably, only 11% had heard of AMR, with 33% of them misunderstanding its mechanism. In practice, 16.7% had consumed

antimicrobials in the past six months, predominantly amoxicillin, for respiratory tract infections. All antimicrobials were taken with a prescription, but 62% were used for less than five days.

Conclusion: The study highlights significant knowledge gaps and practices contributing to AMR. Targeted public awareness campaigns and stricter antimicrobial stewardship programs are essential to bridge these gaps and promote responsible antimicrobial use in rural populations.

Keywords**:** *Antimicrobials, Antimicrobial Resistance, Public Awareness, Antimicrobial Stewardship, Rural Health.*

A CROSS-SECTIONAL STUDY ON ATYPICAL MANIFESTATIONS OF DENGUE IN A TERTIARY CARE CENTRE

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Background: Expanded dengue syndrome (EDS) describes atypical manifestations that do not fall into either DHF or DSS. Unusual involvement of other organs such as the gastrointestinal tract, cardiovascular system, nervous system, kidneys, and hematological system has been increasingly reported. Knowledge of these manifestations will help clinicians achieve a more prompt diagnosis and initiate appropriate treatment.

Objectives: To determine various atypical manifestations of dengue and to compare the laboratory parameters of atypical and typical cases.

Methodology: Study design: Cross-sectional study at a tertiary care centre. All laboratory-confirmed cases of dengue (NS1 or IgM positive) from 01/07/2024 to 30/09/2024 were retrospectively reviewed from case files. Equivocal cases, cases with co-existing infections. Statistical analysis – atypical manifestations were summarized as proportions whereas laboratory parameters were analyzed using the unpaired t-test.

Results: A total of 203 laboratory-confirmed cases of dengue were included. Of these, 130 were typical and 73 (33.6%) had atypical manifestations. Males showed a higher predominance than females in atypical cases (ratio 3:2). Predominant atypical manifestations noted were conduction anomalies (31%), cardiac arrhythmias (26%), acute

acalculous cholecystitis (26%), hepatomegaly (25%), and splenomegaly (21%). Comparison of laboratory parameters between typical and atypical cases using the unpaired t-test showed that atypical cases had significantly lower sodium levels (hyponatremia) compared to typical cases.

Conclusion: Clinicians should maintain a high index of suspicion and vigilance for atypical manifestations of dengue fever, as lack of timely detection and management could be fatal.

Keywords: *Dengue, Atypical Manifestations, Laboratory Parameters, Hyponatremia, EDS.*

CASE PRESENTATIONS

BLOOD TELLS THE STORY: CASE OF 'HERBAL' ANTI-DIABETIC DRUG INDUCED LEAD POISONING

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Background: Lead poisoning is a multisystem toxic condition, most often linked to environmental or occupational exposure. However, non-prescribed herbal medicines may contain toxic concentrations of heavy metals, posing serious health risks.

Case History: A 58-year-old female with type 2 diabetes mellitus and hypothyroidism presented with generalized fatigue, reduced appetite, and abdominal pain for 2 weeks. She had discontinued metformin and had been taking an online-purchased herbal preparation for glycemic control for 1.5 months.

Examination: On examination, she was pale with desquamation of the tongue and oral mucosa. Vitals and systemic examination were within normal limits.

Differential Diagnosis: Causes of anemia considered included iron deficiency anemia, megaloblastic anemia and myelodysplastic syndrome.

Management: Laboratory findings revealed anemia (Hb 7.5 g/dL), elevated reticulocyte count and serum iron, normal vitamin B12 and folate levels, microcytic hypochromic anemia with coarse basophilic stippling in peripheral smear and ring sideroblasts in bone marrow biopsy. Blood and urine lead levels were markedly elevated. The herbal capsule contained 40,657 ppm lead (limit 10 ppm). A diagnosis of lead poisoning with sideroblastic anemia was made. The patient was advised

to stop the herbal drug and started on chelation therapy with BAL followed by oral d-penicillamine for 6 weeks.

Conclusion: This case highlights the hidden danger of unregulated herbal medicines. Awareness and regulation are vital to prevent such toxic exposures. The case also underscores the diagnostic importance of peripheral smear and bone marrow biopsy in lead poisoning.

Fig. 1 Desquamation of tongue

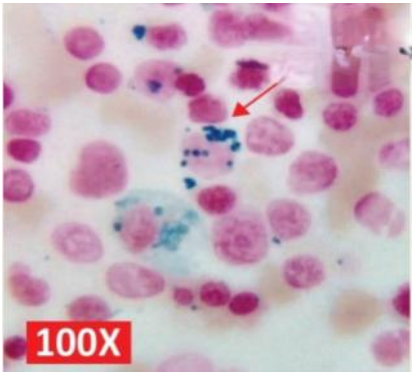

Fig. 2 Ring sideroblasts

Keywords: *Lead Poisoning, Sideroblastic Anemia, Herbal Medicine, Diabetes Mellitus, Chelation.*

ANCA-ASSOCIATED VASCULITIS PRESENTING WITH OPTIC NEURITIS AND PACHYMENINGITIS

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Background: Anti-neutrophil cytoplasmic antibody (ANCA) associated vasculitis are rare, potentially life threatening autoimmune disorders characterized by small vessel necrotizing inflammation. Clinical presentation is heterogeneous, ranging from sinus involvement and pulmonary disease to neurological manifestations.

Case History: A 29-year-old female presented with sudden, painless loss of vision in the right eye. Past history revealed diplopia six months earlier that resolved spontaneously and recurrent sinusitis.

Examination: General examination revealed saddle nose deformity with tenderness over maxillary sinuses. In the right eye visual acuity is counting fingers at 1 m, colour vision abnormal, RAPD present. Extra ocular movements full. No focal neural deficit.

Differential Diagnosis: The possibilities are multiple sclerosis, vasculitis, SLE and infections like tuberculosis or fungal.

Management: Visual evoked potential showed absent waveforms in the right eye, suggestive of optic neuritis. MRI brain revealed right cerebral pachymeningeal enhancement without white matter lesions, so possibility of vasculitis considered. HRCT thorax demonstrated occasional pulmonary nodules. Laboratory workup showed elevated ESR and strongly positive c-ANCA. The patient was initiated on high-dose intravenous steroids, but vision deteriorated after one week. Subsequently, she received intravenous cyclophosphamide, followed by

rituximab maintenance therapy. Over six months, she showed symptomatic improvement with mild vision loss persisting.

Conclusion: This case highlights an unusual presentation of ANCA-associated vasculitis with predominant ENT and neurological involvement. Early recognition, serological confirmation, and prompt initiation of immunosuppressive therapy are crucial to prevent irreversible organ damage and disability.

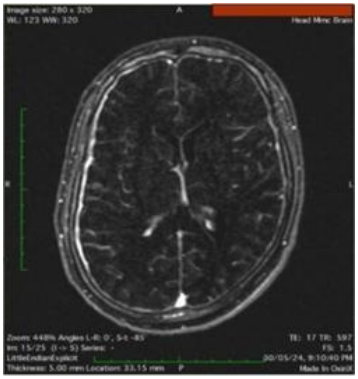

Fig. 1

Fig. 2 Saddle Nose Deformity

Keywords: *ANCA associated Vasculitis, Optic Neuritis, Pachymeningitis, Pranulomatosis With Polyangiitis, C-ANCA.*

WHEN IMMUNITY MISFIRES: A JOURNEY THROUGH RECURRENT AILMENTS PRIMARY IMMUNODEFICIENCY-HYPER IgE SYNDROME/JOB'S SYNDROME

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Background: Rare immunodeficiency with markedly raised IgE, recurrent infections, eczema, and skeletal anomalies. Autosomal dominant form results from STAT3 mutation causing impaired Th17 differentiation and defective neutrophil chemotaxis.

Case History: An 11-year-old girl, developmentally normal and fully immunized, presented with 2-week diffuse headache, high-grade fever with chills and photophobia for 4 days, relieved by antipyretics. MRI brain showed abnormalities. She had recurrent skin infections for 7 years and intermittent ear discharge requiring prolonged antibiotics. Migraine is present in maternal aunt.

Examination: Bilateral cervical lymphadenopathy. Head showed dolichocephaly, frontal bossing, sagittal craniosynostosis, pyoderma scalp, lice, broad nasal bridge and healed facial pyoderma scars. Left ear showed TM perforation. Teeth showed persistence of milk teeth. Lips were thickened. There was joint hypermobility and scoliosis. CNS showed neck stiffness, positive Brudzinski, leg and neck signs. Other systems were normal.

Differential Diagnosis: Bacterial brain abscess considering immunodeficiency, granulomatous amoebic encephalitis, tubercular meningitis, cysticercosis, nocardiosis and toxoplasmosis.

Management: Investigations done included MRI brain which showed

multiple ring-enhancing lesions in bilateral cerebral and cerebellar hemispheres, hydrocephalus and basal meningitis. CSF showed elevated protein, pleocytosis and low glucose. Culture of scalp and ear showed MSSA. Serology showed high serum IgE. By genetic testing, STAT3 mutation was confirmed by whole exome sequencing. Treatment included IV vancomycin (8 weeks), meropenem (5 weeks), ceftriaxone (3 weeks). Patient was started on dexamethasone and then tapered to prednisolone. Supportive care by aural toileting and acetazolamide for hydrocephalus with prophylactic co-trimoxazole was started. Counseling on long term follow up and planned IVIG therapy.

Conclusion: Early recognition of primary immunodeficiency in children with recurrent infections and atypical features enables timely treatment and prevents life-threatening complications.

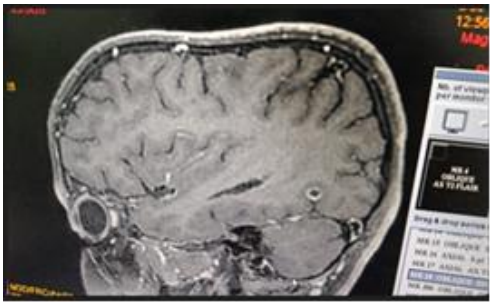

Fig. 1

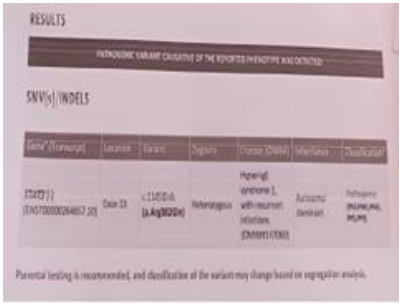

Fig. 2

Keywords: *Hyper-IgE Syndrome, STAT 3 Mutation, Recurrent Infections, Brain Abscess, IVIG Therapy.*

A RARE CASE OF CRYPTOSPORIDIAL GASTRITIS IN AN IMMUNOCOMPETENT PATIENT

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Background: Cryptosporidial gastritis is a rare cause of gastric inflammation caused by *Cryptosporidium* species, usually seen in immunocompromised individuals. Infection occurs through ingestion of contaminated food, water, or contact with infected sources. The parasite adheres to the gastric mucosa, causing inflammation and symptoms such as nausea, vomiting, and abdominal pain. Understanding this condition helps clinicians identify atypical causes of gastritis and address underlying risk factors contributing to gastrointestinal morbidity. Here in, we present an interesting case of gastritis caused by *Cryptosporidium* in an immunocompetent adult requiring treatment with nitazoxanide.

Case History: A 71-year-old male presented with a 6-month history of abdominal discomfort associated with decreased appetite. There was no history of weight loss, vomiting, hematemesis, melena, diarrhea, jaundice or per-rectal bleeding. The patient reported easy fatiguability, generalised weakness, and exertional dyspnea on walking approximately 100 meters. There were no associated symptoms such as cough or chest pain. The patient denied any similar illness in the past and there was no significant family history.

Examination: The patient was conscious, cooperative, moderately built, with pallor but no icterus or oedema. Vital signs were stable. Abdominal examination was unremarkable without tenderness or organomegaly. Systemic examination showed no abnormalities.

Differential Diagnosis: H-pylori gastritis, NSAIDS induced gastritis,

autoimmune gastritis, peptic ulcer, viral gastritis and malignancy.

Management: Investigations revealed anaemia and features of antral gastritis. Endoscopic biopsy confirmed *Cryptosporidium* associated gastritis with activity. The patient was treated with nitazoxanide 500 mg twice daily for 5 days, along with iron supplementation and supportive care.

Conclusion: Cryptosporidial gastritis, though rare in immunocompetent patients, should be considered in unexplained chronic gastritis. Timely diagnosis and specific anti-parasitic treatment with nitazoxanide can lead to clinical resolution. Awareness of such atypical presentations is essential to guide appropriate diagnostic evaluation and management.

Fig. 1 Upper GI endoscopy shows mild antral erythema and juxta-pyloric mucosa appears oedematous and friable.

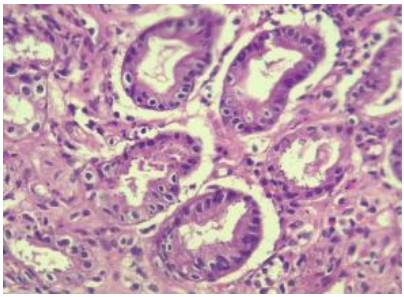

Fig. 2 H&E stain (40x)- Endoscopic biopsy shows features of *Cryptosporidium* associated antral gastritis with activity.

Keywords*: Cryptosporidium, Gastritis, Immunocompetent, Nitazoxanide, Endoscopic Biopsy.*

A QUIET STORM: SUBTLE BEGINNINGS, SUDDEN WEAKNESS

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Background: This case illustrates the complexities in approaching a patient with fever, neurological deterioration, and flaccid paralysis, highlighting the importance of a systematic clinical and investigative approach.

Case History: A 70-year-old male farmer presented with a 5-day history of fever accompanied by a holocranial headache. After admission, he developed altered behaviour, irrelevant speech followed by weakness in all four limbs and seizures.

Examination: Patient was conscious and oriented initially. Later he became drowsy. Meningeal signs were positive. Motor system examination showed hypotonia of both upper and lower limbs. Upper limb deep tendon reflexes (DTR) were sluggish bilaterally and lower limb DTR were absent bilaterally. Plantar reflex was bilateral equivocal.

Differential Diagnosis: Acute meningoencephalitis followed by development of flaccid quadriparesis, parainfectious demyelination, fulminant Guillain–Barré syndrome and infectious vasculitic infarcts/hemorrhage.

Management: Routine investigations were normal except elevated CRP, ALT, and AST. CSF showed lymphocyte predominant pleocytosis with CSF glucose 54 mg/dL and CSF protein 155 mg/dL. MRI brain and spinal cord were normal. Nerve conduction studies showed symmetric motor mixed polyneuropathy of both upper and lower limbs with prolonged

F-wave latencies. CSF and serum meningoencephalitis panel was positive for West Nile encephalitis. Final diagnosis was acute fulminant West Nile meningoencephalitis with West Nile induced acute flaccid myelitis mimicking fulminant Guillain–Barré syndrome. Patient was treated for meningoencephalitis with ceftriaxone, vancomycin, ampicillin, and acyclovir. IVIG therapy was given for West Nile induced acute flaccid myelitis.

Conclusion: This case highlights the challenges in diagnosing and managing acute neurological infections with atypical presentations. Clinicians should remain vigilant for rare infectious causes when evaluating rapidly progressive neurological illness.

Keywords*: Acute Flaccid Paralysis, Parainfectious Demyelination, GBS, Meningoencephalitis, West Nile.*

VENOM AND VESSELS: A RARE CASE OF CAPILLARY LEAK SYNDROME IN A 6-YEAR-OLD

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Background: Capillary leak syndrome (CLS) is a potentially fatal disorder of fluid imbalance, marked by increased vascular permeability leading to intravascular hypovolemia, extravascular edema, and hypoperfusion. It is a very rare complication of viper envenomation, possibly triggered by a vascular apoptosis-inducing venom component not neutralized by conventional anti-snake venom (ASV). CLS, also known as Clarkson's disease, is defined by the triad of hypotension, hemoconcentration, and hypoalbuminemia.

Case History: A 6-year-old girl was referred to this tertiary care centre, following a snakebite on right lower limb. She presented with severe limb pain, upper eyelid edema, restlessness, and a brief episode of seizure (stiffening of the body and up-rolling of the eyes, <2 minutes). She was immediately shifted to the ICU and started on ASV. 20 vials of ASV were administered, including treatment for eyelid edema. Approximately 12 hours later, she developed bilateral parotid swelling, following which 10 vials of ASV were administered. There was no evidence of hematuria or external bleeding. The clinical course was aggressively monitored closely in the ICU, and the child was managed supportively.

Examination: Periorbital edema, bilateral parotid swelling, neck edema, inguinal lymphadenopathy, and right leg edema were noted. No pallor,

icterus, cyanosis, clubbing. No focal neurological deficits. Systemic examination was normal.

Differential Diagnosis: The possibilities are capillary leak syndrome, septic shock, anaphylaxis, nephrotic syndrome and hepatic failure.

Management: Second whole blood clotting time (WBCT) was prolonged (>20mins), leukocytosis, elevated CRP, increased PT/INR ratio, elevated hemoglobin and hematocrit, prolonged PT, APTT and thrombocytopenia seen. RFT was normal. The child received 30 ASV vials, steroids (hydrocortisone), augmentin, later meropenem, and ICU supportive care.

Conclusion: CLS post-viper bite is rare but critical. Early diagnosis and aggressive supportive care are essential for survival.

Fig. 1

Fig. 2

Keywords: *CLS, Viper Envenomation, Edema, WBCT, ASV.*

A CURABLE CATASTROPHE: TTP IN A YOUNG MALE

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Background: Thrombotic thrombocytopenic purpura (TTP), characterized by thrombocytopenia, microangiopathic hemolytic anemia, and widespread microvascular thrombosis is a rare disease with 4–5 cases per million annually. Mortality exceeds 90% if untreated, however early plasma exchange reduces it to 10–20%. Neurological involvement, including seizures and encephalopathy, may mimic more common tropical infections.

Case History: A 28-year-old male presented with intermittent high-grade fever with chills, gum bleeding, body pain for 3 days, vomiting of 2-3 episodes, abdominal pain, and loose stools for 1 day.

Examination: BP was 158/110 mmHg, pulse was 96 bpm with no organomegaly, focal neurological deficits or meningeal signs.

Differential Diagnosis: Dengue, arboviral diseases, malaria, leptospirosis, scrub typhus, other thrombotic microangiopathies (HUS, DIC) and TTP.

Management: Initial investigations showed lowered hemoglobin (9.2 g/dl) and platelets (14,000/cu.mm), with raised LDH, and indirect hyperbilirubinemia. He developed seizures with postictal confusion, low GCS necessitating intubation. Peripheral smear showed schistocytes

consistent with microangiopathic haemolysis (Fig. 1). MRI brain demonstrated basal ganglia/subcortical hyperintensities with microbleeds and pachymeningeal thickening, suggesting encephalitis. Extensive infectious and autoimmune workup, including tropical fevers, viral encephalitis and toxicology was negative. The diagnostic breakthrough came when ADAMTS13 activity was <0.2%, confirming TTP. He underwent nine sessions of plasmapheresis, IV methylprednisolone, and four doses of rituximab. With multidisciplinary ICU care, gradual recovery ensued, platelets normalized (2.98 lakhs/cu mm), LDH fell (213 U/L), and he was discharged.

Conclusion: This case emphasizes the importance of considering TTP in febrile thrombocytopenia with neurological involvement, once tropical infections are excluded. Early recognition with peripheral smear and ADAMTS13 activity is crucial, as plasma exchange and immunosuppressive therapy reduce mortality from 90% to <20%. His recovery highlights the value of systematic evaluation and timely intervention in a condition otherwise fatal.

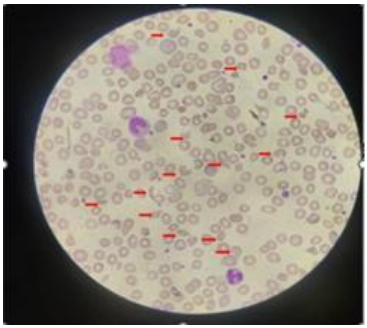

Fig. 1 Peripheral smear showing schistocytes

Keywords: *TTP, MAHA, ADAMTS-13 Deficiency, Plasmapheresis, Rituximab.*

A RARE CASE OF NUMB CHEEK SYNDROME

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Background: Numb cheek syndrome is a rare condition characterized by numbness over the cheek and gums due to involvement of the trigeminal nerve. Infiltration by local malignancy or infections is the most common cause.

Case History: A 48-year-old hypertensive male on treatment, presented with a 15-day history of numbness over the right forehead and cheek. There was no fever, headache or vomiting. No weakness or sensory loss or vision blurring**.**

Examination: Clinical examination revealed decreased sensation over the V1 and V2 divisions of the right trigeminal nerve for pain/touch/temperature.

Differential Diagnosis: A diagnosis of numb cheek syndrome secondary to right trigeminal nerve involvement was made. Etiology involves malignancy, infection of sinuses, CT disorders like Sjogren's or Wegener's, demyelinating disorders like MS or NMO or MOG**.**

Management: The routine blood investigations were within normal limits. Vasculitis markers (ANA, c-ANCA, SS-A, SS-B) were negative. CT of the chest and abdomen showed no evidence of underlying malignancy. Vitamin B12 and folate levels were normal. The serum paraneoplastic antibody panel was negative, and serum NMO/MOG was also negative. MRI of the brain revealed multiple white matter lesions in the subcortical, periventricular, and brainstem areas with occasional enhancement. A lesion was noted involving the right Trigeminal nerve

entry zone in the pons, responsible for facial numbness, which is characteristic of an active demyelinating disease process such as multiple sclerosis. CSF analysis showed normal cells and raised proteins with positive oligoclonal bands, findings suggestive of multiple sclerosis. He was started on pulse dose intravenous steroids for five days followed by a tapering course of oral steroids. There was marked improvement in symptoms after steroid initiation, and he was subsequently planned for further treatment with disease-modifying drugs for multiple sclerosis. He is currently on regular follow-up.

Conclusion: Demyelinating diseases like MS are a rare cause of numb cheek syndrome. Early diagnosis can lead to good outcomes.

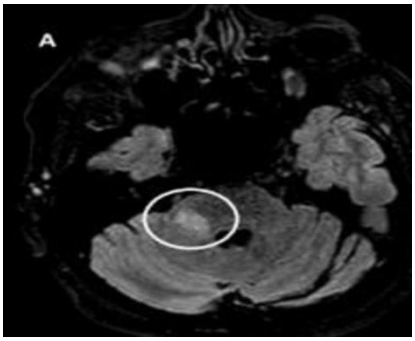

Fig. 1 T2 Flair image showing multiple hyperintensities in bilateral periventricular areas.

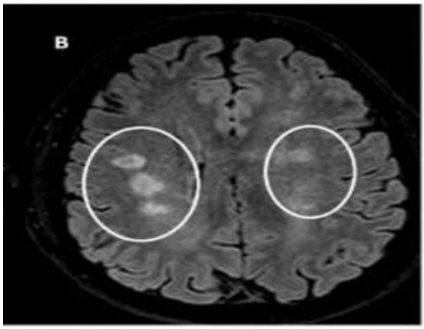

Fig. 2 T2 Flair image showing lesion involving involving the right trigeminal entry in pons.

Keywords: *Numb Cheek Syndrome, Trigeminal Neuropathy, Multiple Sclerosis, Demyelinating Disease, Oligoclonal Bands.*

TUMEFACTIVE DEMYELINATION MASQUERADING AS STROKE: A DIAGNOSTIC IMPOSTOR

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Background: Acute focal neurological deficits are often attributed to stroke. Tumefactive demyelination is a rare variant of demyelinating disease that clinically mimics stroke and radiologically presents as a space-occupying lesion resembling neoplasms, frequently leading to diagnostic uncertainty. Accurate diagnosis is crucial, as management differs significantly from vascular and neoplastic causes.

Case History: A 40-year-old female with no comorbidities presented with sudden onset weakness of right upper and lower limbs with speech difficulty for two days. She also had fever with cough two weeks prior. There was no history of seizures, headache or similar past episodes. Family history was non-contributory.

Examination: The patient was conscious and oriented. Neurological examination revealed right-sided hemiparesis with upper limb power 1/5 and lower limb power 2/5, with motor aphasia. Deep tendon reflexes were brisk on the right side. Right plantar response was extensor. No meningeal signs noted.

Differential Diagnosis: Based on localization to the left frontal cortex and subcortical structures, the differentials include acute ischemic stroke, CNS demyelination and space-occupying lesions (primary or metastatic tumors).

Management: Routine blood tests including vasculitic markers were normal. MRI brain revealed a large intra-axial lesion in the left frontal

lobe with minimal contrast enhancement, suggestive of tumefactive demyelination. CSF was normal. Paraneoplastic and autoimmune panels were negative. The patient was started on pulse methylprednisolone followed by tapering steroids, along with intravenous immunoglobulin (2 g/kg). She showed marked improvement in motor power and speech. Repeat imaging demonstrated reduction in lesion size. The patient is on regular follow-up.

Conclusion: Tumefactive demyelination is an important diagnostic consideration in patients with acute neurological deficits and tumor-like lesions on MRI. Prompt initiation of corticosteroids and immunotherapy results in favorable outcomes. Interval imaging is essential for monitoring.

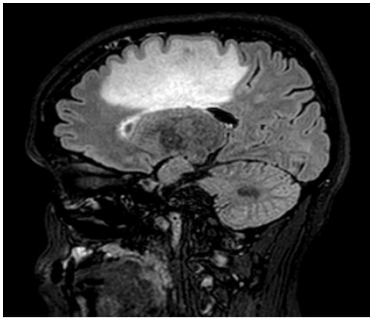

Fig.1 MRI Brain T2 Flair sagittal image showing hyperintensity with edema involving left frontoparietal lobe

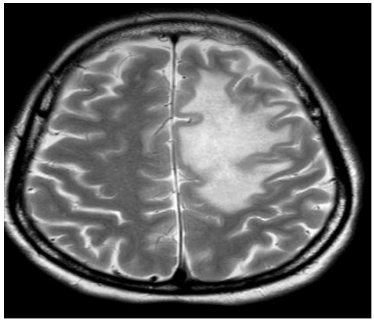

Fig.2 T2 axial MRI Brain showing hyperintensity involving left frontal lobe.

Keywords*: Tumefactive Demyelination, Stroke Mimic, MRI Brain, Corticosteroids, IVIG.*

BEYOND THE ORDINARY: CLINICAL INSIGHTS INTO FRANK-TER-HAAR SYNDROME

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Background: Frank-Ter-Haar syndrome is a rare autosomal recessive disorder resulting from mutations in the SH3PXD2B gene, which is involved in the formation of podosomes and invadopodia. Characterised by facial dysmorphism, variable developmental delay, skeletal and cardiac anomalies.

Case History: 13-year-old boy born of 3rd degree consanguineous marriage presented with one day history of mucopurulent cough. Progressive breathlessness for 4-5 years, NYHA class III. Family history showed similar symptoms in his two elder brothers, who passed away at the age of 9 and 10 years. Developmental history showed global developmental delay.

Examination: CVS examination showed tapping apex at 5th ICS lateral to anterior axillary line, loud S1, grade IV mid-diastolic murmur radiating to axilla with palpable P2. Abdominal examination showed hepatomegaly with a span of 5 cm.

Differential Diagnosis: Frank-Ter-Harr syndrome with acyanotic congenital heart disease (mitral stenosis with severe pulmonary artery hypertension) with grade IV clubbing. Other differentials involved Borrone syndrome, Melnick-Needles syndrome.

Management: Chest X-ray showed severe cardiomegaly, prominent pulmonary bay, severe kyphoscoliosis. ECHO showed severe mitral stenosis and PAH. Chromosome analysis showed normal male 46,XY

and whole exome sequencing showed homozygous missense point mutation in the SH3PXD2B gene on chromosome 5q35.1. autosomal recessive, from both parents. Treatment involved IV amoxicillin and clavulanic acid 90mg/kg/day, oral digoxin 0.25mg OD, oral furosemide 40mg BD and referred for further management.

Conclusion: This case highlights the complexity of Frank–Ter Haar syndrome, emphasising early recognition, genetic confirmation, and timely counselling for better management.

Fig. 1

Fig. 2

Fig. 1,2: Flat depressed nose, retrognathia, brachycephaly, hypertelorism, megalocornea, grade IV clubbing flexion deformities of fingers, periorbital oedema

Keywords: *Frank-Ter-Haar syndrome, Genetic Mutation, Autosomal Recessive Disorder, Consanguineous Marriage, Skeletal and Cardiac Anomaly.*

WHEN A STING STRIKES THE HEART: UNRAVELLING KOUNIS SYNDROME

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Background: Kounis syndrome, or allergic myocardial infarction, is a rare but increasingly recognized entity in which an allergic or hypersensitivity reaction precipitates acute coronary syndrome. Release of inflammatory mediators such as histamine, leukotrienes, and cytokines can induce coronary vasospasm or even plaque rupture. Despite its potential severity, it remains underdiagnosed in emergency practice.

Case History: A 55-year-old man with no known comorbidities presented to the emergency department following multiple bee stings over the face, neck, and chest. He denied itching, swelling, chest pain, dyspnea, gastrointestinal or neurological symptoms.

Examination: He was conscious and oriented. Vitals showed BP 140/90 mmHg, PR 88/min, SpO_2 100% (room air), and afebrile. Systemic examination was unremarkable except for localized erythema at sting sites.

Differential Diagnosis: Allergic reaction without systemic involvement, anaphylaxis, acute coronary syndrome, stress-induced cardiomyopathy.

Management: He was treated with antihistamines and steroids. Initial

ECG showed normal sinus rhythm with VPCs. Labs showed haemoconcentration, leukocytosis, hypokalaemia, and raised creatinine. Subsequently, he developed generalized tiredness. Repeat ECG revealed new T-wave inversions in V4–V6. Troponin I was elevated (0.02). Echocardiography demonstrated akinesia of mid and distal anteroseptum, mid and distal anterior wall, and entire apex, with moderate LV systolic dysfunction. A diagnosis of Kounis syndrome type 1 was made. Management included dual antiplatelet therapy, statin, beta-blocker, ACE inhibitor, and diuretic. He was observed for one week, remained stable, and was discharged.

Conclusion: This case highlights Kounis syndrome as a clinically significant but underrecognized consequence of allergic insults. Timely suspicion and appropriate cardiac evaluation in allergic reactions can prevent morbidity. Greater awareness among clinicians is essential to improve diagnostic accuracy and patient outcomes.

Keywords: *Kounis Syndrome, Allergic Myocardial Infarction, ACS, Anaphylaxis, Allergic Angina.*

BEYOND ROUTINE: AN ATYPICAL NASAL MASS A RARE CASE OF PLEOMORPHIC ADENOMA IN NASAL CAVITY

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Background: Pleomorphic adenoma is the most common benign salivary gland tumor, but its occurrence in the nasal cavity is extremely rare. It is a mixed tumor with epithelial and myoepithelial elements in a chondromyxoid stroma.

Case History: A 62-year-old male presented with complaints of right nasal obstruction, persistent for the past 1 year. His complaints were insidious in onset, persistent in nature and gradually worsening. Not associated with diurnal or postural variation. He also gives a history of recurrent sneezing paroxysms, nasal discharge and a swelling in the right nasal cavity, which was gradually increasing in size with no history of bleeding.

Examination: Nose had swelling over right side, size 2x2 cm, firm, regular margin, smooth surface, skin over swelling is normal, with obliteration of right nasolabial and nasofacial fold. Vestibule had mucoid discharge on the right side. Cold spatula test revealed absent fogging on right. Anterior rhinoscopy revealed septum deviated to the left. Right side had a pinkish firm lesion with smooth surface arising from the lateral wall, extending to vestibule, touching septum and floor; non-tender, non-bleeding.

Differential Diagnosis: Pyogenic granuloma, osteoma and sinonasal malignancy.

Management: CT scan showed well-defined expansile heterogeneously

enhancing lesion in right anterior nasal cavity with cavity obliteration, mass effect, and osseous remodelling- likely neoplastic, angiomatous polyp. Surgical excision was done under general anesthesia. A well-encapsulated mass was dissected from surrounding tissues, and the attached pedicle was cauterized and excised. Histopathological examination stated it was a case of pleomorphic adenoma.

Conclusions: This case highlights the importance of considering rare entities in the differential diagnosis of atypical nasal masses. Early recognition and accurate histopathological confirmation are crucial to avoid misdiagnosis.

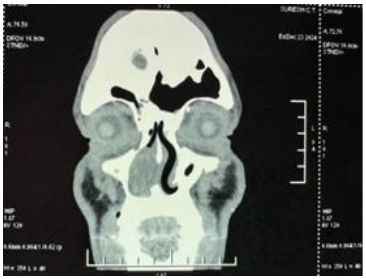

Fig. 1

Fig. 2

Keywords: *Pleomorphic Adenoma, Nasal Mass, CT Scan, Histopathology, Surgical Excision.*

BEYOND MISMATCH REPAIR: A CASE OF COMBINED MSH2 AND EPCAM GENE DELETION IN LYNCH-ASSOCIATED ENDOMETRIAL CARCINOMA

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Background: Lynch syndrome is an autosomal dominant cancer syndrome due to germline mutations in mismatch repair (MMR) genes, predisposing carriers to aggressive malignancies, notably endometrial and colorectal cancer. While classic MMR mutations are well documented, combined EPCAM–MSH2 gene deletions are rare and clinically significant, amplifying cancer risk. Thus, molecular profiling is critical for targeted management and hereditary prevention.

Case History: A 52-year-old multiparous woman presented with six months of absence of menstruation followed by recurrent episodes of bleeding. Family history is significant for colorectal carcinoma in the patient's sister at 48 years and father.

Examination: Abdomen was soft with no palpable mass. Per vaginal examination revealed a bulky, mobile uterus. Per speculum examination showed a healthy cervix.

Differential Diagnosis: Endometrial carcinoma (as sentinel malignancy in Lynch syndrome), endometrial hyperplasia and endometrial polyp.

Management: Ultrasonography revealed an enlarged uterus with multiple fibroids with thickened endometrium (20 mm) and increased vascularity. Endometrial biopsy showed well-differentiated endometrial adenocarcinoma**.** Total laparoscopic hysterectomy with bilateral

salpingo-oophorectomy and lymph node dissection was performed. Histopathology confirmed FIGO grade-1 endometrial adenocarcinoma, stage pT1a with < 50% myometrial invasion. Immunohistochemistry revealed loss of MSH2 and MSH6 expression prompting advanced molecular diagnostics. Next-Generation Sequencing followed by MLPA uncovered large heterogeneous deletion of EPCAM gene along with exons 1-7 of MSH2 - a significant and uncommon genetic finding that confirmed Lynch syndrome. This guided targeted genetic counseling.

Conclusion: This case represents a rare combined EPCAM–MSH2 deletion confirmed through advanced molecular diagnostics emphasizing the value of universal screening for Lynch-associated cancers. Timely genetic testing in relatives could have enabled prophylactic hysterectomy, preventing malignancy. A multidisciplinary comprehensive workup integrating surgery, molecular diagnostics and genetic counseling ensures optimal management, cascade screening and vigilant surveillance for hereditary cancer prevention.

Fig. 1

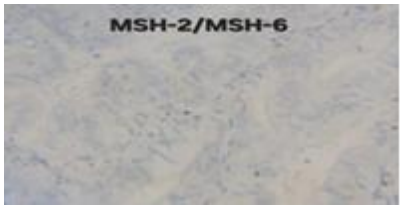

Fig. 2

Keywords: *Endometrial Carcinoma, Lynch Syndrome, Genetic Counseling, EPCAM, MSH2.*

UNEASY IS THE HEAD THAT WEARS THE CROWN: SQUAMOUS CELL CARCINOMA OF THE SCALP WITH CALVARIAL INCISION

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Background: Squamous cell carcinoma (SCC) is the second most common cutaneous malignancy, associated with ultraviolet radiation, chronic inflammation, immunosuppression, and chemical carcinogens. Scalp SCC with calvarium and dural invasion is rare, carrying poor prognosis and significant oncological and reconstructive challenges.

Case History: A 55-year-old female presented with an 8-month history of a progressively enlarging ulcer over the right fronto-parietal scalp, associated with throbbing headache and occasional blood-tinged discharge. There were no neurological deficits, seizures, or features of meningeal irritation. She had a past history of excision of a swelling at the same site during childhood.

Examination: On examination, a non-healing ulceroproliferative lesion measuring 8×5×2 cm with irregular borders, everted edge, granulation tissue, and scanty serosanguinous discharge was noted, suggesting a possible squamous cell carcinoma.

Differential Diagnosis: Basal cell carcinoma, malignant melanoma and cutaneous metastasis.

Management: Biopsy revealed well-differentiated squamous cell carcinoma with stromal invasion and squamous pearls. MRI demonstrated a heterogeneously enhancing lesion (80×62×16 mm) involving skin, subcutaneous tissue, and scar tissue, with erosion of the right parietal bone and mild dural thickening but no parenchymal

involvement. CT confirmed the above findings and the absence of intracerebral lesions. Wide local excision with margin clearance and calvarial resection was performed. The bony defect was reconstructed with a titanium mesh, and scalp coverage was achieved using a local flap. Postoperatively, adjuvant chemotherapy was administered.

Conclusion: This case represents a rare and aggressive presentation of scalp SCC with calvarial invasion. Successful management required combined efforts of surgical oncology, neurosurgery, and reconstructive surgery, supported by adjuvant therapy. A multidisciplinary approach remains crucial in addressing such advanced malignancies.

Fig. 1 Pre-operative image of the ulceroproliferative lesion over the right fronto-parietal scalp

Fig.2 Intra-operative image of the titanium mesh placed for calvarial reconstruction

Keywords: *Squamous Cell Carcinoma, Scalp, Calvarial Invasion, Titanium Mesh, Multidisciplinary Care.*

A CASE PRESENTATION OF VARIANT TYPE OF HEREDITARY LEIOMYOMATOSIS AND RENAL CELL CARCINOMA (HLRCC)

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Background: Hereditary leiomyomatosis and renal cell carcinoma (HLRCC) is a rare autosomal dominant disorder caused by fumarate hydratase gene mutation. It affects both sexes, presenting as cutaneous leiomyoma in males and uterine fibroids in females, along with aggressive renal cell carcinoma (RCC). It mostly presents at a young age which makes early screening and surveillance essential.

Case History: The patient had consulted with a urologist with complaints of mild right sided flank pain and one episode of bilious vomiting. Ultrasound and CECT were then done for evaluation. It showed a well-defined lobulated lesion (4.3x3x3 cm) with neoangiogenesis on the interpolar region of the right kidney suggesting neoplastic origin– RCC, and multiple uterine fibroids. She was then referred to a urologist for a right partial nephrectomy. Histopathology report stated clear cell renal carcinoma. Alongside she also referred to a gynecologist for management of fibroids. No history of heavy menstrual bleeding, foul smelling discharge, mass per abdomen/ mass per vaginum, urinary incontinence or abnormal bowel habits were recorded.

Examination: On examination there was a midline mass similar to 16 weeks gravid uterus. Vaginal examination demonstrated the same 16

week size uterine mass, anteverted, mobile with transmitted mobility.

Differential Diagnosis: The possibilities are hydronephrosis with fibroids or pyelonephritis with fibroids.

Management: Right partial nephrectomy followed by total abdominal hysterectomy and bilateral salpingo-oophorectomy was done 6 months later.

Conclusion: This case of variant HLRCC aims at the need for early recognition and multidisciplinary care. The coexistence of aggressive renal carcinoma and uterine fibroids reveals the syndrome's dual manifestations. Early surgical management, with surveillance and genetic counselling, is important to improve and prevent disease progression.

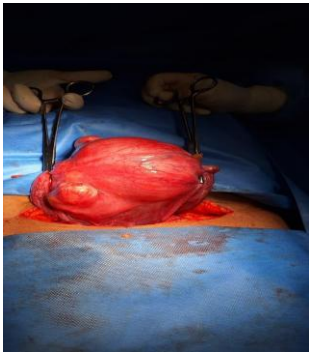

Fig. 1 Uterine fibroid

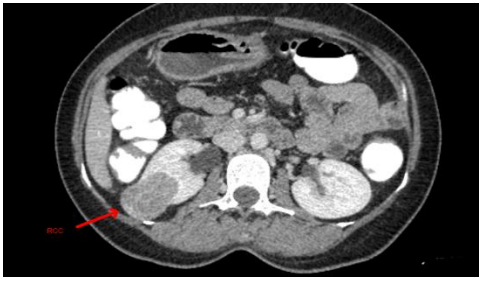

Fig. 2 CECT revealing a solid of the mass on the right kidney.

Keywords: *Fibroids, RCC, Fumarate Hydratase, HLRCC, Early Surveillance.*

PRIMARY DERMAL MELANOMA: WHEN THE SEARCH FOR A PRIMARY LESION ENDS WHERE IT BEGAN

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Background: Malignant melanoma is an aggressive tumour of neural crest origin, presenting a significant diagnostic challenge. Differentiating a rare primary dermal melanoma from metastatic melanoma of unknown primary is crucial due to their histological mimicry and drastically different prognoses. The possibility of de-differentiation can also impact its histomorphology.

Case History: A 69-year-old male, bedridden for 12 years due to traumatic paraplegia, presented with a 3 month history of an insidious, gradually progressing painless swelling in his left upper thigh. He reported colour changes but denied fever, bleeding, or systemic symptoms. His past and family histories were unremarkable for malignancies.

Examination: General examination showed stable vital signs. Local examination revealed 8x6x3 cm globular, firm, non-tender swelling on the left upper thigh, with irregular margins, a bosselated surface, erythema, and blackish discoloration. It was mobile and not fixed to underlying muscle.

Differential Diagnosis: Hemangioma and Morel-Lavallee lesion.

Management: USG identifies ill-defined, lobulated heteroechoic subcutaneous lesion with significant internal vascularity. Following excision, histopathology revealed marked pleomorphism of neoplastic cells, raising suspicion of melanoma with dedifferentiation. Lymphatic, vascular invasion was present and critically, the deep and two peripheral

surgical margins were involved. Breslow thickness and Clark level couldn't be determined due to the absence of epidermal involvement. PET-CT scan suggested lymph nodal metastases. Patient is now on temozolomide oral chemotherapy.

Conclusion: This case illustrates a complex presentation of rare primary dermal melanoma in a paraplegic patient. Histopathology, with de-differentiation, lymphatic or vascular invasion, and involved margins, posed a challenge in differentiating it from metastatic melanoma of unknown primary. IHC and PET-CT are crucial for definitive diagnosis, prognostic assessment, and guiding further management. The rarity of this specific melanoma presentation highlights the diagnostic conundrum it poses.

Fig. 1

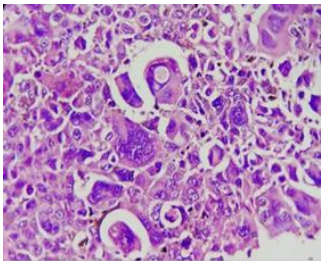

Fig. 2: 40X, H&E: Neoplastic cells with marked pleomorphism and prominent nucleoli with some showing intracytoplasmic pigmentation.

Keywords: *Primary Dermal Melanoma, Metastatic Melanoma of Unknown Primary, Dedifferentiation, Immunohistochemistry (IHC), PET-CT.*

UNMASKING THE MYSTERY OF HIRSUTISM: A CASE OF BILATERAL OVARIAN TUMOUR

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Background: Androgen-secreting ovarian tumours are rare neoplasms which often present in young women with clinical features of hyperandrogenism, including rapidly progressive hirsutism, menstrual irregularities, alopecia, acne, and, in severe cases, virilization.

Case History: A 22-year-old unmarried nulliparous female, presented with hirsutism for two years and secondary amenorrhea for one year but no frontal baldness and voice changes. She also noted weight gain and excessive hair fall. Menstrual history included menarche at 13 years, with an initial three-year period of amenorrhea followed by regular cycles until one year before presentation.

Examination: The patient had a BMI of 35.2 kg/m², acanthosis nigricans and a Ferriman-Gallwey score of 36, consistent with severe hirsutism. Systemic and gynecological examination revealed no palpable mass or clitoromegaly.

Differential Diagnosis: PCOS, non-classic congenital adrenal hyperplasia, adrenal neoplasm, sertoli-leydig cell tumor and granulosa-theca cell tumors.

Management: Investigations showed elevated fasting glucose (270 mg/dL), LDH (549 IU/L), prolactin (29.74 ng/mL), DHEA (6.56 µmol/L) and markedly elevated free testosterone (6.31 ng/dL). Imaging revealed bilateral adnexal solid masses, the largest measuring 6.4 cm, with features highly suspicious for androgen-secreting ovarian neoplasm (ORADS-5). The patient underwent right ovarian cystectomy with

omental biopsy and peritoneal wash cytology after multidisciplinary evaluation.

Conclusion: This case underscores the importance of distinguishing androgen-secreting ovarian tumors from PCOS in women with severe, rapidly progressive hirsutism and secondary amenorrhea. Early recognition, appropriate imaging, and timely surgical intervention are critical for better oncological outcomes.

Fig. 1

Fig. 2

Keywords: *Hirsutism, Menstrual Irregularities, Elevated DHEA, Testosterone, Ovarian Neoplasm.*

TRIPLE SYNCHRONOUS MALIGNANCIES: COWDEN SYNDROME OR BEYOND

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Background: Multiple primary malignancies (MPMs) are uncommon, with synchronous triple primaries being exceedingly rare (<0.1%). Their occurrence raises the suspicion of an underlying hereditary cancer syndrome, although not all cases demonstrate identifiable germline mutations

Case History: A 55-year-old female presented with a painless lump in the left breast for 3 months with no constitutional symptoms. Mammography and biopsy confirmed infiltrating ductal carcinoma. During staging, PET-CT revealed an FDG-avid mass in the left kidney and a suspicious left thyroid nodule. FNAC of the thyroid confirmed papillary carcinoma. Renogram supported impaired left renal function with a mass lesion.

Examination: On clinical examination, the patient was stable with a firm breast lump in the left upper outer quadrant and palpable axillary lymph nodes. No thyroid enlargement or abdominal mass was palpable.

Differential Diagnosis: The occurrence of breast, thyroid, and renal tumors suggested possibilities of Cowden syndrome (PTEN mutation), Li-Fraumeni syndrome (TP53 mutation), CHEK2/BRCA-related syndromes, or sporadic synchronous primaries.

Management: The patient underwent left modified radical mastectomy, left radical nephrectomy with para-aortic node sampling, total thyroidectomy, and left oophorectomy. Histopathology confirmed an

invasive carcinoma of breast (non specific type, grade II, pT2N2a with 6/19 nodes positive), clear cell renal cell carcinoma (grade 1, 14.6 cm, pT3aN0 with sinus involvement), papillary carcinoma thyroid (classic type, 1 cm, pT1aN0x with no invasion) and a mature teratoma in the ovary. Genetic testing using a 158-gene hereditary panel (NGS, CNV, MLPA) showed no pathogenic variants.

Conclusion: This case represents a rare instance of synchronous triple primaries (breast, renal, thyroid) without germline mutation, highlighting the diagnostic challenges and the limitations of current genetic testing including rare polymorphisms and mosaicism. It underscores the importance of vigilant clinical evaluation, multidisciplinary management, and long-term follow-up in such unusual presentations.

Keywords: *Malignancies, Mutations, Cowden, Polymorphisms, Mosaicism.*

SURPASSING THE USUAL POLYP: A CASE OF NASAL CHONDRO-OSSEOUS HAMARTOMA

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Background: Hamartomas are tumor-like self-limiting proliferations of cells and tissues found in the organ from which they arise. They can occur sporadically or in association with syndromes like PTEN hamartoma tumor syndrome. Chondro-osseous hamartoma is a rare benign developmental lesion composed of disorganized bone and cartilage.

Case History: A one-year-old male infant born to non-consanguineous parents presented with an ovoid swelling from the left side of nasal septum which was initially 2x2x1 cm and gradually progressed to 3.3x2.2x1.8 cm with sinus point at anterior end, with associated mucoid discharge and right cleft lip since birth.There is a history of cleft lip in the maternal side of the family. Normal developmental milestones corresponding to age achieved.

Examination: Anthropometry including weight, height, and head circumference are within normal ranges. External nose: the asymmetrical left nostril appears wider. Nasal obstruction is present. Left nasal septal swelling, well defined, 3.3x2.2x1.8 cm with no ulceration or active bleeding, non-tender, right partial cleft lip, small mucosal defect over right upper gingiva. Palate intact.

Differential Diagnosis: Hemangioma, inflammatory polyp, dermoid cyst and nasal glioma.

Management: MRI shows well-circumscribed round to oval polypoidal soft tissue mass attached to the nasal septum/ lateral nasal wall, not

connected to the brain. History of corpus callosum agenesis with gross colpocephaly noted. Excision of swelling under general anaesthesia, and on histopathology diagnosed as chondro-osseous hamartoma. The procedure was uneventful, and the patient recovered well. On follow-up, the infant is doing well.

Conclusion: Nasal hamartoma causes functional and cosmetic deformities. Imaging and histopathology help in future management to minimise complications and ensure good recovery.

Fig. 1 Nasal septal swelling before surgery

Keywords*: Hamartoma, Paediatric, Nasal Septum, Cleft Lip, Chondro-osseous.*

"ALL IS NOT WHAT IT SEEMS"- WHEN MALIGNANCY MASQUERADES AS LYMPHEDEMA

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Background: Stewart-Treves syndrome (STS) is a rare and aggressive cancer (lymphangiosarcoma) with incidence of 0.07%-0.45%, developing in chronically lymphedematous limbs, post radical mastectomy with axillary lymph node dissection. Chronic lymph stasis causes tissue hypoxia, inflammation and immune dysfunction, leading to malignant transformation of endothelial cells. Occurring 5 to 15 years post-surgery, STS presents as rapidly evolving violet skin lesions and carries a poor prognosis.

Case History: A 62-year-old woman with a history of left modified radical mastectomy performed eight years ago for breast carcinoma, developed progressive swelling of the left upper limb since then. She noticed bluish discoloration of the skin 8 months ago, which gradually thickened and developed multiple violaceous nodules and plaques. These lesions coalesced and ulcerated, forming a painful, bleeding ulcer on the forearm. No history of abnormalities in the opposite limb.

Examination: On examination, there was a 6×5×1 cm ulceroproliferative lesion on the flexor aspect of the left forearm, approximately 5 cm proximal to the wrist joint. The lesion showed irregular margins, was tender and firm on palpation. It bled easily on contact. Extensive non-pitting lymphedema was seen with violaceous nodules and plaque-like lesions.

Differential Diagnosis: STS, Kaposi's sarcoma**,** chronic venous insufficiency changes**,** benign lymphedema skin alteration and metastatic cutaneous lesion.

Management: Punch biopsy confirmed angiosarcoma. Initial PET-CT excluded metastasis. Above-elbow amputation followed by chemotherapy. The patient developed extensive metastases within four months. Currently receiving conservative treatment.

Conclusion: STS is a deadly complication of chronic post-mastectomy lymphedema. Early recognition and prompt biopsy of lesions are predominant. Surgical and systemic treatments may extend life. The overall prognosis is poor due to rapid local recurrence and distant metastasis. Heightened awareness and close surveillance of patients at risk are crucial for timely intervention.

Fig. 1

Fig. 2

Keywords: *STS, Aggressive Lymphangiosarcoma, Post Mastectomy Lymphedema, Modified Radical Mastectomy, Above Elbow Amputation.*

WHEN IMAGING REVEALS AN UNEXPECTED GASTRO TALE

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Background: Gallbladder disease is a common cause of abdominal pain, often managed surgically. Occasionally, unexpected findings challenge standard approaches, highlighting the dynamic nature of intra-abdominal pathology. This report describes a patient whose gallbladder disease evolved in an unusual and intriguing manner.

Case History: A 59-year-old male with type 2 diabetes mellitus, hypertension, dyslipidemia presented with right upper quadrant colicky pain and one episode of vomiting. Prior evaluation for cholelithiasis revealed gallstones, wall thickening and a small adjacent collection on imaging, suggestive of contained perforation. He was hemodynamically stable and afebrile. Laboratory parameters showed only mild inflammatory changes.

Examination: On admission, he was well-nourished, vitally stable, with no jaundice, pallor, or peripheral edema. Abdominal examination revealed a soft, non-tender abdomen with no guarding or rigidity. Murphy's sign was negative. Other systems were normal.

Differential Diagnosis: Acute calculous cholecystitis with small perforation, possible fistula between gallbladder and colon or stomach, pericholecystic abscess.

Management: Investigations involving MRCP and CECT initially suggested a small perforation with suspicious communication to the hepatic flexure. Treatment involved conservative management with IV antibiotics, analgesics, and monitoring. Follow-up imaging months later showed partial gallbladder contraction, air locules, and a fistulous tract to the stomach. Interestingly, subsequent CECT revealed a disappearing/vanishing gallbladder phenomenon, with complete non-visualization of the organ, no residual fistula and no collection. Throughout, the patient remained asymptomatic and stable.

Conclusion: This case illustrates an unusual course of gallbladder pathology, where initial perforation and fistula formation resolved spontaneously, resulting in non-visualization of the organ on imaging. Awareness of such rare evolution can guide conservative management and avoid unnecessary surgical intervention. Close monitoring and serial imaging remain key in managing atypical gallbladder presentations.

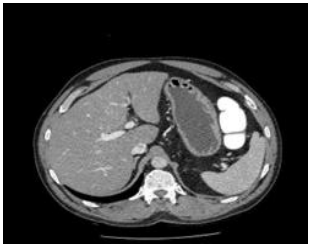

Fig. 1 MRI Abdomen showing contracted gallbladder wall with collection, suggestive of contained perforation with fistulous communication.

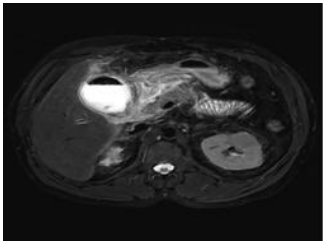

Fig. 2 CECT Abdomen showing non-visualization of gallbladder with air locules and contrast in the stomach consistent with cholecystogastric fistula and vanishing gallbladder.

Keywords: *Cholecystitis, Gallbladder Perforation, Cholecystogastric Fistula, Vanishing Gallbladder, Conservative Management.*

DOUBLE JEOPARDY: SPONTANEOUS TWIN PREGNANCY IN A NON-COMMUNICATING RUDIMENTARY HORN

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Background: Pregnancy in a non-communicating rudimentary horn, is a rare Müllerian anomaly resulting from incomplete fusion of the paramesonephric ducts. It carries a high risk of rupture due to limited muscular development and poor distensibility, with a maternal mortality rate of up to 5.7%. Twin gestation in such a horn is exceptionally rare and poses diagnostic and management challenges.

Case History: A 21-year-old primigravida with a spontaneous conception presented at 11 weeks and 6 days of gestation. She reported acute abdominal pain for one day, associated with vomiting and loose stools. She had no prior antenatal visits and was unaware of any uterine anomalies.

Examination: On evaluation, the patient was pale, tachycardic with a pulse rate of 112/min, and hypotensive with a blood pressure of 90/60 mmHg. Abdominal examination revealed a tender lower abdomen with a soft, barely palpable uterus. Per abdominal and pelvic examination findings raised concern for intra-abdominal bleeding.

Differential Diagnosis: Based on clinical presentation and imaging, differentials included ruptured ectopic pregnancy, ruptured rudimentary horn pregnancy or interstitial pregnancy.

Management: Emergency ultrasound showed twin fetuses without cardiac activity in a mass separate from the uterine cavity, suggesting a ruptured rudimentary horn. An emergency laparotomy revealed approximately two litres of hemoperitoneum. A ruptured non-

communicating rudimentary horn containing DCDA twins was identified and excised. The uterus and adnexa were preserved. The patient received blood transfusions intraoperatively and had an uneventful recovery.

Conclusion: This case highlights the importance of considering rudimentary horn pregnancy in women with early pregnancy complications and abdominal pain. Early diagnosis is essential to prevent catastrophic rupture and maternal morbidity. Twin gestation in a rudimentary horn, though extremely rare, must be managed promptly with surgical intervention.

Keywords: *Rudimentary Horn Ectopic Pregnancy, DCDA Twins, Uterine Anomaly, Hemoperitoneum, Emergency Laparotomy.*

CASE POSTERS

UNRAVELING SUDDEN WEAKNESS: A MYSTERIOUS CASE OF ASCENDING PARALYSIS IN A 12-YEAR-OLD

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Background: Guillain-Barré syndrome (GBS) is a rapidly progressive auto-demyelinating polyneuroradiculopathy, typically presenting with ascending paralysis and areflexia. GBS with intracranial hypertension presents atypically and is diagnostically challenging, occurring in about 4-6% of paediatric cases.

Case History: A 12-year-old girl, second to non-consanguineous parents, normal perinatal and developmental history presented with severe pain in lower limbs followed by symmetrical ascending weakness for the last 2 days. No history of any prodrome in the form of upper respiratory infection, diarrhoeal disease and of recent vaccination.

Examination: Child is conscious and oriented, cranial nerves are normal, bilateral lower limb hypotonia, symmetrical upper and lower limb weakness (proximal more than distal) without involvement of respiratory muscles (SBC-35) and areflexia in all limbs without any sensory deficit.

Differential Diagnosis: GBS, hypokalemic periodic paralysis, longitudinally extensive transverse myelitis and cerebrovascular accidents.

Management: A provisional diagnosis of GBS was made and the child underwent lumbar puncture and nerve conduction studies on day 3 of illness and were found to be normal. The possibility of GBS was considered and the child was initiated on intravenous immunoglobulin for 5 days and showed clinical improvement. On day 10 of illness the

child had severe holocranial headache and vomiting. Neuro-ophthalmic evaluation revealed bilateral papilledema. MRI and venography of the brain revealed perioptic sheath dilation, transverse sinus stenosis and cauda equina root enhancement suggestive of features of raised intracranial pressure. She was initiated on mannitol and acetazolamide which showed gradual improvement of symptoms. On follow up after 7 months, the child had a complete neurological recovery and resolution of papilledema.

Conclusion: Raised intracranial pressure in Guillain-Barré syndrome, though uncommon can lead to serious complications if unrecognized. Early identification and timely intervention are key to improving outcomes and preventing vision loss.

Fig. 1 Cauda equina root enhancement.

Fig. 2 Perioptic sheath dilation

Keywords: *Guillain-Barré Syndrome, Intracranial Hypertension, Papilledema, Bilateral Ascending Weakness, Areflexia.*

IgG4-RELATED DISEASE PRESENTING AS ORBITAL APEX SYNDROME

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Background: IgG4-related disease is a chronic inflammatory condition that can affect multiple organs, characterized by lymphocyte and IgG4 secreting plasma cell infiltration.

Case History: This 67-year-old male patient, known case of hypertension and diabetes, presented with a one month history of intermittent right hemicranial headache with no nausea or photophobia. This was followed by aggravation of symptoms over the last two weeks with diplopia on lateral gaze and drooping of the right eyelid.

Examination: General examination was unremarkable and vital signs were normal. CNS examination showed right eye ptosis with third and sixth nerve palsies of the right eye. There was reduced visual acuity of the right eye with bilateral papilledema. There was no motor weakness, sensory loss or meningeal signs.

Differential Diagnosis: Infective chronic meningitis, sarcoidosis, Wegener's granulomatosis, polyarteritis nodosa, IgG4 disease and carcinomatous meningitis.

Management: Elevated ESR with normal vasculitic markers including serum ACE levels. CSF analysis showed raised proteins (303 mg) with lymphocytic pleocytosis (23 cells) and normal sugars. MRI brain with contrast showed extensive pachymeningeal thickening and enhancement extending along the entire right cerebral convexity up to the cavernous sinus and orbital apex. Serum levels of IgG4 were elevated. A diagnosis

of an IgG4 disease was made and he was started on pulse dose methylprednisolone for five days followed by a tapering schedule of oral steroids. He had significant improvement in headache and double vision and is on regular follow up.

Conclusion: IgG4 disease is an important cause of granulomatous inflammation of the cavernous sinus and orbital apex. Steroids and immune suppression are the mainstays of treatment.

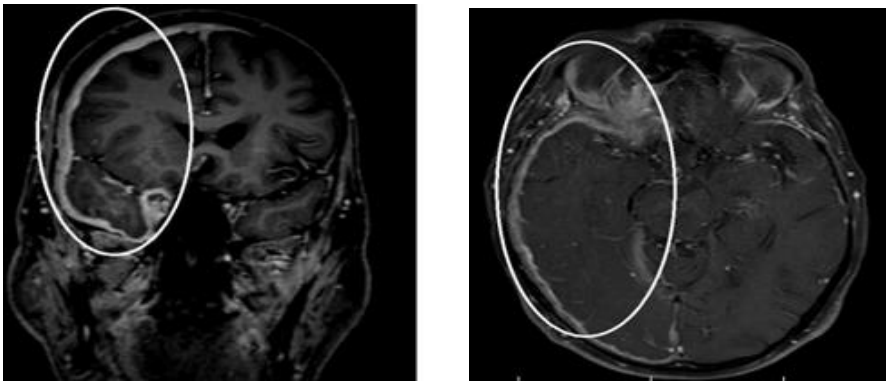

Fig. 1,2 MRI Brain post contrast images axial and coronal views showing right pachymeningeal thickening extending to cavernous sinus and orbital apex

Keywords: *Hemicranial Headache, Bilateral Papilledema, Orbital Apex Syndrome, Pachymeningeal Thickening, Cranial Nerve Palsies.*

TWO HEADED HYDRA: A CASE OF UNUSUAL DUAL ORGAN CYSTIC LESIONS

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Background: Lung cysts are defined as round, thin-walled parenchymal lucencies interfaced with normal parenchyma that may contain air, fluid, or solid material. The differential diagnosis ranges from congenital and infectious causes to multisystem diseases.

Case History: A 21-year-old girl from Odisha presented with two episodes of haemoptysis following bouts of laughter over the past 1 week. No history of chronic cough, fever, weight loss, dyspnoea, or past TB infection. A detailed history revealed exposure to a sick dog four years ago.

Examination: Hemodynamically stable. No clubbing, lymphadenopathy, or systemic signs. Reduced chest expansion on the right with reduced tactile vocal fremitus, dull percussion note and decreased breath sounds over the right infrascapular region.

Differential Diagnosis: Pneumonia, tuberculosis, pulmonary abscesses, granulomas, benign tumours, lung carcinoma, hematomas and bronchogenic cysts.

Management: Chest X-ray showed a homogenous round opacity in the right mid and lower lung zones. Sputum Truenat was negative for tuberculosis. CECT chest revealed a well-defined heterogeneous cystic lesion in the right lower lobe with the characteristic “serpentine sign”. A

hepatic subcapsular lesion with multiple daughter cysts was also noted. Routine blood investigations were within normal limits with serum positive for Echinococcus granulosus IgG (18.04 NTU). The patient was initiated on albendazole and planned for surgery.

Conclusion: Hydatid disease is a parasitic zoonosis primarily involving the liver and lungs, caused by *Echinococcus granulosus*. It is one of the differential diagnoses of cystic pulmonary lesions, even reported in non-endemic areas as sporadic cases due to migration and travel. This case highlights the importance of considering hydatid disease in young patients with cystic lung lesions, especially in endemic regions like India.

Fig. 1 CT chest showing air bubble sign and serpentine sign.

Fig. 2 CXR showing round homogenous opacity in right mid-lower zone.

Keywords: *Zoonosis, Pulmonary Hydatid Cyst, Hepatic Hydatidosis, Echinococcus Granulosus, Serpentine Sign.*

"THE SILENT IMPOSTER": UNMASKING PRIMARY THYROID LYMPHOMA

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Background: Primary thyroid lymphoma (PTL) is a rare malignancy, accounting for <5% of all thyroid cancers and ~2% of extranodal lymphomas. It usually arises in the background of Hashimoto's thyroiditis and predominantly affects older females. Diagnosis is challenging due to its clinical overlap with anaplastic thyroid carcinoma, making early tissue diagnosis crucial for prognosis.

Case History: A 58-year-old female, known case of type 2 diabetes mellitus and dyslipidaemia, presented with a single, painless, rapidly progressive swelling in front of neck for one month, associated with night sweats. There was no difficulty in swallowing, breathing, or hoarseness of voice.

Examination: Thyroid examination revealed a single hard, fixed swelling involving the isthmus and left lobe, moving with deglutition and not with tongue protrusion. A single cervical lymph node was palpable in the right level IV region, firm, mobile, non-tender, and measuring approximately 1cm.

Differential Diagnosis: Anaplastic thyroid carcinoma, Hashimoto's thyroiditis and Riedel's thyroiditis.

Management: Hemogram and thyroid function tests were normal; LDH was elevated. Ultrasound neck revealed multiple solid-cystic nodules in the left lobe and isthmus (TIRADS-III) with benign-appearing lymph nodes (levels I–IV). CT neck showed a well-defined hypodense lesion (3.8×1.7 cm) with level IV and VI lymph node enlargement. FNAC

(Bethesda VI) and core biopsy suggested Non-Hodgkin lymphoma (NHL). Immunohistochemistry showed CD20+, BCL6+, Ki-67 proliferation index 95%, confirming diffuse large B-cell lymphoma (DLBCL). PET-CT revealed no distant metastasis. The patient was started on R-CHOP chemoimmunotherapy.

Conclusion: A rapidly enlarging, hard thyroid mass should raise suspicion not only for anaplastic carcinoma but also for PTL. Early tissue diagnosis allows timely initiation of curative therapy, transforming a potentially fatal presentation into a treatable malignancy.

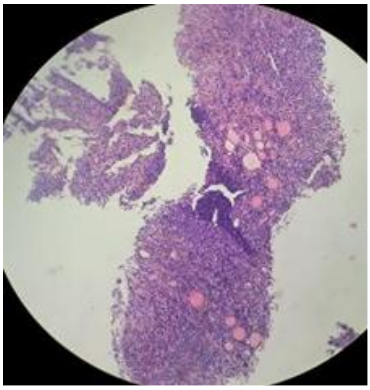

Fig.1 Histopathology showing atypical cells arranged in diffuse sheets with intervening thyroid

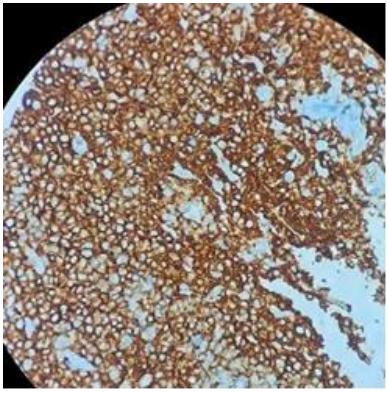

Fig. 2 CD20 positive

Keywords: *Primary Thyroid Lymphoma, Non-Hodgkin Lymphoma, Diffuse Large B-cell Lymphoma, Chemoimmunotherapy, Thyroid Malignancy.*

FROM CURE TO CURSE: A CASE OF FOETAL VALPROATE SYNDROME

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Background: Foetal valproate syndrome (FVS) is a rare disorder caused by prenatal exposure to valproic acid, an antiepileptic drug also used in bipolar disorder and migraine prophylaxis. It is characterised by a spectrum of neurodevelopmental and physical anomalies.

Case History: A 1-month-old girl presented with recurrent fever, cough, nasal discharge, and poor weight gain, raising suspicion of a cardiac anomaly. Her mother, a 26-year-old primigravida with a history of longstanding seizures, continued sodium valproate without proper follow-up up to 20 weeks of gestation and had missed folic acid supplementation as well as first-trimester antenatal scans. Delivery was done at 37+6 weeks due to foetal distress, by emergency LSCS and required NICU care for respiratory acidosis and neonatal hyperbilirubinemia.

Examination: On examination, the following physical features were present: trigonocephaly, microphthalmia, medial epicanthal fold, low set ears, long philtrum and micrognathia. Anthropometry indicated moderate underweight and severe wasting. Systemic examination of CVS revealed late systolic murmur and suprasternal thrill.

Differential diagnosis: Foetal hydantoin syndrome, foetal alcohol syndrome and Cornelia-de-Lange syndrome.

Management: Chest X-ray showed cardiomegaly. Echocardiogram showed a 3mm PDA with left-to-right shunt, moderate PAH, mild TR and coarctation of aorta. MRI confirmed a triangular frontal skull. Final

diagnosis of foetal valproate syndrome with recurrent upper respiratory tract infection, was made. The child was conservatively managed and referred for advanced genetic evaluation.

Conclusion: This case illustrates the teratogenic potential of valproic acid and the clinical spectrum of FVS. It emphasises the need for preconception counselling, folic acid supplementation, and regular follow-up in women on valproate therapy.

Fig. 1

Fig. 2

Keywords: *Foetal Valproate Syndrome, Valproic Acid, Antiepileptic, Teratogen, Trigonocephaly.*

A CASE OF THROMBOTIC THROMBOCYTOPENIC PURPURA WITH ACUTE SYMPTOMATIC SEIZURE

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Background: Thrombotic thrombocytopenic purpura (TTP) is a thrombotic microangiopathy characterised by widespread formation of platelet-rich thrombi in small vessels due to the deficiency or inhibition of ADAMTS13.

Case History: A 28-year-old male with no comorbidities presented with high grade fever which was associated with bleeding gums. Patient had body pain for three days. After admission, he had one episode of seizure.

Examination: He was admitted to the ICU as he had post-ictal confusion and on routine investigation showed anemia with thrombocytopenia, peripheral smear showing schistocytes, deranged RFT, LFT and raised LDH.

Differential Diagnosis: All the initial investigations pointed towards hemolytic anemia and further evaluation showed negative DCT which indicated non-immune hemolytic anemia. A possibility of microangiopathic hemolytic anemia was considered and the patient was further managed with a multidisciplinary approach including neurology, nephrology, critical care, internal medicine and oncology.

Management: ADAMTS13 level had been sent and the patient was initiated on plasmapheresis. After three to five episodes of plasmapheresis, his platelet counts showed significant improvement and he was initiated on injection rituximab from day 5. He was also treated with other supportive measures like antibiotics, steroids and mechanical ventilation. Later, he was weaned off from the ventilator and continued

with daily plasmapheresis. He was given 4 weekly doses of rituximab till platelet counts were normalized and LDH was normalized, further plasmapheresis has been stopped and he completed 4 doses of rituximab. Later, ADAMTS13 level was repeated which showed significant improvement. The patient has been discharged and is kept under follow up.

Conclusion: TTP is a medical emergency that can present with neurological symptoms, including stroke-like features. A high index of suspicion, supported by ADAMTS13 testing, is essential for timely diagnosis and effective management.

Keywords: *Microangiopathy, Thrombocytopenia, Plasmapheresis, ADAMTS13, Hemolysis.*

ONE MYELIN, MANY FACES: THE EXPANDING SPECTRUM OF DEMYELINATING DISEASES

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Background: Demyelinating diseases attack the brain and spinal cord by stripping off their myelin insulation, short circuiting nerve signals often presenting as a diagnostic riddle due to overlapping clinical and radiological features. Early recognition and targeted therapy is key to preserving function and preventing long-term disability.

Case History: A previously healthy 32-year-old gentleman developed acute onset bilateral lower limb weakness on waking, progressing within 24 hrs to involve upper limbs. He also noted ascending paresthesias reaching up to nipple level. By day 3, he developed left LMN facial palsy. No other neurological or systemic symptoms.

Examination: Lower limb showed hyperreflexia and hypertonia, motor weakness was more in the distal muscles of the upper limb when compared to the proximal muscles, normal tone and sluggish reflexes, complete sensory loss below the level of nipples, LMN left facial palsy.

Differential Diagnosis: Acute disseminated encephalomyelitis, multiple sclerosis, neuromyelitis optica spectrum disorder, myelin oligodendrocyte antibody disease, neoplastic or paraneoplastic encephalomyelitis and infectious encephalomyelitis.

Management: Investigations included blood routine which was

inconclusive, MRI brain with spine showed longitudinally extensive transverse myelitis (LETM) with multifocal brain involvement, CSF study showed slightly elevated protein level with negative autoimmune and viral panel. Based on the relevant clinical and radiological findings, a diagnosis of ADEM was made and he was started on IV methylprednisolone and IVIG, later developed respiratory distress requiring intubation, underwent one session of plasmapheresis, but eventually succumbed to refractory hypotension.

Conclusion: This case highlights the complexity of demyelinating diseases, which may present with varied and severe neurological deficits. Early recognition and prompt immunotherapy remain crucial in altering disease course and improving prognosis.

Fig. 1

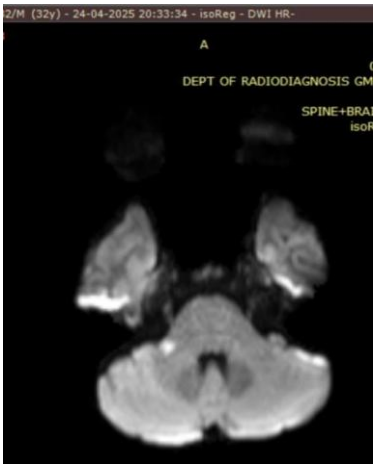

Fig. 2

Keywords: *ADEM, Demyelinating Diseases, LETM, MRI, LMN Facial Palsy.*

UNUSUAL CASE OF INTRAUTERINE FETAL INTESTINAL OBSTRUCTION

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Background: Intrauterine fetal intestinal obstruction is a rare condition characterized by bowel obstruction due to congenital anomalies such as atresia or malformations. Early antenatal diagnosis is vital to plan delivery, neonatal resuscitation and surgical management.

Case History: A 39-year-old female, $G_5P_0L_0E_4$, conceived by in-vitro fertilisation, presented at 35+4 weeks with multiple episodes of vomiting and tiredness. She had a history of four ectopic pregnancies, two managed medically and two with bilateral salpingectomies. Antenatal course included early diamniotic dichorionic twin pregnancy with a vanishing twin, later evolving to singleton gestation. The patient developed gestational diabetes mellitus and gestational hypertension, taking medications for both.

Examination: Per abdomen showed uterus corresponding to 36 weeks, cephalic presentation, excess liquor with normal fetal heart sounds. Per speculum showed closed cervical os without leaking or bleeding per vagina.

Differential Diagnosis: Anorectal malformation, atresia, meconium ileus plug and Hirschsprung's disease.

Management: Ultrasound scans revealed a live fetus with dilated small (up to 1.9 cm) and large bowel loops (up to 3.8 cm, length 14 cm), suggestive of distal large bowel obstruction. Mildly increased amniotic fluid index (18 cm) and mobile internal echoes in amniotic fluid were

noted. Emergency lower segment caesarean section was performed at 36+4 weeks. A live male infant weighing 2.47 kg was delivered with meconium-stained liquor. The baby was handed over to the paediatric team for further evaluation. Maternal postoperative recovery was uneventful. On evaluation, the baby was found to have proximal jejunal type 3 atresia. For this, resection of adynamic segment followed by tapering dissection anastomosis was done with trans-anastomotic tube.

Conclusion: This case highlights the importance of detailed antenatal imaging in identifying rare fetal intestinal anomalies. Early recognition and multidisciplinary approach significantly improves the neonatal outcomes in intrauterine intestinal obstruction.

Fig. 1

Fig. 2

Keywords: *Intestinal Obstruction, Foetus, Jejunal Atresia, Antenatal Imaging, Gastrointestinal Malformation.*

UNRAVELLING THE GENETIC PUZZLE OF RECURRENT HYDATIDIFORM MOLE

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Background: Hydatidiform mole is a gestational trophoblastic disease (GTD) characterized by abnormal trophoblastic proliferation. While most cases are sporadic, recurrent hydatidiform mole (RHM) is rare, occurring in 1–4% of women with a prior mole. Pathogenic maternal-effect gene mutations, especially in NLRP7, are implicated in its etiology and predispose to repeated molar pregnancies and poor reproductive outcomes.

Case History: A 26-year-old woman, gravida 7, presented with 9 weeks amenorrhea and suspicious ultrasonography findings. She had a history of six prior molar pregnancies, all treated with suction and evacuation. One episode progressed to gestational trophoblastic neoplasia (GTN) with pulmonary metastasis, treated initially with methotrexate and subsequently with multi-agent EACO chemotherapy due to resistance.

Examination: On admission, she was hemodynamically stable. Per vaginal examination showed a bulky uterus.

Differential Diagnosis: Recurrent hydatidiform mole, invasive mole/GTN, choriocarcinoma and retained products of conception.

Management: Pre-evacuation serum β-hCG was >2,72,600 mIU/mL. Ultrasound showed a cystic endometrial mass, confirmed as hydatidiform mole on histopathology. CECT thorax revealed pulmonary

nodules. She underwent suction evacuation and was given actinomycin D due to recurrence and prior GTN. Genetic testing detected two pathogenic NLRP7 variants, and counselling advised high recurrence risk with ovum donation as the most viable reproductive option.

Conclusion: This case underscores the complexity of managing recurrent hydatidiform mole associated with NLRP7 mutation. Early diagnosis, serial β-hCG monitoring, genetic evaluation and multidisciplinary care are crucial. Genetic counselling plays a pivotal role in guiding reproductive decisions, as ovum donation may be the only option for a successful live birth in such cases.

Keywords*: Recurrent Hydatidiform Mole, NLRP7 Gene Mutation, Gestational Trophoblastic Disease, Genetic Counselling, Ovum Donation.*

"ZEBRA IN ACUTE ABDOMEN"- A RARE PRESENTATION OF EPIPLOIC APPENDAGITIS

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Background: Epiploic appendagitis (EA) is a rare cause of acute abdominal pain, often misdiagnosed as appendicitis or diverticulitis. It occurs due to torsion or venous thrombosis of epiploic appendages, leading to ischemic infarction. Though benign and self-limiting, incorrect diagnosis may result in unnecessary interventions. It commonly affects adults between 20-50 years, with obesity and excess abdominal fat as risk factors.

Case History: A 40-year-old female, with no comorbidities, presented with right lower abdominal pain for one week and nausea. The pain was sudden in onset, sharp, radiating to the umbilicus, and worsened over 2 days. No vomiting, fever, bowel or urinary disturbances were reported.

Examination: General condition was stable with a BMI of 27 kg/m^2. Abdomen revealed severe tenderness, guarding, and rigidity in the right lumbar quadrant; bowel sounds were present. Other systemic examinations were normal.

Differential Diagnosis: Epiploic appendagitis, acute appendicitis, omental infarction and diverticulitis.

Management: Blood tests showed leukocytosis with raised CRP. Ultrasound suggested mesenteric inflammation, while CECT revealed a fat-density lesion in the right iliac fossa with halo and fat stranding, consistent with EA, along with an inflamed appendix. Diagnostic laparoscopy confirmed infarcted epiploic appendage, which was excised, and an inflamed retrocecal appendix, for which appendectomy was performed. Histopathology confirmed fat necrosis in the epiploic appendage and inflammatory changes in the appendix.

Conclusion: Epiploic appendagitis is a rare but significant mimic of acute appendicitis and diverticulitis. Awareness of its clinical and radiological features is vital to avoid misdiagnosis and unnecessary surgery. In this patient, coexisting appendicitis warranted surgical management. Early recognition through imaging ensures accurate diagnosis and appropriate treatment.

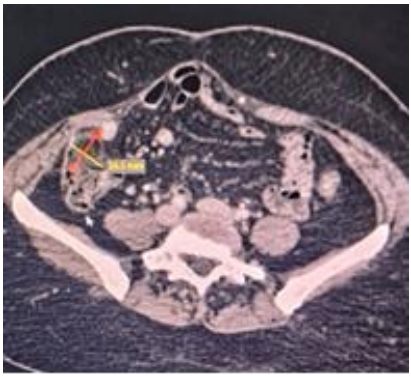

Fig. 1

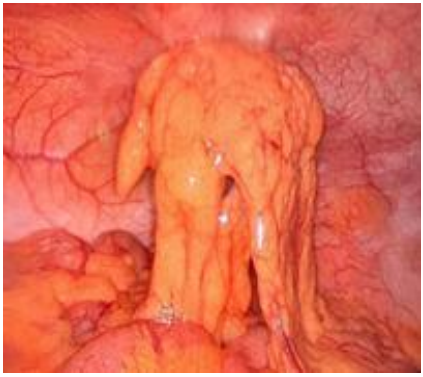

Fig. 2

Keywords: *Epiploic Appendagitis, Acute Abdomen, Omental Infarction, Appendicitis, Diagnostic Laparoscopy.*

MASSON'S TUMOUR ACROSS AGES: CLINICAL PERSPECTIVE FROM TWO PATIENTS

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Background: Masson's tumour, also known as intravascular papillary endothelial hyperplasia (IPEH) is a rare benign vascular lesion resulting from reactive endothelial proliferation within a thrombus. Clinically it may mimic malignant soft tissue tumours, making clinical diagnosis challenging.

Case History: We present two patients of different age groups. The first is a 6-year-old boy presenting with a painless swelling over the volar aspect of the right middle finger for one month with a history of trauma. The second case is a 20-year-old male with a history of trauma to the right forehead by a shuttle racket, who developed a gradually enlarging swelling over 4 months.

Examination: Case 1 revealed a well-defined 1x1 cm lesion at the subcutaneous plane in the level of middle phalanx, firm and non-tender, without neurovascular deficit. Case 2 presented with a 1x1 cm forehead swelling which was firm. No systemic complaints, no overlying skin changes, no regional lymphadenopathy was noted.

Differential Diagnosis: Giant cell tumour of tendon sheath, hemangioma, angiosarcoma, neurofibroma and lipoma.

Management: Both patients underwent surgical excision under anaesthesia. Intraoperative findings showed soft tissue swelling with multiple feeder vessels, histopathology confirmed intravascular papillary endothelial hyperplasia. Postoperative recovery was uneventful with no

recurrence on follow-up.

Conclusion: Masson's tumour is a rare benign vascular lesion, yet our institution identified two cases within consecutive months. This cluster emphasises the importance of recognising this entity despite its uncommon occurrence. Accurate histopathological diagnosis ensures curative surgical excision and excellent outcomes.

Keywords: *Masson's Tumour, Vascular Lesion, Benign Tumour, Trauma, Histopathology.*

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