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JUBICON 2024
REDEFINING HEALTHCARE

CONSPECTUS

JUBICON RESEARCH REPERTOIRE

EDITORS:
Dr. Radhika Kannan
Dr. Jaziya Jabeen
Dr. Jyothis G Saji
Dr. Sam Emmanuel Sabu
Ms. Krishnanjali J

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JUBICON RESEARCH REPETOIRE

JUBILEE CENTRE FOR MEDICAL RESEARCH

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Conspectus

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Extended abstracts of scientific presentations

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JUBICON

JUBICON stemmed from the dedication and brilliance of a few individuals who inspired many around them. Through perseverance and continuous refinement, we have created what you see before you: a conclave of students from across India celebrating not just academic excellence, but also the ideals of art, technology, and passion. The idea originated from various clubs within our college coming together to form a programme grounded in an academic perspective - a sort of confluence.

Every initiative starts small, but each idea is imbued with big dreams-dreams that bring out the best in us and help us manifest them into reality. With the support of our staff advisors, Dr Biju Bahuleyan and Dr Ranjith S, as well as our Principal, JCMR, Community Medicine, and various other departments, our modest idea has grown into something much larger. This collaboration of research, academia, and the arts aims to develop the brightest minds in India's medical science community.

The Jubilee Centre for Medical Research (JCMR), our backbone, is a DSIR-recognised and KUHS-approved research centre, acknowledged by the Ministry of Finance under Section 351(ii) to receive donations, and by the Ministry of Corporate Affairs to carry out CSR activities. JCMR has completed several research projects funded by ICMR, DRDO, DST, DHR, KSCSTE, and others.

Our vision is to redefine medical thinking through research and technology, laying the foundation for India's scientific community.

FOREWORD

I am delighted to witness Jubilee students presenting this year's "Conspectus" in association with JUBICON 2024, marking the third successful edition of this annual event. This book represents a platform for young scientists to express their creativity and innovation, and I highly commend the undergraduate students for their dedication in organizing this event and conducting significant research activities.

This year, JUBICON focuses on the latest advancements in healthcare research, including emerging fields like molecular biology, personalized medicine, and the integration of Machine Learning (ML) in clinical trials. These developments are crucial in enhancing patient-centered care, optimizing clinical trial efficiency, and tackling the complexities of large clinical datasets. The agenda this year highlights presentations and discussions that explore into these topics, enriching the academic and research culture at Jubilee.

It is truly encouraging to see the high standards maintained in both the research and the execution of this program. I extend my best wishes for the continued success of JUBICON and the valuable contributions of CONSPECTUS in fostering a new generation of scientific minds.

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

FROM THE EDITORS DESK

We are proud to unveil the second edition of Conspectus - a momentous collaboration between the Editorial Board and the brilliant minds of our research enthusiasts presenting at JUBICON 2024. This book is not merely a collection of research articles, but a testament to the hearts and souls invested in creating this hallmark of an achievement. Balancing research with clinical responsibilities has long been a challenging task, but these youthful embers can ignite an ethereal spirit of curiosity and medical advancement.

By promoting grassroot research, we lay the foundation for our future medical graduates, constructing analytical minds that delve deeply into complex medical concepts. As pioneers in this endeavor, these students will build their scientific portfolios and establish themselves as undeniable contenders in the research community, paving the way for future opportunities.

We extend our heartfelt gratitude to everyone on our team, those who supported us through the challenges of bringing this book to life, and most importantly, to the students from across the nation who have shared their findings and unwavering commitment to advancing medical knowledge. This confluence of shared ideals reflects our ambition for excellence and reinforces our mission to foster a vibrant culture of scientific exploration and inquiry.

As we present Conspectus, we look forward to the positive impact these contributions will have on the future of healthcare and the growth of these talented students as they change the world around them.

Editorial Board
JUBICON 2024

FROM THE EDITORS DESK

“Innovation is the key to the future, but basic research is the key to future innovation”

It is exciting to see the medical college students and staff team coming together with yet another conclave- JUBICON 2024 – which has been a golden feather to the crown of Jubilee Mission Medical College & Research Institute. The event highlights the importance of medical research at the undergraduate level and brings together young minds to a rich learning platform.

Showcasing the articles presented in the event through the CONSPECTUS is a wonderful venture included in the scientific event. Hearty congratulations to the students and the staff advisors who have put in their effort for the success of this event!

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

FROM THE STAFF ADVISORY

The future of medicine lies in the hands of those who dare to question, explore, and discover. In this 'conspectus,' we are privileged to witness the bright promise and immense potential embodied by medical students embarking on their inaugural journeys into the expansive and ever-evolving field of healthcare research.

Within these pages, you will find a diverse array of research articles reflecting the wide-ranging interests and talents of these budding researchers. What makes this collection truly inspiring is the audacity and vision of its contributors. Each article is not just a testament to knowledge but also a celebration of perseverance. Medical students, often balancing their studies with clinical rotations and other responsibilities, have invested their hearts and minds into these realms of research.

In closing, I would like to express my gratitude to the authors, editors, and contributors who have made this book possible. May their dedication inspire us all to strive for excellence in the pursuit of knowledge.

Dr. Ranjith S
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Department of Anatomy
JMMC & RI

Dr. Biju Bahuleyan
Professor and Head
Department of Physiology
JMMC & RI

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PREVALENCE OF UNDERWEIGHT AMONG UNDER FIVE CHILDRENRESIDING IN THE RURAL AREAS OF KOLLAM DISTRICT, KERALA: A COMMUNITY-BASED CROSS-SECTIONAL STUDY

Anna Mariya Jose[1] Anjana Sukhesh[1] Anjitha Jayachandran[1] Anuja Reji[1] Anusha Shaji[1] Reshmi S[2]
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Background: Undernutrition remains a significant public health concern, particularly among the vulnerable population, such as children in India. According to the National Family Health Survey-5, 32.1% of children under five years of age are underweight in India, 19.7% in Kerala, and 17% in Kollam district of Kerala; so accurate assessment of the issue is essential for developing control strategies.

Objective: To estimate the prevalence of underweight, stunting, and wasting using WHO-MGRS standards among under-five children and to identify the factors associated with the same.

Methodology: A community-based, cross-sectional study was conducted in August 2023 to March 2024 among under five children enrolled in anganwadis residing in the rural areas of Kalluvathukkal Panchayath of Kollam district. The sample size of 150 was computed by the formula $n = (Z\alpha)^2 pq/d^2$ by randomly selecting 5 out of 44 anganwadis in the Panchayath. Nutritional status assessment was done by anthropometric measurements, and a semi-structured questionnaire was used to collect the data from the mothers after getting informed consent. The data collected was entered into Microsoft Office Excel, analysed in IBM SPSS 26, and statistical tests were applied.

Result: The study reveals prevalence of underweight at 25.4% (10% were severely underweight), stunting at 20% (6.9% were severely stunted), and wasting at 18.5% (6.2% were severely stunted), with limitations in establishing associations due to sample size constraints.

Conclusion: The study's findings indicate a higher prevalence of underweight compared to similar studies in Kerala and carry crucial implications for forthcoming efforts and programs aimed at children in India.

Keywords: *Children Under Five, Kollam, Underweight, Stunting, Wasting.*

THE EFFECT OF PREGNANCY ON THE WORK-LIFE BALANCE OF WOMEN IN KERALA

Amal S Lal[1] Adarsh S Santhosh[1] A Harikrishnan[1] Aiswarya Das[1] Akshay Anil[1] Aleena V Jyothi[1] Ameena Rasha Rafath[1] Amitha Anikuttan[1] Anamika P[1] Reshmi Ramachandran[2]
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Background: Over the years, there has been a significant increase in the number of women in the global workforce. Pregnant women also make up a major portion of this workforce. Therefore, it is essential to study the effect of pregnancy on the work life balance of women.

Objectives: To study the effect of pregnancy on the work-life balance of women in Kerala.

Methodology: A descriptive study was conducted among 138 women residing in different parts of Kerala. It included women who are currently pregnant and are working or were working at the onset of their pregnancy, and also women who had delivered or were pregnant within the last 3 years and were working at the onset or during the period of their last pregnancy. A questionnaire was prepared with the help of a project guide, and data was collected using the same. Data was coded and entered in a Microsoft Excel worksheet and analysed using SPSS software. Qualitative data was summarised using frequency and percentages, and the chi square test was used to find out the association between variables. AP value < 0.05 was considered a statistically significant association.

Results: It was found that 72.5% had discontinued work during pregnancy, while the rest continued to work during pregnancy. 38% discontinued their work in the third trimester, while 21% discontinued on

detection of pregnancy, and another 21% in the second trimester, while 20% discontinued in the first trimester. The majority of the discontinuation was due to medical reasons. Of the study population who discontinued, 68% did not regret quitting. 94.9% underwent regular antenatal checkups. It was found that 34.1% of the population had comorbidities during pregnancy, while the majority did not. 41.3% of the population were employed in the professional sector, while 39.9% had office work and nearly 10% had been employed for daily wages. It was also found that more than half the population worked for 6–8 hours. Only 2.9% were engaged in severe physical work, while the majority (64.5%) required only slight physical work in their jobs. 68.7% did not receive any incentives from their workplace.

Conclusion: This study reveals that almost 3/4th of the study participants had discontinued work during pregnancy. A quarter of them discontinued work soon after detection of pregnancy. No statistically significant association was found between any of the demographic or antenatal factors and discontinuation of work during pregnancy.

Keywords: *Antenatal, Work Life Balance, Pregnancy, Woman, Discontinuation.*

MEDICAL STUDENTS' PERSPECTIVE TOWARDS CBME CURRICULUM: A CROSS SECTIONAL STUDY

Ashwin M Suresh[1] Akhila Kuriakose[1] Aishwarya V[1] Henna Mumthaz[1] Treasa[1] Jerry Rachel John[2] Sandhya G I[3]
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Background: Competency-based medical education is an approach to ensuring that the graduates attain the competencies required to discharge their professional duties as healthcare personnel. The new undergraduate curriculum is expected to improve the quality of education, produce skilled human resources, and thereby enhance the health status of people. The pivot of the new undergraduate curriculum is the shift of knowledge accumulation to skill acquisition.

Objectives: To find out the perspective of second year and third year MBBS students of a private medical college in central Kerala about CBME curriculum.

Methodology: A cross-sectional study was done among a calculated sample size of 230 students chosen randomly using the attendance lists of 2nd and 3rd year CBME batch students. A pre-tested questionnaire was given to students. Part of the questionnaire was on a Likert scale and an open-ended question for inductive theme analysis done manually. Statistical analysis of data entered in MS Excel was done using Jamovi 2.5.6.

Result: New teaching techniques, like self-directed learning methods, were preferred by 80% of students, and 28% of them preferred small group discussions. 26.1% of students agreed that a foundation course was necessary at the start of the MBBS course. 14.8% of students were neutral with regard to AETCOM classes for their personality development. Students also suggested to include methods for stress management.

Conclusion: 93% of students have given positive responses about the new amendment made in the CBME curriculum. Various methods, like foundation courses, SDL, and AETCOM, have made learning more interactive and effective than before. Classes on basic life support and family adoption methods have improved the communication skills. The introduction of the foundation course was beneficial as it gave a better idea regarding the course, language enhancement, and clinical exposures.

Keywords: *AETCOM, CBME Curriculum, Foundation Course, SGD, SDL.*

POLYPHARMACY AND POTENTIAL DRUG-DRUG INTERACTIONS AMONG PSYCHIATRIC PATIENTS ABOVE EIGHTEEN YEARS OF AGE AT A TERTIARY CARE HOSPITAL IN CENTRAL KERALA

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Background: Studies have shown 20–30% of all adverse drug reactions are caused by polypharmacy and consequent drug-drug interaction (DDIs), and some of these adverse reactions could be life-threatening. This study aims to explore the prevalence of polypharmacy and pDDIs.

Objectives: To find out the prevalence of polypharmacy and pDDI among patients admitted to a psychiatric ward, along with the associated risk factors and prevalence of clinical DDIs.

Methodology: Polypharmacy is defined as the use of five or more drugs. A retrospective cross-sectional study was done using data collected from medical records of patients admitted to the psychiatry ward who were over the age of 18 and were admitted to a tertiary care center. The Medscape Drug Interaction Checker was used for identification and the severity of the pDDIs. Statistical analysis was then done using SPSS software to identify correlation between pDDIs and patient factors.

Results: Among the 181 participants, 80.7% had pDDIs, and the majority (88.6%) of them were of moderate severity. A total of 75 patients (41.4%) had polypharmacy. Atypical antipsychotics and benzodiazepines were the most commonly encountered drugs. Polypharmacy, history of substance abuse, and diagnosis of schizophrenia were found to be risk factors. The prevalence of clinical DDIs was only 23.9%.

Conclusions: Potential drug-drug interactions were found to be common among psychiatric patients. Nevertheless, the prevalence of clinical DDIs is very low and could be due to underreporting. Clinical diagnosis and polypharmacy were found to be important risk factors for pDDIs.

Keywords: *Retrospective Study, Polypharmacy, Potential Drug-drug Interactions, Psychiatric Patients, Central Kerala.*

INVESTIGATING SYMPTOM CLUSTER ASSOCIATIONS WITH QUALITY OF LIFE IN HAEMODIALYSIS PATIENTS: A MIXED METHODS APPROACH

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Background: Haemodialysis patients often experience significant disruptions in their physical, mental, and social well-being due to the nature of their treatment. Understanding their quality of life (QoL) is essential to improving care strategies. This study aims to assess the QoL of haemodialysis patients at a tertiary care centre using standardised tools.

Objectives: Primary: To identify distinct symptom clusters among haemodialysis patients.
Secondary: Investigate the association between identified symptom clusters and different aspects of health-related quality of life (HRQoL).

Methodology: A cross-sectional observational study in a tertiary care centre in Kerala, within the haemodialysis unit, among 30 patients with chronic kidney disease (CKD) undergoing regular haemodialysis treatment able to provide informed consent. Standardised questionnaires will be used to collect data on sociodemographic and clinical data and symptom clusters. A validated HRQoL instrument named Short Form-36 (SF-36) will be used to collect data on health-related quality of life.

Results: The quality of life of haemodialysis patients was found to be significantly impaired ($P < 0.05$) in comparison to healthy individuals of the general population, particularly with respect to the physical

psychological, and social relationship domains. The QOL scores improved with increasing levels of education.

Conclusion: The evaluation of QOL in CKD patients undergoing haemodialysis showed that it was relatively compromised. Because the patients had a chronic, progressive, irreversible disease, the most affected was the physical domain. Age, education, employment, and marital status were found to affect one or more domains of QOL.

Keywords: *Chronic Kidney Disease, Haemodialysis, Quality of Life, Nephropathy, Renal Failure.*

ASSESSMENT OF QUALITY OF LIFE AMONG PERIMENOPAUSAL WOMEN IN A TERTIARY CARE HOSPITAL IN CENTRAL KERALA

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Background: Perimenopause is an ill-defined period surrounding the final years of women's reproductive life, characterised by hormonal variations that last several years and significantly impact physical, emotional, mental, and social well-being.

Objectives: To assess the quality of life among perimenopausal women (40–55 years) in a tertiary care hospital in central Kerala and to determine the factors associated with it.

Methodology: A cross-sectional study was conducted in 107 middle-aged women from 17th October to 13th November 2023 by convenient sampling method. The menopause rating scale was used to assess the prevalence of menopausal symptoms and quality of life, and the data were collected for socio-demographic factors, relevant menstrual histories, and other variables.

Result: The study was conducted among 107 perimenopausal women with a mean age of 48.6±3.1 years. The majority of participants do unskilled jobs (50.5%), such as housekeeping, cleaning staff, daily wage workers, peons, and housewives. 43.9% have regular menstruation, while 27% have attained menopause. The study revealed that 92.5% felt at least

one menopausal symptom. The symptom reported to be experienced in most severity was joint and muscular discomfort, and bladder problems were the symptom that was least common. 52.3% of the study participants were found to have poor quality of life. The study also demonstrated a significant association between the presence of comorbidities, below-degree (non-graduate) education, and poor quality of life.

Conclusion: The poor QoL among a high proportion of perimenopausal women would place a significant burden on public health care in developing countries like India. To improve QoL and to decrease the menopausal symptoms in these women, a holistic approach in the form of lifestyle and behavioural modifications is required.

Keywords: *Quality of Life, Menopause Rating Scale, Perimenopause, Menopausal Symptoms, Prevalence.*

PREVALENCE OF POSTPARTUM DEPRESSION AMONG MOTHERS ATTENDING A TERTIARY HEALTH CARE CENTRE IN TRIVANDRUM

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Background: Pregnancy and postpartum are associated with increased risk for developing depressive symptoms in women because of alterations in the mothers' hypothalamic pituitary adrenal (HPA) and hypothalamic pituitary gonadal (HPG) axes. Postpartum depression affects approximately 10-15% of women and impairs mother-infant interactions that, in turn, are important for child development. Active screening and following treatment based on cooperation between gynaecology-obstetrics, and psychiatry is the major method of postpartum depression prevention.

Objectives: To assess the prevalence of postpartum depression in mothers attending a tertiary health care centre in Trivandrum, Kerala.

Methodology: A cross-sectional study was carried out among mothers aged 18 and above who had given birth within 4 to 6 months at the time of study during the period between May and July 2023 from the gynaecology and paediatric OPD's were studied after obtaining verbal consent. Data collection was done using a semi-structured questionnaire (Beck's Depression Inventory Standardised Malayalam version), and accordingly, scoring was done with scores of 0, 1, 2, and 3 for a set of 21 questions.

Results: Out of the 41 mothers assessed, 48.78% were in the age group 25-29, 24.39% were in the age group 30-34, and 19.51% were in the age group 20-24. 70.73% of women had 1 child when comparing parity. Most mothers complained of sleep disturbances. One woman had thoughts of suicidal ideation, i.e., 2%. 12% of mothers had the possibility of developing depression. The final results were 12.195% of mothers had mild mood disturbance, 4.878% had borderline clinical depression, and 2.439% had moderate depression.

Conclusion: From our study, we have the prevalence of postpartum depression as 19.512% taken from a tertiary care centre in Trivandrum.

Keywords: *Postpartum Depression, Hypothalamic Pituitary Gonadal Axis, Hypothalamic Pituitary Adrenal Axis, Suicidal Ideation.*

EXPLORING THE IMPACT OF EXERCISE ON PAIN THRESHOLD: UNRAVELING THE MECHANISMS OF EXERCISE INDUCED HYPOALGESIA

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

Background: Isometric exercise influences pain threshold and blood pressure and may produce effective analgesia.

Objectives: To assess the effectiveness of isometric exercise in increasing pain threshold and record changes in cardiovascular parameters immediately after isometric exercise and to examine potential mechanisms underlying the analgesic effects of isometric exercise.

Methodology: An interventional study was conducted in 88 MBBS students. A questionnaire that included biodata and personal history was given to the participants. The STAI (State Trait Anxiety Inventory) Questionnaire was used to assess the anxiety level of the subjects and the IPAQ to categorise the subjects according to their regular level of activity. Eysenck Personality Questionnaire: short form was also used to assess the personality of the individual. Then the measurements were taken in the resting state, which includes the pulse rate, blood pressure, and the pain threshold level. The isometric exercise was performed with a hand grip dynamometer. Following the exercise, blood pressure, pulse rate, and pain threshold were again measured.

Results: The subjects included 66 females and 22 males with a mean age of 22.39. We found that Following isometric exercise, pain threshold

significantly increases in the dominant hand (8.66±13.56, $p<0.05$) as well as the non-dominant hand (4.81 ±8.79, $p<0.05$).

Conclusion: Isometric exercise produces effective analgesia.

Keywords: *Isometric Exercise, Pain Threshold, Analgesia, Blood Pressure, Dynamometer.*

ASSESSMENT OF SLEEP HYGIENE AMONG ADULTS RESIDING IN A RURAL AREA OF NORTH KERALA

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Background: Sleep hygiene constitutes personal behaviours, environmental routines that support sleep, and avoiding activities that disturb or delay sleep. Poor sleep quality and sleep deprivation are linked with higher incidences of psychosocial distress, impaired judgement and learning ability, cardiovascular disease, diabetes, obesity, and overall increased mortality.

Objectives: To study sleep hygiene habits among adults.

Methodology: This is an analytical cross-sectional study with a sample size of 100, set in a rural area of Taliparamba Panchayat, Kannur, Kerala. Duration of study was 1 month. The convenience sampling method was used. Study subjects were consenting adults of age 30-60 years; bedridden and mentally challenged persons were excluded. The study tool used was a semi-structured questionnaire. The Sleep Hygiene Index (SHI) was incorporated into the questionnaire. SHI is a self-administered index intended to assess the presence of behaviours that comprise sleep hygiene. Total sleep hygiene score is 52. Score ≥26 is indicative of a more maladaptive sleep hygiene status.

Results: Of 100 participants, 72% showed higher sleep hygiene scores (≥26), indicating poor sleep hygiene. 53% face difficulty falling asleep. 46% wake up between sleep, and 35% of them find difficulty returning

to sleep afterwards. 87% use their phone at least sometimes, and 33% rarely go to sleep at the same time every day. 14% use alcohol, tobacco, or caffeine within 4 hours before bed, at least sometimes.

Conclusion: A significant number of study subjects follow numerous healthy sleep hygiene habits, despite which 72% have a high sleep hygiene score, indicating a maladaptive sleep hygiene status. This can be attributed to several factors, the most prevalent of which is the use of electronic gadgets before going to sleep, followed by an inconsistent sleep schedule.

Keywords: *Sleep Hygiene, Sleep Hygiene Score, Electronic Gadget Use, Substance Use, Sleep Schedule.*

RESEARCH POSTER

THE UTILITY OF SERUM PROTEIN ELECTROPHORESIS IN THE DIAGNOSIS OF MULTIPLE MYELOMA

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Background: Multiple myeloma is a neoplasm that results in the abnormal proliferation of plasma cells in the bone marrow. These plasma cells produce abnormal immunoglobulins, causing monoclonal gammopathy, which can be detected by the presence of an M-band in serum protein electrophoresis.

Objectives: To assess the role of serum protein electrophoresis (SPEP) in the diagnosis and treatment of multiple myeloma and to study the process of serum protein electrophoresis.

Methodology: Serum samples from suspected myeloma patients and known cases of multiple myeloma were subjected to serum protein electrophoresis, and the results were interpreted. The M-band was detected visually, and quantification was done using a densitometer.

Results: In the case of previously undiagnosed patients' samples showing an M-band, patients were sent for further evaluation, and the diagnosis of myeloma was confirmed. In known cases of myeloma, the M band levels showed variation with treatment, indicating the utility of serum protein electrophoresis in the follow-up of myeloma patients and its use to assess prognosis.

Conclusion: Serum protein electrophoresis is an effective and affordable tool to detect the presence of abnormal immunoglobulins in serum and is useful in the diagnosis of multiple myeloma.

***Keywords**: Multiple Myeloma, Myeloma, Serum Protein Electrophoresis, M-band, Plasma Cells.*

EOSINOPHILS AND THEIR CONTRASTING EFFECTS ON COVID-19 AND ASTHMA

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Background: In the present world, where respiratory issues are on the rise, we decided to explore two diseases that have significantly impacted humanity. We found the involvement of eosinophils in the pathophysiology of both diseases. The fact that eosinophils have varied effects on these conditions prompted us to investigate further.

Objective: We aim to understand the beneficial and adverse effects of eosinophils on COVID-19 and asthma, respectively, and to extrapolate this information for potential therapeutic implications of targeting eosinophils in asthma management and COVID-19 treatments.

Methodology: We conducted a systematic review by referring to various renowned articles, journals, and standard textbooks.

Results: It is interesting to note that eosinophils exacerbate asthma by enhancing existing airway inflammation through the release of cytokines involved in homeostasis and inflammation, while also aiding in COVID-19 recovery. This is attributed to the presence of cationic proteins, RNAses, and reactive oxygen and nitrogen species in eosinophilic granules.

Conclusion: Mepolizumab, a drug that targets eosinophils, has been found beneficial in managing asthma. This suggests that further research focused on understanding the relationship between eosinophils and these

conditions can lead to the development of treatment strategies involving drugs that target eosinophil levels in the blood.

Keywords: *Eosinophils, Asthma, COVID-19, Mepolizumab, Inflammation, RNAses, Cationic Proteins.*

ANTIBIOTIC SUSCEPTIBILITY PATTERNS OF BACTERIAL ISOLATES FROM ENDOTRACHEAL ASPIRATE SAMPLES FROM PATIENTS IN THE INTENSIVE CARE UNIT OF A RURAL TERTIARY CARE HOSPITAL – A CROSS SECTIONAL STUDY

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Background: Antimicrobial resistance is a multifaceted problem and among the most serious global public health issues of this century. We aimed to identify bacterial isolates cultured from endotracheal aspirates (ETA) in patients admitted to our multidisciplinary ICU and analyzed their antibiotic susceptibility patterns.

Objectives: To identify bacterial isolates from endotracheal aspirate samples, and to determine antibiotic susceptibilities of these bacterial isolates.

Methodology: This was a retrospective observational study conducted in an ICU of a tertiary care hospital, with a waiver of consent obtained from the institutional IRB. Cultures from ETA for a period of one year, February 2023 to February 2024, were analyzed. Microbiological culture analysis of tracheal aspirate was performed according to the CLSI method.

Results: Of 258 endotracheal aspirate cultures, 144 samples were culture positive. Isolated bacteria were mostly gram-negative: *Acinetobacter baumannii* (32.1%), *Klebsiella pneumoniae* (22.9%), and *Pseudomonas aeruginosa* (12.4%). Among the gram-positive organisms, *Haemophilus*

influenzae (4.6%), *Corynebacterium striatum* (2.6%), *Staphylococcus aureus* (2.6%), and MRSA (2%) were identified. Among the isolates, 77% of Klebsiella species, 26% of Pseudomonas species, and 87% of Acinetobacter species were extensively drug resistant (XDR). Colistin was sensitive in 97% of XDR organisms, and tigecycline in 32%. Meropenem showed resistance in 96% of XDR isolates. Mortality was 28% in 122 patients with positive ETA cultures. Klebsiella species were isolated in 36% of patients who did not survive.

Conclusion: Antibiotic sensitivity and resistance patterns in an ICU are crucial to guide the treating physician in initiating the appropriate empirical antibiotics in critical cases. This study will help in formulating such policies in a multidisciplinary ICU.

Keywords: *Intensive Care Unit, Tracheal Aspirate, Drug Resistance, Acinetobacter, Klebsiella pneumoniae.*

PERCEPTION OF SUICIDE AND SUICIDAL IDEATION AMONG DOCTORS A CROSS SECTIONAL STUDY

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Background: The medical profession is known for its stress and work pressure, yet mental health issues among doctors remain a taboo in the Indian context. Despite the prevalence of suicide among doctors in India, only few scientific studies have explored this issue. Factors leading to suicide can include personal reasons, such as underlying psychiatric disorders, and structural reasons related to the working environment, such as lack of support, work overload, and inadequate time for doctor-patient interaction. Endemic factors, like exposure to death and trauma without safe places to reinvigorate oneself, also play a role.

Objectives: This study investigates doctors' perceptions of the prevalence of suicide, associated factors, and recommendations for prevention.

Methodology: A cross-sectional study was conducted among modern medicine doctors in Perinthalmanna with a sample size of 100. Data was collected using a pre-designed questionnaire sent via Google forms.

Result: Our study found that the doctors' community has higher rates of suicidal ideation than the general population, with study stress (58%) and workload (55%) as key factors associated with this ideation.

Conclusion: The study indicates that doctors are more prone to suicide and have greater suicidal ideation compared to the general population.

Recommendations include improving working conditions, adjusting time schedules, reducing workload by hiring more doctors, and increasing payment scales.

Keywords: *Suicide, Suicidal Ideation, Doctors, Stress, Workload.*

WORK-LIFE BALANCE AMONG MARRIED WORKING WOMEN IN A TERTIARY CARE CENTRE: A CROSS-SECTIONAL STUDY

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Background: In the past, men provided for the family by working outside the home, while women took care of the household. With the present generation recognising the importance of financial stability, women have definitely stepped up. This study addresses the growing need to understand how women manage their dual roles, which has significant implications for their well-being and productivity.

Objectives: To assess work-life balance among married working women in a tertiary care centre and determine various factors associated with it.

Methodology: A cross-sectional study was conducted among married working women in a tertiary care centre, with a sample size of 100. Data were collected using a pre-designed questionnaire comprising two parts: sociodemographic details and associated factors, along with a validated questionnaire developed by Daniel and McCaraher, the 'Work-Life Balance Questionnaire.'

Results: 22% per cent of participants belong to category A (under considerable stress from lack of work-life balance), 47% to category B (not entirely happy with work-life balance but in a good position not to

let the situation get out of control), and 31% to category C (have set their own priorities in work-life balance, making it work).

Conclusion: The study sheds light on the nuanced landscape of work-life balance among married working women. A significant insight emerges regarding the influence of sociodemographic factors, notably family type and number of children. By acknowledging this, organisations can cultivate strategies that empower women to thrive in their lives.

Keywords*: Working Women, Work-Life Balance, Personal Life, Professional Life, Work Life.*

COVERAGE OF COVID-19 VACCINE IN A PHC AREA OF SOUTH KERALA

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Background: COVID-19 was declared a pandemic by WHO, affecting over 700 million people worldwide. The COVID-19 vaccine has proven to reduce complications and infectivity associated with the pandemic. This study sheds light on the coverage of the COVID-19 vaccine in selected wards under a PHC in rural South Kerala.

Objectives: Primary objective: to estimate the coverage of the COVID-19 vaccine in eligible individuals in the PHC area. Secondary objectives: to find age group-specific vaccination coverage (12-14, 15-17, 18-44, 45-60, >60 years). To identify reasons for being unvaccinated or partially vaccinated. To assess socio-demographic factors associated with vaccination coverage. To study reported side effects following COVID-19 vaccination.

Methodology: A cross-sectional study was conducted among 228 individuals selected using cluster sampling; 30-33 individuals werechosen from each cluster, which included 7 wards in the PHC area. Data was collected from consented individuals aged 12 and above, excluding bed-ridden patients, using an interviewer-administered questionnaire and analyzed using IBM SPSS version 29 software.

Results: The sample size was achieved, and fully vaccinated individuals accounted for 92.5% (211) of the participating population. Age group-specific vaccination coverage was 30.0% (12-14), 85.7% (15-17), 96.0%

(18-44), 92.8% (45-60), and 100.0% (>60). Reasons for being unvaccinated (3.6%) included fear of side effects. Side effects from the first dose prevented individuals from taking the subsequent dose (3.9%). 88.1% reported no side effects, while reported side effects included body pain, tiredness, and fever.

Conclusion: Overall, COVID-19 vaccination coverage is high, especially among the elderly (100.0%). Coverage was higher in males (93.2%), individuals with higher education (95.3%), and diabetics (100.0%).

Keywords: *COVID-19, Vaccine Coverage, Fully Vaccinated, Socio-Demographic Factors, Side Effects.*

ASSESSMENT OF AWARENESS OF SELF-CARE HABITS AMONG TYPE 2 DIABETIC PATIENTS OF A TERTIARY CARE CENTER IN NORTH KERALA

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Background: Diabetes is the seventh leading cause of death. The global number of individuals affected by diabetes is on the rise, with WHO estimating that 537 million adults have diabetes. It can lead to various microvascular and macrovascular complications, highlighting the importance of self-care practices. Self-care practices are defined as behaviors undertaken by individuals with or at risk of diabetes (prediabetic) to manage the disease independently. These practices fall under the seven domains recommended by the American Association of Diabetes Educators (AADE) for outcome assessment.

Objectives: Primary: To assess awareness of self-care practices among Type 2 diabetic patients at a tertiary care center in North Kerala through a scoring system. To assess factors influencing poor self-care practices and establish associations between various factors. Secondary: To assess the practice of storage and usage techniques for insulin.

Methodology: Study design- cross-sectional study. Study setting- medical college hospital in Kozhikode. Study population- Patients attending diabetic OPD and inpatients in medicine and surgery wards. Inclusion criteria- Type 2 diabetes on insulin therapy for minimum 6 months. Exclusion criteria- those who didn't give consent, those not on insulin therapy. Study period 1/3/24 - 20/3/24. Convenience sampling method. Sample size – based on the study by Chandra Sekhar et al.

Prevalence p=54% (footcare prevalence). Sample size: $4pq\backslash d^2$ =122. Prevalence p=54% (footcare prevalence) d=**9.** Variables include socio-demographic factors, diet factors, physical activity, drug adherence, risk reduction, glucose monitoring, problem solving, mental coping.

Results:

TABLE 2: AWARENESS OF SELFCARE SCORING - AADE GUIDELINES [N=122]

SCORING INTERVALS	FREQUENCY	PERCENTAGE%	LEVEL
4-9	13	10.48	Poor
10-14	82	66.13	Average
15-19	29	23.38	Good
Median score	12.25±2.2		

Positive associations: Education p=<0.001. Socioeconomic status p=0.001. Age category p=0.045.

Conclusion: The majority, 82 (66.13%), had average self-care scores, while 29 (23%) had good self-care scores for self-care practices. There was a significantly higher risk of poor self-care practices among the older age group, those with poor education, and individuals with low socioeconomic status. Additionally, 80.5% of study participants had poor scores in dietary practices.

Keywords: *Diabetes Mellitus, Scoring, Self-Care, Socioeconomic Factors, Domains.*

PREVALENCE OF ILLNESS ANXIETY DISORDER AMONG MEDICAL STUDENTS

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Background: Health anxiety may often be under-reported and under-recognized in the medical student population, which can interfere with their academic performance. Medical students are more likely to develop illness anxiety disorder (IAD) due to their exposure to medical knowledge and the stress of their studies. This topic is less explored in India, which prompted us to choose it.

Objectives: To estimate and compare the prevalence of illness anxiety disorder in the early and late phases of MBBS.

Methodology: A cross-sectional study was conducted among all MBBS students from first year to final year, with a sample size of 150 and a study period of three weeks. A pre-designed questionnaire consisting of socio-economic details and the validated SHAI-14 questionnaire regarding illness anxiety disorder was used. A Google form was circulated among the study population, asking them to complete the questionnaire.

Results: The study showed that the prevalence of IAD among medical students is 29.14%. Among these, mild IAD was 27.2%, moderate IAD was 1.7%, and substantial IAD was 0.3%.

Conclusion: In our study, 28.14% of students were found to have illness anxiety disorder (IAD). The early phase showed a prevalence of 32.67%, while the late phase showed a prevalence of 25.66%. Thus, the prevalence of IAD appears to decrease over the years. About one third of the female study population (31%) and one fourth of the male study population (23%) have IAD. There is no association between age, gender, place of stay, having a family member in the health profession, and IAD.

Keywords: *Health Anxiety, Medical Students, Mental Health, Academic Performance, Phase of Study, Clinical Exposure.*

CASE PRESENTATIONS

A CASE OF DIFFUSE SYSTEMIC SCLEROSIS

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Background: Systemic sclerosis is a rare complex autoimmune disease characterized by immune activation, fibrosis, obliterative vasculopathy and multisystem involvement with substantial morbidity and mortality.

Case History: 58-year-old female presented with pain and bluish discoloration of fingers on exposure to cold for 27 years, tightening of skin for 26 yrs, later developed recurrent painful leg ulcers, dysphagia and weight loss, breathing difficulty, now admitted with exacerbation of painful ulcers on feet.

Examination: Patient appeared moderately built and ill-nourished. Vitals were stable. Pallor, pitting pedal edema, peripheral pulses palpable. Dermatological examination revealed multiple discrete tender ulcers with pus discharge on the feet, blackish discoloration of the toes, and induration of the skin on extremities extending to the elbows and knees, as well as face and anterior chest. There is also salt and pepper pigmentation, mask-like facies, restricted mouth opening, and digital pitted scars. Musculoskeletal examination shows fixed flexion deformity of all fingers and shortening of both index fingers.

Differential Diagnosis: Diffuse cutaneous systemic sclerosis with gangrene of toes, limited cutaneous systemic sclerosis with gangrene of toes.

Management: Laboratory results show hemoglobin 9.3g%, total count of 15,500 and ESR of 54 mm/hr, while renal and liver function tests,

serum electrolytes are normal. ANA and Anti-Scl 70 are both positive. Arterial and venous doppler of both legs are normal. HRCT thorax reveals ground glass opacities in the lungs. Barium swallow and esophageal manometry indicate scleroderma esophagus. UGI endoscopy shows a stricture in the lower esophagus with esophagitis, and the esophageal biopsy confirms Barrett's esophagus. Echocardiography shows no evidence of pulmonary artery hypertension. Treatment included intravenous prostacyclin, tadalafil, nifedipine, systemic antibiotics, proton pump inhibitors, counselling on diet and avoidance of cold exposure. Consultations for management of lung and GI involvement.

Conclusion: Early diagnosis, treatment and regular follow up is important in preventing complications. Multidisciplinary treatment approach is essential.

Keywords: *Diffuse Cutaneous Systemic Sclerosis, Scleroderma, Barrett's Esophagus, Gangrene, Chronic Multisystem Disease.*

A CASE OF PLASMA CELL MYELOMA WITH HICCUPS AND INFECTION

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Background: Plasma cell myeloma is a malignant proliferation of B-lymphocytes producing abnormal immunoglobulins. Hiccups in cancer patients can be due to a respiratory tract infection or a gut infection or as a side-effect of steroids or chemotherapy.

Case history: A 72-year-old male patient who is a known case of type 2 diabetes mellitus, systemic hypertension, dyslipidemia and multiple myeloma presented with complaints of fever associated with painful micturition for the past 3 days. Patient also complains of generalised tiredness, body pain and hiccups for the past 3 days.

Examination: Patient is conscious, oriented with time, place and person. Pulse rate is 90/min and blood pressure is 130/80 mmHg. On system examination, normal vesicular breath sounds heard bilaterally, normal bowel sounds heard, no focal neurological deficit, normal higher mental functions and S1, S2 heard, no murmur.

Differential diagnosis: Monoclonal gammopathy of undetermined significance, smoldering multiple myeloma, Waldenstrom macroglobulinemia, light chain amyloidosis.

Management: Investigations done include complete blood count, random blood sugar, lipid profile, liver function tests, renal function tests and serum protein electrophoresis. Treatment includes injection perinorm, injection monocef, syrup citralka and injection pantop.

Conclusion: This is a case of a myeloma patient with complaints of hiccups which reduced on treating the infection. The possible cause of hiccups here could be due to the infection.

Keywords: *Myeloma, Hiccups, Electrophoresis, Infection, B-lymphocytes.*

A RARE CAUSE 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 inferior alveolar nerve, a branch of the trigeminal nerve. Infiltration by local malignancy or secondaries is the most common cause.

Case History: A 48-year-old male, with uncontrolled type 2 diabetes mellitus had right sided headache and right sided facial numbness of three weeks duration. Pain and numbness was more over the right side of face over the zygomatic arch. There was no history of limb weakness, fever or seizures.

Examination: General examination revealed fullness and swelling over the right cheek. Clinical examination revealed decreased sensations over the V2 division of right trigeminal nerve. A diagnosis of a right sided numb cheek syndrome secondary to trigeminal neuropathy was made.

Differential Diagnosis: Primary sinus malignancy or secondaries with neural infiltration was considered the primary diagnosis. Bacterial/fungal infections and autoimmune conditions like Sjogren's were considered.

Management: Blood investigations revealed high sugars with negative vasculitis markers. MRI brain and skull base revealed an infiltrative lesion arising from the right maxillary sinus with extension into the right pterygopalatine ganglion, causing erosion of the wall of the maxillary sinus (Fig 1). Possibilities considered were primary sinus malignancy and

fungal infection. Endoscopic biopsy of the lesion confirmed a diagnosis of mucormycosis(Fig 2). Treatment with liposomal amphotericin and strict blood sugar control had improvement in symptoms.

Conclusion: Mucormycosis is an important cause of numb cheek syndrome in diabetic patients. Mucormycosis is aggressively invasive, and thus, progression of the infection may be very rapid. Early diagnosis is essential for successful treatment.

Fig 1- Infiltrative lesion arising from right maxillary sinus with local invasion

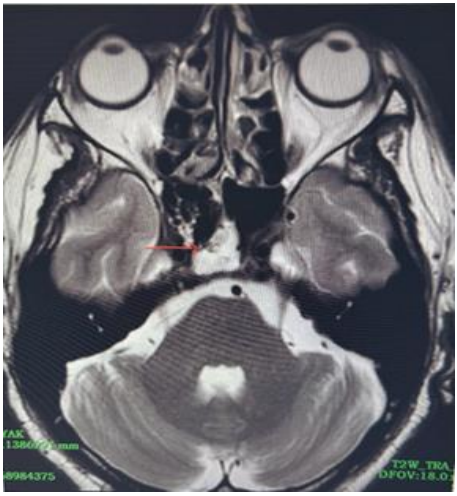
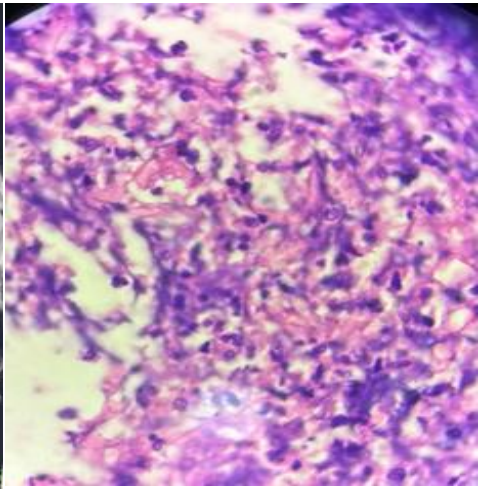


Fig 2- Histopathology section specimen showing hyphae of fungal mucor



Keywords: *Numb Cheek syndrome, Trigeminal Neuropathy, Mucormycosis, Uncontrolled Diabetes, Amphotericin.*

THREADS OF SUSPICION: WEAVING THROUGH A CASE OF PSYCHOSIS

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Background: Psychosis is a mental state characterized by a loss of contact with reality, leading to symptoms like delusions, hallucinations, and disorganized thinking or behaviour. It can occur in various psychiatric conditions, including schizophrenia and mood disorders. This case presents a 47-year-old male with 27-years history of psychotic symptoms, evolving into delusional disorder predominantly centred on persecutory beliefs regarding family members.

Case History: Patient first exhibited symptoms in his early twenties, including fearfulness, beliefs about evil spirits causing bodily pain. Symptoms persisted but were partially managed with psychiatric intervention. In 2018, patient developed more intense delusions, particularly focused on his elder sister, accusing her of malevolent behaviour like black magic, attempts to take over family property. In past two months, symptoms worsened, including increased suspiciousness, reduced sleep, increased activity, talkativeness. He also presented with delusions of persecution. Patient denies having any mental illness and insists his sister is the one who needs psychiatric care.

Examination: Mental status examination revealed cooperative, alert patient who was appropriately dressed and kept. He exhibited tangential thinking, increased speech volume, delusions of persecution without hallucinations. His cognitive functions were intact, but abstraction and judgement were impaired.

Differential Diagnosis: ICD-10: persistent delusional disorder

ICD-11: schizophrenia, schizoaffective disorder.

Management: CBC, LFT, RFT, ESR, HIV, HBsAg, HCV, VDRL, urine routine, ECG to exclude organic causes. Patient was admitted under psychiatry for optimization of medications. Tablet risperidone 1mg1-0-1 was gradually increased to 4mg twice daily. Tablet lorazepam 2mg SOS for anxiety and agitation. Long-term management includes regular follow-up, family psychoeducation, ongoing medication adjustments to refine diagnosis.

Conclusion: This case highlights the diagnostic challenges and management complexities of chronic psychosis, particularly when delusions persists over long periods.

Keywords: *Psychosis, Delusions, Schizophrenia, Schizoaffective Disorder, Persecutory Delusions.*

THYROID IN THE PELVIS: A CASE ON STRUMA OVARII

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Background: Struma ovarii is a monodermal ovarian germ cell tumour characterized by the presence of thyroid tissue comprising more than 50% of the overall mass. It is typically benign, but can become malignant. It may be associated with ascites and raised CA-125. Confirmatory diagnosis is by histopathology while surgical removal is the recommended treatment. Here, is a case of stroma ovarii in a hypothyroid patient with the finding of a large ovarian mass but with normal CA-125.

Case History: 54-year-old postmenopausal female, known case of type2 diabetes mellitus, hypertension, dyslipidaemia and hypothyroidism presented with abdominal pain for 2 days. Pain was localised to left lower side of abdomen and was associated with two episodes of vomiting on the previous day.

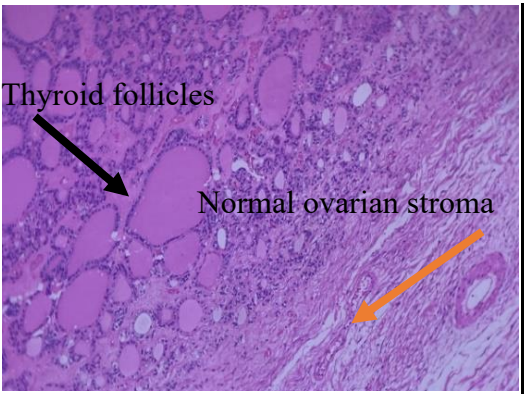
Examination: P/A: An ovoid shaped mass palpable in the supraumbilical region 17x15x10cm, non-tender, firm in consistency, no discoloration of skin over the mass.

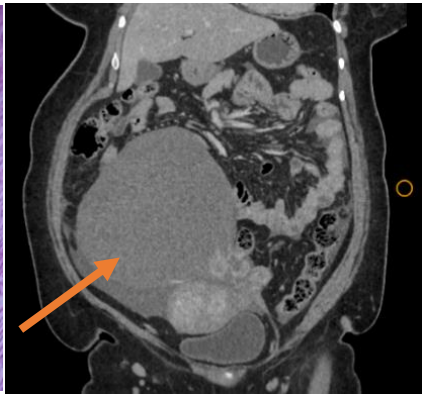
Differential Diagnosis: All other forms of ovarian neoplasms, ectopic pregnancy, endometrioma, hydrosalpinx.

Management: Normal hemogram and TFT. USG abdomen and pelvis showed a large cyst of 20x17x13.8cm with an irregular solid component in it is seen extending from the upper part of pelvis into the supraumbilical area. Mild ascites is also seen. CT Abdomen showed 134x193x196 mm (AP x TR x CC) large cystic lesion arising from the

pelvis predominantly originating from the left adnexa and extends superiorly until the supraumbilical region to the level of L1. Total Abdominal Hysterectomy with Bilateral Salpingo-Oophorectomy under spinal anaesthesia was done.
Specimens were sent for histopathological examination. Sections from solid areas show thyroid tissue with colloid filled follicles lined by cuboidal cells and adjacent normal ovarian stroma.

Conclusion: This case highlights a rare instance of struma ovarii in a hypothyroid postmenopausal woman, presenting with a large ovarian mass, normal CA-125 levels successfully treated with surgical removal.





Keywords: *Monodermal Ovarian Teratoma, Mature Cystic Teratoma, Struma Ovarii, Thyroid Tissue, Ovarian Germ Cell Tumour.*

A RARE CAUSE OF ALTERED SENSORIUM IN PREGNANCY

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Background: Wernicke's encephalopathy is a neurological emergency due to thiamine deficiency that presents with the triad of ophthalmoplegia, ataxia and confusion. We present here a pregnant woman with hyperemesis gravidarum who presented with altered behaviour and was found to have features of Wernicke's encephalopathy.

Case History: 22-year-old pregnant female of 13 weeks gestational age had repeated episodes of nausea and vomiting for the last three weeks. She was diagnosed with hyperemesis gravidarum outside and treated with intravenous fluids and antiemetics. She presented to the emergency with three day history of altered sensorium, irrelevant talk and unsteadiness on walking. There was no fever or seizures.

Examination: Clinical examination revealed patient conscious but drowsy and responding to verbal commands. Examination revealed a staring look with bilateral gaze evoked nystagmus, dysarthria, severe gait ataxia and brisk lower limb reflexes. There was no sensory or bladder involvement or meningeal signs.

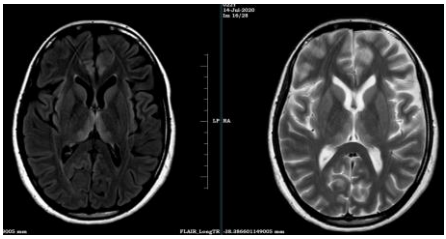
Differential Diagnosis: Possibility of a Wernicke's encephalopathy was considered in view of nystagmus, ataxia and altered sensorium in the setting of repeated vomiting associated with hyperemesis gravidarum. Meningoencephalitis and demyelination were also considered.

Management: MRI Brain showed bilateral symmetric hyperintensities

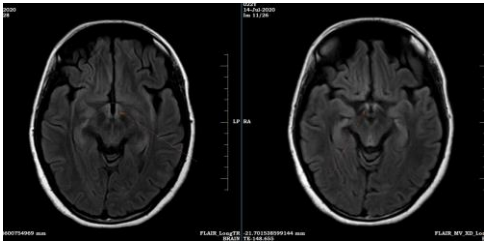
involving the bilateral medial thalami, mamillary body, periaqueductal region and dorsal medulla- in keeping with Wernicke's encephalopathy. She was started on intravenous thiamine initially followed by oral thiamine. She had immediate improvement in gait and behaviour and was discharged after stabilization. She remains symptom free at follow up.

Conclusion: Wernicke's encephalopathy is one of the rare neurological complications seen in pregnancy complicated by hyperemesis gravidarum where a delay in diagnosis and treatment can be costly. Therefore, in pregnant women with frequent vomiting and any neurological changes, it should be considered and promptly treated.

MRI Brain T2/FLAIR sequences showing hyperintensity involving medial thalami bilaterally



MRI Brain FLAIR sequences showing hyperintensity involving mamillary bodies bilaterally



Keywords: *Hyperemesis Gravidarum, Pregnancy, Wernicke Encephalopathy, Mamillary Body, Ataxia.*

AN UNUSUAL CAUSE OF STROKE IN AN ELDERLY MAN

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Background: Essential Thrombocythemia (ET), a myeloproliferative disorder, is characterized by elevated platelet counts. This can lead to thrombosis and hemorrhage, impacting various organs. We present a case of an elderly man with bilateral strokes, diagnosed with ET.

Case History: 74-year-old male with no comorbidities presented in emergency with sudden-onset weakness in the left lower limb, followed by loss of speech and right-sided weakness. There was no fever or headache.

Examination: Clinical examination revealed motor aphasia, right hemiparesis, and left lower limb weakness. Vitals were normal, and he was conscious and oriented.

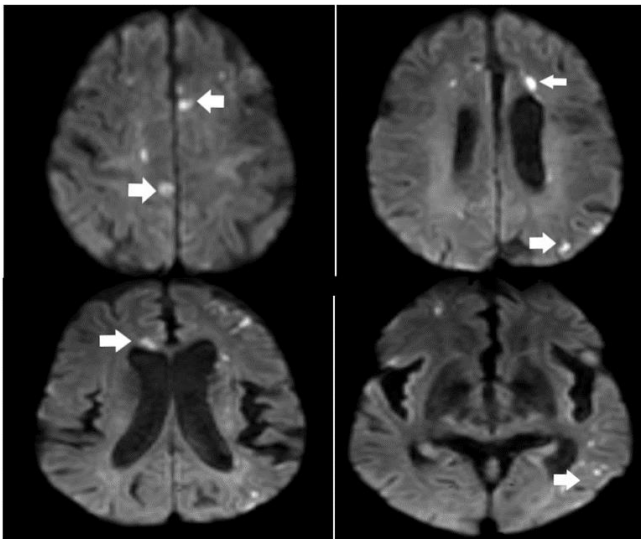
Differential Diagnosis: The clinical possibility of multiple strokes involving bilateral cerebral hemispheres was considered and investigated accordingly.

Management: MRI brain showed multiple infarcts in the left middle cerebral artery and right middle cerebral/anterior cerebral artery watershed territories (Fig 1). Blood investigations revealed elevated platelet counts (11.75 lakhs). Peripheral smear suggested a myeloproliferative disorder like ET. Genetic testing confirmed CALR (calreticulin) gene mutation, responsible for ET. Treatment included low molecular weight heparin, antiplatelet agents, statins, anticonvulsants,

and hydroxyurea. Physiotherapy, speech therapy, and rehabilitation were provided. Follow-up showed improvement in motor power and speech.

Conclusion: Essential thrombocythemia, although rare, is an important cause of arterial thrombosis leading to stroke. High platelet counts in stroke patients should raise suspicion for ET. Genetic testing aids diagnosis and management.
Diffusion weighted images on MRI scan showing scattered areas of diffusion restriction (white arrows) involving both cerebral hemispheres representing multiple infarcts in both anterior cerebral artery and middle cerebral artery territories.

Fig 1- MRI scan showing scattered areas of diffusion restriction (white arrows) representing multiple infarcts in both anterior cerebral artery and middle cerebral artery territories.



Keywords: *Stroke, Essential Thrombocythemia, Hemiparesis, Vessel Occlusion, Calreticulin Mutation.*

A RARE MEDICAL DUO: PHEOCHROMOCYTOMA AS A CATALYST FOR ECTOPIC CUSHING'S SYNDROME

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Background: Pheochromocytoma, a rare adrenal tumor typically produces excessive catecholamines, resulting in symptoms like hypertension and palpitations. In exceptionally rare instances, these can also secrete ectopic ACTH, leading to Cushing's syndrome, characterized by central obesity, hyperglycemia, muscle weakness. The coexistence of these conditions occurs in fewer than 1% of pheochromocytoma cases, making diagnosis challenging due to overlapping clinical features. Early detection and intervention are critical for effective treatment and improved patient outcome.

Case History: 56-year-old woman, k/c/o diabetes mellitus, presented with poor glycemic control, proximal muscle weakness and episodic hypertension.

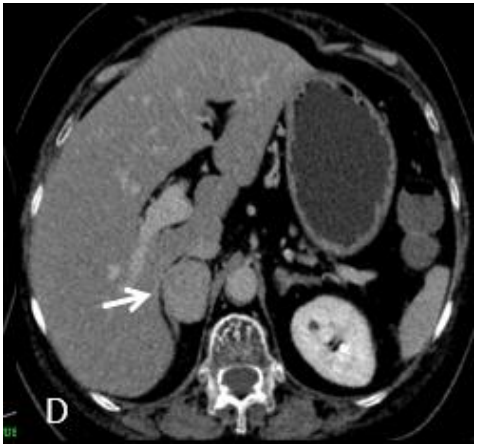
Examination: On examination, patient exhibited subtle features of Cushing's syndrome, including facial plethora, mild facial rounding, knuckle hyperpigmentation and severe proximal muscle weakness.

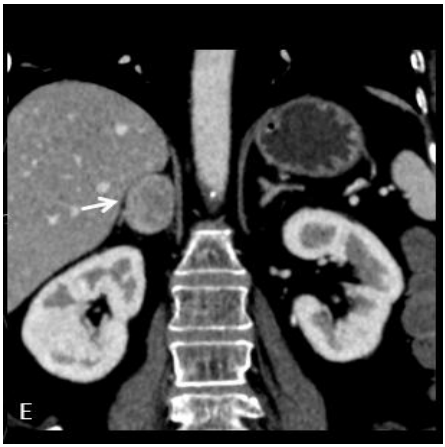
Differential Diagnosis: ACTH-dependent Cushing's syndrome, ACTH-independent Cushing's syndrome

Management: Initial blood tests revealed poorly controlled diabetes (HbA1c-9%) and hypokalemia. Cortisol level was 27.4mcg/dl at 8 AM and 19.2mcg/dl at midnight and the patient had an unsuppressed overnight dexamethasone suppression test with cortisol level 24mcg/dl. She had elevated 24-hour urine free cortisol 1300 mcg/24 hr and midnight cortisol levels, confirming Cushing's. Her ACTH level was 50 pg/mL, indicating ACTH-dependent Cushing's syndrome, although MRI brain was normal. Due to hypokalemia and severe proximal muscle weakness, ectopic ACTH secretion was suspected.

Additionally, episodic hypertension and palpitations raised possibility of pheochromocytoma. Elevated 24-hour metanephrine value (1170/24 hr) and normetanephrine levels confirmed this, imaging localized right adrenal pheochromocytoma. The patient started preoperative alpha-blockade and underwent surgery to remove the right adrenal pheochromocytoma. Histopathological findings confirmed diagnosis, postoperatively, cortisol and metanephrine levels returned normal. She achieved good glycemic control after procedure.

Conclusion: This case highlights rare coexistence of pheochromocytoma with ectopic Cushing's. Early recognition and timely surgical intervention are crucial for achieving favourable outcomes in patients with complex and challenging condition.





Keywords*: Pheochromocytoma, Ectopic Cushing's Syndrome, ACTH, Episodic Hypertension, Proximal Muscle Weakness.*

A RARE CAUSE OF MYELOPATHY IN A YOUNG FEMALE

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Background: Myelin oligodendrocyte glycoprotein antibody disease (MOGAD) is an autoimmune disease that causes inflammation of the central nervous system. It is caused by the immune system attacking the myelin oligodendrocyte glycoprotein (MOG) protein, which is found on the myelin sheath of nerves. We present here a case of a young female presenting with a myelopathy and detected to have MOGAD.

Case History: 35-year-old female patient presented with a two week history of progressive numbness and burning sensations starting in both lower limbs and ascending upwards to the trunk. There was no history of weakness or bladder involvement. There was a history of fever one week prior to symptom onset.

Examination: Clinical examination revealed loss of sensations over both lower limbs and trunk from T4 dermatome downwards. Cranial nerve and motor power were normal. There were no meningeal signs. A clinical diagnosis of cervical myelopathy was made.

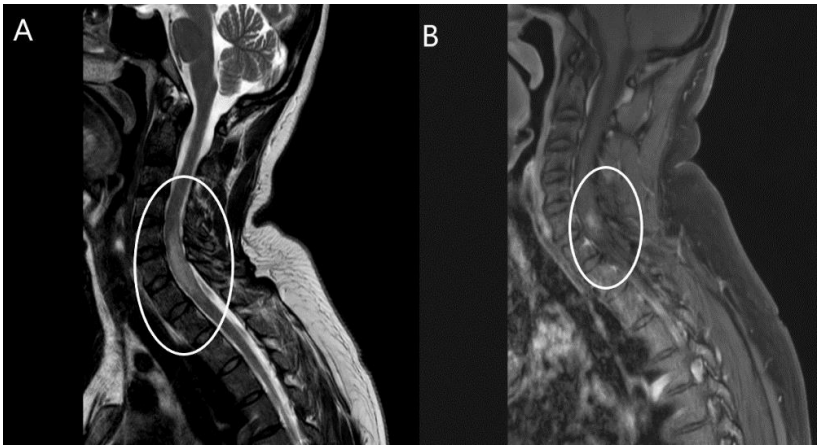
Differential Diagnosis: The differential diagnosis for a subacute myelopathy included post infectious demyelination, vasculitis syndromes, infections, degenerative disc disease, nutritional myelopathies, and spinal cord tumours.

Management: Blood investigations revealed strongly positive serum MOG antibody. MRI spine showed a long segment of hyperintensity in the cervical spinal cord with contrast enhancement (Fig 2). Brain MRI was normal and cerebrospinal fluid examination showed no infection. She was started on pulse-dose steroids followed by a tapering schedule of oral steroids. She had good improvement in symptoms and is on follow up.

Conclusion: MOGAD is an important cause of myelopathy in young patients and should be kept in the differential diagnosis. It can present with symptoms related to spinal cord, brain, and optic nerves. Early diagnosis and treatment leads to good long-term outcomes.

Fig 1- T2 sagittal image of cervical spine showing long segment of demyelination in cervical cord

Fig 2- Post contrast image showing enhancement of lesion



Keywords: *Mog Antibody Disorder, Cervical Myelopathy, Transverse Myelitis, Demyelination, Pulse Steroids.*

CREEPY-CRAWLIES IN THE CRANIUM: A CASE OF EOSINOPHILIC MENINGITIS IN A TODDLER

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Background: Eosinophilic meningitis, though rare, is a serious condition in paediatric populations, particularly in regions like India where parasitic infections are common. Globally, it is estimated to be around 0.1 to 0.5 cases per 100,000 population per year.

Case History: 1-year-old female presented with an 18-day history of high-grade fever with wet cough. Two days before admission, she experienced a seizure characterized by rolling up of eyes, brief loss of consciousness, cyanosis, and desaturation lasting 2 to 4 minutes.

Examination: Vitals are stable. Child is conscious, playful. Bulging of the anterior fontanelle.

Management: CSF analysis suggested meningitis. Chest X-ray showed right lower lobe pneumonia, and abdominal USG revealed mild hepatomegaly. MRI brain with contrast revealed minor gliosis in the periventricular white matter and right parieto-occipital lobe, and features suggestive of meningitis (Fig 1). A 6mm enhancing area in the left caudate suggested an infarct (Fig 2). Elevated eosinophils (30%) (Chart.1). These findings confirmed eosinophilic meningitis. She was started on IV antibiotics at meningitic doses. She was started on oseltamivir and azithromycin and was treated with albendazole and steroids.

Differential Diagnosis: Bacterial meningitis, viral encephalitis, tuberculous meningitis, cerebral malaria.

Conclusion: The condition, which can arise from both infectious and non-infectious causes, presents a complex clinical picture and significant diagnostic challenges. This case highlights the importance of eosinophilic meningitis in the differential diagnosis of prolonged febrile illness in children.

Fig1. **Fig2**.

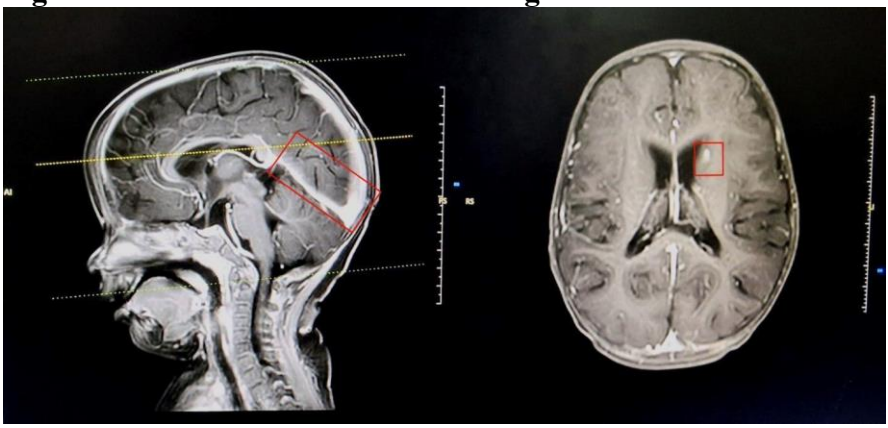

Chart.1 CSF analyses

Parameters	First LP	Repeat LP
Cells	2400	1840
Neutrophils	15%	23%
Eosinophils	30%	34%
Lymphocytes	55%	40%
Glucose	<20	26
Protein	592	97

Keywords: *Paediatric, Meningitis, Eosinophilia, Parasitic, Lumbar Puncture.*

"THE IMMUNE TIMEBOMB" - UNRAVELLING THE LETHAL THREAT OF IMMUNE TTP

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Background: Thrombotic thrombocytopenic purpura (TTP) is a rare, life threatening thrombotic microangiopathy (TMA) often occurring in adulthood with a sudden, unpredictable onset with an incidence of 1 in million in the world. Deficiency of ADAMTS13 enzyme activity represents the central feature of TTP and is traditionally attributed to either a congenital or acquired condition. Traditionally, diagnostic criteria have centred around the presence of a classic pentad of TTP symptoms: thrombocytopenia, hemolytic anemia, neurological abnormalities, fever, and renal dysfunction but current recommendations of diagnosis done with the help of PLASMIC score.

Case History: A 20 year old female, who is a known case of polycystic ovarian syndrome, presented with complaints of fatigue for 10 days, fever with nasal discharge and dry cough 3 days prior to the onset of fatigue. After 2 days, patient developed 3 episodes of vomiting and loose stools. Hb was reduced to 3gm% and was shifted to ICU where she developed headache and hallucinations.

Examination: Significant pallor, vitals stable, no organomegaly.

Differential Diagnosis: Hemolytic uremic syndrome, ITP, pregnancy related HELLP syndrome, paroxysmal nocturnal hemoglobinuria, drug induced thrombocytopenia.

Management: Investigations showed marked anisopoikilocytosis, thrombocytopenia, high LDH, low haptoglobin, peripheral smear showed dimorphic anemia and schistocytes. ADAMTS13 inhibitor levels found to be 82.2 IU/ml through ELISA and confirmed to be immune TTP. Managed on plasma exchange along with steroids till platelets became normal and on periodic infusion of rituximab. Patient currently stable.

Conclusion: iTTP is left untreated, has mortality rate as high as 90%. It can also lead to complications like kidney failure, CVA, heart block, TRALI etc.

Keywords: *Thrombocytopenia, Anemia, ADAMTS13, Fatigue, Fever.*

"NEITHER THE PATIENT NOR THE DOCTOR SEES ANYTHING"- A CASE OF RETROBULBAR OPTIC NEURITIS

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Background: Retrobulbar optic neuritis is an inflammatory condition, typically causing acute unilateral vision loss with pain on eye movement with normal fundus examination. It is the presenting symptom of multiple sclerosis in many cases. We present here a case of a 55-year-old lady presenting with retrobulbar neuritis and later diagnosed with multiple sclerosis.

Case History: This 55-year-old patient with no comorbidities presented with one week history of progressive visual loss in left eye associated with left sided eye pain and headache. There was no history of fever, seizures or weakness of limbs.

Examination: Clinical examination revealed decreased visual acuity in left eye along with relative afferent pupillary defect (RAPD) in left eye and normal fundus examination. Right eye was normal and there were no other deficits or meningeal signs. Considering findings of visual loss with eye pain and normal fundus, retrobulbar optic neuritis was considered the most likely diagnosis.

Differential Diagnosis: Main differentials for retrobulbar neuritis included demyelinating diseases like multiple sclerosis, infections including meningitis, syphilis, autoimmune disorders like sarcoidosis and primary optic nerve tumours.

Management: MRI Brain showed thickening and enhancement of the retrobulbar segment of the left optic nerve (Fig 1) with multiple periventricular white matter lesions suggestive of Multiple Sclerosis (MS) (Fig 2).

Cerebrospinal fluid analysis was positive for oligoclonal bands supporting the diagnosis of MS. She was started on pulse dose methylprednisolone followed by oral tapering steroids. She had improvement in vision and on follow up.

Conclusion: Retrobulbar neuritis should be suspected in cases with sudden visual loss and normal fundus examination. Multiple sclerosis remains one of the major causes of the same and early diagnosis leads to better outcomes.

Figure 1-Contrast MRI scan showing thickened and enhancing left optic nerve

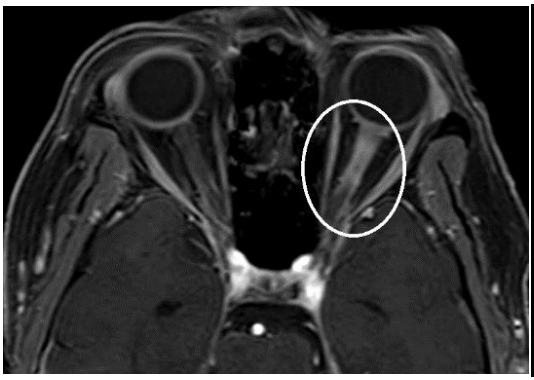
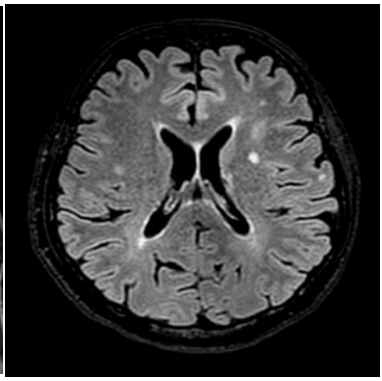


Figure 2- multiple white matter lesions suggestive of MS on T2 FLAIR MRI sequence



Keywords: *Retrobulbar Neuritis, Multiple Sclerosis, Afferent Pupillary Defect, Oligoclonal Bands, Pulse Steroids.*

PLACENTA ACCRETA: ADDRESSING THE RARE YET RISING CHALLENGE IN THE ERA OF INCREASING CAESAREAN SECTIONS

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Background: Placenta accreta spectrum, refers to the range of pathological adherence of the placenta and is a cause of maternal morbidity and mortality because of severe and sometimes life-threatening hemorrhage, requiring blood transfusion.There are several risk factors for placenta accreta spectrum. The most common being previous cesarean deliveries thus causing a rise in the same.

Case History: A 36 year old G3P2L2 with previous 2 LSCS, placenta previa, stage 1 IUGR, Rh negative pregnancy, bronchial asthma, hypothyroidism, mild anaemia, at 37 weeks +2 days presented as a referred case. No history of abdominal pain, bleeding PV, leaking PV at the time of admission.

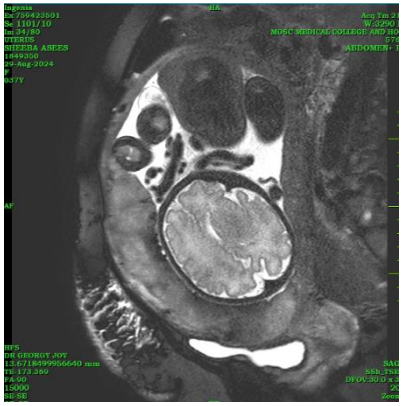
Examination: BP-130/36 mmHg, PR- 89/min, RR- 16/ min. Abdominal examination- uterus corresponds to 34 weeks, cephalic presentation, FHS(+).

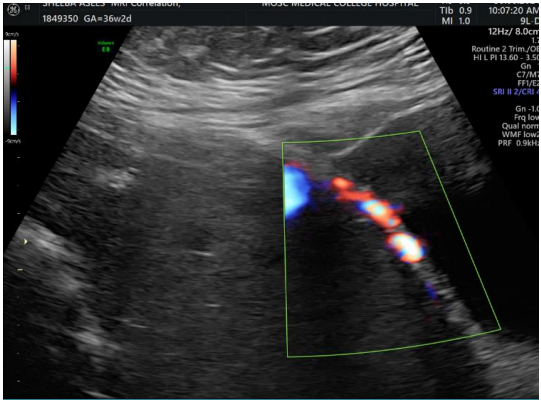
Differential diagnosis: Abruptio placenta, local cervical lesions, circumvallate placenta, vasa previa.

Management: MRI showed placenta anterior, lower end covering internal os. Myometrial placental interface appears ill defined. Placenta appears to extend into the serosa of maternal urinary bladder wall suggesting placenta accreta spectrum disorder with extension into serosal margin of maternal urinary bladder.
She underwent emergency caesarean hysterectomy in view of the same.
Histopathological report findings suggestive of placenta accreta.
Microscopy: Sections of the cervix show surface glycogenation, nabothian cysts, tunnel clusters. Placental parenchyma shows area suggestive of hematoma.

Conclusion: The incidence of placenta accreta is increasing following the trend of rising caesarean delivery. Early diagnosis ensures better maternal and neonatal outcomes.

USG correlation: Intraplacental leaks noted, increased retroplacental vascularity, increased vascularity between Uterus and maternal urinary bladder, non-visualization of normal myometrium in this region.





Keywords: *Placenta Accreta Spectrum, Caesarean Delivery, Maternal Mortality, Maternal Morbidity, Emergency Caesarean Hysterectomy*.

CLOT TWIST: UNUSUAL PRESENTATION OF ACUTE LEUKAEMIA AS SUBCLAVIAN THROMBOSIS

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Background: Subclavian vein thrombosis is commonly associated with conditions like thoracic outlet syndrome or catheter use, but its occurrence with acute leukemia is rare. Upper extremity deep vein thrombosis accounts for only 4-10% of all DVTs. In leukemia patients, venous thromboembolism is seen in 5-10% of cases, usually involving the lower extremities. This case emphasizes the need for a broad differential diagnosis, careful investigation of atypical presentations.

Case History: A 56-year-old male presented with left upper limb swelling associated pain for 7 days, he gave history of left upper chest pain radiating to the left arm for 3 days and fever for 1 day. He did not give history of trauma or breathlessness.

Examination: Left upper limb examined revealed swelling of the whole arm extending upto shoulder. There was local rise in temperature, redness and was tender to touch. Radial and ulnar pulses were feeble.

Differential Diagnosis: Cellulitis , venous thrombosis, thoracic outlet syndrome

Management: Lab results showed anemia (Hb 9.2) , leukocytosis, thrombocytopenia (84,000 cells/μL). USG revealed subclavian thrombosis, MRI reported as superficial thrombophlebitis of the left subclavian vein with thrombosis extending to the brachiocephalic vein.

Medical oncology recommended bone marrow biopsy to confirm leukemia, but the patient refused further diagnostic procedures. Patient discharged himself and was lost to follow up.

Conclusion: This case highlights the rare presentation of acute leukemia as subclavian thrombosis clinically presenting as left upper limb swelling.

Keywords: *Acute Leukemia, Venous Thromboembolism, Upper Limb Swelling, Subclavian Vein Thrombosis, Thoracic Outlet Syndrome.*

SHATTERING STEREOTYPES: A CLINICAL CASE OF MALE BREAST CANCER

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Background: Male breast cancer (MBC) is rare; accounting for less than 1% of cases, with rising incidence. Often under-recognized, MBC leads to delayed diagnosis and poorer outcomes, with men facing lower survival rates. BRCA2 mutations complicate prognosis, and societal misconceptions about breast cancer being a "women's disease" further delay treatment, highlighting the need for greater awareness and education.

Case History: A 70-year-old male from Hassan, presented with a left breast lump persisting for 15 years, growing from 2x2cm to 10x8cm in the past year. The lump is painless, with no nipple discharge or secondary changes. No history of trauma, significant weight loss, distant metastasis, or relevant family history and patient has been a chronic smoker and alcoholic for 40 years.

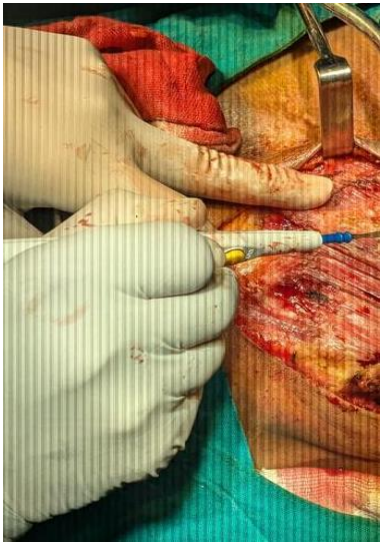
Examination: A hard, non-tender solitary lump measuring 10x13cm, ovoid, fixed to the skin and underlying pectoralis major. The nipple-areolar complex shows reddish discoloration. Dilated veins seen. Mobile, firm anterior left axillary lymph nodes are also palpable.

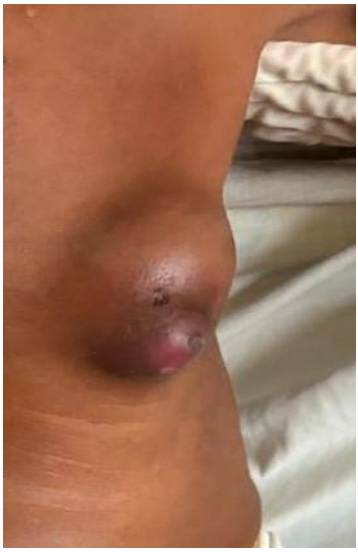
Differential Diagnosis: Gynecomastia, male breast cancer, sarcoma.

Management: The patient underwent an ultrasound, FNAC, and CT thorax, all suggestive of malignancy with axillary lymph node metastasis.

Staging showed no distant metastasis. He underwent modified radical mastectomy, and the specimen was sent for histopathological analysis and receptor studies to guide further treatment.

Conclusion: Male breast cancer necessitates prompt recognition and management due to specific risk factors. A multidisciplinary approach, including surgery, hormonal therapy or chemotherapy, is essential. Early detection and tailored strategies are crucial for improving outcomes and quality of life**.**





Keywords: *Rare Malignancy, Delayed Diagnosis, Multidisciplinary Approach, Awareness, Genetic Predisposition.*

HARNESSING THE BODY'S POTENTIAL: FAT GRAFTING FOR MANAGEMENT OF FACIAL ASYMMETRY IN MORPHEA

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Background: Morphea, a localized form of scleroderma, involves excessive collagen deposition in the skin and subcutaneous tissues, leading to hardening, thickening, and volume loss. The facial area is particularly challenging to treat due to its aesthetic significance and potential functional impairment. While various treatments exist, addressing cosmetic disfigurement remains difficult. Lipofilling, or autologous fat grafting, shows promise in restoring volume and improving facial contour.

Case History: A 26-year-old male presented with a 5-year history of progressive facial deformity in the left cheek. Initially, he noticed a subtle black discoloration, which expanded and was accompanied by noticeable flattening and volume loss.

Examination: Physical examination revealed distinct facial asymmetry with loss of subcutaneous fat and persistent black discoloration on the left cheek. Systemic examination was unremarkable, with no extracutaneous involvement.

Differential Diagnosis: Systemic scleroderma, morphea.

Management: The patient received methotrexate therapy under the care of a dermatologist to suppress the disease's progression. After thorough evaluation and discussion, the patient underwent lipofilling under general anaesthesia. Autologous fat was harvested from the abdomen, processed, and injected into the affected areas of the left cheek. The procedure aimed to restore volume, improve facial contour, and address aesthetic concerns.

Conclusion: This case report demonstrates the successful application of lipofilling in treating facial deformity due to morphea. The elusive condition of morphea had caused significant facial disfigurement. Our focus was on finding an intrinsic solution for the patient's facial deformity, utilising their own body. The patient experienced significant improvement in facial symmetry and contour, enhancing his self-esteem and quality of life.

Keywords**:** *Morphea, Facial Deformity, Lipofilling, Fat Grafting, Autologous.*

A CASE OF UNILATERAL HYPERLUCENCY OF CHEST X RAY- A DIAGNOSTIC DILEMMA

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Background: Unilateral hyperlucency of the lung is not an uncommon finding which arises from a variety of conditions like technical, congenital and acquired. Here is a case of diaphragmatic hernia which presented as unilateral hyperlucency on chest radiography. It usually results from congenital defects or rupture in the diaphragm due to trauma.

Case History: A 26-year-old female presented with complaints of shortness of breath, cough, chest discomfort and upper abdominal pain since 2 days. Consulted local hospital on day of illness and took medications, symptoms aggravated gradually and patient consulted again in the same hospital and was referred to our hospital. No history of loose stools, painful micturition, fever, melena or abdominal distension.

Examination: Patient had stable vitals initially. After resuscitation the patient was evaluated and was noted to have reduced air entry on left side of chest. Per abdomen soft and nontender.

Differential Diagnosis: The differential diagnosis of congenital diaphragmatic hernia includes other thoracic lesions such as congenital cystic adenomatoid malformation, bronchopulmonary sequestration, bronchogenic cysts, bronchial atresia, teratomas.

Management: Chest X-ray suggested left-sided pneumothorax with air fluid level. CT thorax showed moderate left pneumothorax, collapse of left lower lobe with elevation of left hemidiaphragm, herniation of stomach and few loops of transverse colon and spleen into thoracic cavity through a defect in the left posterolateral hemidiaphragm. Emergency exploratory laparotomy, reduction of hernial content, hernial repair, ICD, insertion on left side under general anaesthesia.

Conclusion: This case demonstrates successful treatment of diaphragmatic hernia with laparotomy and reduction of the abdominal contents, followed by repair of the diaphragmatic injuries.

Keywords: *Pleural Diseases, Respiratory Muscles, Lung Trauma, Hernia Diaphragmatic, Pneumothorax.*

DOUBLE BALLOON TECHNIQUE OF EMERGENCY CERVICAL ENCERCLAGE - A NOVEL METHOD

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Background: Cervical insufficiency is characterized by painless cervical dilatation (cervical length <25mm) in the second or early third trimester with ballooning of amniotic sac into the vagina, followed by rupture of membranes and expulsion of a live fetus. Ideally cerclage should be performed before cervical dilatation. Sometimes this is not possible and cerclage may have to be performed after cervix is found dilated. This is called emergency cerclage. Most of the techniques are successful only when dilatation is less than 3cm. This novel technique has success rate with dilatation more than 3cm.

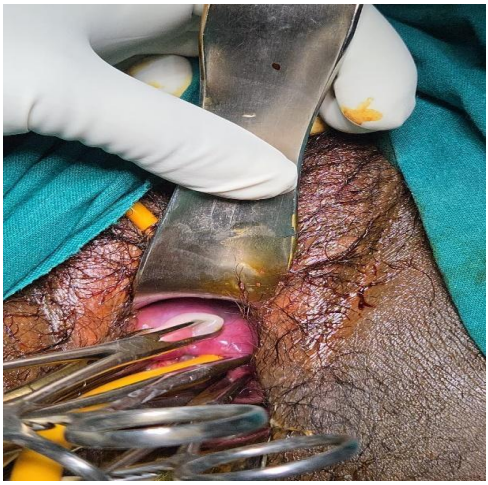
Case History: 24 year old female, G2A1, 21 weeks + 1 day gestational age with h/o cervical encerclage insertion for cervical incompetence, presented with complaints of lower abdomen pain and associated abdominal tightness for 1 day. Obstetric score: G2A1, A1 at 24 weeks of gestation due to cervical incompetence. LMP was on 10/02/24 and EDD according to scan was 19/11/24.

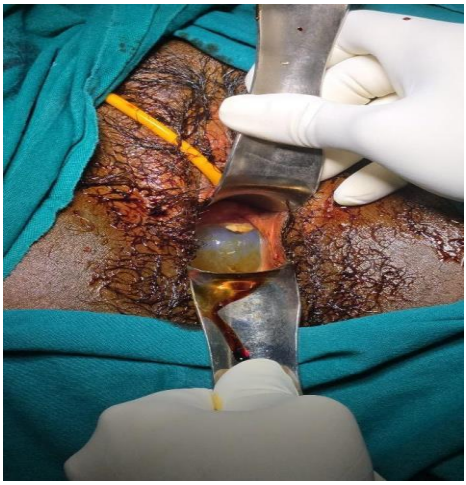
Examination: Patient conscious and oriented. Vitals were stable. Abdomen examination: P/A irritable. P/S: membranes bulging into vagina. P/V: OS 4-5cm open; almost fully effaced, membrane bulging into vagina.

Differential diagnosis: Cervical incompetence, preterm labour, PPROM, chorioamnionitis, placental abruption.

Management: USG: Cervical length- 2.6cm, Cervix is relatively short with cervical sutures in situ. Mild funneling noted. Fetal head is deep within the pelvis, cervix dilated 4-5 cm
Membrane bulging through the os. Previous encerclage removed. Re-encerclage done with Sutupak. After the procedure residual cervical length- 3cm.

Conclusion: With this novel technique 50% success rate is achieved.





Keywords: *Cervical Incompetence, Cervical Encerclage, Bulging Of Membranes, USG, Double Balloon Technique.*

A DIFFERENT APPROACH TO PLACENTA ACCRETA SPECTRUM

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Background: Placenta accreta spectrum is a potentially lethal obstetric condition that demands multidisplinary method for management. It is sometimes closely associated with Placenta Previa. Both together bring about significant number of maternal morbidity and mortality.

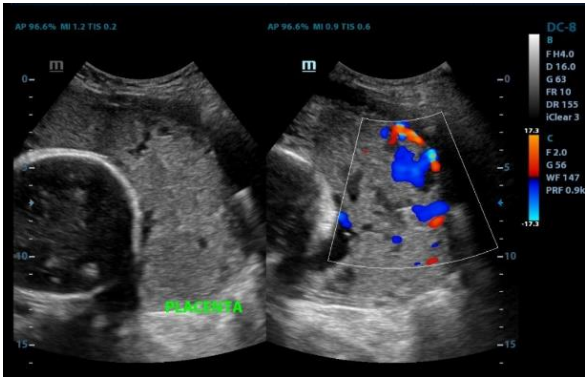
Case History: 37 year old, G5P4L4, Previous 4 LSCS, now at 33 weeks of gestation came as a referred case of Anterior low lying placenta with features suggestive of placenta accreta (from USG)

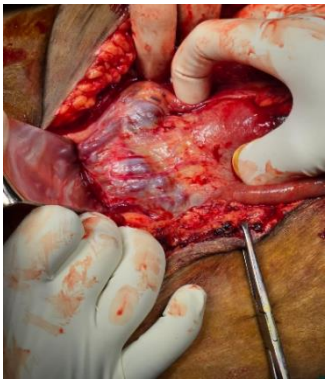
Examination: Patient vitals are stable, Uterus corresponding to gestational age.

Differential Diagnosis: Abruptio placentae, vasa previa.

Management: MRI report showing low lying placenta (Placenta Previa) with Placenta Percreta invading wall of urinary bladder
A revolutionary two step approach was taken. As the first step elective LSCS and bilateral ureteric stenting were done. Placenta and uterus were left in situ. Then the patient was monitored closely for 1 week. Scans taken on alternative days during that 1 week showed decrease in placental vascularity. After 1 week of elective LSCS, relaparotomy and hysterectomy was done with minimal blood loss and no complications at all.

Conclusion: Compared to classical cesarean hysterectomy, this approach reduced blood transfusion and no complications were observed. Thereby, this approach should be widely recognized for PAS to reduce maternal morbidity and mortality.





Keywords: *Placenta Percreta, Relaparotomy, Hysterectomy, PPH, Morbidity.*

SUBDURAL HAEMORRHAGE- A LETHAL BLEED HIDING BEHIND THE MASK OF GESTATIONAL HYPERTENSION

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Background: Here we present the case of a patient with gestational hypertension complicated by subdural haemorrhage. Gestational hypertension is hypertension in pregnancy after 20 weeks of gestation without proteinuria. This can develop into severe features like preeclampsia, pulmonary edema, intracranial haemorrhage, liver injury, haemolysis, seizures etc. Intracranial haemorrhage is bleeding within the skull, occurring due to trauma, aneurysm, arteriovenous malformations, brain tumors and conditions like hypertension. ICH can be extradural, subdural, subarachnoid or intraparenchymal.

Case History: A 44-year-old lady (G5P1L1A4) with gestational hypertension and overt diabetes mellitus presented after LSCS with abnormal behaviour and irrelevant talk. She was admitted under psychiatry, and then shifted to medicine for desaturated fever and cough, later transferred to critical care unit for drop in GCS. There was no history of clinical seizures, head trauma or new onset limb weakness.

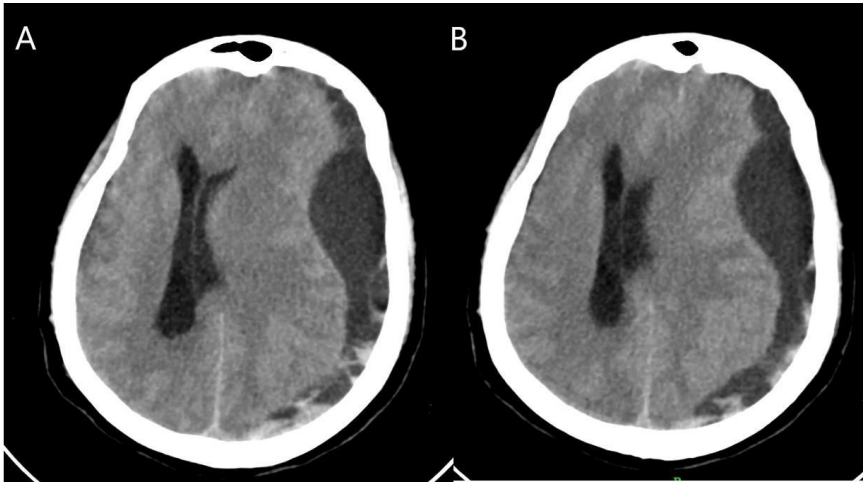
Examination: BP 190/90mmHg. GCS score was low. Tone of muscles was assessed to be normal and moving all four limbs. Oculocephalic reflex, Corneal reflex present, Pupils bilaterally symmetrical.

Differential Diagnosis: Subdural haemorrhage, acute encephalitis, systemic vasculitis.

Management: CT brain revealed extraaxial haemorrhage along left

frontotemporoparietal region. Adjacent mass effect in the form of effacement of left lateral ventricle, third ventricle and partial effacement of right lateral ventricle, fourth ventricle with midline shift to right side. Patient was intubated and Burr Hole evacuation was done in view of subdural haemorrhage. BP was controlled by hydralazine, nifedipine. Seizure control done by levetiracetam.

Conclusion: Subdural hemorrhage is one of the rare complications of hypertensive disorders of pregnancy, occuring when blood collects under the dura mater presenting as headache, slurred speech, visual changes and dizziness. CT brain is the primary means of diagnosing SDH. Complications include residual hematoma post-op, post-traumatic seizures, meningitis, brain abscess.



Keywords: *Gestational Hypertension, GCS, Subdural Haemorrhage, Acute Encephalitis, Burr Hole Evacuation.*

UNRAVELING THE ENIGMA: A RARE CASE OF XANTHOGRANULOMATOUS CHOLECYSTITIS

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Background: Xanthogranulomatous cholecystitis (XGC) is a rare and enigmatic form of chronic cholecystitis, characterized by the presence of xanthoma cells, granulomatous inflammation, and fibrosis. This unusual entity accounts for only 1-2% of all cholecystitis cases.

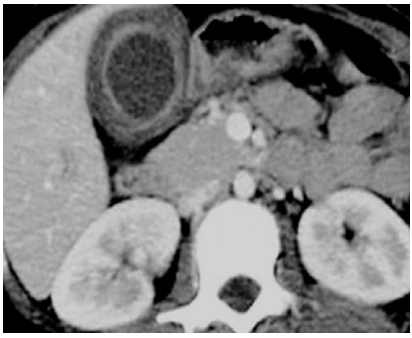
Case History: 80-year-old male agriculturist presents with a chief complaint of dull aching pain in the right upper quadrant of his abdomen since few months which is insidious in onset, intermittent, and is accompanied by occasional episodes of dyspepsia. Notably, he has a past medical history of pulmonary tuberculosis, which was treated and completed 25 years ago. Patients' sleep is disturbed and appetite is reduced.

Examination: Poor built and nourishment with a BMI of 19.8 kg/m^2. On systemic examination of the abdomen, umbilicus was found to be central and inverted, with no signs of distension, scars or sinuses. Palpation indicated tenderness in the right hypochondrium, while percussion yielded tympanic sounds with normal bowel sounds. Auscultation showed no bruits, and bowel sounds were present.

Differential Diagnosis: Carcinoma gallbladder, adenomyomatosis of gallbladderr, acute cholecystitis, xanthogranulomatous cholecystitis.

Management: The laboratory results indicate a hemoglobin level of 11.3g/dL and serum CA19-9 level of 33.74U/mL. Ultrasound of abdomen and pelvis shows grossly thickened gallbladder wall with sludge and calculi, and a lesion infiltrating the liver, raising suspicion for malignancy. Additionally, prostatomegaly noted. CECT of abdomen and pelvis further identifies a hypoenhancing lesion in segment V of the liver, infiltrating from the gallbladder mass, while the gallbladder appears partially distended, few calculi noted with a thickened wall measuring 5 mm and pericholecystic fluid noted. Recommended management is definitive surgery, and radical cholecystectomy was performed.

Conclusion: Xanthogranulomatous cholecystitis (XGC) is a rare, benign inflammatory disease of the gallbladder that poses diagnostic challenges due to its nonspecific presentation and potential misdiagnosis as gallbladder cancer. Timely surgical intervention is crucial for accurate diagnosis and effective management of XGC



Keywords: *Xanthogranulomatous Cholecystitis, Chronic Cholecystitis, Gallbladder Wall Thickening, Cholecystectomy, Benign Inflammatory Disease.*

CASE POSTERS

A THROMBOTIC STORM - UNVEILING CATASTROPHIC ANTIPHOSPHOLIPID ANTIBODY SYNDROME

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Background: Catastrophic Antiphospholipid Syndrome (CAPS) is a life threatening variant of antiphospholipid syndrome characterised by thrombotic events involving multiple organ systems, with mortality of more than 30%.

Case History: 34-year-old female, k/c/o primary antiphospholipid syndrome, off treatment for the past 6 months, presented with chief complaints of severe abdominal pain since 2 days. She had been under treatment for heavy menstrual bleeding for the past 6 months.

Examination: Patient was febrile, dyspnoeic and had tachycardia. She had pallor and multiple purpuric lesions over bilateral toes. She was also tender over right hypochondrium and epigastrium. She also had bilateral basal crackles.

Differential Diagnosis: Mesenteric ischemia due to APLA, acute cholecystitis/pancreatitis, bronchopneumonia with DIC, infective endocarditis with septic emboli vasculitis.

Management: Lab results showed neutrophilic leukocytosis with anemia, thrombocytopenia, elevated CRP levels, chest x-ray showed B/L lower zone haziness, SGOT/SGPT-181/320, urine routine-proteinuria with 8-10 RBC, 24-hour urine protein was 2.2g, ANA was positive,

positive anti-RNP and anti-smith antibodies, serum C3&C4 were decreased, CECT chest and abdomen showed multiple hepatic infarcts, lupus anticoagulant-positive.
Initiated on anticoagulation with heparin, IV methylprednisolone under antibiotic cover (meropenem+azithromycin). Patients' abdominal pain decreased initially, and recurred again after 2 days. She was noted to have microangiopathic haemolytic anemia with severe thrombocytopenia with new hepatic infarcts. Patient became drowsy and MRI brain showed acute infarcts in the right high frontal lobe and right inferior cerebellum. Diagnosis of catastrophic antiphospholipid antibody syndrome was made. She was initiated on plasma exchange therapy following which platelets counts and liver enzymes returned to normal levels. Inj. rituximab 1000 mg IV was given following PLEX. Discharged with prednisolone, warfarin and hydroxychloroquine.

Conclusion: CAPS is associated with high mortality. Hence prompt recognition and early initiation of aggressive immunosuppressive therapy is key to successful outcome.

Keywords*: Plasmapheresis, Hepatic Infarcts, Microangiopathic Hemolytic Anemia, Catastrophic Antiphospholipid Syndrome, Rituximab.*

NERVE RACKING: A CASE OF SCHWANNOMA OF CERVICAL SYMPATHETIC CHAIN

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Background: Schwannomas are benign, well-encapsulated tumors that rarely turn malignant. Cervical Sympathetic Chain Schwannomas (CSCS) are rare, with only 65 cases reported, typically presenting as slow-growing asymptomatic swellings in individuals aged 30–70.

Case History: A 21-year-old man presented with a painless left sided neck swelling for 3 months which was insidious in onset and gradually progressive. There was no history of chronic cough, ulcers or growths in the oral cavity, syncope, hoarseness of voice, dysphagia, Horner's syndrome, pain associated with movement, weight loss or fever.

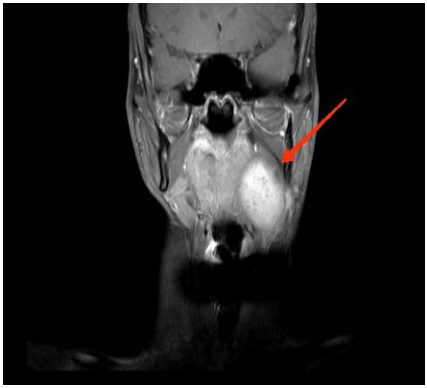
Examination: A firm, 4×2cm, non-pulsatile, mobile swelling was revealed in the upper cervical region, becoming prominent on turning the neck to the right, with no bruit heard.

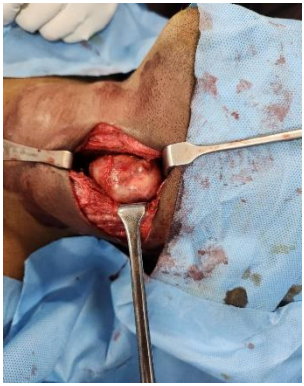
Differential Diagnosis: Nerve sheath tumors- vagus or cervical sympathetic chain.

Management: MRI revealed a large left-sided neck mass (45×35×67 mm), likely a neurogenic tumor. Ultrasound-guided FNAC suggested a neurogenic tumor, possibly schwannoma of the vagus or sympathetic chain.
The tumor was excised under general anesthesia via a transcervical approach. Intraoperatively, the 6×4.5cm mass originated from a cervical

sympathetic chain branch, located posteromedial to the carotid artery and IJV. Histopathological examination confirmed a schwannoma. Postoperative period was uneventful with no neurological deficits.

Conclusion: CSCS are rare and often asymptomatic. While complications like postoperative Horner's syndrome occur, careful surgical technique can minimize risks. This case underscores the importance of considering schwannomas in the differential diagnosis of neck swellings and the need for thorough investigation and planning to reduce morbidity associated with surgical excision. Increased clinician awareness can improve early detection and management.





Keywords: *Schwannoma, Neck Swelling, Cervical Sympathetic Chain, Neurogenic Tumour, Horner's Syndrome.*

A RARE CASE OF LONGITUDINALLY EXTENSIVE TRANSVERSE MYELITIS - PARA INFECTIONS QUADRIPARESIS

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Background: Longitudinally extensive transverse myelitis (LETM) is a neurological condition characterized by a contiguous inflammatory lesion of the spinal cord.The clinical course of longitudinally extensive transverse myelitis (LETM) is characterized by single or multiple attacks of paraparesis or tetraparesis, sensory deficits and bowel/bladder disturbances,and in severe cases can lead to respiratory failure. We present here a case of 2.5-year-old boy presenting with LETM.

Case History: 2.5yr old male child born to NCM parents presented with fever and rhinitis and paucity of upper limb movements and weakness of right upper limb as noticed by the parents.

Examination: Child is alert and active. Peripheries warm, peripheral pulses felt. Deep tendon reflex absents on right upper limb. Tone reduced on right upper limb. Power - right upper limb -2. Right lower limb 3. All other neurological examinations normal.

Differential Diagnosis: Any demyelinating diseases like NMO, multiple sclerosis, intramedullary tumors and space occupying lesion.

Management: MRI spine long segment intramedullary signal change (mildly expansile, central and right lateral) involving cervicothoracic (C2 -T1) cord. Electrophysiological study was consistent with motor

polyneuropathy. Provisional diagnosis of longitudinally extensive transverse myelitis was made. The patient was managed with IV immunoglobulin, methylprednisolone, antibiotics and symptomatic and supportive treatment.

Conclusion: Shorter time from symptom onset to initiation of immunomodulatory therapy is associated with more favourable prognosis and patients showed most pronounced improvements in the motor area and incontinence. Early treatment and effective rehabilitation are very important to minimize the risk of disability.

Keywords: *LETM, Autoimmunity, Quadriparesis, Immunoglobulin, Steroids.*

RENAL AMYLOIDOSIS: AN ENIGMA UNRAVELED

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Background: Amyloidosis is a rare, systemic disease characterized by deposition of fibrils in extracellular tissue affecting kidney, liver and other organs. Renal presentation includes nephrotic syndrome, renal failure, tubular dysfunction, or simply proteinuria. I present the case of a renal biopsy-proven AL (kappa) type amyloidosis.

Case History: A 74-year-old male with T2DM and systemic hypertension for 16 years presented with bilateral lower limb pitting edema for 6 months and frothing of urine. No history of fever, oliguria, hematuria or dysuria.

Examination: Physical examination and vitals were normal except for elevated BP-168/96 mm Hg and mild pallor. Systemic examinations were normal. Fundoscopy revealed no signs of retinopathy.

Differential Diagnosis: Non diabetic renal disease (NDRD), membranous nephropathy (MN), FSGS.

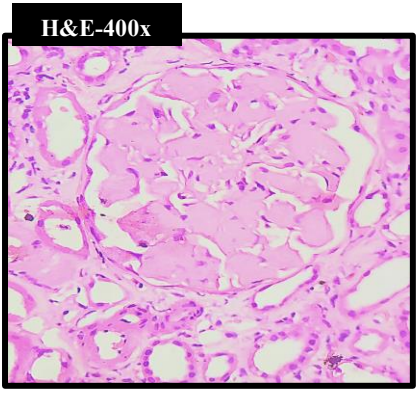
Management: Lab Investigations: Hb-11.5g/dL, RBS-160mg/dL, S. creatinine-1.4mg/dL, S. cholesterol-304mg/dL, Total protein-5.4g/dL, S. albumin-2.5g/dL, Serum globulin-2.8g/dL, Urine protein-3+, Protein Creatinine ratio-12.72, No urine sediments. Patient underwent USG guided renal biopsy and samples were sent for light microscopy and direct immunofluorescence.

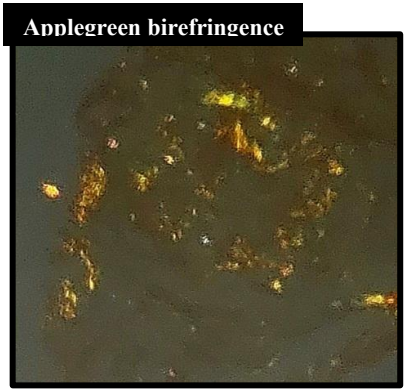
Histopathological Findings:

- Light microscopy-Sections stained with H&E, PAS and MT showed glomeruli with nodular mesangial and capillary wall deposition of pale eosinophilic material which were Schiff poor, congophlic and showed apple green birefringence on polarization. No KW nodule seen. No features of diabetic nephropathy seen.
- Direct Immunofluorescence: Deposits showed intense 3+ kappa light chain staining. Lambda light chains were negative.

Patient was evaluated for plasma cell dyscrasias and elevated serum kappa levels were seen. He is currently on chemotherapy for renal amyloidosis.

Conclusion: The case highlights the importance of early diagnosis of AL amyloidosis, as prompt chemotherapy intervention can slow disease progression, prevent renal failure, and improve patient outcomes. Additionally amyloid kidney must be considered as a differential for elderly patients with proteinuria.





Keywords: *AL Amyloidosis, Renal Amyloidosis, Nephrotic Syndrome, Biopsy, Congo Red.*

A DIAGNOSTIC ENIGMA: UNRAVELLING THE MYSTERY OF A RARE AND CHALLENGING GASTRIC MESENCHYMAL NEOPLASM

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Background: Gastrointestinal stromal tumours (GISTs) and cellular schwannomas are distinct neoplastic entities that can present similarly, making accurate diagnosis essential due to their different management and prognostic implications. This case report highlights the diagnostic journey of a patient with a mass in the distal part of stomach, initially presumed to be GIST, however, later diagnosed as gastric cellular schwannoma.

Case History: 19-year-old female presented with symptoms of dyspepsia of 3 months duration with associated nausea and vomiting. Imaging studies revealed a well-demarcated gastric mass suggestive of GIST.

Examination: A young female, conscious, oriented and alert, was found to have pallor, with her vital signs and systemic examination well within the normal limits.

Differential Diagnosis: GIST and other mesenchymal neoplasms.

Management: Distal gastrectomy was performed which revealed a sessile submucosal polypoid mass in the distal body of stomach, along the greater curvature. Morphological diagnosis of GIST was considered. However, the initial immunohistochemistry (IHC) panel showed

negative expression for CD117 and DOG1. Given the unusual clinical presentation and certain atypical histopathological features, further investigation was warranted. Additional IHC testing revealed diffuse, strong nuclear and cytoplasmic expression for S-100 protein, while negative for desmin. Thus, gastrointestinal mesenchymal neoplasm of nerve sheath origin was considered, with the features favouring gastric cellular schwannoma.

Conclusion: Distinguishing between GIST and cellular schwannoma requires a careful assessment of clinical, radiological, and histopathological data. This case underscores the importance of considering a broad panel of IHC markers to ensure accurate diagnosis and appropriate treatment of gastrointestinal tumours.

Keywords: *Gastrointestinal Stromal Tumour, GIST, Cellular Schwannoma, Immunohistochemistry, Differential Diagnosis.*

HIRATA'S DISEASE: UNMASKING A RARE HYPOGLYCEMIC SYNDROME

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Background: Insulin autoimmune syndrome (IAS) also called Hirata's disease, is a rare disorder marked by episodes of hypoglycemia due to elevated levels of insulin autoantibodies in patients who haven't received exogenous insulin which occurs when a triggering factor, such as a medication or viral infection, activates a pre-existing genetic predisposition.

Case History: 73-year-old male with history of systemic hypertension and bronchial asthma, presented with episodes of profuse sweating, palpitations, and numbness over his head. GRBS was found to be low during the episodes and he improved after taking oral feeds. RBS, c-peptide, insulin levels and serum cortisol at the time of hypoglycemic symptoms were measured. Patient had extremely high serum insulin (200mIU/mL) and c-peptide levels (9.40ng/mL).

Examination: Patient had elevated blood pressure 180/100mmHg and low GRBS value of 55mg/dL.

Differential Diagnosis: Insulin autoimmune syndrome, insulinoma, exogenous insulin administration, sulfonylurea use.

Management: CECT chest and abdomen ruled out insulinomas/other malignant lesions. Serum insulin antibodies level was high (>300 U/ml). Patient was diagnosed with IAS based on the criteria of Hirata. The age

at onset, sex, and duration of hypoglycemic attacks, outcome or treatment, medication taken prior to onset of IAS and background disease were taken into consideration. Hypoglycemia occurred spontaneously in post-absorptive state 4-6 hours after a meal rather than after a 72-hour fast test. Extremely high levels of insulin (>200 µIU/mL) and serum insulin antibodies (>30 U/ml) were constructive in the diagnosis of IAS. The patient was started on inj. octreotide along with steroids and was advised to consume small frequent meals.

Conclusion: To expedite early detection and minimize unnecessary examinations, this could be the most crucial syndrome to consider in the differential diagnosis of endogenous hyperinsulinemic hypoglycemia. For patients with a strong suspicion, insulin autoantibodies should be tested.

Keywords: *Insulin Autoantibodies, Insulin Autoimmune Syndrome, Hypoglycemia, Hyperinsulinemia, Octreotide.*

AN UNUSUAL CASE OF MENINGITIS WITH LOWER LIMB WEAKNESS

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Background: Chronic B-cell lymphocytic leukemia, the most common adult-onset leukemia, involves abnormal B-lymphocyte proliferation. Neurological complications are rare. We present a 73-year-old female with paraparesis, later diagnosed with B-cell CLL and treated.

Case History: 73-year-old female with diabetes and hypertension presented with a one-month history of progressively worsening lower limb weakness and low back pain, along with intermittent high-grade fever for one week before presentation.

Examination: Clinical examination revealed a febrile patient with symmetric flaccid paraparesis (power 1/5), absent reflexes, normal sensations, and terminal neck stiffness.

Differential Diagnosis: A clinical diagnosis of a lumbosacral polyradiculoneuropathy with meningitis (probable infective etiology) was made and she was investigated for the same.

Management: MRI spine revealed L1 spondylitis, bilateral psoas abscesses, cauda equina clumping, and spinal arachnoiditis, while MRI brain showed meningeal enhancement, ventriculitis, and hydrocephalus. Ultrasound-guided aspiration confirmed MRSA, also present in blood cultures. CT-guided lumbar puncture showed neutrophilic pleocytosis with low sugars and high proteins; other tests were negative. Given the

diagnosis of pyogenic meningitis and MRSA, treatment with meropenem, vancomycin, ampicillin, and corticosteroid was initiated. CSF shunting was declined by the family. Blood tests indicated anemia, elevated counts, and thrombocytosis, leading to a bone marrow biopsy confirming B-cell CLL. Palliative care was chosen, and the patient later succumbed to a respiratory infection.

Conclusion: In adults, raised blood counts and opportunistic infections of the brain and spinal cord should prompt consideration of underlying hematological malignancies like CLL. Early recognition is crucial for appropriate treatment and better long-term outcomes.

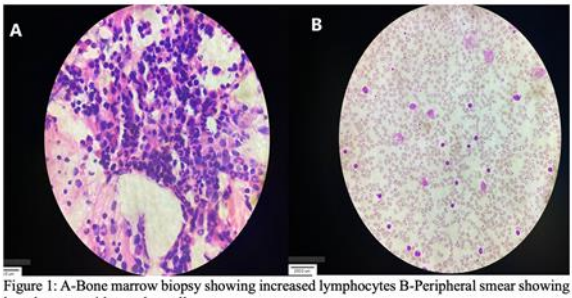

Figure 1: A-Bone marrow biopsy showing increased lymphocytes B-Peripheral smear showing lymphocytes with smudge cells

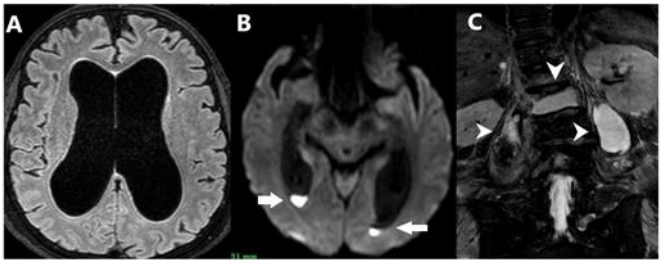

Figure 2 A-MRI Axial T2 image showing communicating hydrocephalus B- Diffusion-weighted images showing collection in ventricles-ventriculitis (arrows) C- Coronal STIR sequence showing bilateral psoas and intra-osseus collections(arrowheads)

Keywords: *Pyogenic Meningitis, Psoas Abscess, Hydrocephalus, Chronic Lymphocytic Leukemia, Staphylococcus aureus.*

BLINDED BY INFECTION: A RARE CASE OF PEDIATRIC TUBERCULOMA

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Background: Pediatric intracranial tuberculomas with optochiasmatic arachnoiditis (OCA) are rare but severe manifestations of CNS tuberculosis, occurring in about 8% of tuberculous meningitis (TBM) cases. OCA primarily affects the optic chiasm, potentially causing irreversible vision loss if untreated. We present a 4-year-old boy with TBM who developed OCA during treatment.

Case History: 4-year-old boy presented with a history of two seizure episodes six months back, along with high-grade intermittent fever and headaches for two weeks, photophobia, phonophobia, and repeated vomiting. His parents also reported excessive sleepiness and notable behavioral changes, including bursts of anger.

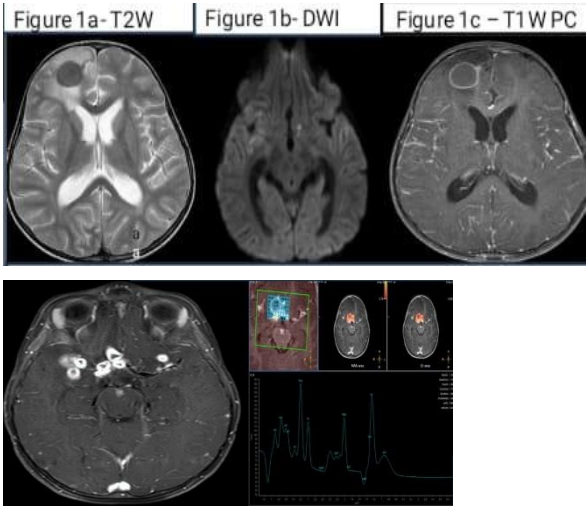
Examination: The child was irritable but alert, with a Glasgow Coma Scale score of E3M5V4. Signs of meningeal irritation were present, but no focal motor deficits were noted.

Differential Diagnosis: Bacterial meningitis, viral encephalitis, neurocysticercosis.

Management: A lumbar puncture revealed elevated CSF protein and lymphocytic pleocytosis, indicating tubercular meningitis. MRI showed multiple ring-enhancing lesions, extensive meningitis, ventriculitis, hydrocephalus, arachnoiditis, and small infarcts. A right frontal

craniotomy was performed to excise the lesion, and AFB samples confirmed *Mycobacterium tuberculosis*. Tissue biopsy confirmed tuberculoma via CBNAAT. The patient was started on oral steroids and antitubercular therapy as per NTEP guidelines. Over three months, clinical improvement was noted, though follow-up imaging revealed chiasmatic and optic nerve arachnoiditis. Magnetic resonance spectroscopy showed lipid lactate and choline peaks, leading to thalidomide administration.

Conclusion: This case highlights the need for early detection and comprehensive treatment of pediatric intracranial infections in TB-endemic regions. It stresses the importance of follow-up imaging to identify delayed presentations like OCA, especially in children where visual field defects may be challenging to diagnose due to their age, necessitating repeated imaging and cautious steroid administration.



Keywords: *Pyogenic Meningitis, Psoas Abscess, Hydrocephalus, Chronic Lymphocytic Leukemia, Staphylococcus aureus.*

LARGE CHONDROID SYRINGOMA AXILLA

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Background: Chondroid syringoma is a rare benign adnexal skin tumour affecting head and neck region. Average size of reported chondroid syringomas are less than 3cm. This is a case of 44-year-old female with a giant chondroid syringoma of size 8x7x6 cm in the axilla diagnosed by histopathological examination of the excised specimen. This case is reported for its unusual size and site of occurrence.

Case History: A 44-year-old lady presented with a swelling in the right axilla, initially small in size and painless when noticed 5 years back; suddenly increased to present size in the past 3 months and is currently associated with mild pain.

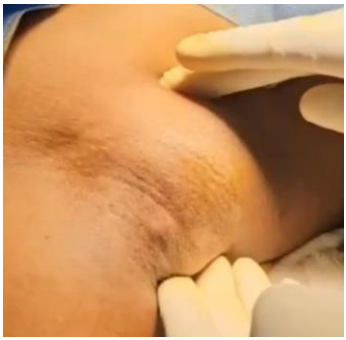
Examination: On clinical examination, a swelling of size 8x7x6 cm, hard in consistency with nodular surface and mobile in all directions was palpable in the right axilla. No evidence of lump in breasts or oedema of upper limb.

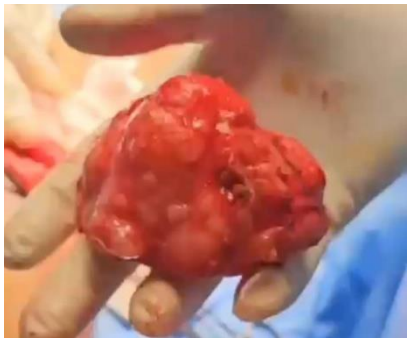
Differential Diagnosis: Axillary lymph nodes (secondaries from breast or abdomen), giant fibroadenoma axilla, phyllodes tumour axilla.

Management: Mammogram showed dense focal lesion with diffuse infiltration of axilla highly suggestive of metastasis. No focal lesions in breast found. Fine needle aspiration cytology reported possibilities of phyllodes tumour with myxoid stroma or a chondroid syringoma. Excision biopsy was planned to remove the lesion and to ascertain the diagnosis with histopathological correlation. On excision, the swelling

was found to be subcutaneous in plane and not attached to adjacent structures. It was removed in toto and sent for histopathological examination. Histopathological examination revealed a diagnosis of chondroid syringoma.

Conclusion: Histopathological examination revealed a benign adnexal tumour, chondroid syringoma at a rare location, the axilla.





Keywords: *Benign Axillary Tumour, Chondroid Syringoma, Rare Site Of Tumour, Benign Adnexal Tumour, Excision Biopsy.*

THE MANY FACES OF ERYTHROMELALGIA: A CASE REPORT ON ERYTHROMELALGIA WITH FACIAL FLUSHING

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Background: Erythromelalgia (EM) is a rare vascular peripheral pain disorder in which blood vessels are episodically blocked, then become hyperaemic and inflamed. It is characterised by a triad of redness, warmth, and burning pain often exacerbated by heat or activity. While EM typically affects the hands and feet, facial involvement is less common. This case report presents a patient with EM who experienced facial flushing and burning sensation.

Case History: A 23-year-old female presented to the dermatology department with episodes of erythema over the face that started 6 months before. She experienced multiple episodes of cyclical flushing and burning sensation every day that aggravated on exposure to sun and warmth.

Examination: Examination revealed diffuse blanchable erythema on the malar area, cheek, nose and ear.

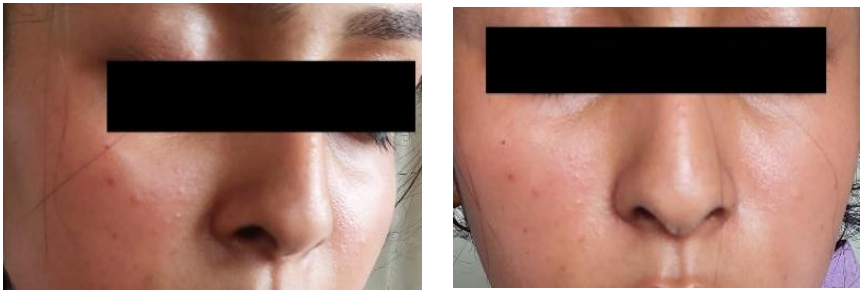
Differential Diagnosis: The differential diagnosis of facial erythromelalgia includes acne, rosacea, seborrheic dermatitis, contact dermatitis and medication reactions.

Management: There is no specific test for erythromelalgia. The diagnosis is primarily based on a combination of symptoms and medical

history. CBC, WBC, Platelet count and TFT showed non-specific findings. Serology for ANA was not reactive. The treatments for acne, rosacea and seborrheic dermatitis did not work, which led to a conclusion of erythromelalgia. There is no universally effective treatment. The mainstay treatment is support and avoidance of triggering factors. Patient's complaints were successfully controlled with daily low-dose aspirin. Topical brimonidine given was not effective. The patient was suggested to take paroxetine (which she did not take) and use a moisturiser and cleanser.

Conclusion: Erythromelalgia is rare and can become persistent over time. There is no diagnostic test for erythromelalgia; hence, a high level of clinical suspicion, as well as a detailed history and physicial examination, are necessary to establish the diagnosis.

Fig 1,2- Diffuse blanchable erythema on the malar area, cheek, nose and ear.



Keywords: *Erythromelalgia, Flushing, Burning, Erythema, Aspirin.*

POST-LYSIS CLOT MIGRATION IN VERTEBRAL ARTERY THROMBOSIS SECONDARY TO ESSENTIAL THROMBOCYTOSIS: AN UNDERRECOGNIZED BUT DANGEROUS COMPLICATION

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Background: Clot migration is a rare phenomenon involving distal migration of a clot post-lysis in stroke patients. We present a case of clot migration in a 54-year-old male patient who presented with acute posterior circulation stroke with vertebral artery thrombosis and essential thrombocytosis.

Case History: 54-year-old male presented to ER with acute rotatory vertigo, right-side weakness and dysarthria for 2 hours.

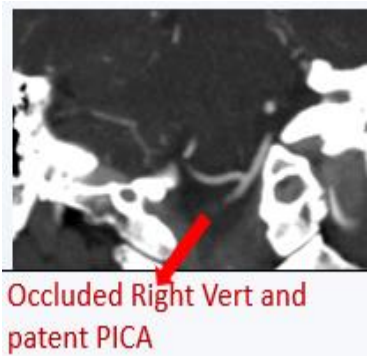
Examination: Clinical examination revealed dysarthria, right upper and lower limb 4+ power, and right limb ataxia.

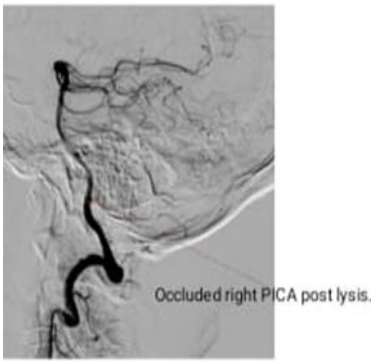
Differential Diagnosis: Hemorrhagic stroke, ischemic stroke.

Management: Emergency CT angiography revealed right vertebral artery occlusion and patient was lysed with IV alteplase. Post-lysis patient initially improved then worsened in GCS and power. The possibility of post-lysis bleeding was considered, leading to an emergency plain CT brain, which showed no intracranial bleed. An emergency MRI (Brain + MRA) revealed infarcts in right cerebellum, thalamus and lateral medulla with patent basilar and right vertebral arteries, and right PICA occlusion. Emergency DSA confirmed a patent

right vertebral artery and right PICA occlusion, implying clot fragmentation. Patient's platelet count was 953,000 indicating essential thrombocytosis. Peripheral smear and myeloproliferative panel were sent. Patient's condition steadily improved. JAK 2 mutation came positive confirming essential thrombocytosis, prompting treatment with hydroxyurea. After 1 month in the hospital, patient was discharged with a tracheostomy for physiotherapy. Later the tracheostomy was closed and under follow-up.

Conclusion: Clot migration is a rare complication of thrombolysis that should be considered if a patient worsens post-lysis, especially in large vessel occlusions. In acute vertebral artery thrombosis with minimal deficit, the choice between thrombolysis and endovascular thrombectomy remains a dilemma. Basic blood tests, like platelet count, can help identify underlying causes like essential thrombocytosis.





Keywords: *Clot Migration, Vertebral Artery Thrombosis, Essential Thrombocytosis, Thrombolysis, Endovascular Thrombectomy.*

UNRAVELING VASCULAR MALFORMATIONS IN CHILDREN: DIAGNOSTIC INSIGHTS AND TREATMENT APPROACHES

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Background: Vascular malformations (VMs) are uncommon congenital conditions affecting the vascular system, leading to abnormal blood flow due to enlarged or tangled vessels. Symptoms may emerge gradually, frequently mistaken for trauma or infections, often leading to diagnostic confusions. This case emphasizes importance of recognizing and effectively treating VMs in pediatric population.

Case History: A 5-year-old girl presented with pain on prolonged standing and gradually enlarging swelling over her right knee first noted by her mother following minor fall at age 3. The swelling progressed from 2x2cm to 5x4cm over three years, occasionally extending to calf and causing tenderness. The child had no limitations in movement, bleeding episodes or abrupt size changes of swelling.

Examination: The child's vital signs and growth parameters were normal. Local examination revealed non-pulsatile, tender swelling of 5x4cm on lateral aspect of right knee, with tenderness extending to calf. Peripheral pulses remained intact, no visible skin changes.

Differential Diagnosis: Venous malformation, haemangioma, juvenile idiopathic arthritis, infectious arthritis.

Management: Laboratory tests showed elevated D-dimer (3040ng/ml) and plasma fibrinogen (225.7mg/dl). MRI revealed a diffuse hyperintense lesion in distal thigh and knee, measuring 10x5.4x1.4cm, with hypointense septations and phleboliths.
Patient underwent foam sclerotherapy with 3% sodium tetradecyl sulfate, targeting multiple venous pouches in right thigh, with good sclerosant distribution.

Conclusion: This case illustrates importance of early diagnosis and high index of suspicion for venous malformations in children. Sclerotherapy with agents like sodium tetradecyl sulfate offers a promising treatment approach, emphasizing need for specialised paediatric care in managing vascular anomalies.

Keywords: *Venous Malformations, Swelling, Sclerotherapy, D-Dimer.*

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