

**Abstracts presented at the 40th Annual Conference
of Radiological Society of Pakistan
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Venue : Pearl Continental, Rawalpindi

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40th Annual Conference 2024
Radiological Society of Pakistan
ABSTRACTS

INVITED LECTURES (I)

I-1 (Inaugural Lecture)

Advances in imaging technology and the Society

Sarwat Hussain

UMASS Chan Medical School, USA.

I-2

Fibrotic interstitial lung disease

Aamer Chughtai

Cleveland Clinic, USA.

I-3

Cardiac MRI in the assessment of Ischemic heart disease

Stephen Harden

Royal College of Radiologists, UK.

I-4

Cardiovascular causes of airway obstruction: Role of MDCT

Naila Nadeem

Department of Radiology, Aga Khan University Hospital (AKUH), Karachi, Pakistan.

Congenital heart diseases (CHD) in children can present with airway symptoms due to intrinsic or extrinsic causes. Intrinsic causes might include congenital airway malformations, whereas extrinsic causes could stem from vascular anomalies, such as vascular rings or pulmonary artery sling, that compress the trachea or bronchi. These symptoms may overlap with other respiratory conditions, making it challenging to pinpoint the root cause based on clinical signs alone.

CT angiography (CTA) offers a valuable diagnostic tool in such cases. Not only does it provide detailed anatomical information about the cardiovascular system, but it also allows for the assessment of the airways and lung parenchyma. This dual evaluation helps in identifying any airway compression or associated pulmonary abnormalities that might be causing or exacerbating symptoms in children with CHD. CTA can clarify if symptoms are purely cardiac, respiratory, or a combination of both, leading to more accurate diagnosis and management. The multidisciplinary approach is required for good diagnosis and management. A detailed clinical history is crucial, as it informs the radiologist about specific concerns or areas of interest, such as the possibility of airway compression, vascular abnormalities, or parenchymal lung disease. Based on this information, the radiologist can tailor the CT angiography (CTA) protocol to meet the patient's specific needs. This might involve adjusting slice thickness, contrast timing, or imaging planes to optimize visualization of both cardiovascular structures and the airway.

I-5

Cardiac MRI- basic interpretation and role in non-ischemic cardiac diseases

Hassan Saleem

Department of Radiology, Islamabad Diagnostic Center, Islamabad, Pakistan.

I-6

Radiologic approach to axial spondyloarthritis: Current practice and coming advancements?

Ghazala Malik

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PURPOSE: Diagnosing early spondyloarthritis remains a challenge in routine practice, especially in its axial (SpA) form. However, despite MRI being recognized as a crucial imaging biomarker of SpA it has several limitations. The purpose of this review is to discuss the internationally practiced approach toward axial spondyloarthritis.

OBJECTIVES: The aim of this review is to summarise the criteria, findings and current recommendations regarding the most effective use of imaging methods to make a definite diagnosis and monitoring of axSpA. The other objective is to outline possible future directions of development in this field which may improve the effectiveness of early axSpA imaging detection. Keywords: axSpA-axial spondyloarthritis, EULAR-European league against Rheumatism, ASAS – Assessment of SpondyloArthritis international Society.

METHOD AND MATERIALS: Spondyloarthritis describes a heterogeneous group of chronic inflammatory rheumatic diseases, which subdivides into two categories: axial and peripheral. The creation of separate diagnostic arm based on radiological visualisation of sacroiliitis and incorporating MRI as an sufficient method of SIJ inflammation detection, put enormous emphasis on the importance of radiology in diagnosing axSpA. Capturing disease on early, pre radiographic stage, what became possible owing to MRI, is especially relevant in quick implementation of effective therapy namely, TNF inhibitors, which are approved in Europe for axSpA. Moreover, I will outline the role of promising imaging techniques, such as diffusion-weighted imaging and dynamic contrast-enhanced sequences MRI or low dose CT. As precise monitoring of axSpA activity is vital, brief review will be given of the most precise methods: semi-quantitative scores (e.g., Spondyloarthritis Research Consortium of Canada scores or CT Syndesmophyte Score) and quantitative analysis of MRI-based apparent DW ADC maps and enhancement curves.

RESULTS: According to EULAR and ASAS recommendations, radiography and MRI still remain basic methods of axSpA diagnosis and monitoring. However, the knowledge of state-of-the-art international guidelines combined with the awareness of emerging imaging methods is the key to effective management of axSpA.

CONCLUSION: Thus, staying up-to-date with current recommendations of international societies, regular search, trial and audit for more and more specific radiological methods of axSpA evaluation is crucial for radiologist dealing with this subject professionally. Underdiagnosing or over diagnosing axSpA carries equally bad impact and burden on patients health and life style.

I-7

Case-based review of wrist pathologies

Hifz ur Rahman Aniq

Liverpool University Hospital, UK.

Wrist is a complex joint consisting of distal radioulnar joint (DRUJ), radiocarpal joint (RCJ), the intercarpal joints, and carpometacarpal joint (CMCJ). While plain radiography is the primary imaging modality for wrist pathologies, advanced imaging techniques are often necessary to assess this intricate joint and the surrounding soft tissues. Wrist pathologies can result from acute or repetitive trauma, arthritis, tendon injuries, or mass lesions. However, certain

conditions, such as triangular fibrocartilage (TFC) complex lesions and ulnocarpal impaction, are unique to this joint. We will present a case-based analysis of various wrist pathologies and outline a systematic approach to reach the final diagnosis. This in turn will result in faster diagnosis, leading to more effective management plans and quicker recovery for patients.

I-8

Case based review of elbow pathologies

Syed Babar Ajaz

Imperial College Health Trust, London, UK.

I-9

Ankle impingement syndromes

Charles House

University College London Hospitals (UCLH), UK, London.

Ankle impingement syndromes commonly present with pain and limited range of movement in the ankle joint. This presentation will summarise the classification of ankle impingement, according to location of the impingement. Aetiology of ankle impingement syndromes is variable and manifestations include both soft tissue and bony features. As such, the mainstay of definitive investigation is by MRI of the ankle joint. MRI offers detail of the nature and mechanism of the impingement and often of the underlying cause or pattern of injury.

As well as presenting the MRI features of impingement syndromes, the plain film X-ray findings will also be considered during this session. Ultrasound is primarily of value in facilitating image-guided treatments.

MRI of the ankle is a common investigation and a thorough knowledge of the causes and features of ankle impingement enables the radiologist to maximise the value of the investigation in guiding patient care.

I-10

Imaging MSK infections: Case based approach

Asad Shah

Sheikh Shakhboub Medical City, Abu Dhabi.

I-11

Uterine fibroids imaging with emphasis on MRI

Mobeen Shafique

Department of Radiology, Combined Military Hospital (CMH), Lahore, Pakistan.

I-12

MRI breast as a problem solver in breast after oncoplastic surgery

Mahreen Rasool

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OBJECTIVE: To assess the role of MRI Breast as a problem-solving technique in patients who have undergone breast conservative surgery and chemo-radiotherapy in follow up of these patients.

PURPOSE: Breast Cancer is the most common cancer affecting women all over the world. Standard treatment of care includes Breast Conservative surgery with chemo-radiotherapy. Breast cancer recurrence following conservative therapy may occur during the first 5 years after treatment, with a peak incidence after 2 years. Therefore, during the follow-up period, patients undergo a series of radiological examinations like mammography and breast ultrasound however after surgery and radiation therapy, several modifications occur in the treated breast, causing difficulties in image interpretation, especially when local recurrence is suspected.

MRI is considered more sensitive than the conventional imaging examinations in discriminating between post-surgical tissue modifications and tumor recurrence.

CONCLUSION: MRI is the most sensitive technique in detecting local breast cancer recurrence. Although current guidelines do not recommend the use of MRI in the routine follow-up after BCS, it should be performed in uncertain cases, as well as in patients at high risk of tumor relapse.

I-13

Integration of radiology services and its impact on patient workflow and quality

Muhammad Imran

Consultant Radiologist, Abu Dhabi.

I-14

Effectiveness and efficiency in the radiology department

Qaiser Malik

RCR, UK.

I-15

Emergency Radiology - standards and protocols

Tahira Nishtar

Department of Radiology, Lady Reading Hospital, Peshawar, Pakistan.

O-16

Let's take up the intracranial pressure: NPH, IIH and SIH

M. Asif Dogar

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This talk delves into the imaging characteristics and diagnostic approaches for Normal Pressure Hydrocephalus (NPH), Idiopathic Intracranial Hypertension (IIH), and Spontaneous Intracranial Hypotension (SIH), three conditions that present with overlapping clinical features but distinct imaging findings. We will begin with NPH, discussing key imaging features such as the Evans index and callosal angle, which aid in diagnosing the condition. Attendees will learn how to assess DESH pattern and other imaging feature of NPH. Additionally, we will explore the significance of deep white matter and periventricular hyperintensities, and how to effectively differentiate NPH from brain atrophy using the iNPH RAD scale.

Moving to IIH, we will cover its role in neuroimaging, highlighting critical orbital findings such as papilledema and vertical tortuosity of the intra-orbital nerve. We will also address skull base abnormalities, including an enlarged

empty sella turcica and venous sinus stenosis. The four cardinal MRI signs of IIH will be outlined, along with the prevalence of these signs in patients without IIH, emphasizing the need for careful interpretation.

For SIH, we will discuss clinical features and common etiologies, incorporating the Monro-Kellie hypothesis to contextualize imaging findings. Key imaging indicators such as subdural fluid collections, meningeal enhancement, and the engorgement of veins will be highlighted, alongside the characteristic sagging of the brain. The talk will also cover the Bern score and imaging workup algorithms for SIH, including differentiating it from Chiari I malformation.

Through detailed imaging examples and clinical case discussions, attendees will gain a robust understanding of how to apply imaging techniques in the evaluation of these conditions, enhancing diagnostic accuracy and improving patient management strategies.

I-17

Multiple sclerosis - review of differentials and updated criteria 2024

Zafar Sajjad

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I-18

Approach to cranial nerve imaging: Normal and abnormal

Nadeem Ahmad

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Cranial nerve imaging plays a crucial role in diagnosing various neurological conditions, particularly in the context of tumor involvement and other pathologies. This presentation aims to explore the imaging characteristics of cranial nerves in both normal and disease states, emphasizing the importance of understanding their complex anatomy for accurate diagnosis. Magnetic resonance imaging (MRI) is established as the gold standard for evaluating cranial nerves due to its superior soft tissue contrast and ability to visualize subtle anatomical details. The presentation will cover the typical imaging appearances of cranial nerves using advanced MRI techniques. Key pathological processes affecting cranial nerves will be highlighted, with a focus on how these conditions manifest radiologically. Emphasis will be given on tumor involvement and understanding its radiological interpretation. This presentation aims to provide an overview that will assist radiologists and clinicians in recognizing and interpreting cranial nerve abnormalities effectively. Understanding these aspects is essential for improving patient management and outcomes in cases involving cranial nerve disorders.

I-19

CNS vasculitis and mimics: Rad-path approach

Iftikhar Ahmed

Cleveland Clinic, Abu Dhabi.

I-20

Renal tumors – beyond RCC

Zia Salman Faruqi

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The detection of a renal mass is a relatively frequent occurrence in daily practice of any radiologist. The diagnostic approach depends on whether the

lesion is cystic or solid. Cystic lesions can be managed using the Bosniak classification, while management of solid lesions depends on whether the lesion is well-defined or infiltrative. The approach to well-defined lesions focuses mainly on the differentiation between renal cancer and benign tumors such as angiomyolipoma (AML) and oncocytoma. Diagnosis of subsets of clear cell carcinoma may also help in patient management.

CONCLUSION: This review will assess the imaging characteristics of renal masses and their implications.

I-21

Abdominal emergencies in focus: A case-based review

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INTRODUCTION: Abdominal emergencies encompass a wide range of conditions that require prompt diagnosis and intervention to prevent severe morbidity or mortality. Radiology plays a pivotal role in the timely identification and characterization of these conditions, enabling healthcare professionals to make swift clinical decisions. This presentation, "Abdominal Emergencies in Focus: A Case-Based review," aims to provide a practical and structured review of key abdominal emergencies. By presenting cases from each major abdominal organ, the session will highlight the radiologic findings and management considerations critical to improving patient outcomes in acute care settings.

DISCUSSION: Through a series of case-based analyses, this presentation will explore the emergent conditions affecting the liver, spleen, pancreas, kidneys, gastrointestinal tract, and other abdominal organs. Each case will focus on areas like:

- The clinical presentation and key radiologic features.
- The role of different imaging modalities, including ultrasound, CT, and MRI in the emergency setting.
- Diagnostic challenges and potential pitfalls.

Detailed discussion will provide insight into how specific imaging findings can guide the management strategy, from conservative treatment to surgical intervention. The goal is to enhance diagnostic accuracy and equip radiologists and emergency physicians with the knowledge to act decisively in life-threatening situations.

CONCLUSION: Abdominal emergencies demand a high level of diagnostic precision and rapid intervention. This case-based approach provides a practical toolkit for healthcare professionals, offering insights into the diagnostic process for emergent conditions involving each major abdominal organ. By applying the principles and strategies discussed, clinicians can improve decision-making and patient care in emergency settings, ultimately reducing morbidity and mortality associated with abdominal emergencies.

I-22

MRI with liver specific contrast for surveillance of patients with cirrhosis at high risk of HCC: A review of protocols guidelines & technique. An initial experience in Pakistan.

Zainab Hussain

Department of Radiology, Aga Khan University Hospital (AKUH), Karachi, Pakistan.

Hepatocellular carcinoma (HCC) is the most common primary liver tumor worldwide and the 3rd most common cause of mortality. In Pakistan, the reported prevalence of HCC is between 3.8% - 16% with viral hepatitis and subsequent cirrhosis as the most common etiology. While diligent screening

protocols are in place for the screening and identification of HCC with ultrasound scans performed every 6 months, significant limitations have risen for the identification of tumors specifically for those less than 2 cm. Technical factors such as screen resolution, operator expertise and obesity resulting in beam attenuation play a significant role in degradation of images and inability to identify disease. While Computed Tomography has played a significant role with its multiphase protocol in identification of disease replacing biopsy and histopathology for diagnosis, its radiation factor and increased potential morbidity with contrast injection remain matters of considerable concern. MRI with liver specific contrast has been proposed as a modality of significant sensitivity and increased detection of liver lesions especially smaller nodules of less than 2 cm. This review outlines the current guidelines and imaging protocol for MR imaging of the liver with primavist and the role of liver specific CEMRI in the identification of cases and a comparison to other imaging modalities while focusing on pitfalls and mimickers at a tertiary care hospital in Karachi, Pakistan.

INTERACTIVE SESSIONS (IS)

IS-1

Interactive session of Royal College of Radiologists (RCR) UK

Stephen Harden, Robin Proctor, Qaisar Malik, Tanya Vanburen, Charles House, Rachel Magennis

- Introduction of Royal College of Radiologists (RCR)
- Future collaboration between RSP and RCR - an overview
- Opening the doors to FRCR in Pakistan
- REAL learning opportunities in radiology

IS-2

Interactive cases - Gut

Imran Syed

MSE NHS Trust, UK.

IS-3

Breast MDT

Armed Forces Institute of Radiology & Imaging (AFFIRI), Combined Military Hospital (CMH), Armed Forces Institute of Pathology (AFIP) Team

IS-4

Learning from your mistakes - A personal reflection

Sami Khan

Basildon University Hospital, UK.

IS-5

Hepato-pancreatico-biliary cases

Atif Rana

Department of Radiology, Shifa International Hospital, Islamabad, Pakistan.

ORAL PRESENTATIONS (O)

O-1

18-F FDG PET CT in cardiac sarcoidosis – A problem solving tool for a challenging diagnosis and correlation with cardiac MRI.

Sadaf Nausheen, Samar Hamid, Rubnawaz, Riffat Hussain, Nida Ihsan, Raima Kaleemi, Naveed Ahmed, Rizwan Syed, Ghazala Irfan, Tariq Mahmood
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BACKGROUND: Cardiac sarcoidosis is a rare condition that affects a small number of people either with isolated heart involvement or associated with pulmonary sarcoidosis. In this condition inflammatory cells or granulomas are appreciated in areas of heart with the manifestation of range of symptoms including arrhythmia, heart block, and heart failure. This study aims to assess the sensitivity, specificity and accuracy of PET/CT scan in the evaluation of cardiac sarcoidosis and its correlation with Cardiac MRI.

MATERIALS AND METHODS: This retrospective cross-sectional study was conducted at the Imaging Section of Radiation Oncology, Jinnah Postgraduate Medical Center, Karachi, Pakistan. We reviewed data from 2018 to Dec 2024. A Non-Gated TOF PET-CT scan without IV contrast was performed on all patients with minimum injected activity of 185 MBq and an uptake duration of 60 minutes. A delayed scan after 120 minutes was performed on patients with pathological myocardial uptake. All FDG findings were correlated with an available Cardiac MRI scan and lab investigations. A nuclear physician and a radiologist retrieved all cases of cardiac sarcoidosis by detailed analysis of the patient's electronic medical records using relevant clinical information. All patients referred from the National Institute of cardiovascular diseases with strong clinical suspicion of cardiac sarcoidosis were included.

RESULTS: A total of 17 patients were included in the study with clinically suspected cardiac sarcoidosis, out of which 09(52.9%) were female and 08(47.05%) were male. The overall mean age was 39.4 years with + SD 5 years and range 22 to 45 years. Out of the total 17 patients, 09 patients showed typical anterior and basal myocardial 18F-FDG uptake. Post steroid therapy follow up scan showed resolution of typical myocardial uptake confirming sarcoidosis on the basis of combined clinical, labs and advanced cardiac imaging. Out of 09, 04 patients showed findings of associated pulmonary disease with mediastinal nodes these were histologically proven on mediastinal/hilar nodal biopsy. 02 patients are false positive FDG PET scan and other imaging findings of CMR and echocardiography reveals cardiomyopathy rather than sarcoidosis. 04 patients are true negative without evidence of myocardial uptake despite of having enhancement of CMR, suggest inactive disease and MR enhancement suggest scar tissue. 02 patients are false negative and indeterminate despite of having symptoms which controlled on steroid therapy.

Data was entered in an MS Excel spreadsheet. The sensitivity and specificity of 18F-FDG PET were calculated as 81 %, and 66.6% respectively. A p-value of <0.05 was deemed statistically significant. The data analysis was performed using SPSS 22.0.

CONCLUSION: Higher accuracy of PET/CT observed in the diagnosis of clinically suspected cardiac sarcoidosis thus will be helpful in appropriate management by treating physicians using steroids, immunosuppression and in selected patients implantable cardioverter defibrillator (ICD) used to decrease the risk of sudden cardiac death.

O-2

Departmental audit on the accuracy of Balik's formula in quantifying pleural effusion using ultrasonography

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OBJECTIVE: The primary objective of this audit is to assess the precision

of Balik's formula in quantifying pleural effusion volume and to use it as a reliable tool.

MATERIAL AND METHODS: Type: Audit performed in the Radiology Department, Shifa International Hospital started on 1st, August 2024. Statistical analysis: Descriptive statistics using Spss version 25.

RESULTS: A total of 54 patients were included in the audit, comprised of 27 males and 27 females. The Balik Formula, a technique used to estimate the volume of pleural effusions, was applied to 24 patients (44.4%). Of these 24 patients, 17 (70.8%) had accurate pleural effusion estimations, while 7 (29.5%) had inaccurate estimates. The accuracy of the Balik Formula was verified through thoracocentesis and post-thoracocentesis residual pleural effusion quantification. The results indicate a statistically significant association between the use of the Balik Formula and the accuracy of pleural effusion quantification ($p = 0.0013$).

CONCLUSION: This audit suggests that the Balik Formula can be a reliable tool for estimating the volume of pleural effusions, potentially improving patient care and treatment decisions.

O-3

A cross sectional study for the evaluation of pulmonary embolism in unexplained dyspnea in acute exacerbation of chronic obstructive pulmonary disease

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BACKGROUND: Infections are a common cause of chronic obstructive pulmonary disease (COPD) exacerbations, however unexplained dyspnoea may be due to factors such as pulmonary embolism (PE). In the cases of the congenital diseases, early diagnosis of PE plays an important role mainly as regards to morbidity and mortality. This work aims at determining the rate of PE in patients of COPD presenting with unexplained dyspnoea during exacerbations.

OBJECTIVES: To assess the suspicion of pulmonary thromboembolism in patients with COPD during acute exacerbation with unrevealing dyspnea and to compare clinical consequence and risk elements involved.

STUDY DESIGN: A cross sectional study.

PLACE AND DURATION OF STUDY: From 01 April to 30 September diagnostic radiology department, sandamen provincial hospital, Quetta.

METHODS: This cross sectional study comprises 150 COPD patients having acute exacerbation and unexplained dyspnea. Participants had clinical assessments taken D-dimer measurement and computed tomography pulmonary angiography (CTPA) done for the diagnosis of PE. The following patients were excluded from the study; patients with known factors that precipitated dyspnea. Statistical methods were used to analyze the data and in all the tests, significance level of $p < 0.05$ was used in this study.

RESULTS: Out of the total 150 patients, 28 patients were diagnosed with PE which accounts for 18.6%. Regarding the mean age, the patients were 65 ± 7.3 years of age. PE positive patients had significantly elevated D-dimer levels as compared to the control group ($p = 0.03$). The measure of dispersion for D-dimer levels was 220 ng/mL. Patients with PE had higher heart rates (mean \pm SD: In addition, another study revealed that such patients presents with higher heart rate (average of 102 ± 12 bpm) than patients without PE ($p = 0.01$).

CONCLUSIONS: Pulmonary embolism is well-known to be a cause of 'Shortness of breath' in COPD exacerbation and it was present in almost one fifth of the patients in this study. CTPA can help in early identification for most patients in the study and thus enhance their overall clinical prognosis for COPD patients especially during exacerbations for which routine screening using D-dimer test should be encouraged.

O-4

The innovation of skull base virtual dissection in medical college

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OBJECTIVE: In the last two decades, there has been a tremendous transition in traditional methods of learning Anatomy. Our study aims to determine the Medical Student Response and Assessment for Virtual Dissection (VD) - Skull Base Anatomy?

METHODS: Dow Medical College, Radiologist conducted a teaching session and demonstrated Skull base Anatomy on Patient CT Head in 3 equal groups at 2nd year undergraduate MBBS students. IT personnel deployed RADIANT DICOM software and installed images at Lecture Hall. 9 BCQs Pre and posttest and a feedback form (10 question) with 5-point Likert Scale Questionnaire was offered post- session after written informed consent.

RESULTS: 95 (81.9%) students believe that virtual dissection is a new technologic advancement. 74 (63.8%) students agreed that this activity aids in better understanding of skull anatomy. 66 (56.9) students agreed that this voluntary teaching session must be the part of routine Anatomy curriculum. 51% (n= 59) students found this teaching session- extremely interesting. A slightly higher significant median score in posttest versus pretest (7 vs 6- out of 9) was recorded from 86 students.

CONCLUSION: Overall, there was positive feedback response from Medical Students with significant post test results showing the VD -an innovative tool for learning skull base anatomy.

O-5

Retrospective Evaluation of deltoid tear incidence in patients presenting with full-thickness rotator cuff tears

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BACKGROUND: Rotator cuff tears are among the most common causes of shoulder pain with full thickness tears particularly more common in elderly age group. These tears are associated with significant pain and morbidity affecting the quality of life.

Deltoid muscle plays a major role in shoulder movement, particularly the shoulder abduction and deltoid injury causes impairment of shoulder function. Association of deltoid injury with rotator cuff tear (full-thickness) is underdiagnosed on imaging, possibly due to subtle presentation on imaging or coexistence with more obvious rotator cuff pathology.

There is limited attention to deltoid injury secondary to rotator cuff pathology in the available literature. This study aims to retrospectively evaluate the incidences of deltoid tears in patients presenting full-thickness rotator cuff tears, assessing their clinical relevance and potential impact on patient outcomes. Aims and objectives: To evaluate the incidence of deltoid muscle tears in patients diagnosed with full-thickness rotator cuff tears, using retrospective data from clinical and imaging records.

RESULTS: In the study population of 64, frequency of deltoid tears is found to be 13(20.3%) in patients with rotator cuff tears. Among these, 7(53%) were females and 6(47%) were males with mean age of 67.7 years. 8(61.5%) were right sided and 5(38.4%) were left sided.

The Man-Whitney U test indicated a significant association between deltoid tears and full-thickness rotator cuff tear. Acromio-humeral interval showed a significant difference between the deltoid and non-deltoid cases.

CONCLUSION: Deltoid tears, although less common have significant association with full thickness rotator cuff tears. Identifying these tears on imaging are important for comprehensive shoulder injury assessment and it may help in more targeted rehabilitation strategies and optimize recovery outcomes.

O-6

Diagnostic performance of contrast-enhanced mammography (CEM) in the presurgical staging of breast cancer: Experience at a tertiary care center

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OBJECTIVE: Contrast-Enhanced Mammography (CEM) makes use of iodinated contrast to show breast neovascularity making the tumor visible despite the presence of dense breast. The added information provided by CEM helps in detection of multifocality, multicentricity, or lesion in the opposite breast and makes it possible to select the ideal surgical procedure. The objective of this study is to determine the diagnostic accuracy of CEM in the presurgical staging of women with newly diagnosed breast cancer.

METHODS: 39 biopsy proven breast cancer patients who underwent mammography and ultrasound (US) at Radiology department of AKUH between July 22 and July 24 were retrospectively included. Initial treatment plan was based on the surgeon's consultation and initial radiological evaluations. The final pre-operative staging was done after the inclusion of CEM findings.

RESULTS: Keeping histopathology as gold standard, CEM and US proved to have high and comparable sensitivities with CEM having a slight edge (91.67% vs. 90.00% respectively) while mammography on the other hand shows a much lower sensitivity (16.67%) at detecting multifocal lesions. After the inclusion of CEM results, according to the final surgical plan, 37.8% of patients underwent breast conservation surgery/lumpectomy/quadrantectomy and 58.9% of patients underwent mastectomy. These percentages do not show any difference from the pre-surgical plan as the accuracy of ultrasound for detecting multifocal/multicentric disease was comparable/equivalent with CEM.

CONCLUSION: The diagnostic efficacy of CEM and US are almost equivalent in detecting multifocal/multicentric disease and therefore no difference in pre-surgical plan was seen.

O-7

Relation of radiographic BI-RADS (4 and 5) score and triple negativity in patients with breast cancer

Farah Afzal
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O-8

Saving the uterus; uterine artery embolization for adenomyosis. A reliable alternative to surgery

Amama Gulzar
Department of Radiology, Shifa International Hospital, Islamabad, Pakistan.

O-9

Study of anxiety level and associated factors with breast biopsies done under sonographic guidance: A cross sectional study in a tertiary care hospital

Muhammad Ayub
Department of Radiology, Bolan Medical Complex Hospital, Quetta, Pakistan.

O-10

Use of AI in radiology - A Moscow experience

Aleksandr Borisov
Moscow, Russia.

O-11

Critical alerts and their impact on patient management

Muhammad Usama Faruqi
Department of Radiology, Shaikat Khanum Cancer Hospital and Research Centre, Lahore, Pakistan.

O-12

Utilisation of Paediatric Genitogram at a Tertiary Care Hospital in Karachi, Pakistan

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INTRODUCTION: Genitograms are pivotal in diagnosing disorders of sex development (DSD) and other genital anomalies in children, providing critical anatomical insights for gender assignment and surgical planning. Despite the importance of genitograms, there is a lack of data on their use and diagnostic outcomes in Pakistan. This study aims to address this gap by analysing the prevalence, indications, and outcomes of genitogram use in a tertiary care setting in Karachi.

METHODOLOGY: This cross-sectional observational study was conducted at the National Institute of Child Health (NICH), Karachi, involving 140 pediatric patients who underwent genitography from May 1, 2023, to April 30, 2024. Participants were selected through non-probability consecutive sampling. Data were collected using a structured questionnaire covering demographics, clinical information, and diagnostic findings. SPSS version 24 was used for statistical analysis, employing descriptive statistics and the Chi-square test to evaluate associations between variables.

RESULTS: Out of 140 cases, the majority were less than 1 year old, with an equal gender distribution. Genitogram results showed that 42 of the cases were normal, while the other 98 had different conditions, such as DSD, persistent urogenital sinuses, and cloacal malformations. Statistical analysis showed significant associations between examination findings, clinical diagnoses, and genitogram results ($p < 0.05$).

CONCLUSION: Genitograms are crucial in early diagnosis and management of DSD in Pakistan, where cultural and religious factors promote early medical consultation. However, variability in diagnostic expertise and technology across regions may influence results, underscoring the need for standardised protocols and further research into non-invasive alternatives.

O-13

Artificial intelligence in diagnostic ultrasound

M. Isifan
Dubai.

O-14

Evaluation of risk factors of contrast extravasation in computed tomography; A retrospective single institute study

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OBJECTIVES: In this study, we aim to evaluate the risk factors associated with contrast media extravasation in CT Scans.

MATERIALS AND METHODS: 38 patients that underwent CT Scans with IV contrast enhancement between 2020 to 2024 were retrospectively identified. Multiple risk factors were observed including the cannulation size, flow rate, site of cannulation, comparison between left and right arm/hand, age, gender etc. Statistical analysis was done using IBM SPSS Statistics 23. The qualitative variables will be represented as frequency and percentages and the quantitative variables will be represented by mean and standard deviation. Appropriate statistical methods will be applied for data analysis.

RESULTS: Amongst total of 38 patients having extravasation, all of them had no history of previous extravasation.

Gender: 23(60.5%) were female and 15(39.5%) were male. All of them were using non ionic contrast media.

Age: 21(55.3%) had age between 18-60 and 17(44.7%) were greater than 60 years of age.

Cannula size: 26(68.4%) had cannula of 20 gauge, 9(23.7%) had cannula of 22 gauge, 3(7.9%) had cannula size of 18 gauge.

Site of occurrence of extravasation: 23(60.5%) were on left side and 15(39.5%) were on right side.

Volume injected: 18(47.4%) had less than 60ml injected volume, 11(28.9%) had more than 80 ml of injected volume and 9(23.7%) had 60-80ml of injected volume.

Position: 33(86.8%) had elevated position and 5(13.2%) had supine position.

Site of cannula: 19(50.0%) had cannula on forearm, 15(39.5%) had cannula on elbow and 4(10.5%) had cannula on hand.

Number of pricks: 66.6% patients had multiple pricks at the time of cannulation while 33.3% patients had single pricks at the time of cannulation.

CONCLUSION: The above-mentioned outcomes are consistent with earlier studies.

O-15

MR diffusion tensor imaging in pre-operative planning for surgical resection of diffuse infiltrative glioma via awake craniotomy

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O-16

Role of MRI orbit in post-IAC retinoblastoma evaluation

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O-17

Diagnostic accuracy of MRI brain perfusion imaging in differentiating radiation induced necrosis of intracranial tumors from disease progression

Mariam Malik
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O-18

Clinical utility of CT and MRCP in detecting gallbladder perforation

Nosheen Zahir
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O-19

Unraveling the hepatorenal connection; intra-renal resistive index as sentinel diagnostic tool in chronic liver disease patients

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O-20

Correlation of hepatic steatosis with severity of acute pancreatitis

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O-21

Computed tomography liver volumetry in living donor liver transplantation: Influence of the slice thickness on the volume calculation

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E-POSTERS (P)

P-1

Cerebral venous sinus thrombosis associated with tuberculous meningitis: A pediatric case report and review of the literature

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BACKGROUND: Central nervous system tuberculosis (TB) has a dismal prognosis with higher rates of mortality and neurological deficits. Few reported cases showed that the TB meningitis was associated with cerebral sinus venous thrombosis (CSVT) in children. In this case report, the clinical course, diagnostic challenges, and management of CSVT associated with TB meningitis is presented.

CASE PRESENTATION: A 1-year-old child presented with fever, vomiting, fits, neck stiffness and Glasgow Comma Scale of 12. Contrast enhanced computed tomography (CECT) of the head and CT venography with contrast showed hypodense areas in bilateral frontal regions, minimal dilatation of all ventricles, increased meningeal enhancement and a filling defect within the anterior part of superior sagittal sinus indicating complicated meningitis with cerebral venous sinus thrombosis and venous infarction. Cerebrospinal fluid (CSF) analysis showed only a moderate elevation of white blood cells (WBCs) with negative culture for organisms no improvement after starting empirical antibiotics and acyclovir was observed. Due to the exclusion of other infections, the absence of other established risk factors of CSVT, CSF, and imaging findings that was consistent with tuberculous meningitis (TBM), and a positive history of TB sick contact; anti-TB therapy was initiated, which showed significant improvement that confirmed the diagnosis of TBM.

CONCLUSION: A case of CSVT secondary to TBM was presented. Since clinical examination alone might not be sufficient to solve such a diagnostic dilemma, a multidisciplinary approach including radiologists, neurologists, and infectious specialists is warranted to promote proper awareness, detection, and management of CVST associated TBM.

P-2

Ocular Health Challenges Among Radiologists in Pakistan: A Cross-Sectional Study

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INTRODUCTION: Radiologists, due to their intensive screen exposure, are at risk of developing ocular health issues. This study aimed to investigate the prevalence and characteristics of eye problems among Pakistani radiologists, highlighting the potential impact on their well-being and professional performance.

METHODS: A cross-sectional survey was conducted among Pakistani radiologists working in various healthcare settings. Participants were asked about the frequency and severity of eye-related symptoms, including eye strain, dryness, headaches, and visual disturbances. Additionally, the survey explored work-related factors such as screen exposure duration, protective measures, and perceived impact on daily tasks.

RESULTS: The study revealed a high prevalence of eye problems among Pakistani radiologists. Eye strain was the most common symptom, reported by 68.3% of participants, followed by dryness (54.7%), headaches (45.2%), and blurred vision (36.8%). Further analysis revealed a significant correlation between the duration of daily screen exposure and the prevalence of eye strain ($r=0.72$, $p<0.001$).

DISCUSSION: The findings underscore the need for targeted interventions to address the ocular health challenges faced by Pakistani radiologists. Prolonged screen exposure, coupled with inadequate protective measures, contributes to the reported symptoms. Potential strategies to mitigate eye strain include implementing ergonomic workstations, promoting regular eye breaks, encouraging the use of blue light-filtering glasses, and providing educational resources on ocular health. There should be use of protective measures, such as ergonomic workstations and adherence to the 20-20-20 rule, to mitigate ocular strain.

CONCLUSION: This study highlights the significant burden of ocular health issues among Pakistani radiologists. By understanding the prevalence and risk factors associated with these problems, healthcare institutions can implement effective interventions to protect the ocular well-being of radiologists, thereby enhancing their job satisfaction and overall performance.

P-3

Correlating BI-RADS categories and histopathological outcomes in breast biopsies: A five-year review

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OBJECTIVE: The aim of the study is to determine concordance and discordance between radiological and pathological findings of BI-RADS categories II, III, IV and V lesions

METHODOLOGY: The study took place at the Radiology Department of INMOL Cancer Hospital, Lahore during 2019-2023. Imaging and histopathologic reports of a total of 1425 female patients with breast lesions were analyzed. Concordance and discordance rates were estimated by comparing histopathology and imaging findings.

RESULTS: The study aimed to evaluate the concordance and discordance between radiological BI-RADS categories and the corresponding histopathological diagnoses, focusing on BI-RADS 2, 3, 4 (subcategories IVa, IVb, IVc), and 5 lesions over a five-year period. A total of 1,425 cases were analyzed, categorized based on their BI-RADS classification and histopathological diagnosis. BI-RADS II and III categories showed high concordance (100%) with benign histopathological findings, with no malignant diagnoses reported. In BI-RADS IVa, a significant portion of cases (70%) were diagnosed as invasive ductal carcinoma, which represents discordance with the category's lower malignancy suspicion. BI-RADS IVb and IVc demonstrated an increasing number of malignant findings, particularly invasive ductal carcinoma grades II and III, with a small proportion of benign cases, reflecting moderate to high suspicion for malignancy. BI-RADS V cases were almost exclusively malignant, confirming high concordance between radiological and pathological findings.

CONCLUSION: The study highlights a general alignment between BI-RADS categorization and histopathology, with some discordance observed in BI-RADS IVa, which warrants further consideration in clinical practice.

P-4

Navigating uncertainty in breast imaging: Interpreting BI-RADS 3 lesions and their management in clinical practice

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Interpreting Breast Imaging Reporting and Data System (BI-RADS) category 3 findings is a critical aspect of breast imaging, aimed at identifying probably benign lesions that require short term follow-up rather than immediate biopsy.

This category, which carries a less than 2% risk of malignancy, has the potential to significantly reduce false positives and associated patient anxiety. However, the application of BI-RADS 3 is complex and varies across different breast imaging modalities including mammography, ultrasound, and MRI, each presenting unique challenges in ensuring accurate diagnosis. The main challenge lies in achieving consistency among radiologists in lesion categorization and patient's compliance with follow-up recommendations.

The purpose of this review is to examine the current practices in the use of BI-RADS 3, to evaluate the factors influencing its diagnostic precision, and to discuss strategies to enhance its utility in reducing false positives without compromising the detection of early-stage breast cancer.

Enhanced training, technological advancements, and patient education are essential to optimize the use of BI-RADS 3 in clinical practice.

P-5

Intracardiac echocardiography versus transesophageal echocardiography guidance on left atrial appendage occlusion in patients with atrial fibrillation: A systematic review and meta-analysis

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BACKGROUND: Intracardiac echocardiography (ICE) is an innovative technique that has emerged as an alternative to transesophageal echocardiography (TEE) to guide the implantation of a left atrial appendicular obstruction (LAAO) device in patients with nonvalvular atrial fibrillation who cannot tolerate anticoagulants.

PURPOSE: We aim to review the clinical efficacy and safety of ICE compared to TEE.

METHODS: We conducted comprehensive searches across PubMed, CENTRAL, WOS, Scopus, and EMBASE until March 2024. Pooled data were reported using risk ratio (RR) for dichotomous outcomes and mean difference (MD) for continuous outcomes, along with a 95% confidence interval (CI). This systematic review and meta-analysis was registered with PROSPERO ID: CRD42024542537.

RESULTS: We included 20 studies with a total of 110,026 patients. ICE was associated with significantly high procedure success rate compared to TEE [RR: 0.99370 with 95% CI (0.98878, 0.99864), $P = 0.01$], but there was no difference in Procedure duration [MD: 3.07 with 95% CI (-4.67, 10.80), $P = 0.44$], and adverse events [RR: 0.86 with 95% CI (0.71, 1.05), $P = 0.14$] between the two groups. However, compared to ICE, the TEE patients required more than one device [RR: 1.39 with 95% CI (1.23, 1.57), $P < 0.01$].

CONCLUSION: Our meta-analysis concluded that ICE is associated with similar safety and efficacy in guiding LAAO compared to TEE. However, ICE is a feasible and safe alternative that reduces exposure to general anesthesia and associated potential risks.

P-6

Enhancing patient experience in ultrasound examinations: A communication analysis

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INTRODUCTION: Effective communication is paramount in healthcare. This e-poster explores communication practices during ultrasound examinations

at DHQ Hospital Gahkuch to identify opportunities for improvement.

METHODS: Fifty patients were interviewed to assess their experiences regarding:

Patient expectations: Anxiety about findings, desire for immediate results.

Doctor-patient interaction: Clarity of explanations, use of terminology.

Post-examination anxiety: Related to waiting for results.

RESULTS: Patient expectations: 60% expressed anxiety about potential findings. 95% expected immediate results. Only 80% understood explanations fully.

Doctor-patient interaction: 90% were satisfied with the examination. 20% were dissatisfied due to a lack of immediate results. 22% found terminology confusing.

Post-examination anxiety: Patients reported anxiety while waiting for results, especially if explanations were unclear.

DISCUSSION: A significant gap in communication was identified, with many patients experiencing anxiety due to unclear explanations and technical terms.

Recommendations:

Pre-procedural information: Provide leaflets explaining the procedure, potential findings, and limitations.

Doctor training: Enhance communication skills, focusing on plain language and active listening.

Standardized explanations: Develop clear and tailored explanations for common findings.

Realistic expectations: Set realistic expectations regarding result availability.

CONCLUSION: Implementing these strategies can significantly improve patient experience, reduce anxiety, and enhance satisfaction with ultrasound services.

P-7

Diagnostic accuracy of ADC values in diffusion weighed MRI for differentiation of benign and malignant cervical lymph nodes-a pilot study

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INTRODUCTION: Various modalities are being used for assessment of lymphadenopathy, these are ultrasound, computed tomography and conventional magnetic resonance imaging. Localization and characterization of Head and neck lesions have been well defined by CT and MRI, however these conventional methods have poor performance in assessment of lymph node metastasis.

OBJECTIVE: To determine the diagnostic accuracy of ADC values in diffusion weighed MRI in diagnosis of malignant cervical lymph nodes, taking cytology as reference standard.

STUDY DESIGN AND SETTING: Cross Sectional validation Study. Department of Radiology, Advance Diagnostic center, Islamabad. This study was conducted over a period of 8 months from 1st August 2023 to 31st March 2024.

SUBJECTS AND METHODS: A total of 30 patients of both gender with enlarged/ sonographically suspicious neck nodes on ultrasound measuring more than 5mm in the short axis, were included in the study. The lymph nodes were characterized on ultrasound. Diffusion weighted MRI is carried out, ADC value is recorded. A cutoff ADC value of $0.9 \times 10^{-3} \text{ mm}^2/\text{s}$ for differentiation between benign and malignant lymph nodes.

In all the subjects, FNA was done and cytology was sent to histopathology lab AIH Hospital, Islamabad. Cytology was reported by senior histopathologist. Results were analyzed to calculate sensitivity, specificity and diagnostic accuracy of test.

RESULTS: DW-MRI diagnosed 10(33.3%) and cytology diagnosed 12(36.6%) patients with malignant cervical lymph node. ADC values in DW-MRI show sensitivity of 96.2%, specificity 84% and diagnostic accuracy by 93% in diagnosis of malignant cervical lymph node.

CONCLUSION: ADC value in addition to DWI-MR is an important supportive tool in differentiation between benign and malignant cervical lymph nodes.

P-8

Dural venous sinus cyst: A rare and radiologically important entity

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Dural venous sinus cysts are mostly congenital, rarely reported and of radiological importance given the potential for misdiagnosis as cerebral venous sinus thrombosis. They are predominately asymptomatic and are usually an incidental finding on cranial imaging. Potential radiological misdiagnoses include venous sinus thrombosis, dural sinus adipose tissue, arachnoid granulations, and arachnoid cysts.

We present a case of a 33-year-old female who was initially misdiagnosed and treated for dural venous sinus thrombosis, highlighting the importance of accurate radiological diagnosis. The patient was presented with a four-day history of headache, irritability, and blackouts. She had been taking oral contraceptive pills and had a previous MRI brain scan showing a filling defect in the right transverse sinus, concerning for dural venous sinus thrombosis. Despite treatment, her symptoms persisted, and she was referred to our hospital. CT scan brain and CT venogram performed at our department revealed a fluid-density cystic lesion in the right sigmoid sinus, near the junction with the internal jugular vein, consistent with a dural venous sinus cyst. The patient's diagnosis was revised, and anticoagulation therapy was ceased. She was managed symptomatically for headaches and advised to stop taking oral contraceptive pills. Regular imaging follow-up was recommended to monitor for potential growth of the lesion and sinus occlusion.

This case emphasizes the importance of accurate radiological diagnosis to differentiate between venous sinus thrombosis and dural venous sinus cysts, avoiding unnecessary anticoagulation and associated risks.

P-9

Social media as a learning resource for radiology residents: A quantitative study

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OBJECTIVE: This study aims to evaluate the effectiveness, usage patterns, and perceived value of various social media platforms as educational tools for radiology residents. Additionally, it compares the perceived utility of these platforms with traditional learning methods and explores their role in professional development.

METHODS: A cross-sectional survey was conducted among radiology residents. Participants were asked to detail their social media usage for educational purposes, the specific platforms they used (YouTube, Twitter, Instagram, Facebook, Telegram, WhatsApp), the types of content they consumed (e.g., case presentations, educational videos, medical news), and their perceptions of the effectiveness and value of each platform. Data were analyzed to assess platform popularity, content engagement, perceived educational impact, and professional networking value.

RESULTS: Platform Usage: YouTube: 80%, Twitter: 65%, Instagram: 55%, Facebook: 40%, Telegram: 30%, WhatsApp: 25%

Content Consumption: Case Presentations: 72%, Educational Videos: 65%, Latest Updates: 58%

Perceived Effectiveness (rated as "very effective" or "extremely effective"): YouTube: 75%, Twitter: 68%, Instagram: 60%, Facebook: 52%, Telegram: 45%, WhatsApp: 40%

Perceived Value: Knowledge and Skill Improvement: 85% of residents reported that social media contributed significantly to their radiology knowledge and skill development.

Networking and Professional Development: 70% of respondents stated that social media played a valuable role in enhancing their professional network and facilitating career growth.

Community Engagement: 60% of residents believed that social media increased their involvement with the global radiology community, offering real-time engagement and access to expert opinions.

CONCLUSION: Social media platforms, particularly YouTube, Twitter, and Instagram, have emerged as important supplementary tools for radiology education, providing residents with flexible and accessible learning resources. While traditional platforms remain dominant, WhatsApp is increasingly recognized for its utility in smaller group discussions and real-time communication, supporting collaborative learning. Overall, social media enhances radiology education by improving knowledge retention, fostering professional connections, and increasing engagement within the radiology community. Further research should focus on optimizing the educational potential of different platforms for radiology training.

P-10

A rare presentation in a common renal anomaly; metastatic adenocarcinoma in horseshoe kidney

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A horseshoe kidney, the most common renal fusion anomaly, affects approximately 0.25% of the population. While this condition increases the risk of urinary stasis, infection, and nephrolithiasis, the chances of malignancy are relatively increased as well. Most common tumor arising in horseshoe kidney is transitional cell carcinoma however renal pelvic adenocarcinoma in a horseshoe kidney is very rare.

We present a case of a 24-year-old male who was initially evaluated for lower backache with a lumbosacral spine MRI with contrast, which led to the discovery of metastatic lesions in the vertebrae. Subsequently further workup was requested including ultrasound (US) and computed tomography (CT) chest, abdomen and pelvis, which identified a cystic mass with calcification in the incidentally found horseshoe kidney arising from the isthmus and left renal pelvis. A positron emission tomography (PET) scan demonstrated increased uptake in a renal lesion as well.

Initially a biopsy from vertebra lesion was done which showed metastatic adenocarcinoma. The biopsy of the renal mass revealed the diagnosis of renal adenocarcinoma. Given the rarity of primary renal adenocarcinoma in a young patient, additional gut biopsies and a follow-up PET scan were performed to rule out other primary sites. However, these investigations and a review of the biopsy results ultimately reaffirmed the diagnosis of renal adenocarcinoma. The patient presented with metastases not only to the vertebrae but also to the lungs. The metastatic disease prompted an urgent need for a comprehensive treatment plan comprising chemoradiotherapy.

This case underscores the importance of considering renal adenocarcinoma as a differential diagnosis in young patients presenting with metastatic disease, even when presenting with atypical features and presenting complaints. A thorough diagnostic workup, including imaging and biopsy, is crucial for accurate diagnosis and appropriate management.

P-11**The silent threat: Incidental discovery of aortic dissection in an asymptomatic patient****Maham Khalid***Department of Radiology, INMOL, Lahore, Pakistan.**E-mail: mahamkhalid74kemu@gmail.com*

Aortic dissection is a life-threatening condition characterized by a tear between tunica intima and media, creating a false lumen that compromises blood supply to the vital organs. Risk factors include aging, atherosclerosis, hypertension, and chest trauma. Aortic dissection usually presents with sharp ripping chest pain radiating to back, dyspnea or syncope in acute settings leading to the demise of majority of the patients before reaching the Emergency Department. In cases of chronic aortic dissection (more than 2 weeks), patients usually present with vague neurological or cardiovascular symptoms. Only a few cases have been reported in literature in which the aortic dissection remained silent and was diagnosed as an incidental finding on the imaging done for other purposes. We present a rare case of an asymptomatic aortic dissection discovered incidentally on imaging.

A 67-year-old male, with a history of gastrointestinal spindle cell tumor treated in 2022, presented to our department for workup of suspected disease recurrence. Contrast-enhanced CT scans showed disease recurrence. In addition, there was an incidental finding of intimal flap with resultant formation of false lumen involving the descending aorta from the level of aortic arch to just above the level of aortic bifurcation suggesting aortic dissection (DeBakey type III). Comparison with previous imaging revealed extensive atherosclerosis and an interim development of the aortic dissection. Notably, the patient remained asymptomatic throughout. Despite the absence of mal-perfusion symptoms, the patient was immediately referred to the Emergency Department for further management due to the extensive nature of the dissection.

This case highlights the importance of vigilant imaging interpretation, as asymptomatic aortic dissections are extremely rare. Prompt recognition and management are crucial to prevent life threatening complications.

P-12**An uncommon cause of abdominal pain in a child with undescended testes****Ammara Malik***Department of Radiology, Basildon University Hospital,**E-mail: amarasaeed@ymail.com*

INTRODUCTION: Torsion of undescended testes is rare and the occurrence of torsion in undescended testes is extremely rare. Only a handful of cases have been reported in literature. The clinical presentation of the condition along with imaging features playing important role in diagnosis. We report torsion of mature teratoma in cryptorchid (intra-abdominal) testes in a 9 month old boy.

CASE REPORT: A nine month old male presented with 5 days history of cough and cold with fever. This was then followed by abdominal pain and constipation over 48 hours prior to presentation. Subsequently taken to hospital following abdominal distension, refusal to eat and one episode of non-bilious vomiting.

He was previously fit with history of left sided undescended testes diagnosed at birth with a plan to review again at around 10 months of age.

On physical examination there was abdominal fullness with no guarding. Otherwise no cardiorespiratory issue and normal neurology. Initial blood reports showed raised CRP, WCC, platelets and low haemoglobin. Mildly raised LDH but tumor markers AFP and HCG were normal.

Initially an abdominal X-ray was requested to rule out bowel obstruction secondary to intussusception. The X-ray showed abnormal calcification in right side of abdomen and few distended bowel loops on the left. This prompted further investigation by ultrasound demonstrating right sided 11 cm mass predominantly cystic with several large soft tissue components and calcification within. The mass was separate from both kidneys and the left testis was not visualised in the scrotum. With exclusion of renal tumor, mature teratoma involving the undescended testes was likely. Small amount of free fluid around the mass and in the peritoneal cavity pointed towards torsion of the mass. After initial management the patient opened bowels and abdominal pain ceased.

An MRI imaging was obtained to further define the extent and nature of the lesion, confirming heterogenous.

MRI findings:

The patient underwent laparotomy for resection of the abdominal mass. The left testes was also removed as tumor seemed to be arising from the undescended left testicle. Histopathology of specimen showed an encapsulated mass with mixed solid cystic areas containing tissues from all three germ cell layers thus confirming the diagnosis of mature testicular teratoma. There was mixture of cartilage, skin, adipose tissue and smooth muscles. No immature elements or physical evidence of malignancy. The specimen demonstrated features suggestive of previous torsion. The patient's recovery was uneventful.

DISCUSSION: Undescended testis is present in about 1-4.5% of newborns. The well-known consequences of undescended testes is neoplastic change and torsion. There is 3-8 times higher risk of neoplasia in cryptorchid testes relative to general population. The risk is higher in bilateral cases and intra-abdominal cryptorchidism. Testicle teratomas are non-seminomatous germ cell tumors and contain cell population derived from all three embryonal cell layers. These tumors are divided by patient's age and degree of differentiation ; mature or immature. Teratomas contribute to 23-48% of pre-pubertal testicular tumors. The median age of presentation is 13 months.

Testicular torsion is a paediatric urologic emergency that requires immediate attention and treatment. The annual incidence of testicle torsion is 3.8 per 100,000 in pre pubertal males. Torsion in cryptorchid testes is rare however development of neoplasia predisposes the gonad to torsion. The typical symptoms of testicular torsion is inguinal pain but in cases of undescended testes the diagnosis becomes more difficult. Cryptorchid testicular torsion initially manifests as atypical clinical symptoms such as inguinal or abdominal pain, nausea or vomiting , restlessness and fever which may cause delay in seeking attention and correct diagnosis especially for prepubertal children who cannot describe their symptoms. This condition can be misdiagnosed as abdominal colic, intestinal obstruction, incarcerated inguinal hernia etc.

The normal testes have homogeneous and moderately echogenic texture with moderate amount of blood flow on Doppler ultrasound. The testes undergoing torsion initially appeared swollen and enlarged with generalised decrease in echogenicity and very low or absent blood flow. Intra-abdominal undescended testes is very rarely seen on ultrasound unless complicated by malignant transformation. The differential diagnosis for solid cystic abdominal mass in a young child includes lymphangioma, gonadal tumor, neuroblastoma, and multicystic dysplastic kidney. The history of undescended testes and normal appearance of kidneys in our case suggested the tumor to be of gonadal origin. The appearance of mass with mixed solid cystic areas along with calcification and fat components further narrowed down the differential diagnosis to testicular teratoma. Presence of minimal amount of fluid around the mass favoured the diagnosis of torsion.

LEARNING POINTS/CONCLUSION :

1. Although rare, it is important to consider the diagnosis of torsion of intra-abdominal testicular teratoma in patients presenting with acute abdomen especially in the presence of past history of undescended testes.
2. The case report highlights the importance of using ultrasound in making diagnosis of torsion in intra-abdominal mass.
3. MRI is useful technique particularly for detecting ectopic testes in abdomen and diagnosing teratomas in undescended testis.

P-13**Utilizing un-enhanced computed tomography chest as a screening tool for surgical decision making in blunt trauma patients presenting to accident & emergency****Nosheen Noor***Department of Radiology, Lady Reading Hospital, Peshawar, Pakistan.
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BACKGROUND: Blunt chest trauma is a common, potentially life-threatening condition requiring prompt assessment for surgical intervention. The utilization of computed tomography chest has surfaced as a promising avenue due to its heightened sensitivity and specificity in detecting thoracic injuries compared to the conventional method of chest radiography.

OBJECTIVE: This study aims to assess the impact of non-contrast computed tomography chest findings on surgical decision-making and to compare with the chest radiograph findings.

STUDY DESIGN: Retrospective cross-sectional study.

DURATION AND PLACE OF STUDY: Thoracic surgery and Radiology departments of Lady Reading Hospital, Medical teaching institute, Peshawar, from May 2022 to April 2024.

METHODS: The study included patients who presented with blunt chest trauma to Accident and Emergency Department, Medical Teaching Institute, Lady Reading Hospital, Peshawar, Khyber Pakhtunkhwa, Pakistan. Patients of all ages and both genders were included. The intervention involved the use of non-contrast computed tomography chest as an initial screening tool, compared to the traditional diagnostic approach of chest radiograph. Data collected included patient demographics, mechanism of injury, diagnostic findings, and treatment decisions. The imaging was performed using a GE Optima 16-slice scanner.

RESULTS: The study included 246 patients, of whom 210 were males (85.4%). The most common age group was elderly, that is 50 years or more constituting 28.9%. The most prevalent mechanisms of trauma were road traffic accidents (76.4%). Hemopneumothorax was detected in 121 patients on CT scan compared to 34 patients on chest radiograph. On chest radiograph the pneumothorax component was missed in 43 patients while in 21 patients the hemothorax component was not detected. Patient management included conservative management in 30 cases and surgical intervention in the form of unilateral or bilateral tube thoracostomy which was performed in 173 and 43 patients respectively.

CONCLUSION: Our study supports the use of non-contrast computed tomography scans as a reliable diagnostic tool for blunt chest trauma, aligning with current literature. This approach enables prompt management decisions, particularly for initiating tube thoracostomy based on pneumothorax and hemothorax findings. The rarity of mediastinal great vessel trauma further justifies minimizing routine contrast use, enhancing the efficiency of trauma evaluations.

P-14**Gall bladder perforation a complication of enteric fever****Farayha Khalid, Saba Khilji***Department of Radiology, Dr. Akbar Niazi Teaching Hospital, Islamabad, Pakistan.**E-mail: farayakhalid@outlook.com*

If not identified and treated right once, gallbladder perforation—a uncommon but dangerous consequence of acute cholecystitis—can result in significant morbidity and mortality. We describe the example of a female patient, having 19 years of age, who had a history of constipation. The patient was diagnosed with typhoid fever and underwent imaging studies that revealed gallbladder

wall perforation along its postero-inferior aspect with adjacent contained right subhepatic collection. The patient underwent diagnostic laparoscopy and subtotal cholecystectomy. This instance emphasizes how crucial it is to rule out gallbladder perforation while diagnosing acute abdomen in typhoid fever patients. Prompt surgical intervention and early diagnosis can avert major problems and enhance results.

P-15**A unique case of heterotopic pregnancy****Saba Khilji, Farayha Khalid***Department of Radiology, Dr. Akbar Niazi Teaching Hospital, Islamabad, Pakistan.**E-mail: dr.saba.k5@gmail.com*

Heterotopic pregnancy, characterized by simultaneous intrauterine and extrauterine pregnancies, is a rare but potentially life-threatening condition. Its incidence has increased, attributed to factors such as pelvic inflammatory disease and assisted reproductive technologies. We present a case of spontaneous heterotopic pregnancy in a 28-year-old woman with lower abdominal pain. Initial examination revealed a ruptured left tubal ectopic pregnancy alongside a live intrauterine pregnancy. Prompt diagnosis via transvaginal ultrasonography led to emergency laparotomy, confirming sonographic findings. The ruptured ectopic pregnancy was successfully removed, preserving intrauterine gestation. Follow-up ultrasounds demonstrated a progressing intrauterine pregnancy. This case underscores the diagnostic challenges and emphasizes the importance of early recognition and intervention in heterotopic pregnancies, especially in the absence of predisposing risk factors. Increased awareness, thorough pelvic examination, and close follow-up are crucial for optimal outcomes in both pregnancies.

P-16**Pyknodysostosis: A challenging diagnosis****Farayha Khalid, Saba Khilji***Department of Radiology, Dr. Akbar Niazi Teaching Hospital, Islamabad, Pakistan.**E-mail: farayakhalid@outlook.com*

This case report details a 7-year-old male child with short stature, born of consanguineous parents in rural Punjab, Pakistan. Despite a normal pregnancy and early developmental milestones, concerns arose as the child aged. Clinical examination revealed frontal bossing, hypoplastic maxillae, and wide fontanelles, initially suggestive of hypothyroidism. However, further investigation, including anthropometry and skeletal surveys, revealed characteristic findings consistent with Pyknodysostosis, such as sutural diastasis and acro-osteolysis. The family was counselled regarding the condition's autosomal recessive inheritance and limited treatment options. Growth hormone therapy was proposed as a potential intervention for improved growth potential. This case highlights the importance of thorough clinical evaluation and collaboration with radiologists in diagnosing rare skeletal disorders.

P-17**Role of CT in evaluating postoperative complications after thoracic surgery****Nosheen Noor***Department of Radiology, Lady Reading Hospital, Peshawar, Pakistan.**E-mail: noshyyn@hotmail.com*

INTRODUCTION: Thoracic surgery assumes a basic part in the different thoracic and pulmonary conditions, including lung disease, pleural emanations, and mediastinal growths.

OBJECTIVES: The main objective of the study is to find the role of CT in evaluating postoperative complications after thoracic surgery.

MATERIAL AND METHODS: This retrospective observational study was conducted at the Thoracic Surgery Department and Radiology Department of the Medical Teaching Institution, Lady Reading Hospital (MTI-LRH) in Peshawar, KPK, Pakistan from January 2022 to January 2023. A total of 135 patients who had CT scan after thoracic surgery for post-operative complications were included in the study. Data regarding postoperative complications and relevant clinical information were collected for each participant. Postoperative complications of interest included atelectasis, pneumothorax, pleural effusions, bronchopleural fistulas, surgical site infections, and vascular complications.

RESULTS: Data were collected from 135 patients of both genders. There were 85 males and 50 females. Mean age of the patients was 55.0±12.35. Out of the 135 patients, 35 (25.9%) developed postoperative complications. The most common complication was atelectasis, occurring in 18 patients (12.5%). Pneumothorax was observed in 8 patients (5.9%), while 5 patients (3.7%) developed pleural effusions. Bronchopleural fistulas were identified in 3 patients (2.2%), and 4 patients (2.9%) experienced surgical site infections. Vascular complications, including pseudoaneurysms and arteriovenous fistulas, were observed in 3 patients (2.2%).

Conclusion: It is concluded that early detection through CT scans facilitated timely interventions, improved patient outcomes, and minimized the need for invasive procedures. The utilization of CT imaging as a standard practice in postoperative evaluations has the potential to enhance patient safety and optimize healthcare resources in thoracic surgery.

P-18

Posterior Nutcracker syndrome: A case report

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BACKGROUND: Nutcracker syndrome is very rare disorder of blood vessels that refers to the compression of the left renal vein, most commonly between the superior mesenteric artery and aorta which is known as anterior nutcracker syndrome and other rarer anatomical variant is posterior nutcracker syndrome in which the left renal vein is compressed between the aorta and vertebral column resulting in non-specific symptoms due to compression of left renal vein. Imaging plays a central role in diagnosis of the pathology. We present a rare case of compression of left renal vein between abdominal aorta and vertebral bodies.

CASE PRESENTATION: A 36-year-old woman was referred from Department of Urology, HMC to radiology department with History of pain in the left flank and pelvis for the last few days. There was history of repeated hospital admissions for similar complaints. Physical examination revealed tenderness in left flank.

The laboratory investigations revealed RBCs in urine (hematuria) whereas complete blood count and C-reactive protein were within normal limits. Urinary tract Ultrasound was performed and was found to be normal. CT IVU was performed which showed compression of the left renal vein (LRV) between the vertebra body and abdominal aorta which is main finding in posterior nutcracker syndrome (NS). Besides, CT scan also showed dilated left adrenal vein.

CONCLUSION: Abdominal CT provide essential information in the diagnosis of NS and determination of the severity of the disease and assists in planning regarding management.

P-19

An unanticipated discovery: Rare presentation of metastatic liver disease

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Hepatic metastases are 18-40 times more common than primary hepatic neoplasms and remain asymptomatic in a vast majority of patients. They are usually discovered incidentally during work up for other pathologies or cross-sectional imaging for staging. When symptomatic, they can present with localized tenderness or pain, jaundice, ascites or fever. Imaging features are highly variable ranging from focal well-circumscribed lesions or ill-defined infiltrative masses however parenchymal infiltration of a lobe has rarely been described previously. Ultrasound, CT and MRI especially contrast enhanced sequences can help in the detection and differentiation of hepatic metastases from other benign entities like hemangiomas, focal nodular hyperplasia and focal fatty infiltration or sparing.

We present a case of a 63 years old female with complaint of pain in right hypochondrium. She was referred to radiology department for ultrasound abdomen which revealed diffuse enlargement of left lobe of liver giving somewhat mass like appearance. For further evaluation contrast enhanced CT abdomen was performed which showed an enlarged left hepatic lobe almost completely replaced by a hypodense lesion with patent segmental branches of portal vein traversing through it mimicking an area of focal fat infiltration without CT density corresponding to the Hounsfield units of fat. On MRI, lesion was T1 hypointense, T2 and STIR hyperintense excluding focal fat infiltration. For definitive diagnosis, histopathology was performed on which it turned out to be positive for metastatic invasive ductal carcinoma of breast, ER and PR positive HER2NEU receptor negative. Further work up with mammography and sonomammography confirmed right breast mass with ipsilateral lymphadenopathy.

This case underscores the importance of being familiar with atypical presentations of hepatic metastasis. Vigilant imaging interpretation and a high suspicion of hepatic metastasis must be considered while giving the differential diagnosis of hepatic lesions with highly inconclusive imaging features and atypical features.

P-20

AI-powered precision education: Shaping the future of radiology training

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Artificial intelligence (AI) is revolutionizing radiology by augmenting diagnostic processes and transforming education. This presentation explores the concept of "precision education" in radiology, where AI tailors instruction to individual trainee needs, thereby improving learning outcomes. Drawing from recent advancements, we highlight the integration of AI tools into radiology education, including personalized case-based learning and interactive digital platforms that assess trainee performance and optimize case exposure. AI-driven educational frameworks, such as the Adaptive Radiology Interpretation and Education System (ARIES), offer novel approaches to fostering diagnostic accuracy and cognitive development in radiologists. By aligning AI applications with cognitive, behaviorist, and constructivist learning theories, we can address educational challenges and ensure that radiology trainees are equipped to excel in an AI-augmented clinical environment.

P-21**From pseudocysts to neoplasms: Navigating cystic lesions of the pancreas****Muhammad Salman Rafique***Department of Radiology, Pakistan Kidney and Liver Institute and Research Center, Lahore, Pakistan.**E-mail: msalmanrafique@gmail.com*

Cystic pancreatic neoplasms encompass a diverse group of pathologies with distinct clinical and radiological features. The major types include pancreatic pseudocysts, serous cystic neoplasms, mucinous cystic neoplasms, and intraductal papillary mucinous neoplasms. Key imaging characteristics, such as the presence of central scars, septations, and duct communication, aid in differentiating benign from potentially malignant lesions. Diagnostic tools like MRCP and the role of surveillance in tumor progression, especially for premalignant lesions, is pivotal. This talk aims to enhance the diagnostic accuracy and management strategies in clinical practice.

P-22**Unveiling a rare entity: Quadrigeminal plate lipoma with distinctive MRI features****Mahnoor***Department of Radiology, Ayub Teaching Hospital, Abbottabad, Pakistan.**E-mail: mahnoorashfaq96@gmail.com*

Quadrigeminal plate lipomas are rare congenital intracranial lesions, accounting for 0.1-0.5% of all brain tumors. We present a case of a 30-year-old male with a history of seizures, who developed left-sided hemianesthesia and dizziness. MRI revealed a 3 x 2 x 1.5 mm lesion in the quadrigeminal cistern, adjacent to the tectum, showing characteristic hyperintense signals on T1 and T2-weighted images, without post-contrast enhancement. Fat-saturated T1 and SWI sequences confirmed the presence of fat, consistent with a lipoma. No associated malformations or hydrocephalus were detected. The quadrigeminal plate lipoma is a rare and usually asymptomatic lesion, but can present with symptoms like headache, vertigo, and seizures due to its location. Magnetic Resonance Imaging (MRI) plays a crucial role in precisely diagnosing and characterizing this rare lesion. The lesion's characteristic appearance, including hyperintense signals on T1 and T2-weighted images and lack of enhancement, can aid in differentiating it from other lesions. Due to the risks associated with surgery, conservative management is often the preferred approach. This case emphasizes the need for radiologists and clinicians to be knowledgeable about this unusual entity, ensuring timely and accurate diagnosis, and appropriate management.

P-23**A pictorial review of least invasive breast interventions for diagnostic and therapeutic purposes****Asma Asghar***Department of Radiology, Shaukat Khanum Memorial Cancer Hospital and Research Center, Lahore, Pakistan.**E-mail: drasmaqasim@gmail.com*

OBJECTIVE: The aim of this study is to evaluate the method of choice for intervention and type of guidance after considering different parameters in mammographic and sonomammographic characteristics of the breast lesion.

BACKGROUND: Breast intervention has undergone many changes over the past multiple decades. Widespread acceptance of least invasive breast biopsy techniques represents the most important practice-changing development in breast imaging. The radiologist now plays a vital role not only in the detection and evaluation of breast disease but also in the diagnosis and management of breast cancer. Descriptions of the advantages of variable breast interventions are the focus of this pictorial review.

STUDY DESIGN: Retrospective Study. We will collect the data of 6-month duration from February 2023 to July 2023.

SETTING: In Women Imaging Diagnostic Radiology Department. Shaukat Khanum Memorial Cancer Hospital and Research Centre (SKMCH & RC) Lahore.

METHOD: Ultrasound-guided breast lesion biopsy, fine needle aspiration (FNA) and stereotactic-guided biopsies have helped in early detection of breast cancer. Alongside, ultrasound or stereotactic guided clip and wire placement have helped in treatment plan and localization for breast conservative surgery. We will select at least four to five images of each procedure mentioned below. Only the images will be displayed on the pictorial review and no personal patient information will be displayed.

1. **Ultrasound-guided percutaneous needle biopsy:** Ultrasound image-guided percutaneous breast biopsy is a safe, accurate, and cost-effective method of establishing a tissue diagnosis of breast abnormalities. It has high sensitivity and specificity. In addition, for patients with cancer, needle biopsy provides a rapid way of providing not only a definitive diagnosis but prognostic information, allowing prompt discussion of treatment options, be they surgical or medical. Early removal of uncertainty also allows better psychosocial adjustment to the disease. Patients with benign conditions can be promptly reassured, removing psychological costs of surgical biopsy or repeated follow-up.

2. **Fine-needle aspiration (FNA):** A breast FNAC is indicated in several clinical situations that have mainly diagnostic values, except for some therapeutic implications of FNAC as in the case of a benign cyst, which can be evacuated during FNAC. The diagnostic usage of these procedures includes a morphological diagnosis along with the application of necessary ancillary techniques such as performing immunochemistry for estrogen and progesterone receptors (ERs and PRs) in the malignant epithelial neoplasms. This procedure can be performed for palpable and nonpalpable lesions of the breast. The major loophole of FNAC, however, lies in its inability to distinguish between in-situ carcinomas, low-grade malignancies, and invasive malignancies.

3. **Stereotactic guided percutaneous breast biopsy:** Most breast abnormalities are currently biopsied under ultrasound guidance, however, certain mammographic microcalcifications and small parenchymal deformities are not demonstrable and thus require stereotactic guidance.

4. **Stereotactic or ultrasound-guided wire placement:** For excision of non-palpable lesions, localization techniques that include wire-guided localization are currently available. Wire-guided localization (WGL) has been the gold standard in the management of clinically occult breast lesions for many years. In our set-up, WGL can be performed either under ultrasound or stereotactic guidance.

5. **Stereotactic or ultrasound-guided metallic clip placement:** Accurate tumour bed localization is a key requirement for breast-conserving surgery (BCS) in breast radiotherapy (RT) planning. Therefore, this technique can help us to accurately determine the tumour bed, which is essential for planning the radiotherapy boost and for partial breast radiotherapy and breast conservative surgery.

CONCLUSION: This paper provides an overview of practice for diagnostic interventional breast procedures and standards, highlighting the most important clinical scenario and clinical implication.

P-24**Beyond the usual suspects: Case series of Lemmel syndrome with emphasis on the role of multimodality imaging****Naheed Khan***Department of Radiology, Khyber Teaching Hospital, Peshawar, Pakistan.**E-mail: naheedilyaskhan@yahoo.com*

INTRODUCTION: Lemmel syndrome, first described by the German physician Lemmel in 1934, is the obstructive jaundice caused by periampullary duodenal diverticulum arising within 2-3cm of Ampulla of Vater, compressing the intrapancreatic CBD. Patients with the disease present with recurrent episodes of jaundice, pancreatitis and cholangitis. CT and MRI features include focal duodenal out pouching adjacent to the papilla causing distal CBD compression and proximal extra and intrahepatic biliary dilatation.

CASE REPORTS: Here we report three cases of Lemmel syndrome, two of these diagnosed on CT Abdomen pelvis and one on MRCP. First case was a 75 years old male, had CBD stenting for obstructive jaundice. Post ERCP CT abdomen pelvis was performed which showed Periampullary duodenal diverticulum compressing the distal CBD with resultant cholestasis. CBD stent was in situ.

Second patient was a 65 years old female who underwent MRCP for acute Pancreatitis. A periampullary duodenal diverticulum compressing the distal CBD with upstream cholestasis was diagnosed along with mild acute pancreatitis. Small stones were seen in the dilated CBD along with cholecystolithiasis. Third patient was a 65 years old female admitted for epigastric pain and jaundice, underwent contrast enhanced CT abdomen pelvis which showed periampullary duodenal diverticulum compressing distal CBD and resultant proximal dilatation of extra and intrahepatic biliary channels.

CONCLUSION: CT and MRCP are the reference non invasive imaging modalities for the diagnosis of Lemmel syndrome and must be performed in all patients presenting with obstructive jaundice in order to avoid mismanagement and treatment delay.

P-25**Side effects and complications of chemotherapy : A pictorial review from whole body CT.****Kalsoon Nawab***Department of Radiology, Khyber Teaching Hospital, Peshawar, Pakistan.**E-mail: kalsoomnawab@gmail.com*

Latest chemotherapeutic agents, have reduced toxic effects in oncology patients. However, post-treatment imaging examinations is routinely performed for assessment of treatment response. Radiologists must be aware of chemotherapeutic related side effects or complications to avoid misinterpretation of imaging findings. Latest research and advancement have increased life expectancy of oncology patients as well as the frequency of long-term chemotherapy-related side effects. Radiologists have to distinguish expected findings from residual tumors or relapse and to early identify therapy-related complications, which at times may be life-threatening conditions. This pictorial review talk will help radiologists to know and interpret chemotherapy-related complications and to differentiate expected side effects on normal tissues from tumor recurrence or metastasis.

P-26**Quality control audit for standardization of MRI Breast reporting for local staging of breast cancer in comparison to the standardized guidelines****Mariam Malik***Department of Radiology, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan.**E-mail: mariammalik6429@gmail.com*

Introduction: Breast MRI is the most sensitive diagnostic method among the non-invasive diagnostic tools. It can demonstrate physiological changes such

as vascularity and contrast time relation. Breast MRI reports may have high inter-observer and intra-observer variability. Therefore, using a common standard can be very useful for reducing discrepancies between the radiologists. There is no commonly accepted template for the MRI reports.

OBJECTIVES: To evaluate the quality of MRI breast reports.

To identify areas for improvement in reporting.

To provide recommendations for enhancing the accuracy of MRI breast reports.

MATERIALS AND METHODS: This retrospective study was conducted at radiology department of Shaukat Khanum Memorial Cancer Hospital Lahore.

Study Design: Retrospective study.

Setting: This study was conducted in Radiology Department of Shaukat Khanum Memorial Cancer Hospital Lahore.

Duration: This study included the patients presenting in our department From January 1 2024 Till 30 July 2024

Sample Size and Sampling Techniques: 150 MRI breast reports were evaluated. 16 parameters of MRI breast reporting were assessed as mentioned in international standardized ACR guidelines.

Inclusion and Exclusion Criteria

Inclusion: All MRI breast reports with breast masses were included in our study.

Exclusion: Those reports with no mass lesion were excluded.

RESULTS: International standardized reporting guidelines were followed and following were the results. Target of 100 % of MRI reports fulfilling all the standardised guidelines was not achieved. None of the parameters met the target of 100 % . 11 out of 16 parameters were present in more than 50 % of the MRI reports. 5 out of 16 parameters were present in less than 50 % of all MRI reports.

CONCLUSIONS: As target of 100 % of MRI reports fulfilling all the standardised guidelines was not achieved. So the results of this audit should be shared and discussed with the radiologists who assess and report breast MRIs. The audit should be repeated in 6 months. We should develop and implement standardized reporting templates to ensure consistency across all MRI breast reports. Introduce a checklist for radiologists to ensure all essential elements like lesion characteristics, BIRADS category, and management are consistently reported.

P-27**Angioinvasive fungal infection of brain with ruptured mycotic aneurysm of internal iliac artery in patient with B cell lymphoma- A rare and fatal complication****Mariam Malik***Department of Radiology, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan.**E-mail: mariammalik6429@gmail.com*

An arterial wall can become focally dilated due to infection; a condition known as mycotic aneurysm. The term "mycotic" was introduced by Willaim Osler in his Gulstonian lectures, where he described a patient with multiple aortic mycotic aneurysms and valve vegetations that resembled the appearance of a fleshy fungus. Mycotic arterial aneurysm is rare disease of the vessel wall. Although considered rare, the incidence is increasing over the last two decades because of the increased frequency of risk factors i.e. atherosclerosis and immunosuppression[1] The following case report describes the presentation, diagnosis, and rapidly progressive course of the disease which leads to the death of the patient with B cell Lymphoblastic Lymphoma .The patient developed mycotic aneurysm of the right internal iliac artery while undergoing chemotherapy.

P-28**interventional radiology and pain management for abdominal cancers****Shahzad Karim Bhatti***Department of Radiology, Mayo Hospital / King Edward Medical University, Lahore, Pakistan.**E-mail: shahzadkbhatti@gmail.com*

INTRODUCTION: Interventional radiology is rapidly growing super specialty of Radiology resulting in accurate results with reduced hospital stay. Interventional pain management is another area in which IR can help patients with targeted treatments which are mostly done blind without image guidance. Need for pain management in the gastroenterology cancers has increased as greater number of patients suffering from Liver, Gall bladder, Pancreatic, upper and lower GI malignancies. Procedures like Coeliac axis, Superior hypogastric and ganglion impar blocks for cancer pains can be done using ultrasound, fluoroscopic and CT guidance with increased accuracy and least complications making quality of patient's life better.

OBJECTIVES: The study aims to highlight the effectiveness of Interventional radiology in pain management under image guidance in abdominal cancer patients showing increased accuracy with decreased complications as compared to a routine approach

METHODS: A total of 148 patients were included in this cross-sectional descriptive study for a period of 18 months in Interventional radiology department of Mayo Hospital, Lahore, using ultrasound, angiofloro suite and 168 slice CT scanner. All the patients included were diagnosed with abdominal cancers and had a history of pain. Pain was assessed on VRS (Verbal rating scale) with increasing intensity of pain range from 0 to 10.

RESULTS: Out of 148 patients, 78 were female and 70 were male. 104 patients were referred from oncology department while 44 from other departments or referred from different hospitals. Of these 148 patients, 126 patients showed significant pain reduction. 14 had moderate reduction in pain and 8 showed mild decrease in pain intensity. In all the patients no serious complication was faced. Only 7 patients experienced orthostatic hypotension that resolved after IV fluids.

CONCLUSION: Image guided pain management procedures are targeted and very precise since every movement of the needle is being observed visually resulting in minimal chances of soft-tissue or vascular injury. Interventional pain management can be a useful companion in palliative as well as curative treatment in cancer patients.

P-29**Quality control re audit of MRI brain perfusion imaging****Mariam Malik, Syed Shahzad Hussain***Department of Radiology, Shaukat Khanum Memorial Cancer Hospital and Research Centre, Lahore, Pakistan.**E-mail: mariamalik6429@gmail.com*

INTRODUCTION: This Audit was performed to identify artifacts and pitfalls in MRI Brain perfusion imaging performed at SKM so that corrective measures and training can be done to improve the quality of MRI image acquisition.

OBJECTIVES: The purpose of this re audit is to identify weather previously set standards for MRI brain perfusion studies at SKMCH according to international standards are being followed or not. This re audit would further improve the quality of MRI brain perfusion studies being performed at SKMCH.

MATERIALS AND METHODS: This retrospective study was conducted at radiology department of Shaukat Khanum Memorial Cancer Hospital Lahore. Study Design: Retrospective study.

Setting: This study was conducted in Radiology Department of Shaukat

Khanum Memorial Cancer Hospital Lahore.

Duration: This reaudit included brain perfusion MRI performed at SKMCH from 01/09/2022 to 01/07/2024.

Sample Size and Sampling Techniques: 86 MR brain perfusion scans were included in our study.

Inclusion and Exclusion Criteria

Inclusion: All MRI brain perfusion scans with follow up imaging were included in our study.

Exclusion: Those MRI brain perfusion scans with no follow up were excluded.

RESULTS: According to the data and the analysis, the parameters like slice thickness, IV catheter size, injection rate, total acquisition time, pulse sequence, temporal coverage and FOV were followed according to the guideline with adequacy of 100%, however TR/TE and curve adequacy were not according to the guidelines with adequacy of less than 100%.

CONCLUSIONS: The result showed that there was improvement in parameters which were previously not adequate. Most of the parameters followed ASFNR recommended protocols, however TR/TE and curve adequacy were not 100 percent and still need to be adjusted.

P-30**Unusual and rare presentation of Neurofibromatosis type I with perianal neurofibroma and sphenoid wing dysplasia in an 8-year-old male****Hamza Javed***Department of Radiology, Ayub Teaching Hospital, Abbottabad, Pakistan.**E-mail: hjtk37@gmail.com*

INTRODUCTION: Neurofibromatosis type I (NF1) is a common autosomal dominant disorder characterized by a range of cutaneous, neurological, and skeletal manifestations. This case report describes an atypical presentation of NF1 in an 8-year-old male with perianal neurofibroma, extensive café-au-lait spots, and sphenoid wing dysplasia.

CLINICAL PRESENTATION: The patient presented with a history of multiple café-au-lait spots on the back and thighs, a painless swelling of the left upper eyelid with S-shaped ptosis for seven years. The left eye exhibited reduced sensitivity to red color, with vision of 6/36 compared to 6/6 in the right eye. Additional symptoms included a painless swelling on the medial side of the thigh and a painful, tender swelling in the left lumbar region persisting for five years. Family history was negative for hereditary diseases.

RADIOLOGICAL FINDINGS: MRI of the pelvis with and without IV contrast revealed an abnormal signal intensity area in the peri-anal region extending into the anal cleft, partially encasing the external anal sphincter, and showing subtle peripheral enhancement. Abnormal signal intensity areas were also noted in the subcutaneous tissues of the lower back and visualized sections of the right and left thighs. Further investigation identified left sphenoid wing dysplasia.

DIAGNOSIS: Based on clinical history and radiological findings, a diagnosis of NF1 with perianal neurofibroma and sphenoid wing dysplasia was established. The MRI findings of abnormal signal areas in the perianal region, lower back, and thighs were consistent with neurofibromas typical of NF1.

DISCUSSION: This case highlights the importance of comprehensive diagnostic imaging in identifying the full extent of NF1-related abnormalities. The combination of clinical symptoms and advanced imaging techniques is crucial for accurate diagnosis and effective management planning. Pediatric cases of NF1 require careful long-term follow-up to monitor for potential complications and guide therapeutic interventions.

CONCLUSION: This case underscores the diverse manifestations of NF1 and the need for a tailored, interdisciplinary approach to management.

P-31

Uncommon presentation of Mazabraud syndrome with fibrous dysplasia and intramuscular myxomas in a 42-year-old female

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INTRODUCTION: Mazabraud syndrome is a rare disorder characterized by the coexistence of fibrous dysplasia and intramuscular myxomas. This case report presents a 42-year-old female with fibrous dysplasia and intramuscular myxomas, exhibiting a rare presentation of Mazabraud syndrome. The patient had a three-year history of a mass lesion in the left calf, with no significant associated symptoms beyond the swelling.

RADIOLOGICAL FINDINGS: MRI revealed fibrous dysplasia with abnormal signal intensity in the left fibula and multiple intramuscular myxomas in the soft tissue. These findings were consistent with Mazabraud syndrome, showing characteristic features such as endosteal scalloping and cortical thickening, along with well-defined septated cystic lesions in the soft tissues of the leg and buttocks.

DIAGNOSIS: A diagnosis of Mazabraud syndrome was established based on the clinical presentation and MRI findings and confirmed by histopathology. Discussion: This case emphasizes the need for advanced imaging to accurately diagnose Mazabraud syndrome and guide management. Although intramuscular myxomas are benign, surgical intervention may be required in cases of pain or functional impairment.

CONCLUSION: Mazabraud syndrome presents unique diagnostic and management challenges. The combination of clinical and radiological findings is crucial for early detection and treatment. Regular follow-ups are recommended to monitor lesion progression and recurrence.

P-32

A tale of two outcomes: Ascariasis-induced bowel obstruction and acute pancreatitis

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BACKGROUND: Intestinal parasitic infections affect approximately 1.5 billion people globally, predominantly in impoverished communities lacking sanitation and clean water. Sub-Saharan Africa, China, South America, and Asia note a high prevalence. These infections exacerbate malnutrition and hinder socioeconomic development, highlighting the need for improved sanitation and targeted public health interventions.

DISCUSSION: *Ascaris lumbricoides* causes ascariasis, and the infection cycle starts with the ingestion of an egg, which then migrates through the body before maturing in the intestine. Children aged 2–10 are most affected, often asymptomatic but potentially facing severe complications like intestinal obstruction and malnutrition. The two cases of ascariasis illustrate severe complications. The first patient experienced septic shock and death due to intestinal obstruction, despite typical interventions. The second was pancreatitis, which required invasive procedures for diagnosis and management. Moreover, various imaging modalities, including x-rays, ultrasound, CT, and MRI, each have unique advantages and limitations for diagnosing ascariasis.

CONCLUSION: Ascariasis poses significant public health challenges; accurate diagnosis and prevention through sanitation and deworming are crucial for effective management.

P-33

How to approach vascular anomalies, an insight into tumors and malformations

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Vascular Anomalies are categorized into main two varieties, Vascular Tumors (benign, locally aggressive or borderline and malignant) and vascular malformations.

Vascular malformations are further characterized into capillary malformation (CM), Lymphatic Malformation (LM), Venous Malformation (VM), Arteriovenous Malformation (AVM), Arteriovenous fistula (AVF). Combined malformation have two or more vascular malformations in one lesion. Vascular malformation may be associated other anomalies and genetic abnormalities such as Klippel-Trenaunay syndrome: CM + VM +/- LM + limb overgrowth PIK3CA, Parkes Weber syndrome: CM + AVF + limb overgrowth RASA1, Servelle-Martorell syndrome: limb VM + bone undergrowth, Sturge-Weber syndrome: facial + leptomeningeal CM + eye anomalies +/- bone and/or soft tissue overgrowth GNAQ, Maffucci syndrome: VM +/- spindle-cell hemangioma + enchondroma IDH1 / IDH2.

The Radiological diagnosis involves plain radiography, grey scale and Color Doppler Ultrasound, MRI with contrast and in some cases CT Angiography. The main diagnosis depends upon correlation of ultrasound and MRI findings, which both are having no radiation hazard in paediatric population. Usually these anomalies have the genetic abnormalities PIK3CA, RASA1 / EPHB4, STAMBP, GNA11, GNAQ.

P-34

Evaluation of extent and severity of intervertebral disc degeneration in patients with low backache

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OBJECTIVE: To evaluate the extent of involvement and severity of intervertebral degenerative disc disease on MRI lumbar spine by using a modified pfirrmann grading system in patients with low back pain.

METHODOLOGY: This cross-sectional study was conducted at the radiology department of GMC hospital Sukkur from August 2021- January 2022. T2 weighted images of the MRI lumbar spines of 460 consecutive patients were retrospectively reviewed, and the severity of degeneration was assessed using a modified pfirrmann grading system. Patients with imaging features of degenerative disc disease on MRI lumbar spine were included in the study. Patients with a history of trauma, surgery and infection of the lumbar spine were excluded from the study. Data was collected and analyzed using SPSS version 21.

RESULTS: Disc degeneration was classified by a modified pfirrmann grading system score from 1-8, with no disc score in grades 1, 2 and 3. Other discs score were 13(2.82%), 41(8.9%), 187(40.6%), 125 (27.1%) and 94(20.4%) in grade 4,5,6,7 and 8 respectively.

CONCLUSION: This study concludes that a modified pfirrmann grading system is helpful in the assessment of the severity of lumbar spine intervertebral disc degeneration. It is an easy and reliable method and can be easily applicable for better correlation between radiological findings and clinical diagnosis. This grading helps in early detection and decides the mode of treatment; there is a lack of precise knowledge and data available in our country.

P-35

Perceived barriers to radiology training among house officers in a tertiary care hospital in pakistan: A gender-based analysis

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BACKGROUND: Despite the critical role of radiology in modern healthcare, pursuing a career in this field can be influenced by various barriers in resource-limited settings. This study aimed to identify and compare the perceived barriers to radiology training among intern-year doctors in Pakistan, focusing on gender differences.

METHODS: A cross-sectional survey was conducted among 91 intern-year doctors at Khyber Teaching Hospital, Peshawar, Pakistan. Participants were asked to rate the importance of various barriers to choosing radiology as a specialty. Statistical analysis was performed via chi-square and t-test to evaluate gender differences.

RESULTS: Among the 91 respondents, 42 (46.2%) were female and 49 (53.8%) were male. The top barrier to choosing radiology was "not having enough knowledge about the field," reported by 63 doctors (69.2%), with no significant gender difference ($p = 0.47$).

The second most cited barrier was "lack of exposure during medical school," noted by 55 doctors (60.4%). This barrier was more frequently reported by females (71.4%) than males (51.0%) ($p = 0.03$).

"Perception that radiology lacks patient interaction" was a significant barrier for 47 doctors (51.6%), with a higher prevalence among males (64.3%) than females (40.8%) ($p = 0.02$). Conversely, "radiology being too technology-driven" was reported by 38 doctors (41.8%), with no significant gender difference ($p = 0.32$).

Finally, "difficulty in securing radiology training positions" was mentioned by 35 doctors (38.5%), with a slightly higher, though not statistically significant, prevalence among males (44.9%) than females (30.9%) ($p = 0.14$).

CONCLUSION: The study highlights the need for targeted interventions to address perceived barriers and encourage more balanced career choices in radiology among intern-year doctors in Pakistan. Increasing exposure to radiology during medical school and emphasizing the importance of patient interaction in the field could be key strategies to achieve this goal.

P-36

A rare case of mandibular nerve schwannoma

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Tumors arising from peripheral nerves typically are derived from Schwann cells located in the peripheral nerve sheath, commonly from cranial nerves, but also from sensory or motor nerves and nerves of the sympathetic nervous system. Trigeminal schwannoma is a rare, benign, solitary tumor arising from the trigeminal nerve. Patients commonly present with symptoms such as facial

pain, paresthesia preauricular or parotid swelling. Imaging plays a key role in characterizing and determining the extent of the lesion. We present a case of 30-year-old female patient presented with complaint of left sided facial pain, paresthesia and feeling of swelling in the left side deep in the throat. The MRI indicated a large dumbbell-shaped solid-cystic mass extending across the left side of the base of skull base, from the infratemporal fossa to the middle cranial fossa through widening of foramen ovale. The CT showed bony remodeling of left sided pterygoid plates and posterior wall of left maxillary sinus. Case was labelled as Schwannoma of mandibular division of 5th cranial nerve. Although this lesion is rare, it should be considered in preoperative differential diagnosis as it has characteristic imaging findings.

P-37

Approach to MRI shoulder – normal versus abnormal

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Magnetic resonance imaging (MRI) is a crucial diagnostic tool with its multiplanar imaging, high resolution, and lack of ionising radiation. It is by far one of the best modalities for differentiating between fat, water, muscle, and other soft tissue. Shoulder related injuries require MRI evaluation as the clinicians depend upon the MRI as a roadmap for patient management. Radiologists interpreting MR images should have a detailed understanding of pertinent anatomy and knowledge of common and uncommon pitfalls to avoid during image interpretation. This is a systematic review on how to approach the interpretation of MRI shoulder, to identify normal variants and common pathologies.

P-38

Taking MRI breast to the next level: Exploring the emerging potential of MRI breast in detecting malignant lesions-a pictorial review of cases at NORI

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PURPOSE: MRI Breast in the recent years has emerged as one of the most sensitive and problem solving tool in breast imaging. Early detection of the disease has become a cornerstone of successful treatment in patients with breast cancer. With new and improved screening protocols emerging, MRI breast has found its place as an important tool in not only screening of high risk patients but also in follow up and pre surgical evaluation. Currently, contrast enhanced T1 weighted images, aided by dynamic curves are most important in picking up malignant lesions. However, administration of contrast poses some challenges including the added expense, prolonged scanning time and contraindications in some patients due to pre-existing medical conditions. Purpose of this study is to evaluate how helpful DWI and ADC imaging can be in detecting malignant lesions and whether these sequences can in future be used instead of contrast enhanced sequences in diagnosing suspicious breast lesions.

MATERIALS AND METHODS: This is a retrospective cross sectional study conducted at the Radiology Department at NORI where a total of 18 patients undergoing MRI breast were considered who had their scans done from 1st January 2024 till 1st September 2024. MRI was done on 1.5 T GE MRI machine Model number: optima 450 W. Out of these, 3 patients had MRI done for screening purposes while 17 were biopsy proven cases of CA breast. 18 enhancing lesions were identified, all of which were biopsy proven malignant

lesions, and their contrast enhanced subtracted as well as corresponding DWI and ADC images were reviewed. A pictorial review was conducted and subjective analysis of these lesions were done by two radiologists independently.

RESULTS: Out of the 18 enhancing lesions, majority showed a good correlation between contrast enhancement and restricted diffusion. Most of the enhancing breast lesions showing type II and III curves had corresponding areas of restricted diffusion, when compared with normal adjacent breast parenchyma.

CONCLUSION: DWI and ADC imaging holds a promising potential in substituting contrast enhanced MRI imaging for detecting malignant breast lesions and can be helpful in patients who have contraindications to MRI contrast media. This can also be helpful to reduce scanning times and reducing cost of the scan. The study has its limitations given the small sample size and a more quantitative analysis using ADC values may prove more efficient.

P-39

Resolving the dilemma-hepatic mets vs hemangioma: Using single phase contrast CT to differentiate between hepatic mets and hemangiomas in oncology patients

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OBJECTIVE: The purpose of this study was to optimize evaluation of single phase contrast enhanced CT in differentiating between hypervascular metastases and hemangiomas. If interpretation of single phase CT can be optimized, the need for further investigations including triphasic CT, MRI or correlative ultrasound can be avoided which will reduce the burden on the radiology department and also reduce delays in decision making in the course of the patient's management. The sensitivity and specificity of enhancement patterns were evaluated in which hepatic lesions were characterized as either showing a globular or non globular pattern of enhancement. The term globular enhancement was defined as presence of enhancing nodules measuring less than 1 cm noted within the lesion. Other imaging features including presence or absence of a hypodense halo and density of enhancement with reference to aorta were also analysed.

MATERIALS AND METHODS: CT appearance of 50 lesions was retrospectively seen in 50 patients who had a known malignancy and were undergoing treatment in NORI (Atomic Energy Cancer Hospital) Islamabad. All CT examinations were done using non helical technique after injection of 150 ml of contrast and images taken in the portovenous phase. Patients with hemangiomas showed stability for at least one year after the CT. Patient with hepatic mets has biopsy proven lesions or showed progression in size over time. Only the contrast enhanced images of liver were evaluated and rest of the study was not reviewed to reduce observer bias. Each lesion was evaluated on the basis of three features: 1) presence or absence of globular enhancement, 2) enhancement pattern iso, hypo or hyperdense to aorta, 3) presence or absence of hypodense perilesional halo. Diagnostic conclusion was made for each lesion on this basis.

RESULT: The presence of globular enhancement proved to be the most specific and sensitive imaging feature which differentiated between hemangioma and mets in a patient with a known malignancy. Presence or absence of hypodense halo and contrast density relative to aorta were less specific markers.

P-40

Ultrasound-guided preoperative wire localization of Post-Cesarean Section abdominal wall endometrioma

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Anterior abdominal wall endometriosis (AWE) refers to the presence of endometrial tissue superficial to the peritoneum, lying within the subcutaneous

tissue. It is rare, and the proposed etiology is iatrogenic implantation of endometrial cells during surgery, with Caesarean section accounting for more than half of the cases. Ultrasound, computed tomography, or magnetic resonance imaging can be used to diagnose. In this case report, we share the experience of successful utilization of the imaging-guided wire localization technique for surgical removal of the post-cesarean section abdominal wall endometrioma, which resulted in better patient outcomes. A 29-year-old female, with two previous C-sections presented to the gynecology clinic with a history of lump at the C-section scar site for 2 years. The pelvic MRI confirmed the diagnosis of scar endometriosis. The patient underwent excision of scar site endometriosis after ultrasound-guided wire localization. The lesion was excised completely, which was further confirmed on specimen sonography and histopathology.

P-41

Economic and diagnostic advantages of contrast-enhanced mammography: A study in a lower middle-income country

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OBJECTIVE: This study evaluates the initial experiences, challenges, and cost-analysis of contrast-enhanced mammography (CEM) in a lower middle-income country.

METHODS: Twenty-three CEM examinations were reviewed from January 1, 2022, to March 31, 2023. Patient demographics, prior imaging, clinical indications, enhancement patterns, and histological diagnoses were among the data points collected. A comparison between cost-effectiveness of CEM and Magnetic Resonance Imaging (MRI) was also done, considering equipment, contrast agent, procedural, and personnel expenditures, as well as equipment lifespan.

RESULTS: The study included 23 patients (mean age: 49 years), 19 of whom had malignant contrast enhancement. Conventional mammography missed the majority of these instances (13 of 19). Grade II invasive ductal carcinoma was the most common type and pre-operative staging was the most common indication of CEM. CEM provided considerable cost reduction (>70%) as compared to MRI. The initial challenges included a shortage of experienced personnel and decreased physician awareness about the service, which were addressed by teaching sessions and email service. The cost analysis found considerable savings on equipment, contrast agent, and procedure costs. The average time to perform and report CEM was substantially shorter than that for MRI.

CONCLUSION: CEM is a cost-effective and efficient diagnostic tool for breast lesion detection and characterization in low-income settings. It has the potential to overcome the limitations of traditional mammography and MRI.

P-42

Imaging of a rare entity: Giant patent ductus arteriosus aneurysm and its complications

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We report a rare case of concomitant giant patent ductus arteriosus aneurysm with pulmonary artery aneurysms and pulmonary thromboembolism in a 8-year-old female. On echocardiography, a large aneurysmal mass was seen communicating with main pulmonary artery and aorta with vegetations in it.

A three-dimensional multi-planar reconstruction with CTA validated and verified the diagnosis and interpreted its complications. Patent ductus arteriosus aneurysms is a rare but important entity to recognize at cross-sectional imaging. Report should outline Aneurysm in detail and its relations to help guide clinical decision making between conservative versus surgical management and spot potential complications to prevent life-threatening situations.

P-43

An unusual anatomical variance: Malignant course of anomalous left main coronary artery

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Rarely seen, anomalous coronary arteries are generally considered as benign anatomical variants. Anomalous origin of the left main coronary artery (LMCA) from the right coronary sinus is a unique variation that may lead to myocardial ischemia or sudden cardiac death. We present the case of a 49-year-old man, with complain of exertional chest pain and dyspnea. A left ventricle wall motion abnormality was identified through a transthoracic echocardiogram. The patient had a stress cardiac scan that showed reversible mid to basal left ventricular myocardial ischemia, indicating possible balanced ischemia. Difficulty in identifying and engaging the ostium of the left main artery occurred during the cardiac catheterization procedure. CT angiography (CTA) was employed to provide accurate anatomical information on origin and course. CTA with 3-dimensional reconstruction confirmed an anomalous origin, with the LMCA arising from the right coronary cusp with inter-arterial course.

P-44

The crucial role of FDG-18 PET/CT in detection of breast cancer; Pictorial review of departmental cases

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OBJECTIVE: Different patterns of FDG uptake in different types and presentation of breast cancer

STUDY SIGNIFICANCE: To assess the role of FDG PET /CT in different type of Breast cancer patients stratified on the basis of Age, Histologic type, Metastatic tendencies. As well as role of PET CT in treatment response and recurrence of the disease.

Metabolic PET, most commonly 18F-fluorodeoxyglucose (FDG) PET/computed tomography (CT), has a major impact on the imaging of breast cancer and can have important clinical applications in appropriate patients. FDG PET/CT outperforms conventional imaging in locally advanced breast cancer. It accurately predicts treatment response in the early as well as metastatic disease. FDG-PET/CT has proven high prognostic values in patients with breast cancer. The FDG avidity of a breast cancer is influenced by its receptor status, grade, and histologic type. ER-negative tumors have significantly higher FDG avidity than do ER-positive tumors, and grade 3 cancers have statistically significantly higher FDG avidity than do lower-grade malignancies. ILC differs from IDC in its patterns of metastatic spread. ILC has a greater propensity to metastasize to the gastrointestinal tract and retro peritoneum, areas that are often difficult to assess with FDG PET because they are common sites of physiologic and variable FDG avidity.

Breast cancer patients under the age of 40 may benefit from systemic staging with FDG PET/CT at earlier stages. young breast cancer patients often have more aggressive tumors.

We have a pictorial evidence of cases presented to PET/ CT (radiology) department of JPMC displaying the role of FDG PET in accurately determining distant metastasis (bony, lymph nodes, liver and lung), systemic staging of breast cancer, disease recurrence and treatment (surgery , chemoradio) response keeping histologic grading and age as major analyzing factors.

CONCLUSION: FDG PET/CT has been found to be useful for the evaluation of suspected disease recurrence and compares favorably with other imaging modalities, such as CT, bone scan, or MRI.

P-45

Role of US-guided FNA in thyroid nodule: A comparative study in Karachi, Pakistan

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PURPOSE: Role of US -guided FNA in thyroid nodule cannot be denied.

MATERIALS AND METHODS: From January 2020 to July 2023, seventeen nodules from seventy patients (45 women and 25 men) were reviewed retrospectively with US-guided FNA procedure in thyroid nodule. The Bethesda system for reporting thyroid cytopathologic results was used to assign FNA findings. the sensitivity, specificity, positive and negative predicted values and accuracy of US-guided FNA were evaluated in patients in which core-needle biopsy (CNB) cannot be done. FNA is minimally invasive, safe, and performed as outpatient procedure. However, this depends on technical skills, number of aspirated samples & preparation of slides. Ultrasound feature that are indication of FNA include, single /multiple thyroid nodules specifically if these are smaller in size (less than 1 cm or if the nodule, beside carotid artery or in which possibility of CNB is less due to size characteristics limitations.). Nodules that are diagnosed as benign on FNA should be monitored with close follow-up Ultrasound scans. The possibility of getting desired results after FNA and to avoid inconclusive results is increased by having these three steps; 1. Aspiration of fluid from cystic part of nodule in syringe. 2. Making a cell block of specimen from the solid part of the nodule and send it in formalin 3. Making the adequate slides of specimens taken in step 2 and fixed it with ethylene alcohol.

RESULTS: 80% specimens (50 out of 70) were adequate for histological diagnoses in differentiating neoplastic (malignant and benign) from nonneoplastic lesion of thyroid nodule with 20 patients, reported malignant (40%), 14 patients received results as benign lesion in thyroid (28%) and 16 patients received results as inflammatory nodules (32%).

CONCLUSION: Role of FNA in thyroid nodule cannot be denied especially in patients in which CNB cannot be done due to any limitations but this requires experienced skills with properly followed steps mentioned above to get conclusive results.

P-46

The hidden dangers of uncontrolled diabetes: Septic embolism and thrombosis

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BACKGROUND: Diabetes mellitus (DM) patients experience a hypercoagulable state due to hyperglycemia, leading to impaired fibrinolysis

and increased coagulation factors. This heightens the risk of thrombosis and venous thromboembolism. Septic pulmonary embolism (SPE) is a rare condition where infected blood clots move from a primary infection site to the lungs, typically diagnosed through chest imaging showing multiple, bilateral peripheral pulmonary nodules, often with cavitations.

A 41-year-old diabetic male presented with right lumbar pain, high-grade fever, weakness, and altered sensorium. Tests revealed positive serum ketones, hypernatremia, and abnormal renal and liver function. A CECT scan of the abdomen, pelvis, and limited lung bases showed multiple abscesses in the right pelvic girdle and upper thigh muscles, venous thrombosis in iliac veins, and multiple bilateral pulmonary nodules. An HRCT confirmed scattered bilateral pulmonary nodules with a positive feeding vessel sign, suggesting septic emboli.

CONCLUSION: This case highlights the elevated risk of venous thromboembolism in uncontrolled diabetes, leading to complications like septic pulmonary embolism. The interplay between hyperglycemia and coagulation abnormalities necessitates prompt recognition and imaging to identify related conditions. Clinicians should maintain high suspicion for thromboembolic events in diabetic patients with atypical infections.

P-47

AI meets Radiomics: Revolutionizing medical imaging for next-generation precision diagnosis

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This review investigates the evolving relationship between artificial intelligence (AI) and radiomics, emphasizing their joint potential to revolutionize medical imaging and enable next-generation precision diagnosis. By integrating recent research and technological advancements, we analyze how AI algorithms improve the assessment of radiomic features derived from medical images, resulting in enhanced disease characterization, prognosis, and treatment strategies.

The article highlights significant applications across multiple medical fields, including oncology, neurology, and cardiology. Through the integration of machine learning and quantitative imaging, AI-enhanced radiomics offers exceptional insights into disease patterns, predictions, and treatment effectiveness, marking the onset of a new era in precision medicine.

P-48

Brachial plexus injuries on MRI: Techniques and tips for optimal imaging

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Brachial plexus injuries (BPIs) can severely affect upper limb function and arise from various traumatic or pathological causes. Magnetic resonance imaging (MRI) is recognized as the preferred method for diagnosing these injuries, owing to its exceptional soft tissue contrast and capacity to visualize nerve structures. This article outlines effective MRI techniques for assessing BPIs, including optimal patient positioning, coil selection, and essential imaging sequences such as T1-weighted and T2-weighted images, along with advanced methods like diffusion tensor imaging (DTI). We discuss typical imaging findings linked to different types of nerve injuries, such as neuropraxia, axonotmesis, and neurotmesis. Additionally, we provide practical recommendations for enhancing imaging quality and accuracy, highlighting

the significance of collaboration with clinical teams. By utilizing these strategies, radiologists can enhance diagnostic precision and support effective management of brachial plexus injuries.

P-49

When trauma strikes: Insights from a radiological case of carotid-cavernous fistula

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Post-traumatic carotid-cavernous fistula (CCF) is an uncommon vascular disorder that can occur following head injury and may lead to serious complications if not promptly addressed. This case report presents a 26-year-old male who experienced worsening visual disturbances, proptosis, and pulsatile tinnitus after a motor vehicle accident. Through the use of CT angiography (CTA), a direct CCF between the internal carotid artery and the cavernous sinus was identified. This case underscores the pivotal role of advanced imaging in diagnosing traumatic CCF and highlights the importance of timely intervention to prevent further complications.

P-50

Comparison of number of spotty calcifications on cervico-cerebral computed tomography angiography in patients with and without ischemic stroke

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INTRODUCTION: Vascular calcification is an important component of advanced atherosclerosis and a known risk factor for stroke in the general population. Cervical carotid artery calcification, along with calcifications in several specific segments of intracranial arteries is frequently observed on cranio-cervical computed tomography angiography (CTA). Noninvasive quantification of vascular calcification is also feasible with CTA.

OBJECTIVES: To compare the mean number of spotty calcifications cervico-cerebral computed tomography angiography in patients with stroke and without stroke.

Study design: Case control study.

Settings: Department of Diagnostic Radiology, CMH Multan.

MATERIALS & METHODS: A total of 30 cases and 30 controls patients who ranged from 40-65 years of age of both genders were included. Previous history of stroke, carotid artery dissection and history of vasculitis were excluded. All the patients were undergone cervicocerebral CT-angiography on a 160-slice CT scanner (Toshiba) according to standard angiography protocol. All the CT-angiographies was reported. We selected 11 segments commonly affected by atherosclerosis including both the carotid arterial system and the vertebrobasilar circulation.

RESULTS: In this study, On CT angiography, we found that mean number of spotty calcifications in the stroke group was markedly more prevalent than that in the control group (7.40 ± 1.50 versus 1.23 ± 0.86 , $P = 0.0001$).

CONCLUSION: This study concluded that ischemia stroke is associated with high incidence of spotty calcification and a distinct spatial pattern on cervicocerebral computed tomography angiography.

P-51**Malignant anomalous origin of LAD****Shadab Kanwal***Department of Radiology, Rawalpindi Institute of Cardiology, Rawalpindi, Pakistan.**E-mail: kanwalshadab@yahoo.com*

The anomalous origin of the left anterior descending artery (LAD) following an interarterial course is considered a malignant condition, as it can lead to sudden cardiac death. This case involves a young man who presented with chest pain. After initial investigations at our cardiac center, a CT coronary angiography (CTCA) was performed, which revealed an anomalous origin of the LAD from the proximal part of the right coronary artery. The artery courses between the right ventricular outflow tract and the aortic root, ultimately reaching the anterior interventricular groove. The malignant LAD exhibits a milking effect during systole. The left main stem (LMS) bifurcates into a rudimentary small LAD and the left circumflex artery (LCx). The rudimentary LAD provides septal and diagonal branches.

P-52**Enhancing stroke diagnosis and management: The role of AI and Teleneurology in improving patient outcomes in a single centre retrospective study****Shadab Kanwal***Department of Radiology, Rawalpindi Institute of Cardiology, Rawalpindi, Pakistan.**E-mail: kanwalshadab@yahoo.com***P-53****Uncommon presentation: Pneumatosis coli in a Thalassemia Major patient****Anwar Kamal***Department of Radiology, Liaquat National Hospital (LNH), Karachi, Pakistan.**E-mail: anwarkamal93@gmail.com*

Pneumatosis coli, a rare condition where gas collects within the colonic wall, is typically an incidental finding during imaging, as most patients are asymptomatic. In this case report, we explore an unusual instance of pneumatosis coli in a patient with thalassemia, a rare association not commonly documented in medical literature. While the patient did not exhibit any significant symptoms, potential contributing factors include bowel ischemia due to chronic iron overload, hypoxia from long-standing anemia, and alterations in gut microbiota linked to the disease and its treatments. This case emphasizes the need to consider pneumatosis coli in thalassemia patients, even when they show no symptoms, and underscores the importance of thorough evaluation and close monitoring to prevent potential complications. This is particularly crucial in the significance of collaborating with patients with underlying chronic conditions that may contribute to disease progression. By presenting this rare association, the report aims to raise awareness of the possible mechanisms involved and encourages heightened vigilance in both diagnosing and managing similar cases. In collaboration with clinical teams. By utilizing these strategies, radiologists can enhance diagnostic precision and support effective management of brachial plexus injuries.

P-54**Putty kidney: A rare manifestation of renal tuberculosis****Anwar Kamal***Department of Radiology, Liaquat National Hospital (LNH), Karachi, Pakistan.**E-mail: anwarkamal93@gmail.com*

Tuberculous putty kidney is a rare but serious complication that can occur after long-standing genitourinary tuberculosis. In this condition, the kidney becomes severely damaged, with tissue destruction and calcification, leaving it shrunken and filled with a thick, putty-like material. Although advances in tuberculosis treatment have reduced its occurrence, it still poses a risk in areas where TB is common and for people with weakened immune systems. Symptoms can be vague or even absent, making diagnosis a challenge. However, imaging often shows characteristic signs, like dense calcifications, that help point to the condition. This case report describes a patient's symptoms and imaging results, stressing the need for early detection and careful differentiation from other kidney diseases.

P-55**Rare case of ovarian torsion during first trimester****Farayha Khalid, Saba Khilji, Abdullah Ahmed Khan Niazi***Department of Radiology, Akbar Niazi Teaching Hospital Islamabad, Pakistan.**E-mail: farayakhalid@outlook.com*

Ovarian torsion (OT) is a gynecological emergency which can cause maternal and fetal morbidity. Torsion of ovary is due to complete or partial twisting of ovary around vascular axis or pedicle leading to obstruction of arterial and venous outflow, internal hemorrhage, and necrosis. The exact etiology of ovarian torsion is unknown, predisposing factors are increased size of cyst, free mobility and long pedicle. Risk of ovarian torsion increases 5 folds during pregnancy. Incidence is 5 in 10,000 pregnancies. Diagnostic imaging modalities include ultrasonography and magnetic resonance imaging (MRI). We present a 34-year-old woman with a 7 weeks 5 days pregnancy presented to emergency department with severe pelvic pain radiating to left lumbar region for 1 day.

Ultrasound abdomen pelvis showed bulky left ovary having no vascularity on color doppler and large para ovarian cyst. Differential of adnexal/para ovarian cyst with ovarian torsion were made. She underwent laparotomy and left sided cystectomy and salpingo-oophorectomy was done. Her pregnancy was followed and she delivered healthy baby at term. This case highlights that OT should be considered as suspicion in patients with suspected acute abdomen during pregnancy.

P-56**Takayasu vasculitis presenting as Subclavian steal syndrome in a young Pakistani woman at Rawalpindi institute of cardiology, Pakistan: A case report****Ummarah Kamran***Department of Radiology, Rawalpindi Institute of Cardiology, Rawalpindi, Pakistan.**E-mail: ummarahkamran1@gmail.com*

BACKGROUND: Takayasu arteritis (TAK) is a rare, systemic, immune mediated large-vessel vasculitis of unknown etiology that most commonly

affects women of childbearing age. It is a granulomatous inflammation of the aorta and its major branches that leads to thickening, narrowing, occlusion, or dilation of the affected arteries. The subclavian steal syndrome occurs due to the reversal of flow in the vertebral artery toward the subclavian artery (during periods of increased demand) because of stenosis/occlusion of the proximal subclavian artery. It presents with transient ischemic episodes of the posterior cerebral circulation.

CASE: Our patient is a 25-year-old Pakistani woman, presented with subclavian steal syndrome as the initial presentation of TAK. She was referred to radiology department by the neurologist for a 4-vessel CT angiography for syncopal episodes. Examination findings revealed non-palpable brachial and radial pulses of the both upper limbs with non-recordable blood pressure readings in both arms.

Investigation revealed elevated CRP and normocytic anemia. CT angiography of carotids and aorta showed smooth circumferential intimal thickening of the aorta, on-visualization of both subclavian arteries. She is currently being followed by the vascular surgery and rheumatology teams who have recommended medical management till the acute phase is over. The patient is being managed with steroids and methotrexate but her symptoms are not improving. Her routine follow-up with rheumatology team is scheduled after every 3 weeks.

CONCLUSION: We emphasize the importance of understanding the varied clinical spectrum of TAK and the need to have a high index of suspicion for TAK in a young female with recurrent syncope and upper extremity intermittent numbness and paresthesia.

P-57

The mortal cusp! all coronary arteries arising from the right coronary cusp, at Rawalpindi institute of cardiology-a rare Taxonomy

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BACKGROUND: Coronary artery anomalies are usually encountered incidentally during coronary angiography. Here, we review common coronary anomalies, discuss their anatomy with

CASE REPORT: We present a case of 47 year old man who presented to OPD for work-up of occasional chest pain. His baseline investigations, ECG and echocardiography was normal and he was advised CT coronary angiography (CTCA) to rule out coronary artery disease. CTCA showed anomalous origin of all three coronary arteries from separate ostia from right coronary cusp. This is extremely rare anomaly amongst the coronary artery anomalies, making it highly eligible to be reported from our institution. The patient is being managed conservatively with close follow-ups

CONCLUSION: Coronary CT angiography can pick coronary artery anomalies and malignant course if present, quiet efficiently. Hence, all patients with chest pain should be evaluated properly. This can prompt timely management t and reduce risk of sudden cardiac death in these individuals.

P-58

A rare presentation of Superior mesenteric artery syndrome and Celiacomesenteric trunk in tandem; A case report

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Superior mesenteric artery (SMA) syndrome is a rare disorder, where aortomesenteric angle reduction leads to distal duodenal compression between

the SMA and abdominal aorta. The celiacomesenteric trunk (CMT) is a rare anatomic variant wherein the celiac trunk and the SMA arise from the abdominal aorta together.

The patient, a 23 year old male who had recently undergone marked weight loss owing to ongoing drug addiction, presented with right hypochondrial pain, and vomiting, with associated tenderness. Imaging and laparotomy revealed aortomesenteric distance reduction, distal duodenal compression, with proximal gastric and duodenal dilatation, and a common origin of the celiac trunk and SMA.

SMA syndrome is commonly seen in cases of rapid, severe weight loss, due to retroperitoneal fat loss which decreases the aortomesenteric angle. Initial management is often conservative, aimed at restoring fat reserves. Surgical methods may be employed in refractory cases.

SMA Syndrome is a rare, but significant disorder that should be kept in mind with patients presenting with obstructive symptoms after marked weight loss. Radiological investigations, particularly CECT, provide an effective method with which to identify and thus diagnose these conditions.

P-59

Atypical presentation of non-ketotic hyperglycemia in a young patient with type I diabetes

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Hyperosmolar non-ketotic state (HONK) or hyperosmolar hyperglycemic state (HHS) is a complication of diabetes mellitus in which high blood sugar levels cause increased osmolarity without any significant ketoacidosis. 13-year aged female presented in ER with fever, altered state of consciousness and single episode of tonic-clonic fits. On examination, no focal neurological deficit. Patient was known case of type I DM, taking insulin with poor compliance. Her random sugar level was 750 mg/dl, HbA1C was 13 and urinary ketones were insignificant at presentation. MRI brain showed diffuse sub cortical T2/FLAIR hypointense signals in bilateral frontal, parietal and temporal lobes with associated T1 gyriform hyperintensities. Patient was managed on the line of hyperosmolar non-ketotic hyperglycemia (HONK) and got improved. Aim of this case report is to point out the atypical presentations of hyperosmolar hyperglycemic states in type 1 pediatric diabetic patients.

P-60

Extensive idiopathic retroperitoneal fibrosis with chronic aortitis; A complex vascular and retroperitoneal involvement in young female

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Idiopathic retroperitoneal fibrosis (RPF) is a rare fibro-inflammatory disorder, characterized by inflammation and fibrosis typically involving abdominal aorta and surrounding retroperitoneal structures. This is part of the IgG4-related disease spectrum and can coexist with autoimmune conditions. Chronic peri-aortitis involving thoracic aorta is an extension of RPF. This study presents a case with a large extent of vascular and retroperitoneal involvement. A diabetic and hypertensive female aged 45 years, presented with right renal pain and hematuria for the last three days. Contrast-enhanced CT abdomen demonstrated a fibro-inflammatory mass circumferentially encasing the thoracic, abdominal aorta and its branches with severe stenosis of the left renal ostium. There are extensive perinephric and periureteric inflammatory changes involving the mesorectal fascia and presacral space consistent with chronic aortitis and RPF. There was no sign of aortic aneurysm or dissection.

This case highlights a rare presentation of chronic aortitis with idiopathic RPF resulting in extensive retroperitoneal involvement. Early recognition and diagnosis using imaging is critical for managing complications and guiding therapeutic decisions.

P-61

Herlyn-Werner Wunderlich syndrome

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Herlyn Werner Wunderlich syndrome acronym of OHVIRA (Obstructed Hemivagina with Ipsilateral Renal Agenesis) is a rare Mullerian duct anomaly. A girl presented to us with dysmenorrhea, complain of abdominal pain for 3 months. Ultrasound showed absent right kidney, and suspicion of right adnexal mass pushing uterus to left for which CT was suggested and showed no visualization of right kidney, enlarged left kidney measuring 11.1 x 5.0 cm, right adnexal mass mistaken on usg revealed to be distended right uterine horn with hyperdense fluid. MRI was done for confirmation which revealed duplication of uterine cavity, cervix and vagina with vertical septum. Right horn is distended with hyperintense fluid signals on T1WI and T2WI images (haematocolpos). Exploratory laparoscopy was done followed by resection of vaginal septum for obstructed hemivagina. This case highlights pivotal role of imaging in establishing the diagnosis and paving the road for subsequent operative management to alleviate patient's symptom.

P-62

The curious case of air everywhere

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Necrotizing peritonitis is a severe, life-threatening and rare complication of peritonitis characterized by inflammation and necrosis of the peritoneum. It is most commonly associated with intra-abdominal infections, often secondary to gastrointestinal perforation or surgery. Here, we present a case of necrotizing peritonitis in a 50-year-old female patient who was diagnosed with squamous cell carcinoma of distal esophagus and underwent laparoscopic feeding jejunostomy. She was subsequently discharged home. However, her condition worsened, and she was received back in the emergency department with the presenting complaints of severe abdominal pain associated with projectile nonbilious vomiting.

Emergency laparotomy confirmed the diagnosis. Despite aggressive management, the patient's condition deteriorated rapidly, leading to multiorgan failure and ultimately, she could not survive. This case highlights the importance of early recognition and prompt intervention in necrotizing peritonitis to improve patient outcomes.

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Lipoid pneumonia as a complication of chronic constipation treatment

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Lipoid pneumonia is a rare but significant complication arising from the aspiration of mineral oil used in treating chronic constipation, particularly in

children. This condition manifests through various clinical and radiological features, primarily due to the inhalation of lipids, leading to pulmonary inflammation. We had a 28 years old male patient with low intellectual level taking mineral oil as laxative for treating chronic constipation. He presented to us with complain of cough, dyspnea, bloody sputum and low-grade fever for 2 months. HRCT chest was done which showed multifocal peripheral consolidative opacities with central low (fat density) attenuation involving both upper and lower lobes of bilateral lungs with interlobular septal thickening predominantly in bibasal segments. Based on these findings, diagnosis of lipoid pneumonia was established given the clinical history of the patient. Mineral oil intake was stopped and patient was put on supportive antibiotic therapy, and gradually showed resolution of symptoms.

P-64

MRI: a problem solving tool for detecting uterine congenital abnormalities and subsequent infertility

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OBJECTIVE: The objective of this study is to explore the role of MRI imaging in the evaluation of recurrent reproductive failure caused by primary infertility and determine the incidence of primary infertility due to congenital uterine anomalies. Simultaneously, this study aims to recognize and categorise common congenital uterine anomalies based on the American Society for Reproductive Medicine classification system, while also highlighting the clinical significance of each anomaly.

STUDY SIGNIFICANCE: Women with congenital abnormalities of the uterine cavity are known to have higher incidence of infertility, repeated first trimester spontaneous abortions, fetal intrauterine growth retardation, fetal malposition, preterm labour and retained placenta. This study would highlight the significance of MRI as an investigative tool to detect and establish the accuracy of MRI in detecting such cases so it can be considered a diagnostic tool, allowing for treatment to be provided in a more streamlined and efficient way.

METHOD: This cross sectional study was conducted in the Radiology Department of Jinnah Postgraduate Medical Centre, Karachi. A total of 78 patients were chosen from the Gynecology Outpatient Department via consecutive non probability sampling, and enrolled in this study. Participants included individuals with primary infertility, aged between 20-45 years. Patients with secondary infertility were excluded. Consenting individuals were subjected to imaging via MRI, and imaging was used to determine the cause of infertility. All of the data obtained throughout the history, examination, and investigation was entered into a performa. Collected data was analysed using SPSS version 20.

RESULTS: The study highlighted the significance of MRI in categorising common congenital uterine anomalies and choosing an appropriate treatment. Out of the 78 patients enrolled in the study, 51 individuals were found to have a congenital uterine anomaly. Furthermore, of these 51 patients, 16 had a Mullerian Duct Anomaly (MDA) and 20 had submucosal fibroids. Additionally, 31 individuals were found to have fallopian tube abnormalities, 9 were reported to have polycystic ovarian syndrome and 2 individuals showed no findings on MRI.

CONCLUSION: The study concluded that MRI is a reliable diagnostic technique for diagnosing congenital uterine abnormalities in females associated with primary infertility. Anomalies in the uterus, ovaries and fallopian tubes are responsible for infertility in females and, infertility was commonly caused by fallopian tube abnormalities, submucosal fibroids, and Mullerian Duct Anomalies.

P-65**Recurrent abdominal pain-A manifestation of parathyroid adenoma****Muneeb Ahmad***Department of Radiology, Lahore General Hospital, Lahore, Pakistan.**E-mail: muneeb316161@gmail.com*

A Brown tumor, also known as osteitis fibrosa cystica, is one of the manifestations of hyperparathyroidism.

A young aged girl presented to us with epigastric pain more on right hypochondrium. Ultrasound showed cholelithiasis for which cholecystectomy was done. After 3 months, patient again presented to us with ongoing similar pain in epigastrium radiating to back. S. Amylase was 473 units / liter and S. Lipase was 706 units / liter. Serum calcium was 19.9 mg/dl. She was being managed on the line of pancreatitis. Her CT abdomen and pelvis was advised to look for pancreatic status and any associated complications. On CT, pancreas was homogeneously enhancing with no intra or peripancreatic fluid collections or necrosis, however, there was a lytic expansile lesion noted in left iliac bone. Pancreatitis in absence of any additional risk factor, raised calcium levels and lytic bone lesion led us towards the strong suspicion of Brown tumor and hyperparathyroidism. For which labs and radiological work up was done. Parathyroid levels were markedly raised, 1130 pg/dl. Parathyroid scan showed focal area of radiotracer retention at the lower pole of left lobe of thyroid and concluded as left parathyroid adenoma.

Surgery was performed and adenoma was excised and sent to biopsy which confirmed parathyroid adenoma with no malignant features. PTH and serum calcium were normalised post operative.

Pancreatitis with hypercalcemia should be evaluated for primary hyperparathyroidism as can be seen in our case report.

P-66**Deep infiltrating pelvic endometriosis. An insight on MRI pelvis. A case-based discussion****Gulnaz Shafiqat***Department of Radiology, Aga Khan University Hospital (AKUH), Karachi, Pakistan.**E-mail: gulnaz.shafiqat@aku.edu*

Pelvic endometriosis especially deep infiltrating type is a debilitated condition affecting the female in their reproductive age. It is unfortunately also associated with infertility. Diagnostic laparoscopy is considered the gold standard for endometriosis, but it is invasive with possible false negative results. Nowadays MRI pelvis is the most sensitive and non-invasive method to diagnose the disease and in follow up response to therapy. MRI is highly accurate for the diagnosis of Deep Infiltrating Endometriosis however the diagnostic results of MRI depend on an accurate imaging technique and on the comprehension of specific MR-findings. This Presentation will focus on MRI protocols, findings pertinent to DIE on MRI with case based discussion. This will be followed by literature review.

P-67**Pixels and principles: Navigating the ethical labyrinth of artificial intelligence in radiology****Ali Mansoor***Department of Radiology, Lahore General Hospital, Lahore, Pakistan.**E-mail: dr.alimansoor@hotmail.com*

In this time of artificial intelligence (AI) boom, the radiologist of today finds himself at crossroads as AI is all set to revolutionize and completely change

the existing norms of how we practice radiology. Keeping the other problems aside, one important aspect of AI integration into radiology is ethical issues. These may be classified into ethics of data, ethics of algorithms and trained models and ethics of practice. The objective of this poster is to introduce the radiologist of today with these ethical dilemmas as ultimately he will be integral part of process from the development of AI applications to their application in the clinical practice of radiology. We will briefly outline the main ethical concerns associated with AI integration into radiology and the possible solutions that can address these and make this transition ethically acceptable to all the stakeholders.

P-68**The controversial case of posterior fossa lesion which made radiologists to rethink and reevaluate****Abdul Samad***Department of Radiology, Jinnah Postgraduate Medical Centre (JPMC), Karachi, Pakistan.**E-mail: drshaikhsamad@gmail.com*

Early and accurate differentiation is critical for controversial lesions along with therapeutic interventions, as management strategies vary widely depending on the underlying cause. We reported a 12 years old female known case of posterior fossa lesion (post-surgical, operated remotely) present significant diagnostic challenges due to the overlapping abscess (operated remotely), after period of 2 months again presented with complains of headache, vertigo and confusions.

Post surgical new MRI showed left cerebellar lesion returning iso intense on T1w, hypointense on T2w with central hyperintensities and showing nodular post contrast enhancement on contrast images with no diffusion restriction noted on DWI/ADC mapping.

MRS- Shows choline peak.

C/S for CSF: no growth.

Cytology reported: no malignant cells seen.

Second surgery was done and again shows no malignant cells.

Due to inconclusive signals case is being referred for tumor board/Radio neurologists. Fungal workup was advised in tumor board meeting but unfortunately patient did not survived before fungal work up.

P-69**Understanding esophageal pleural fistula : An uncommon but real complication****Hira Jabbar***Department of Radiology, Lahore General Hospital, Lahore, Pakistan.**E-mail: hirajabbar93@gmail.com*

A middle aged female presented with piece of chicken stuck in throat, for which upper GI endoscopy was performed, which went well. However, after a small period of time patient's condition started deteriorating. Emergency CT was planned, which shows frank collection of air and fluid in mediastinum, right sided pleural effusion, subcutaneous emphysema and pneumoperitoneum which was raising suspicion of iatrogenic esophageal perforation. Primary repair of esophageal perforation with esophageal stenting was done within 24 hours, but the outcome was not up to mark and patient's symptoms partially resolved. On subsequent x-rays, moderate right sided pleural effusion noted, chest tube was inserted which drained fluid containing ingested food particles. Chest CT was done which showed linear fistulous communication from right lateral aspect of midthoracic esophagus to right sided pleural cavity suggestive of esophageal pleural fistula. Esophagography was done and gastroenterologist, pulmonologist and surgeons were consulted for management of patient as esophageal restenting was planned with in a day. Patient's condition got worse all of sudden with severe SOB and patient expired.

Early diagnosis and treatment are required to prevent complications and improved quality of life in patients with esophageal pleural fistula.

P-70

Diagnostic accuracy of contrast-enhanced mri in diagnosing and staging urinary bladder carcinoma taking histopathology as gold standard

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OBJECTIVE: The purpose of this study is to assess the sensitivity and specificity of contrast-enhanced MRI in diagnosis and staging of urinary bladder carcinoma against histopathological results.

METHODS: After the ethical approval from the institutional review board, this prospective observational study was conducted at Radiology Department JPMC from July 2023 to June 2024. Through non-probability consecutive sampling, 25 patients aged 18 years or above, both gender, suspected of urinary bladder carcinoma were included in the present study. Patients having contradictions to MRI or allergic to MRI contrast agents were excluded from the present study. During the registration, patients who meet the given criteria received both contrast-enhanced MRI (CE-MRI) and cystoscopic evaluation as part of the further treatment plan.

RESULTS: In the analysis comparing contrast-enhanced MRI to histopathology, which served as the gold standard, the sensitivity of MRI in detecting bladder carcinoma was found to be 53.85% and specificity of 75%, with a diagnostic accuracy of 64%.

CONCLUSION: In conclusion, this study reveals that contrast-enhanced MRI has a moderate diagnostic accuracy in diagnosing urinary bladder carcinoma and staging them with a sensitivity of 5.85% and specificity at 75%.

P-71

Diagnostic accuracy of MRCP in the evaluation of obstructive jaundice

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OBJECTIVE: The aim of the present study is to determine the diagnostic accuracy of MRCP in diagnosing obstructive jaundice.

METHODS: After the ethical approval from the institutional review, this prospective observational study was conducted at Jinnah post graduate medical center from July 2023 to January 2024. Through non-probability sampling, 109 patients aged 18 years and above, both genders, presenting with clinical features suggestive of obstructive jaundice, including yellowing of the skin and sclerae, pruritus, dark urine, and pale stools were included in the present study. Patients' contradiction to MRCP or prior biliary surgery were excluded.

RESULTS: In terms of diagnostic performance, MRCP demonstrated a sensitivity of 86.4% and a specificity of 88% when compared to ERCP as the gold standard. The ROC curve analysis of comparing MRCP and ERCP findings shows an area under the curve (AUC) of 0.864 with a p value of <0.001.

CONCLUSION: In conclusion, the present study shows that MRCP is highly accurate in diagnosing obstructive jaundice thus can be used to replace ERCP which is invasive.

P-72

Arteriovenous malformation of uterus following pregnancy

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Uterine arteriovenous malformation is a life-threatening conditions characterized by abnormal connections between the arteries and veins in the uterus however its rare. Likely These AVMs can lead to severe hemorrhage and other complications, particularly following pregnancy. This case report will describe the presentation, diagnosis, and management of a uterine AVM in a 29-year-old woman who developed the condition following pregnancy. Introduction Uterine AVMs are uncommon vascular lesions that may be congenital or acquired. Acquired AVMs are often associated with trauma, previous surgical procedures, or pregnancy-related changes in the uterus. The condition is characterized by a direct connection between the arteries and veins without an intervening capillary network, leading to high-pressure blood flow and potential hemorrhage. This report highlights a case of uterine AVM that became symptomatic following pregnancy. Case Presentation Patient Information: Age: 29years Gravida 1, Para 2 Recent History: Delivered a healthy infant through vaginal delivery at term 5 months prior. Clinical Presentation: The patient presented to the radiology department with heavy vaginal bleeding who was referred from gynecology and obs department Investigations: Transabdominal ultrasound: uterus appeared to be cystic ,on color doppler it was vascular lesion in the uterine cavity with turbulent blood flow on color Doppler, suggestive of an AVM.

Magnetic resonance imaging (MRI): Confirmed the presence of a uterine AVM. Diagnosis Based on the clinical presentation and imaging findings, a diagnosis of uterine AVM was made. The patient's recent pregnancy and delivery were likely contributing factors to the development of the AVM.

P-73

Ruptured hepatocellular carcinoma

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Rupture of hepatocellular carcinoma is a life-threatening complication which may lead to high rate of peritoneal dissemination. We present a case of focal rupture of HCC.

A 53 years old male patient presented with right hypochondriac pain, abdominal distension and impaired liver functions.

Ultrasound abdomen revealed heterogeneous segment VI liver lesions with a large exophytic component on background of cirrhotic liver morphology displacing right kidney antero-medially, raising possibility of primary renal lesion with other differential of exophytic hepatic lesion. Triphasic CT scan was done for further evaluation, which showed a large focal arterialized lesion measuring about 10 x 10 cm in segment VI of liver with large exophytic component having both hepatic as well as extra-hepatic blood supply from right hepatic and right renal vessels respectively, compressing and displacing

right kidney anteriorly and towards midline. A small, loculated, hyperdense perilesional fluid component seen suggesting focal rupture. Another similar arterIALIZED lesion (3.6x 4.5cm) is also noted adjacent to aforementioned lesion. Patient was further managed successfully by urgent trans arterial catheter embolization (TACE) on very next day with no further complications. Aim of my study is to highlight the importance of prompt diagnosis and effective timely treatment to improve the overall prognosis and outcome of ruptured HCC.

P-74

Cranio-cervical conundrum; The enigmatic atlanto-occipital assimilation

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Atlanto-occipital assimilation is extremely rare congenital anomaly, characterized by partial or complete fusion of atlas and occipital bone leading to altered cranio-cervical junction anatomy. In our patient, basilar invagination resulted in acute angulation and narrowing of foramen magnum. Crowding of structures at foramen magnum was seen with tonsillar herniation and compression of brain stem. Edema signal in proximal cervical cord was also seen. Bilateral atlanto-occipital assimilation with increased atlas to dens distance seen suggestive of atlanto-axial instability. Overall findings were suggestive of Chiari I malformation with atlanto-occipital assimilation.

P-75

Tangled tendons, hidden pain; Master knot of Henry syndrome

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Master knot of Henry intersection syndrome is pain resulting from friction of two mid foot tendons (flexor hallucis longus and flexor digitorum longus). Known end-stage renal disease male patient presented to OPD dept regarding mid foot pain. Patient had intravenous injection cannulation in right foot six-month back with persistent pain after that. Urgent MRI right foot was advised. Multiplanar multi-sequential noncontrast MRI right foot performed according to departmental protocol. Small loculated fluid was seen in the tendon sheath of flexor hallucis longus in mid foot at the level of crossing of flexor hallucis longus and flexor digitorum longus consistent with intersection-type of tenosynovitis.

Bone alignment were however maintained. There was no fracture, dislocation or marrow contusion.

Tiny subchondral cystic areas were noted in talus, calcaneus and head of 1st metatarsal. No abnormal periosteal reaction was seen. There were no established changes of osteomyelitis. Mild ankle joint effusion was noted. There was no evidence of Morton neuroma. The muscles and tendons of foot show normal morphology. Lisfranc ligament was normal. Achilles tendon and plantar fascia also normal. Ankle joint appeared unremarkable. Sinus tarsi and tarsal tunnel were also normal. No mass in tarsal tunnel was noted. Ankle ligaments were intact. It is important to keep in mind that this is a relatively uncommon cause of midfoot pain while reporting such cases.

P-76

Paralyzing paradox: Spinal cord infarction, a hidden emergency

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Spinal cord infarction is a rare entity that is encountered less but has a high high mortality and morbidity rate. 43 years old female presented to emergency

department with acute lower limb weakness. Urgent MRI was performed that showed long segment intramedullary signal abnormality involving anterior and middle half of cervical spinal cord, showing restricted diffusion and possible questionable faint enhancement. Another smaller similar abnormal signal intensity intramedullary focus at T1-T2 level. No heterogeneous signal or abnormal enhancement was noted in adjacent visualized vertebral bodies. Considering restricted diffusion first differential possibility is of anterior spinal cord ischemia/infarct considering no fever or trauma history. This is a rare case presentation of spinal infarct in Pakistan presenting acutely.

P-77

Unraveling the hepatorenal connection; intra-renal resistive index as sentinel diagnostic tool in chronic liver disease patients: A single institute prospective study

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Early detection of renal disease is crucial in cirrhotic patients, as renal vasoconstriction can occur months before conventional markers become elevated. Novel diagnostic methods are essential to identify hepatorenal syndrome (HRS) in its initial stages, allowing timely intervention and improved patient outcomes.

RI was significantly higher in cirrhotic patients as compared to healthy controls. In patients with cirrhosis, RI was significantly greater in patients with ascites than those without ascites. P- value calculated was significant according to ANOVA test.

Mean renal RI with standard deviation in normal subjects was 0.60 +/- 0.05, in CLD without ascites was 0.63 +/- 0.08, in CLD with mild ascites was 0.70 +/- 0.06, in CLD with moderate ascites was 0.72 +/- 0.04 and in CLD with gross ascites was 0.76 +/- 0.08.

Mean portal vein diameter in mm with standard deviation in normal subjects was 7.6 +/- 1.59, in CLD without ascites was 9.8 +/- 3.24, in CLD with mild ascites was 10.3 +/- 1.51, in CLD with moderate ascites was 12.5 +/- 1.55 and in CLD with gross ascites was 16.3 +/- 2.33.

Early detection of renal impairment in cirrhotic patients is facilitated by Intra-renal Resistive Index (RRI) measurement through renal duplex ultrasound. This non-invasive technique enables assessment of intra-renal hemodynamics, revealing a positive correlation between RRI values and the severity of liver decompensation.

P-78

Diagnostic performance of CT angiography in cases of acute GI bleed

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PURPOSE: CT angiography has appeared as an appealing investigation in patients with acute GI hemorrhage. Purpose of our study is to evaluate utility of CT angiography in localizing and detecting the site and source of acute GI bleed in a retrospective data.

MATERIAL AND METHOD: A total of 109 patients (70 males and 39 females; mean age: 58 years; range 27-91 years) who presented with clinical evidence of acute GI hemorrhage and underwent CTA were included. Outcome of CTA was recorded and were compared with other diagnostic studies including

endoscopy, Tc RBC study and interventional procedures performed for augmentation of diagnosis and/or for therapeutic purposes.

RESULTS: The overall diagnostic yield of CTA in identifying a definitive or potential bleeding source was 57.7% (63 out of 109 cases). Forty-three cases were confirmed with angiography, eighteen with upper or lower GI endoscopy and two with nuclear RBC scan. Sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) were 72.4% (63 of 87), 86.3% (19 of 22), 95.4% (63 of 66) and 44.1% (19 of 43) respectively.

CONCLUSION: Valuable information can be obtained from CTA as preliminary investigation in localizing focus or source of GI bleed with moderate diagnostic yield and a high positive predictive value. This supports in future management as impediment in identifying the cause can be evaded.

P-79

Radiological intelligence: ADC as a game changer in predicting benign vs malignant breast lesions

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OBJECTIVE: To evaluate the efficacy of apparent diffusion coefficient (ADC) values and ADC ratios in differentiating between benign and malignant lesions and to establish optimal cutoff points for these metrics..

MATERIAL AND METHODS: A retrospective observational study was conducted at Radiology department, Shifa International Hospital. All patients who presented to our department with biopsy proven benign or malignant lesions and had undergone MR mammogram were included while excluding those whose biopsy reports were not available or those without any definite lesion on MR mammogram. ADC values and ADC ratios were calculated using syngo.via. Data was collected on a structured Proforma and was analyzed using IBM SPSS version 25.

RESULT: The apparent diffusion coefficient (ADC) values for malignant lesions were significantly lower, with a mean of $0.835 \pm 0.124 \times 10^{-3} \text{mm}^2/\text{s}$ compared to benign lesions, which had a mean of $1.5065 \pm 0.284 \times 10^{-3} \text{mm}^2/\text{s}$. Additionally, the ADC ratio was significantly lower in the malignant lesion group, exhibiting a mean of 0.531 ± 0.114 , whereas the benign group had a mean of 0.962 ± 0.066 .

The optimal cutoff point for ADC values to differentiate between benign and malignant lesions was determined to be $0.998 \times 10^{-3} \text{mm}^2/\text{s}$ yielding a sensitivity of 91.4%, specificity of 98.2%, and diagnostic accuracy of 96.7%. For the ADC ratio, the cutoff point for differentiation was found to be 0.78, with a sensitivity of 92.8%, specificity of 96.1%, and diagnostic accuracy of 93.9%.

CONCLUSION: In summary, our study confirms that the apparent diffusion coefficient (ADC) is an effective non-invasive tool for differentiating malignant from benign lesions, with high sensitivity (91.4%) and specificity (98.2%). The significant differences in ADC values and ratios underscore its diagnostic accuracy (96.7%). Consequently, ADC presents a compelling alternative to invasive histopathological techniques in clinical diagnostics.

P-80

Autoimmune polyendocrinopathy-candidiasis-ectodermal dystrophy (APECED) manifested as immune mediated encephalitis

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Immune-mediated encephalitis is a rare but severe neurological condition characterized by autoimmune cerebral inflammation. This condition becomes

more complex when it presents secondary to autoimmune polyendocrinopathy-candidiasis-ectodermal dystrophy (APECED) also known as APS (autoimmune polyendocrinopathy syndrome). APS-1 is characterized by endocrinopathies, mucocutaneous candidiasis and less frequent neurological manifestations as encephalitis due to mutations in the AIRE (autoimmune regulator) gene. A 22 years old female patient with mucocutaneous candidiasis and hypoparathyroidism presented with recurrent afebrile seizures and altered sensorium. Computed Tomography was performed which revealed bilateral basal ganglia calcifications without any other significant abnormality. Further evaluation was done through MRI brain with contrast & GRE sequence; which showed blooming artefacts in bilateral basal ganglia and medial thalami on GRE and subcortical white matter T2/FLAIR hyperintense signals in right high parietal, bilateral posterior parietal & occipital lobes showing subtle post contrast enhancement and partial diffusion restriction. Keeping in view patient's history, diagnosis of immune mediated encephalitis on the background of autoimmune polyendocrinopathy type 1 (APS-1) was made. Immunotherapy in the form of corticosteroids was administered to which patient responded well.

P-81

Unveiling a rare splenic neoplasm: Composite hemangio-endothelioma - A case report highlighting clinical, radiological and histopathological correlations

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Composite hemangioendothelioma is a rare vascular tumor having intermediate malignant potential. Extra hepatic involvement is very rare. In our case 59 year old female presented with abdominal pain, thrombocytopenia and weight loss. Patient underwent CT abdomen which showed enlarged spleen with multiple hypoenhancing lesions. Correspondingly MRI abdomen showed T2 hypointense non enhancing splenic lesions. Patient underwent splenectomy. Diagnosis of composite hemangioendothelioma was made on histopathology. Follow up CT scan of abdomen showed multiple liver lesions, pulmonary nodules and diffuse osseous lesions representing metastases.

Composite hemangioendothelioma can have variable imaging features, it is necessary to combine clinical features, laboratory tests and histopathology to make correct diagnosis.

P-82

Decoding suspicious breast calcification patterns: A comparative study of mammographic imaging and histopathology via stereotactic biopsy, our experience at shifa international hospital

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OBJECTIVE: To correlate the features of mammographic imaging and histopathological analysis in identifying and characterizing breast calcification patterns.

MATERIAL AND METHODS: A retrospective descriptive study was conducted at Radiology department, Shifa International Hospital. All patients with suspicious calcification on mammography presented to Radiology department, Shifa International Hospital were included who had undergone stereotactic biopsy in our institute. Histopathology reports were obtained from prior medical records. Convenient sampling technique was applied. Data was collected on a structured Proforma and was analyzed using IBM SPSS version 25.

RESULT: The mean age of participants was 56.08 years, with an age range spanning from 31 to 81 years. The study included 110 female participants. In

terms of calcification distribution, 10% were regional, 23.6% segmental, 10.9% linear, 43.6% grouped, 9% diffuse, and 2.7% exhibited both segmental and linear patterns. Regarding calcification morphology, 29% were amorphous, 33.6% pleomorphic, 15.4% coarse heterogeneous, 6% linear branching, 10.9% a combination of amorphous and pleomorphic, 2.7% a combination of linear and pleomorphic, and 1.8% a combination of linear, amorphous, and pleomorphic. The upper outer quadrant was the most frequently affected location, and most calcifications were classified as BIRADS 4B on mammograms prior to biopsy.

Histopathological findings revealed that 28.1% of cases were diagnosed as ductal carcinoma in situ (DCIS), with 54.8% classified as high grade, 19.3% as intermediate grade, and 25.8% as low grade. Comedo and cribriform forms were the most common types of DCIS identified. Additionally, 1.8% of cases were lobular carcinoma in situ (LCIS), 2.7% invasive ductal carcinoma, 0.9% invasive lobular carcinoma, and 0.9% micropapillary carcinoma. Among high-risk lesions, 4.5% were atypical ductal hyperplasia. Pleomorphic type of calcifications and linear distribution were most strongly associated with malignancy. Other histopathological findings included fibroadenomas, fibrocystic changes, intraductal papillomas, and dystrophic calcifications.

CONCLUSION: This study underscores the critical role of calcification characteristics in breast cancer diagnosis, with pleomorphic and linear distributions showing a strong association with malignancy. The prevalence of high-grade ductal carcinoma in situ (28.1%) among participants highlights the necessity for vigilant screening and assessment. These findings provide valuable insights for enhancing diagnostic strategies and improving patient outcomes in breast cancer management.

P-83

Unveiling the hidden: Imaging features and management of cesarian scar ectopic pregnancy- insight from a clinical study of 10 years experience in tertiary care hospital

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BACKGROUND: Cesarean scar ectopic pregnancy (CSEP) is a rare but potentially life-threatening form of ectopic pregnancy where the gestational sac implants within the scar of a previous cesarean section. Early diagnosis and appropriate management are crucial to reduce the risk of severe complications, including uterine rupture and significant hemorrhage. Apart from being rare, it is also often misdiagnosed and can be confused with miscarriage in progress, normal low lying intrauterine pregnancy and cervical ectopic pregnancy. Our study aims to describe the imaging characteristics and management outcomes in a cohort of 35 patients diagnosed with CSEP.

METHODS: We conducted a retrospective observational study on 35 patients diagnosed with CSEP between 2015 and 2024 at Shifa International Hospital. All patients underwent transvaginal ultrasound (TVUS) and some also proceeded with magnetic resonance imaging (MRI) for initial diagnosis. Imaging features such as gestational sac location, presence of yolk sac, fetal pole, heart beat, myometrial thickness, decidual reaction and vascularity were evaluated. Clinical history, gestational age, no. of prior C sections, time since last c section and serum beta HCG levels were also taken into account whether they presented with pain, bleeding or were asymptomatic. Management strategies included medical treatment with methotrexate, surgical intervention, and expectant management, depending on the clinical presentation and patient preference. Complications were also documented if any. Percentages and frequencies were calculated for nominal data. Mean and standard deviation for quantitative data. Fisher exact 2 x 2 test was used to look for associations between different variables. P value less than 0.05 was considered statistically significant.

RESULTS: The majority of patients presented with a gestational sac deeply embedded within the lower anterior uterine wall, showing increased vascularity

on color Doppler imaging and less than 2 mm residual myometrial thickness. MRI provided additional detail, especially in complex cases, by delineating the extent of invasion and myometrial thinning. Significant association was seen between contour distorting sacs with placenta accreta syndrome and hysterectomy.

CONCLUSION: This study highlights the key imaging features of CSEP and the varied management approaches tailored to individual patient profiles. Early and accurate diagnosis using a combination of TVUS and MRI is pivotal for optimizing outcomes. Our findings underscore the importance of a multidisciplinary approach in managing CSEP, with individualized treatment plans to minimize morbidity and preserve fertility.

P-84

Paralyzing paradox: Spinal cord infarction, a hidden emergency

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Spinal cord infarction is a rare entity that is encountered less but has a high high mortality and morbidity rate. 43 years old female presented to emergency department with acute lower limb weakness. Urgent MRI was performed that showed long segment intramedullary signal abnormality involving anterior and middle half of cervical spinal cord, showing restricted diffusion and possible questionable faint enhancement. Another smaller similar abnormal signal intensity intramedullary focus at T1-T2 level. No heterogenous signal or abnormal enhancement was noted in adjacent visualized vertebral bodies. Considering restricted diffusion first differential possibility is of anterior spinal cord ischemia/infarct considering no fever or trauma history. This is a rare case presentation of spinal infarct in Pakistan presenting acutely.

P-85

A rare congenital disorder across a life span; case report of heterotaxy syndrome (left isomerism) in an infant and elderly patient

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BACKGROUND: Heterotaxy syndromes refer to abnormal left/right distribution of thoracic and abdominal organs that is neither situs solitus nor situs inversus. They are frequently associated with congenital heart disease and other visceral abnormalities. Isomerism implies mirrored organs, and can be defined as mirrored atrial appendages. Congenital heart disease and splenic anomalies are frequently associated giving rise to the term cardioplemic syndrome. There are many individual variations, and each case should be individually documented. It affects 1 in 10,000 patients

CASE PRESENTATION: We present 2 cases of left isomerism. A nine months old female patient with associated biliary atresia and a 61 years old female patient. The case was diagnosed early in the former patient due to associated comorbidities while in the second patient it remained silent throughout

her life unless she presented with cough and shortness of breath for HRCT where the findings were seen incidentally. The had different features of the spectrum, i.e polysplenia., azygous or hemiazygous continuation, bilateral hyperarterial bronchi, bilateral bilobed lungs, intestinal malrotation, midline liver.

CONCLUSION: Heterotaxy syndrome defined in the context of left or right isomerism and may be associated with other serious disorders. However it can just be an incidental finding in some patients where it may be present just as normal anatomical variant.

P-86

Hidden in the heat: Primary pancreatic lymphoma manifesting as pyrexia of unknown origin

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This case report details a rare instance of primary pancreatic lymphoma presenting as pyrexia of unknown origin (PUO). A middle-aged patient with persistent, unexplained fever underwent extensive diagnostic evaluation, initially yielding inconclusive results. Following a series of clinical and imaging assessments, a diagnosis of primary pancreatic lymphoma was confirmed. This case underscores the importance of considering primary pancreatic lymphoma in the differential diagnosis of PUO, highlighting the challenges and complexities in diagnosing this uncommon malignancy. The report aims to enhance awareness of this potential presentation and advocate for a broad diagnostic approach in patients with unexplained fever.

Primary pancreatic lymphoma is a rare malignancy, often challenging to diagnose due to its atypical presentation. Pyrexia of unknown origin (PUO) can obscure its identification, making timely and accurate diagnosis particularly difficult.

A 64 years old patient with persistent, unexplained fever for 1 month. He underwent extensive diagnostic evaluation, initially yielding inconclusive results. CT chest, abdomen and pelvis with contrast was performed to rule out any underlying cause which revealed hypodense lesion in the head of pancreas abutting the portal vein, superior mesenteric vein, mesenteric- splenic confluence with complete encasement of common hepatic artery. Additional multiple hypodense lesions were also noted in bilateral kidneys and enlarged para-aortic, aortocaval and iliac nodal masses. Bones were heterogeneous with diffuse osteopenia. Subsequent biopsy of the head of pancreas lesion showed primary pancreatic lymphoma to be the underlying culprit.

The report aims to enhance awareness of this potential presentation and advocate for a broad diagnostic approach in patients with unexplained fever.

P-87

Chronic pyelonephritis; mirroring as perforated renal mass

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Chronic pyelonephritis is type of kidney infection that recurs or persists over time causing progressive kidney damage. A middle-aged female presented to us with complaints of recurrent right flank pain for 2 years and painless hematuria for 6 weeks. Ultrasound showed a heterogenous right renal mass. Computed tomography was done for further evaluation which showed a large complex heterogeneously enhancing right renal mass and associated sub capsular and perinephric hyperdense collections tracking down to right psoas

muscle along with thickening of renal fascias and associated para - aortic lymphadenopathy suggesting neoplastic right renal mass with strong suspicion of bleed within pre-existing neoplastic mass.

Right radical nephrectomy was done with Intra-operative findings of right renal mass adherent to ascending colon and 2nd part of duodenum along with drainage of 200 ml pus.

Pathological examination revealed features of chronic pyelonephritis. Chronic pyelonephritis should be in differential when there is clinical and radiological presentation of complex renal mass.

P-88

Hepatic teratoma mimicking hydatid cyst on ultrasound; A rare diagnostic challenge

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Hepatic dermoid cysts (mature cystic teratomas) are rare benign lesions comprised of fat, calcification and ectodermal elements. Their diagnosis becomes challenging because of overlapping imaging characteristics with other benign cystic liver lesions. This case report delineates a hepatic teratoma which was misdiagnosed as hepatic hydatid cyst on ultrasonography. A 35-year-old female presented with right upper quadrant pain without any constitutional symptoms. Ultrasound abdomen showed a well circumscribed hypoechoic cystic lesion in right hepatic lobe with internal mixed echogenicity components raising the differential of hydatid cyst. Serological tests for hydatid disease came out to be negative and further evaluation was done by CT triphasic abdomen which revealed a well –defined non enhancing hypo attenuating lesion (15HU) in right hepatic lobe with internal soft tissue elements, fat and a tiny calcific focus in its wall confirming the aforementioned lesion as hepatic dermoid. It was surgically excised due to associated risk of malignant transformation.

P-89

Anomalous origin of the left circumflex artery from the right coronary artery

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Coronary artery anomalies are not very common in the general populace. Mostly individuals with coronary artery anomalies are without symptoms. Few individuals with subject anomalies have an increased risk of sudden cardiac arrest, especially young sportsmen, and an elevated risk of myocardial ischemia, seen in aged groups. We report the findings of a CT Cardiac Angiography performed on a 55-year-old female patient, Musarrat Tabassum, to rule out coronary artery disease (CAD). The angiography, conducted using a Toshiba 128 Slice CT scanner, transpired essentially normal coronary arteries with a zero calcium score. A notable finding was the anomalous origin of the left circumflex artery (LCX) from the right coronary artery (RCA), with its course running between the left ventricular outflow tract (LVOT) and the left atrium. The subject report underscores the importance of CT angiography in detecting anatomical variations and ensuring accurate cardiovascular diagnoses.

P-90**Pseudoaneurysm of posterior tibial artery following trauma**

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We present a case report of a 36-year-old male, Ahmed, who presented with complaints of foot pain and redness following trauma. Upon further investigation, he was diagnosed with a pseudoaneurysm of the posterior tibial artery. This case report highlights the importance of prompt diagnosis and appropriate management to prevent further complications associated with pseudoaneurysms. Introduction: Pseudoaneurysms are characterized by the formation of a hematoma surrounded by connective tissue layers, resulting from an incomplete arterial wall injury. They can occur following trauma, such as fractures, penetrating injuries, or iatrogenic procedures. Pseudoaneurysms of the posterior tibial artery are relatively rare but can lead to significant morbidity if left untreated. Here, we present a case of pseudoaneurysm of the posterior tibial artery following trauma in a 36-year-old male with foot pain and redness. Case Presentation: A 36-year-old male, Ahmed, presented to the emergency department with complaints of severe pain and redness in his right foot. He reported a history of trauma to his foot two weeks ago when a heavy object fell on it. Initially, Ahmed experienced mild pain and swelling, which he managed with over-the-counter pain medications. However, his symptoms worsened over time, leading to his presentation at the hospital. On physical examination, the right foot appeared swollen, with erythema and tenderness over the posterior aspect. Distal pulses were palpable, and there were no signs of compartment syndrome. The range of motion of the foot and ankle was limited due to pain. Initial laboratory investigations, including complete blood count and inflammatory markers, were within normal limits. X-ray imaging of the foot did not reveal any fractures or bony abnormalities. However, an ultrasound examination of the foot showed a 3 cm pseudoaneurysm arising from the posterior tibial artery, confirming the suspected diagnosis.

P-91**Stereotactic biopsies: Targeting the barely visible: An experience at nori hospital**

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BACKGROUND: Breast Cancer remains the leading cause of cancer related deaths with Asia having the highest incidence. 1 in every 8 women suffers from breast cancer in their lifetime. It is the most curable disease if detected early through screening. Rigorous screening and newer state of the art diagnostic techniques increase the detection of occult breast cancer, however detecting and targeting very small lesions seen only on mammograms is the most challenging thing. Mostly these present with clustered microcalcifications which are visible on high resolution and magnified views of mammogram and targeting these to get tissue diagnosis is crucial before starting definitive oncological treatment.

METHODS: It's a retrospective cross-sectional study conducted at Radiology department of AECH-NORI hospital from November 2022 to July 31st 2024. Total of 27 patients with clustered or pleomorphic microcalcifications or non-

mass like calcified lesions were considered. We used stereotactic fast gun 16G on our Selenia 6000 3D digital mammography machine equipped with tomosynthesis. We confirmed the calcifications/ specimen retrieved and get its histopathology done at our hospital. We evaluated the sensitivity, specificity and false negative values. Factors attributable to false negative result mainly from operator's experience and retrieval rate of calcifications.

RESULTS: We performed 27 cases of stereotactic mammography guided biopsies. Out of them 09 came out to be DCIS, 14 showed benign ductal cells/ benign breast disease (adenosis, sclerosis, fibrocystic disease/ negative for malignancy), 2 invasive ductal carcinoma and 2 were inconclusive. All biopsy specimens were confirmed by taking specimen radiographs for calcifications prior to histopathology.

CONCLUSION: In this study we concluded that most of the calcifications detected ductal carcinoma in situ and requires treatment with surgery however long term follow up is suggested for negative / benign microcalcifications. False negative results may happen during learning period of operator.

P-92**Response evaluation of head and neck tumors on imaging using NIRADS algorithm**

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OBJECTIVE: To assess the applicability of NIRADS (Neck Imaging Reporting and Data System) in assessing head and neck tumors response to treatment on imaging and standardize imaging interpretation.

METHOD: It's a retrospective study of 31 patients (further data under compilation) with head and neck tumors undergoing treatment surveillance with CT/ MRI imaging in our department. CT/ MRI exams were evaluated and NIRADS were assigned to each case and then correlated with clinical examination and histopathology/ PET where available.

RESULTS: NIRADS 3 or NIRADS 4 suggesting tumor recurrence was seen in 13 out of 31 (41.9%) patients at the primary site and 1 of 31 (3.2%) patients in the neck. NIRADS 1, NIRADS 2 and NIRADS 4 had 100% sensitivity and specificity. NIRADS 3 has 80% specificity and 100% sensitivity. Overall, sensitivity of NIRADS is 100% and specificity is 95%.

CONCLUSION: NIRADS provides a standardized method for categorizing head and neck tumors and it is time to implement it in our daily reporting for crisp and consistent communication with physicians and management recommendations.

P-93**An audit of radiological investigation in acute renal colic as well as diagnostic yield of CT KUB in terms of renal calculi and alternative diagnosis**

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BACKGROUND: CT KUB is regarded as the gold standard investigation for adult patients presenting with acute renal colic given its high accuracy and safety as per established guidelines in iRefer PCR guidance,¹ as well as NICE guidance for acute renal colic,² guidelines by British Association of Urological Surgeon (BAUS) for acute ureteric colic management,³ and guidelines on European Association of Urology (EAUS) on urolithiasis.⁴ Given its safety

and suitability for most cases, CT KUB is the choice of investigation in suspected ureteric colic as well as acute renal colic.

Nevertheless, there is a need to track the appropriate use of CT KUB given a considerable radiation dose involvement and also to ascertain the appropriate use of CT KUB in the setting of acute renal colic presentation and not nonspecific diffuse abdominal pain. Along with that, it's also important to establish a reasonable diagnostic yield for CT KUB and undermine any erroneous use for a patient with an established diagnosis.

Hence, this audit will quantify the use of CT KUB for acute renal calculi as well as assess its diagnostic yield in terms of alternate diagnosis and renal calculi.

OBJECTIVE: An audit to assess whether appropriate radiological investigations are being conducted in patients presenting with acute renal colic, as well as evaluate the diagnostic yield of CT KUB in terms of Renal Calculi and Alternative Diagnosis.

RESULTS: Target for Diagnostic yield of CT KUB for a confirmed calculus and alternative diagnosis were met as well as target for CT KUB being performed within 24 hours of the presentation was almost met, having 1 patient out of 100 not evaluated within 24 hours. Reason for delay in CT KUB not being done within 24 hours in inpatient setting could be due to financial issues at the patient's end, delays at the end of concerned departments and patient not consenting to the said investigation.

P-94

Diphallia with duplicated urinary bladder- A rare case report

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BACKGROUND: Diphallia or penile duplication is an extremely rare congenital anomaly. It occurs once in every 5.5 million live births. The first case was reported in 1609 by Wecker in Bologna, Italy. Until today, only about 100 cases are reported in the literature. In Indonesia, this case was never reported. We report a case of bifid diphallia associated with urinary bladder duplication.

CASE PRESENTATION: A 15-day-old infant was referred to the radiology department at Shifa International Hospital for fluoroscopy following antenatal diagnosis of congenital anomalies. The examination revealed the presence of two urinary bladders, with capacities of 20 ml and 15 ml, respectively, as well as two separate urethras. Subsequently, the pediatric radiology team performed surgery to reconstruct the urinary system, successfully converting the two bladders into one and creating a single urethra.

CONCLUSION: Diphallia is a very rare congenital anomaly, even more striking when it is combined with other anomalies like duplicated urinary bladder that needs to be properly diagnosed and addressed accordingly.

P-95

An audit to assess uniformity of reports for MRI rectal carcinoma amongst different radiologists in Shifa international hospital

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1- WHAT IS THE PURPOSE OF THE STUDY?

An audit to assess whether all reports of different radiologists in Shifa

International Hospital are uniformly adhering to the standard international guidelines of MRI rectal carcinoma reports.

2- WHAT ARE THE OBJECTIVES OF THE STUDY?

To meet 100% of the standard report criteria after introducing interventional presentations in department.

STUDY DESIGN: Retrospective cross sectional.

DESCRIPTION OF METHODS USED IN PROTOCOL: After approval from IRB and EC we retrospectively enrolled all cases with MRI pelvis with contrast for rectal carcinoma and all compulsory parameters are noted in the reports.

PATIENTS SELECTION CRITERIA (Inclusion& Exclusion Criteria)

INCLUSION: patient's with MRI pelvis with contrast for rectal carcinoma

EXCLUSION: MRI pelvis with contrast reports for etiologies other than rectal carcinoma.

RESULTS: After 1st audit cycle, only 20% reports commented upon EMVI, 32% on MRF, 97% reported lymph nodes in body of report and 79% in conclusion of report and only 35% reports provided the. After these results, intervention was done in the form of a departmental meeting, presentation was given on PowerPoint and zoom link and all the departmental consultants and postgraduate residents were briefed about the proper template of rectal carcinoma report, the clinical importance of these variables in the report and their outcomes on patient management. Moreover, a template was introduced in the department for MRI rectal carcinoma reports.

After the 2nd cycle of audit, there was significant improvement in the quality of departmental reports and all the radiologists adhered to the standard reporting format with 100% adherence to MRF, 98.6% reports commented on EMVI, 86.6% mentioned the lymph nodes in conclusion and 100% on lymph nodes in body of report.

CONCLUSION: There was significant improvement in the quality of reports after departmental audit with adherence to a uniform template of report according to the international criterias.

P-96

Radiology in action: A case report of hydatid cysts involving the liver, lungs, and ovary teaching points

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- Hydatid disease can present with varied symptoms, including abdominal pain, cough with bloody sputum, and chest pain.
- Hydatid cysts typically appear as well-defined, round or oval lesions with a characteristic double-layered wall on imaging on ultrasound imaging.
- Imaging can reveal complications such as cyst rupture, secondary infection, and compression of adjacent structures.
- PAIR (puncture, aspiration, injection, re-aspiration) is used for treating hydatid cysts, particularly in the liver and lungs.

CASE OUTLINE: A 27-year-old female patient, known to have had asthma for the last 5 years, presented to the outpatient department with the complaint of pain in the abdomen for the last year and a recurrent cough for the last the last 2 years. Pain in the abdomen was localized in the epigastrium, gradual in onset but worsened with each passing day. The patient also had a recurrent productive cough with yellow phlegm for the last 2 years. Pain in the chest is more localized on the left side, gradual in onset, and sharp in character, not radiating to any other site. The results of abnormal tests are maintained as follows: Hemoglobin 11.3 g/dL, white blood cells 12180/microL, platelets 895000/microL, eosinophils 18, alkaline phosphatase 148 U/L, and gamma GT 59 U/ultrasound revealed bilateral hydatid in liver and a large right adnexal cyst (refer to image A, B, C and D). Chest X- rays showed bilateral cysts in the lungs (refer to image E).

Echinococcus IgG serology was done, which showed both anti-Echinococcus IgG and Echinococcus IgG were positive, with the level of the latter one being 3.97 (positive: greater than 1.1). A multidisciplinary team was taken on board to proceed with cystectomy via video assisted thoracoscopic surgery (VATS) + bilateral cyst excision from the lungs, puncture, aspiration, injection, and re-aspiration (PAIR) + cyst excision from the lungs, and right ovarian cystectomy. Results of biopsies of both lung and liver cysts revealed them all to be hydatid cysts with a wall composed of a cellular laminated membrane with a transparent nucleated lining.

After surgery, the patient was prescribed albendazole 300 mg, omeprazole 20 mg twice daily for 10 days, and montelukast 10 mg once daily for 1 month and a follow up after 1 week.

P-97

Correlation of HRCT findings with bronchoalveolar lavage: A tertiary care institutional study

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High-resolution computed tomography (HRCT) improves lung infection diagnosis, but bronchoalveolar lavage (BAL) is often needed for confirmation, particularly for tuberculosis. Integrating clinical data with HRCT can enhance diagnostic accuracy, although some HRCT patterns may yield lower BAL results.

INTRODUCTION: BAL is commonly performed for lung issues, and identifying patients with high diagnostic yields can reduce complications. This study examines the correlation between HRCT findings and BAL effectiveness.

OBJECTIVE: To assess the relationship between HRCT findings and the diagnostic yield of BAL in suspected lung infections, identifying patterns that predict higher or lower yields.

METHODS: Patients with respiratory symptoms undergoing HRCT were included, excluding those with known malignancies or pulmonary edema, at Fauji Foundation Hospital from August 15 to September 15, 2024. Pathologies included pulmonary tuberculosis, aspergillosis, and other infections, with diagnostic yields defined by positive microbiological cultures and cytopathological results.

RESULTS: Of 40 cases, 15 were male (37.5%) and 25 female (62.5%), aged 30 to 70. An infective cause was found in 26 cases (65%). Common pathogens included tuberculosis (12 cases; BAL yield: 3), allergic bronchopulmonary aspergillosis (6 cases; BAL yield: 3), and miscellaneous infections (8 cases; BAL yield: 4).

CONCLUSION: HRCT findings of reticulo-nodular infiltrates are linked to lower BAL yields compared to air space opacities and tree-in-bud nodules. Symptomatic patients tend to have better outcomes from BAL.

P-98

Cardiac involvement in tuberculosis; radiological findings: A case report

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Tuberculosis is primarily a lung disease however, Extra-Pulmonary Tuberculosis can affect any organ or system. Although rare but most common cardiovascular

complications include Pericarditis, Myocarditis and Coronary Artery Diseases. This case report describes a similar case scenario.

A 27 year old Pakistani man with no known history of cardiac disease presented in the Emergency of Rawalpindi Institute of Cardiology, with the complaints of persistent cough and shortness of breath for 2 weeks. Initially on Postero-Anterior view of X-ray Film of the chest bilateral blunting of Cardio-Phrenic angles were noted, depicting Pleural Effusion. Echocardiography showed Ejection Fraction of 50% with Bi-atrial Enlargement, Annulus reverse and Annulus paradox were also present.

Further workup on Toshiba Aquillion 640 slice CT scan with 0.5mm reconstructed post contrast images on low radiation and high definition mode revealed massive bilateral Pleural Effusion with minimal thickening of fissures in both lungs, Air tracking in mediastinum along great vessels of heart extending up to the neck and the CTR was 116/242=0.47, confirming bi-atrial enlargement. Pericardial thickening of 2 mm was noted along with calcifications predominantly along left ventricle. Few mediastinal lymph nodes were also appreciated. The findings were suggestive of Constrictive Pericarditis due to Tuberculosis and the patient was treated accordingly.

P-99

Parsonage-Turner syndrome in a female patient; A rarely reported entity

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Parsonage-Turner Syndrome (PTS) also known as Neuralgic Amyotrophy or Brachial Plexus Neuritis, is an uncommon syndrome with a characteristic acute onset of severe, historically unilateral, shoulder pain and associated debilitating motor weakness, dysesthesias, and numbness. [1] With an occurrence often a times in previously healthy individuals, it's posed to have an unclear aetiology although it has been linked with autoimmune, viral, bacterial and hereditary conditions in certain cases. Diagnosed primarily based on clinical history and examination, this rare malady is diagnostically a known challenge. [2] MRI is the chosen modality of investigation for a better demonstration of disease progression and to exclude other causes whereas electromyography (EMG) offering better isolation, identification and grading. Our patient is a 69 years old female diabetic patient, presented with severe left shoulder pain and restricted range of movements. There was no history of recent trauma or intervention. She had been a diabetic patient. Non-contrast MRI of shoulder was performed for diagnostic work up which showed contour irregularity, flattening, severe cartilage loss, underlying subchondral cystic and erosive changes with associated marked marrow edema in left humeral head with severe arthritic changes. There was also marked edema in the rotator interval, extending into the rotator cuff muscles, biceps and deltoid as well as surrounding soft tissues with associated rotator cuff muscles atrophy.

P-100

Giant infected concha bulluosa presented as left nasal mass: A case report

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Concha bullosa is a common and normal variation of the sinonasal anatomy, occurring in approximately 35% of individuals (with a range of 14-53% reported in various studies). 35% of individuals (with a range of 14-53% reported in various studies). This case report details the evaluation of a 45-year-old male patient who presented with left sided nasal obstruction duration,

headache, facial pain and hyposmia. On physical examination a large mass was found in the left nasal cavity, causing a deviated nasal septum to the right. Contrast enhanced magnetic resonance imaging brain showed giant infected concha bullosa, measuring 3.0 x 4.3 x 2.7 cm on left half of the nasal cavity with rightward deflected nasal septum and marked thinning of lateral nasal wall obliterating left maxillary sinus. It shows no post-contrast enhancement. Concha bullosa is a rare condition which can arise without any apparent risk factors, making it essential to consider it as a potential diagnosis when evaluating a slow-growing mass that cannot be definitively diagnosed. Radiological imaging plays a key role in diagnosing concha bullosa and planning its surgical interventions when necessary.

P-101

Role of initial chest x-rays on out come of patients with respiratory illness

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OBJECTIVES: The aim of this audit is to assess role of initial chest x-rays on outcome of patients with respiratory illness.

MATERIAL AND METHODS:

Study design: prospective cohort study

Setting: This study was conducted at Fauji Foundation Hospital Rawalpindi. The study includes a group of 100 patients, aged 18 to 85 years, admitted to the hospital with varying acute and chronic respiratory conditions such as pneumonia, chronic obstructive pulmonary disease (COPD) and bronchitis. Role of their initial chest x-rays on outcome of these patients were assessed.

RESULTS: 82% of patients received antibiotic therapy based on the initial chest X-ray findings. Oxygen therapy was administered to 45% of patients, with 18% requiring mechanical ventilation. Bronchodilators were prescribed for 38% of patients with COPD-related findings. The average length of hospital stay was 8 days, with 32% of patients requiring intensive care. Mortality rate was 14%, with pneumonia patients having the highest mortality (22%) among the studied respiratory illnesses. Patients with pleural effusions had the longest hospital stays (10 days).

CONCLUSION: This research reinforces the critical role of initial chest X-rays in guiding clinical decisions for patients with respiratory illnesses. The findings not only enhance our understanding relationships between radiological findings and patient outcomes but also provide actionable insights for healthcare providers. By using this insight, clinicians can work towards improving patient care, reducing mortality rates, and enhancing the overall management of respiratory illnesses.

P-102

Meniscal tears: Analysis of MRI findings in patients with knee pain to determine the incidence and types of meniscal tears

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OBJECTIVES: To determine the incidence of meniscal tears and classify the types based on MRI findings in patients evaluated at Fauji Foundation Hospital Rawalpindi.

MATERIALS AND METHODS: This retrospective study reviewed MRI scans of patients with knee pain who underwent imaging from June to September 2024. Inclusion criteria included having knee pain as a symptom, while those

without pain or with known malignancy were excluded. The MRI findings were analyzed to identify the presence and type of meniscal tears, categorized into vertical, horizontal, radial, complex, bucket handle or other tears. Data was then analyzed with IBM SPSS 20.

RESULTS: Out of 69 patients analyzed, 44 patients (63.7%) had tear of either one or both menisci. Out of these, 26 (59.1%) had medial meniscal tear, 11 (25%) had lateral meniscal and 7 (15.9%) had tear of both menisci. 40 (90.9%) of these patients had concurrent ACL tear. Among these, radial tear was the most common morphology (12 or 27.2%)

CONCLUSION: Meniscal tears are commonly encountered in patients with knee pain and radial tears are the most common morphological type. This knowledge is essential for surgeons who deal with traumatic and non-traumatic cases of knee pain for better patient management.

P-103

Diagnostic accuracy of ultrasound compared to unenhanced CT for obstruction in patients with hydronephrosis detected on ultrasound

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OBJECTIVES: The aim of this audit is to assess diagnostic accuracy of ultrasound compared to unenhanced CT for obstruction in patients with hydronephrosis detected on ultrasound.

MATERIAL AND METHODS:

Study design: Retrospective cross-sectional study

Setting: This study was conducted at Fauji Foundation Hospital Rawalpindi. A total of 50 patients presenting with flank pain were prospectively examined over a period of one month. The results of hydronephrosis detected on ultrasound of these patients were compared with their CT KUB to detect the cause of obstruction causing hydronephrosis.

RESULTS: Of 50 patients 40% patients had similar findings of obstructing renal calculi causing hydronephrosis on both ultrasound and CT KUB. 6% patients had renal calculi on ultrasound and hydronephrosis on CT KUB. 6% patients had hydronephrosis on ultrasound and renal calculi on CT KUB. 9% patients showed hydronephrosis on ultrasound and both renal calculi and hydronephrosis on CT KUB. 2% patients had stone on ultrasound and both hydronephrosis and renal calculi on CT KUB. 6% patients showed hydronephrosis on ultrasound and obstructing mass causing hydronephrosis on CT KUB. 2% patients showed hydronephrosis on ultrasound and obstruction caused by perivesical fat at bladder neck causing hydronephrosis.

CONCLUSION: CT KUB is more sensitive for detecting obstruction leading to hydronephrosis. The difference in findings of ultrasound and CT KUB might not be clinically significant, however giving concern or potentially harmful long-term effect of radiations, ultrasound should be considered first.

P-104

A case report of Arnold Chiari malformation with reverse horseshoe kidney

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Arnold-Chiari malformation type II is a congenital neurological condition characterized by the downward displacement of the cerebellar tonsils through

the foramen magnum, often associated with a range of spinal abnormalities. This case report details the evaluation of an 8-month-old female patient presenting with a palpable mass on the back, referred for pre-operative assessment of myelomeningocele. Magnetic resonance imaging (MRI) of the entire spine revealed notable features indicative of Arnold-Chiari malformation, including a significant tonsillar herniation measuring 2.9 cm. Additionally, imaging demonstrated a cervical syrinx extending into the thoracic region, diastematomyelia between T6 and L2, and associated scoliosis. The findings included block vertebrae at T3-T4, dysmorphic fusion of vertebrae from T9 to L1, and spina bifida extending from T5 to S1, along with a tethered cord. Furthermore, the imaging revealed a fusion of upper poles of kidney (reverse horseshoe kidney), which is extremely rare. This intricate presentation highlights the necessity of thorough radiological evaluation in pediatric patients with congenital anomalies, which is essential for informing surgical management and facilitating comprehensive multidisciplinary care.

P-105

Bird's eye view of high-resolution computed tomography (HRCT) of the chest

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INTRODUCTION: High-resolution computed tomography (HRCT) is an essential imaging modality for evaluating pulmonary diseases. This educational poster provides an overview of HRCT techniques, anatomy, indications, and common findings to enhance radiological education and interpretation skills.

METHODS: A comprehensive review of HRCT literature was conducted, focusing on its application in various respiratory conditions such as interstitial lung disease, pulmonary nodules, and infections. Selected clinical images illustrate key patterns and pathologies.

RESULTS:

1. Techniques: HRCT employs thin-slice acquisition and high spatial resolution to enhance visualization of lung structures.
2. Anatomy: Knowledge of lung anatomy is critical for effective HRCT interpretation. The secondary lobule, the smallest functional unit of the lung, measures approximately 1-2 cm and is surrounded by connective tissue septa. It consists of 5-15 pulmonary acini, where alveoli facilitate gas exchange. Each lobule is supplied by a central terminal bronchiole, accompanied by the centrilobular artery, while pulmonary veins and lymphatics are located in the peripheral interlobular septa. Under normal conditions, only a few thin septa are discernible.
3. Lymphatic System: Two distinct lymphatic networks exist: a central network that follows the bronchovascular bundles toward the lobule's center and a peripheral network situated within the interlobular septa and along the pleural linings.
4. Indications: HRCT is crucial for diagnosing conditions like idiopathic pulmonary fibrosis, sarcoidosis, and emphysema.
5. Findings: Common patterns observed on HRCT include reticular opacities, ground-glass opacities, and nodular lesions, each linked to specific pathologies that assist in differential diagnosis.

CONCLUSION: HRCT plays a vital role in diagnosing and managing various pulmonary disorders. This poster serves as a valuable resource for radiology students and professionals, promoting a better understanding and interpretation of HRCT findings. Engaging visuals and concise explanations will aid in recognizing essential patterns, ultimately improving patient care.

P-106

Pseudoaneurysm of right femoral artery

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Pseudoaneurysms of Femoral artery are rare but significant complication following percutaneous coronary artery intervention surgery or trauma. Prompt diagnosis and treatment are crucial to prevent adverse outcomes.

Here we report a case of 55 year old female, who developed a pseudoaneurysm of right common femoral artery following PCI to right coronary artery. The patient presented with pain and swelling in right groin region. Doppler ultrasound confirmed the diagnosis of pseudoaneurysm. The patient underwent successful ultrasound guided compression, resulting in complete thrombosis of pseudoaneurysm. Follow up ultrasound after 10 days showed no evidence of pseudoaneurysm. The patient remained asymptomatic during subsequent follow up visits.

This case underscores the importance of early recognition and intervention in managing femoral artery aneurysms post - PCI. Ultrasound guided compression and thrombin injection are an effective and minimally invasive treatment options.

P-107

Comparative analysis of grade 4 lesions of breast in BI-RADS classification

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OBJECTIVE: To analyze different BI-RADS IV lesions keeping histopathology as gold standard.

MATERIAL AND METHODS: All the patients with breast lesions were tested with mammograms and 89 patients having breast lesions labeled as BI-RADS 4 were studied from June 2023 to August 2024. Patients identified with BI-RADS 4 lesions were then followed up with ultrasound guided biopsies. Statistical analysis was done using Chi-square test in SPSS version 26.

RESULT: Amongst a total of 42 patients with BI-RADS 4 lesions, 15 (35.7%) patients had malignant lesions whereas 27 (64.3%) patients had non-malignant lesions (Fibroadenoma: 16 (38%), Fatty Change: 8 (19%), Intraductal Papilloma: 2 (4.8%) and Abscess/ Mastitis: 1 (2.8%)). According to sub categories; 17 were found out to be BI-RADS 4-A, 5 were BI-RADS 4-B and 25 were identified as BI-RADS 4-C. Among BI-RADS 4-A, 3 (17.6%) cases were malignant and 14 (82.3%) cases were non-malignant conditions. In BI-RADS 4-B, 2 (40%) cases were malignant and 3 (60%) cases were non-malignant. Among BI-RADS 4-C, 20 (80%) cases were malignant and 5 (20%) cases were non-malignant.

CONCLUSION: A positive correlation was found between classification of BI-RADS 4 lesions into sub categories based on mammography and detection of malignancy on biopsy.

P-108

Collet-Sicard syndrome: A consequence of glomus jugulare paraganglioma

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Collet-Sicard syndrome, also known as condylar jugular syndrome, involves a combination of cranial nerve IX, X, XI, and XII palsies resulting from either

neoplastic or non-neoplastic lesions at the jugular foramen. Common non-neoplastic causes include traumatic skull base fractures, while neoplastic causes include glomus jugulare tumors, schwannomas, and metastases. Paragangliomas represent less than 1% of all neoplasms in the head and neck region and are typically classified as benign, slow-growing, locally invasive and highly vascular tumors.

We present the case of an 83-year-old female who reported hoarseness and decreased hearing for the past 1 year. Examination revealed multiple cranial nerve palsies, including leftward tongue deviation, an absent gag reflex, left-sided uvular palsy, sternocleidomastoid and trapezius muscles weakness. A CE-CT scan of the neck showed an enhancing mass centered in the left jugular fossa, eroding the petrous bone and extending into the cerebellopontine angle with erosion of the hypoglossal canal, jugular foramen, and carotid canal. A follow-up CE MRI revealed an infiltrative mass in the jugular fossa with avid post contrast enhancement giving "salt and pepper" appearance. The left internal carotid artery was partially encased, cranial nerves IX, X, XI, and XII were involved. Based on these clinical and radiological findings, a diagnosis of Collet-Sicard syndrome secondary to glomus jugulare paraganglioma was established, which was confirmed by histopathological examination. Surgical debulking is being planned.

Collet-Sicard syndrome is a rare disorder characterized by complex clinical manifestations that can result in delayed diagnosis. In the absence of trauma, it is important to consider and exclude neoplastic or metastatic diseases involving the temporal bone.

P-109

Cholangiocarcinoma with superadded cholangitic abscess: A case report

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INTRODUCTION: Cholangiocarcinoma (CCA) is the second most frequent type of liver cancer, after hepatocellular carcinoma. The presence of luminal cholangiocarcinoma with cholangitic abscesses complicates diagnosis and management further.

CASE REPORT: Here we discuss the case which encountered our hospital setting discussing clinical signs and symptoms of cholangiocarcinoma with cholangitic abscess, emphasizing the importance of imaging findings from Computed Tomography (CT) and ERCP (endoscopic retrograde cholangiopancreatography) for accurate diagnosis.

DISCUSSION: A significant difficulty arises when a patient with cholangiocarcinoma has cholangitic abscesses. As CT is readily available, it is the preferred modality because it can assess the original tumor as well its complications just like cholangitic abscess as in this case.

CONCLUSION: Cholangiocarcinoma is one of the commonest liver tumour and its complications do occur early in the disease course as it blocks the bile ducts. Cholangitic abscess is not one of the common complication and patient do present late because to distinguish it from other disorders is quite difficult.

P-110

The delectable doughnut sign in radiology: A tasty clue to diagnostic insights

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OBJECTIVE: To describe the characteristic imaging appearance of the doughnut sign on different radiological modalities, including plain radiographs, CT scans, and MRI

STUDY DESIGN: Retrospective study.

PLACE AND DURATION OF STUDY: Radiology department, Liaquat National Hospital Hospital, from 2023 to 2024.wa

METHODOLOGY: Comprehensive review of departmental data was conducted to identify cases where the doughnut sign was observed on various radiological modalities, including radiographs, ultrasound, and computed tomography (CT) scans. A comprehensive literature search was also conducted. A retrospective review of all radiology reports from 2023 to June 2024 was performed within the departmental database. Reports were searched for diseases known to be associated with the doughnut sign. For each case identified, the corresponding radiological images were retrieved from the department's picture archiving and communication system.

CONCLUSION: The doughnut sign is a non-specific finding that requires correlation with the clinical presentation and additional diagnostic tests for accurate diagnosis.

P-111

Unusual association of septic cerebral emboli following necrotizing fasciitis of right breast: A rare case report

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Necrotizing fasciitis is a rare yet lethal skin infection that result in necrosis of subcutaneous tissue and fascia, with global incidence is recorded at 0.4/100,000 per year. Initial clinical presentation of NF resembles with that of cellulitis and erysipelas resulting in misdiagnosis and delay in effective treatment approach. NF usually progress to septic shock however in our case septic cerebral emboli was diagnosed following necrotizing fasciitis involving right breast, axilla and right upper arm. This is a rare presentation of septic cerebral emboli following NF, that is very rarely reported in literature.

P-112

Qualitative analysis of dual-head Tc^{99m} DMSA-SPECT versus radiology in assessing differential function of duplex systems: Optimizing surgical decisions

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OBJECTIVE: To evaluate the effectiveness of Tc^{99m} DMSA-SPECT in diagnosing and assessing the functional status of duplex kidneys compared to conventional imaging techniques.

PATIENTS AND METHODS: Between July 2021 and March 2024, 111

Tc99m DMSA-SPECT scans were performed on patients aged 1 month to 20 years (mean age 5.75 years) at our facility. Clinical records, including ultrasound and CT scan findings, were reviewed. Of the 111 patients, 12 were initially suspected of having duplex kidneys whereas further evaluation of 89 others was revealed to have duplex systems. A total of 101 patients were assessed with DMSA-SPECT for duplex kidneys, and 11 were evaluated for crossed-fused ectopia.

RESULTS: Out of 103 Tc99m DMSA-SPECT scans, 80 cases revealed duplex abnormalities. Right-sided duplex was identified in 31% of cases, left-sided duplex in 49%, and bilateral duplex in 20%. The functional status of the upper moiety showed varying degrees of perfusion; 30% had good tracer uptake, 21% had reduced functioning, and 18% had poorly functioning patches. The lower moiety showed better performance with 43% exhibiting good tracer uptake. Cortical scarring was noted in 15% of cases. Surgical interventions post DMSA-SPECT included heminephrectomy, phyloplasty, ureteric re-implantation, and other procedures.

CONCLUSION: Tc99m DMSA-SPECT is a valuable tool for diagnosing duplex kidneys and evaluating their functional status, offering superior accuracy over planar imaging and CT scans. It provides critical functional data that supports informed surgical decisions and improves the management of complex renal conditions.

P-113

Imaging in non traumatic acute abdominal pain in pediatric patients and young adults in tertiary health care facility - Correlation of Radiological findings with surgical outcome

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Abdominal pain is one of the most frequent causes of emergency department visits in pediatric and adolescent patients. The role of diagnostic imaging is to help the emergency physician and surgeon to clarify the cause of pain and decide whether it needs medical or surgical treatment. The dilemma of acute non-traumatic abdominal pathologies in the pediatric and adolescent population depends on the age of the patients and symptoms. Surgical etiologies in patients younger than 2 years of age include intussusception, pyloric stenosis, malrotation and midgut volvulus. In older patients, considerations become closer to differential etiologies in adults including acute appendicitis, renal colic etc. Ultrasound, fluoroscopic examinations and CT scan remain the mainstay for diagnosis that may even be therapeutic such as contrast/air enemas in intussusception reduction. The purpose of our study is to emphasize the role of Diagnostic imaging in establishing the surgical pathologies that require urgent intervention to reduce morbidity, thus ruling out medical/non surgical causes. This study is being conducted at armed Forces Institute of Radiology and Imaging (AFIRI) where 42 patients have been evaluated so far, with surgical causes of abdominal pain. Radiological findings were correlated with surgical outcome and histopathology. Most common cause was found to be acute appendicitis. Intussusception is another important pathology where Radiologists play important role with avoidance of surgery by therapeutic reduction. Four cases of intussusception were subjected to therapeutic reduction under Fluoroscopic guidance. Out of these two were successful, one showed spontaneous reduction and one was unsuccessful. Ovarian torsion, mesenteric cyst and midgut volvulus were among other important findings. Gossipyboma, intestinal obstruction and ruptured appendix were found in adolescent patients. All cases with surgical indication were correlated with per operative findings.

P-114

Audit of combined fine needle aspiration cytology & core needle biopsy in the same setting to establish histopathological diagnosis

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BACKGROUND AND OBJECTIVES: Fine Needle Aspiration Cytology (FNAC) and Core Needle Biopsy (CNB) are both widely used techniques for histopathological diagnosis of various types of masses. FNAC is less invasive, quicker, and causes minimal patient discomfort, making it a valuable tool initially. However, in some cases, it may not be sufficient for actionable diagnoses or molecular testing, especially for cases that require large immunohistochemical panels or cases in which histological features are mandatory for the diagnosis. Core needle biopsy (CNB), on the contrary, provides samples that are suitable for histological features and sufficient for all ancillary studies. However, CNB is open performed by radiologists or clinicians without the direct participation of cytopathologists, which can lead to missed or delayed diagnoses. This study reports on the experience of combining FNAC and CNB performed in one setting by cytopathologists. The aim was to evaluate the impact of CNB on FNAC and the diagnostic efficiency of the combined procedures.

MATERIAL AND METHODS: This retrospective study was conducted at Aznostrics The Diagnostic Centre Lahore over a period of 03 months from 1st July, 2024 to 30th September, 2024. A total of 70 patients were included in the study. The FNAC results were compared and integrated with the subsequent CNB results. The impact of CNB was categorized as follows: non-contributory, in cases of inadequate samples; confirmed, when the CNB and FNAC diagnoses were the same; improved, when the CNB diagnosis was consistent with the FNAC diagnosis and further specified the corresponding entity; allowed, when CNB produced a diagnosis that could not be reached by FNAC; changed, when the CNB changed the previous FNAC diagnosis.

RESULTS: CNB confirmed the FNAC diagnosis in 52.86% of cases (n = 37/70). CNB improved the FNAC diagnosis in 40% of cases (n = 28/70). CNB allowed a diagnosis that could not be performed on FNAC in 4.28% of cases (n = 3/70). CNB changed a previous FNAC diagnosis in 2.86% of cases (n = 2/70). CNB was non-contributory in 0% of cases (n = 0/70). CNB produced a positive impact on the whole diagnostic procedure in 47.10% of total cases (n = 33/70). The combined FNAC and CNB resulted in actionable diagnoses in 100% of all cases (n = 70/70).

CONCLUSION: The combined use of FNAC and CNB in one setting improves the diagnostic accuracy of both procedures. This approach exploits the advantages of each procedure, enhancing the accuracy of the final diagnosis.

P-115

Comparative study of left ventricular ejection fraction by cardiac magnetic resonance and echocardiography in patients with ischemic cardiac disease

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The aim of this study was to assess and contrast left ventricular ejection fraction measurements using cardiac magnetic resonance (CMR) and echocardiography (echo) in individuals who had previously experienced ischemic myocardial insult. Ejection Fraction measurements obtained through cardiac magnetic resonance (CMR) and echocardiography demonstrate fairly strong correlation between these two modalities, however the standard deviation among the two modalities is due to the performance of echo in the acute phase of myocardial ischemic insult, during which phase due to decreased coronary perfusion leads to muscle hypoxia and necrosis which in turn compromises

myocardial contractility hence low EF. In contrast to that, EF evaluated through CMR is during the later phase of myocardial ischemic insult when most of the hypoxic myocardium has recovered from ischemia, hence demonstrating fairly better EF.

P-116

Rare case of intracardiac right ventricular hydatid cyst, complicated by rupture and anaphylactic shock

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Hydatid cysts are a common parasitic disorder, that commonly affects liver and lungs. However, cardiac involvement is also observed rarely. A 21-year-old young male came to our hospital with a chief complaint of chest pain, dyspnea, and palpitations. Echocardiography revealed a well-defined, cystic mass within the right ventricle. Cardiac Magnetic resonance imaging (CMRI) revealed that the cystic mass within the right ventricle shows no enhancement in early or late gadolinium phases. Plain CT thorax showed faint marginal calcifications. Diagnosis of intra-cardiac hydatid cyst was made and surgical excision was decided.

Unfortunately, the patient did not comply and showed up again after 2 months in a state of anaphylactic shock. Rupture of the intra-cardiac hydatid cyst was suspected, which was later confirmed on contrast enhanced Computed tomography (CECT) Chest. The case highlights the rare occurrence of an intracardiac hydatid cyst, emphasizing the importance of early diagnosis and intervention to prevent potentially life-threatening complications.

P-117

Unusual presentation of a rare coronary disease with unexpected complications: Giants with mass effect

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Coronary artery aneurysms (CAAs) are very rare findings in patients undergoing CT coronary angiography (CTCA) for suspected ischemic heart disease (IHD). CAAs involving more than one coronary artery are even rarer. We, herein, report a case of incidental finding of giant CAAs (GCAAs) that affected three major coronary arteries with mass effect on the adjacent structures. A 56-year male patient presented with chest pain, shortness of breath on exertion, weakness, and history of pre-syncope or syncope episodes. Transthoracic echocardiography (TTE) was performed which showed a suspicious mass behind left atrium. CTCA revealed multiple GCAAs involving left anterior descending artery (LAD), left circumflex artery (LCX), and its obtuse marginal (OM) branch and right coronary artery (RCA). Some of these aneurysms were partially thrombosed while others were almost completely thrombosed. There was evidence of moderate pericardial effusion also. Multiple giant thrombosed aneurysms of more than one coronary artery are very rare. To prevent potential complications, the only recommended treatment is surgical intervention.

P-118

The relationship of age and gender with lumbar spine degenerative changes in patients with low back pain

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A retrospective cross-sectional observational study was carried out on individuals who presented with LBP to the Department of Radiology, Khyber Teaching

Hospital Peshawar from June 2017 to May 2018 for a lumbosacral spine MRI. The sampling was done by consecutive nonprobability technique. The frequency and distribution of Pfirrmann grading, Modic changes, disc herniation, and annulus tear were assessed.

Furthermore, their association with the age and gender of the patient was assessed by regression analysis. SPSS 23 was utilized for conducting statistical analysis.

Our study comprised 163 MRI lumbar spine patients between 30 and 90 years (mean age 46.88 years with a 12.136 standard deviation). 83 patients were male (50.9%) and 80 (49.1%) were female. Age had a significant association with Pfirrmann grading at L2-L3 to L5-S1 level (p-value <0.01). The percentage of degenerated segments also rose with advancing age. The greatest number of Modic changes were seen in the age range of 61-70 years (38.2%). Most annulus tears were seen at L4-L5 levels followed by L3-L4. 19% of males had annulus tears while 23.3% of females had annulus tears. The most disc bulges were observed among individuals aged 31-40 years (n=155), with the second highest occurrence noted in the 41-50 age group (n=75).

Endplate changes and disc degenerative changes are associated with increasing age. Degenerative changes in the lumbar spine are not statistically different in male and female populations.

P-119

Investigation of paget disease of nipple: Embrace cutting edge investigational paradigm

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Paget disease of the breast, is a type of breast cancer characterised by infiltration of the nipple epidermis by malignant cells. Paget's disease of breast is commonly seen in the fifth or sixth decade of life. Clinical symptoms could be changes in nipple and areolar region. A punch biopsy from the nipple areolar region is necessary to confirm the diagnosis.

Conventional imaging such as mammography is the initial radiological investigation for detecting underlying invasive carcinoma or DCIS. MRI of breast is performed in patients with negative mammogram and ultrasound findings with no clinically palpable mass.

Contrast-enhanced mammography (CESM) is an emerging technique that not only gives information about anatomy but uses iodinated contrast material for the visualization of breast neovascularity in a fashion similar to MRI. Imaging is performed with dual-energy digital mammography, which helps provide a low-energy image and a recombined image that gives details about enhancement, thus precluding the need for MRI.

P-120

Rare case of unilateral hypercondylia

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A 22 yrs old male presented in dental opd with progressive asymmetry of jaw for six months, with difficulty in chewing. There was no history of trauma or complain of pain. On examination there was dental malocclusion however no tenderness was elicited. Plain ct face was advised. On ct face, left mandibular condyle appeared significantly enlarged compared to right. No cortical thinning or bone destruction was seen. no soft tissue mass was noted. Case was diagnosed

as unilateral mandibular condylar hyperplasia also known as hypercondylia. Treatment is condylectomy.

P-121

A rare presentation of elastofibroma dorsi: Diagnostic challenges and surgical outcome

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Our patient was 63 years old male who complained of painful lump in right upper back for the last 1 year which restrained his physical activities. Physical examination of the right upper back revealed a lump. Routine investigations including CBC, LFTs and RFTs were normal. X ray bilateral shoulders was normal. Ultrasound showed poorly defined lesion with multi-layered pattern of hypoechoic linear areas intermixed with echogenic fibroelastic tissue. Computed tomography showed ill defined lesion in bilateral subscapular regions, isodense to latissimus dorsi and serratus anterior muscles. Consequently MRI chest showed ill defined, non enhancing, heterogenous lesion with fatty streaks in infra and subscapular regions, deep to latissimus dorsi and serratus anterior muscles. MRI findings were suggestive of bilateral elastofibromas dorsi.

The patient had uneventful recovery. After three months, follow up was done by performing MRI. No recurrent lesion was found.

The lesion is silent in most of the cases but some patients can present with pain radiating to the shoulder which is mistakenly diagnosed as rotator cuff injury. Imaging studies play an important role in evaluation of these lesions. Ultrasound is the initial investigation performed which shows alternating hyper and hypoechoic lines and absence of vascularity on doppler, followed by CT and MRI scans. MRI is not always required however it is done to achieve better soft tissue contrast. Histopathological analysis is done for exact diagnosis which shows dense collagen bands and numerous irregularly arranged elastic fibres with interspread adipocytes. As far as treatment is concerned, surgical resection is done but only offered to those patients who complain of pain since the lesion is benign and slow growing. Imaging plays an important role in raising diagnostic confidence therefore one must perform CT and MRI. Surgical treatment is less often required, except in those patients with pain or functional limitation.

P-122

Imaging driven-diagnosis in the management of trigeminal neuralgia: A case report

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A case of a 27-year-old female who visited the outpatient department of Hayatabad Medical Complex, Peshawar, with a three-month history of severe, shock-like pain on the right side of her face. The pain was triggered by activities like chewing and talking and significantly impacted her quality of life. Physical examination revealed no sensory deficits, but the patient experienced intense pain when the right side of her face was touched. With a provisional diagnosis of trigeminal neuralgia, MRI confirmed the compression of the trigeminal nerve root by the superior cerebellar artery.

The patient was started on carbamazepine, leading to significant symptom improvement at a three-month follow-up, with only mild, occasional pain. She chose to continue with medical management, postponing surgical options. TN typically involves one nerve division but may spread to others or be associated with ipsilateral hemifacial spasm. Rapid spread or bilateral involvement often

indicates secondary disease, such as MS or a tumor. The most accepted theory is that neurovascular compression near the pons damages the myelin sheath, leading to nerve hyperactivity. Diagnosis of TN is primarily clinical, with MRI used to detect neurovascular conflict and rule out secondary causes. Advanced imaging techniques like 3D FIESTA and contrast-enhanced 3D time-of-flight (TOF) MRA are useful in identifying compressing vessels. Treatment usually begins with carbamazepine or oxcarbazepine, with dosage adjusted based on response. For those not responding to medical therapy, microvascular decompression surgery is recommended, providing long-term relief with minimal risks.

Trigeminal neuralgia is a debilitating condition that requires prompt diagnosis and management. This case report emphasizes the value of neuroimaging in confirming the diagnosis and guiding treatment decisions. With early recognition and a tailored treatment approach, patients with TN can achieve significant symptom relief and improved quality of life.

P-123

Development of acceptable quality dose (AQD) and image quality related diagnostic reference levels for common computed tomography investigations in a tertiary care public sector hospital of Khyber Pakhtunkhwa, Pakistan

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To describe the first experience of patient dose optimization in developing AQD, SSDE and image quality-related DRLs for common CT examinations in the adult age group using the concept of AQD.

The recent published IQSC from 0 to 4 were used by radiologists for the assessment of image quality. The entire data were collected for five types (brain CT, chest CT, chest HRCT, abdomen KUB CT and abdomen+pelvic CT) CT investigations based on anatomic region (head, chest and abdomen+pelvic). The entire datasets of 264 patients were categorized into three groups based on their weights: group-1 (41-60 kg), group-2 (61-80 kg) and group-3 (81-100 kg). Only score-3 images were considered to assess median and 75th percentile values of CTDIvol and DLP to obtain AQDs and DRLs, respectively.

Following the practical training of four radiologists on image quality scoring criteria for CT images, 264 (92%) out of 288 patient images were clinically acceptable as per IQSC for the study. The AQD (median) values in terms of CTDIvol for the mentioned weight groups were 25.8, 2.7, and 30.6 mGy, while the median DLP values for these groups were 496, 510 and 557 mGycm, respectively, for brain CT. The 75th percentile values in terms of CTDIvol were 30.2, 35.3 and 36.2 mGy, while in terms of DLP, they were 583, 619 and 781 mGycm for brain CT, respectively. Similar results are presented for the above-mentioned procedures, as well as in terms of SSDE.

The first ever experience in obtaining AQD, SSDE and DRLs values for specific CT procedures couples image quality with dose indices, showing comparable values with other relevant studies. Hence, it will provide a baseline for comparison within the facility for future studies and facilitate dose optimization for other facilities aiming for improvement.

P-124**Role of sonoelastography in evaluation of lymph node metastasis in head and neck keeping histopathology as gold standard****Maaza Javed,***Department of Radiology, Shaikh Zayed Hospital, Lahore, Pakistan.**E-mail: javedmaaza@gmail.com***ABSTRACT:**

This study aims to assess the diagnostic accuracy of sonoelastography in differentiating benign from malignant cervical lymph nodes, using histopathology as the gold standard.

This cross-sectional study will be conducted at the Department of Diagnostic Radiology, Shaikh Zayed Hospital Lahore, with 131 participants presenting with enlarged cervical lymph nodes. Sonoelastography will classify lymph nodes into categories based on tissue stiffness scores from 1 (soft, benign) to 4 (hard, malignant). Histopathological examination will confirm the diagnosis. The study will evaluate sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and overall diagnostic accuracy of sonoelastography.

The study is expected to confirm sonoelastography's effectiveness in identifying malignant nodes with high sensitivity and specificity, potentially reducing the need for invasive biopsies.

Validating sonoelastography as a reliable, non-invasive diagnostic tool could enhance the accuracy of cervical lymphadenopathy assessments in head and neck cancer patients, improving patient management and minimizing unnecessary procedures.

P-125**Imaging driven-diagnosis in the management of trigeminal neuralgia: A case report****Nawal Naseem***Department of Radiology, Lahore, Pakistan.**E-mail: ghazalawahid3@gmail.com*

This study aims to evaluate the diagnostic accuracy of ultrasound for detecting rotator cuff tears, using MRI as the gold standard. A cross-sectional study will be conducted at Shaikh Zayed Hospital, Lahore, over six months. Seventy-eight patients with suspected rotator cuff tears will undergo both ultrasound and MRI examinations. The sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV) of ultrasound will be calculated and compared with MRI findings. Expected outcomes will provide insights into the effectiveness of ultrasound compared to MRI in diagnosing rotator cuff tears, potentially guiding diagnostic practices in resource-limited settings. This study will assess the feasibility of ultrasound as a reliable diagnostic tool for rotator cuff tears, with implications for improving diagnostic access and reducing healthcare costs in Pakistan.

P-126**Radiological insights in the diagnosis and management of tuberous sclerosis with giant cell astrocytoma and hydrocephalus: A case study****Sumbal Moeen, Mamoona Sattar, Shandana Khan***Department of Radiology, Northwest General Hospital & Research Centre, Peshawar, Pakistan.**E-mail: sumbalmoeen22@gmail.com*

A 14-year-old female presented with a two-week history of persistent headaches, vertigo, retro-orbital pain, blurring of vision, and projectile vomiting. MRI brain with contrast revealed hallmark features consistent with tuberous sclerosis, notably bilateral cortical and subcortical altered signal foci, appearing

hyperintense on T2-weighted and FLAIR sequences. These lesions were associated with scattered cystic foci, a well-recognized radiological feature of tuberous sclerosis.

A subependymal lesion, located at the left foramen of Monro, measured 2.0 x 1.0 cm, demonstrating faint post-contrast enhancement and signal intensities isointense on T1-weighted images and hypointense on T2-weighted images. This lesion was causing mild asymmetrical hydrocephalus by dilating the left lateral ventricle. The presence of a calcified lesion at this critical location raised concern for subependymal giant cell astrocytoma (SEGA), a frequent complication in tuberous sclerosis patients. The subtle mass effect and faint enhancement underlined the necessity for vigilant follow-up with high-tesla MRI to monitor potential progression. In addition, abdominal CT revealed a 38 x 36 mm hyperdense lesion in the lower pole of the left kidney, consistent with renal angiomyolipoma, a common manifestation in tuberous sclerosis complex (TSC). The right kidney showed a small, non-obstructing calculus and a possible cortical cyst.

The diagnosis of tuberous sclerosis with SEGA and hydrocephalus was established. Endoscopic third ventriculostomy (ETV) was performed to alleviate the hydrocephalus, and the patient was discharged with home medication and scheduled for routine follow-up imaging. This case underscores the pivotal role of advanced neuroimaging in diagnosing and managing TSC-related SEGA and renal manifestations.

Continuous monitoring with contrast-enhanced MRI is critical to detect early signs of SEGA growth and mitigate complications, ensuring timely surgical intervention where necessary.

P-127**Nonketotic hyperglycemia hemichorea and hemiballismus: A case report****Samia Iftikhar***Department of Radiology, Hayatabad Medical Complex, Peshawar, Pakistan.**E-mail: samiaiftikhar.123@gmail.com*

The goal is to raise awareness about nonketotic hyperglycemia-related hemichorea and hemiballismus, highlighting its higher prevalence in elderly woman with poorly controlled diabetes. Emphasizing the importance of early MRI testing and prompt treatment.

BACKGROUND: Nonketotic hyperglycemia is a rare but significant metabolic disorder characterized by hyperglycemia without ketosis. It can manifest with various neurological symptoms, including hemichorea and hemiballismus, which are involuntary, hyperkinetic movements that are typically unilateral. These symptoms are often overlooked in clinical settings, leading to delayed diagnosis and treatment.

CASE PRESENTATION: A 45-year-old woman with a history of poorly controlled type 2 diabetes and hypertension presented with a one-week history of involuntary, jerky movements in her right arm and foot. There was no history of headache, fever, weakness, seizures, or medication use that could explain the chorea. Neurological examination showed choreiform movements in her right upper and lower extremities. Laboratory investigations showed significantly elevated blood glucose levels with normal ketone bodies. Brain imaging revealed hyperintense signals in the contralateral basal ganglia on T1-weighted MRI, consistent with nonketotic hyperglycemia associated hemichorea and hemiballismus. The patient's symptoms improved significantly with better glycaemic control and supportive care.

CONCLUSION: This case highlights the importance of considering nonketotic hyperglycemia as a potential cause of hemichorea and hemiballismus in patients with uncontrolled diabetes. Awareness of this rare but treatable condition with prompt recognition and management are crucial for timely intervention and better patient outcomes.

P-128**Gas containing ureteric calculi; A rare radiological case**

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Gas containing stones are very rare. They have association with renal infections such as emphysematous pyelonephritis and are mostly encountered in diabetic females with history of urinary obstruction & stasis. These patients may develop serious complications such as sepsis, septic shock that may lead to death.

This case report discusses the radiological findings and emphasizes the need for awareness of this rare condition, which is crucial for accurate diagnosis and timely management. The case also underscores the significance of considering the patient's underlying medical conditions and potential concurrent infections in the diagnosis and treatment of ureteric calculi.

P-129**Celiac artery compression syndrome: A case report**

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Celiac artery compression syndrome is an uncommon condition, and not well understood. It occurs when the median arcuate ligament compresses the celiac artery, leading to persistent abdominal pain after eating, weight loss, vomiting, and nausea. These symptoms are often nonspecific and can be mistakenly diagnosed as functional dyspepsia, peptic ulcer disease, or gastropathy. We report the case of a 56-year-old man who experienced recurrent, severe postprandial abdominal pain, sometimes accompanied by vomiting. A computed tomography angiography revealed compression of the celiac artery by median arcuate ligament. After ruling out other potential causes, a diagnosis of celiac artery compression syndrome was established, and the patient was referred to a surgical team for elective release of the median arcuate ligament.

P-130**Bilateral ectopic kidneys: A rare case presentation in a 50-year-old male**

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Renal migration anomalies are uncommon and often underreported. Kidneys that fail to ascend to their normal position in the renal fossa are referred to as ectopic kidneys, which can occur unilaterally or bilaterally. Pelvic kidneys, those that fail to ascend above the pelvic brim, are a frequent type of ectopic kidney. We present a rare case of bilateral ectopic kidneys in a 50-year-old male. Patients with bilateral ectopic kidneys may remain asymptomatic or experience symptoms such as flank pain, recurrent urinary tract infections (utis), renal calculi, and haematuria. While unilateral ectopic kidneys are more common, this case highlights the atypical bilateral presentation, which is seldom encountered. This case report aims to assist medical practitioners in the prompt diagnosis and management of bilateral ectopic kidneys, enhancing awareness of this rare condition.

P-131**Liver pseudocirrhosis in metastatic breast carcinoma: Unveiling a rare complication**

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Pseudocirrhosis is an uncommon yet significant complication observed in breast cancer patients following chemotherapy. It refers to radiological findings of diffuse hepatic macronodules that resemble liver cirrhosis, although without the histopathological characteristics typically seen in true cirrhosis. This condition often signals advanced disease and poor prognosis. We present a case of a 48 years old female with a history of right breast metastatic carcinoma who developed pseudocirrhosis following neoadjuvant chemotherapy. Despite aggressive treatment, the patient exhibited progressive hepatic dysfunction and radiologic findings consistent with cirrhosis, though without underlying liver disease. This case underscores the importance of recognizing pseudocirrhosis as a potential complication in metastatic breast cancer, highlighting the need for vigilant monitoring and a tailored approach to management. Early identification of this condition is crucial, as it may influence therapeutic decisions and overall patient care.

P-132**Ovarian dermoid cyst- associated autoimmune encephalitis: A case of neurological recovery through timely surgical intervention**

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Ovarian Dermoid Cyst- Associated Autoimmune Encephalitis: A Case of Neurological Recovery Through Timely Surgical Intervention.

Autoimmune encephalitis, especially anti-NMDA receptor encephalitis, is a rare yet severe neurological condition frequently associated with ovarian teratomas. These tumors, containing neural elements, can provoke an autoimmune response, leading to various neuropsychiatric manifestations. We describe a 21- year-old unmarried female who presented with confusion, drowsiness, and a generalized tonic-clonic seizure. Brain MRI suggested autoimmune encephalitis, and anti-NMDA receptor antibodies were positive. Pelvic imaging, including MRI and CT, revealed a left ovarian dermoid cyst. The cyst was surgically removed, addressing the underlying cause of encephalitis. This case underscores the critical role of identifying associated ovarian neoplasms in patients with autoimmune encephalitis. Early recognition and surgical intervention can significantly improve patient outcomes, highlighting the importance of thorough investigations in young females presenting with new-onset neuropsychiatric symptoms.

P-133**Variation of normal portal venous doppler indices in post operative period following living donor liver transplant**

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This retrospective cohort study was done at PKLI and Research Centre from July 1 to December 31 2021. It included all adult patients over 16 years of

age who underwent LDLT. Triplex Doppler ultrasound of LDLT recipients performed intraoperatively and postoperatively for 5 consecutive days. Subsequent scans were performed at 2 weeks, 4 months, and 6 months after the transplant. Portal vein velocities were taken at the extrahepatic part, anastomosis, and intrahepatic part. Statistical analysis was performed using SPSS version 20.

The study involved 91 patients, with ages ranging from 17 to 73 years and a mean age of 44.9 years. Among the recipients, 79% were male and 21% were female. The portal venous velocities varied between 31 cm/s and 357 cm/s. All patients had antegrade portal venous flow. The portal venous velocities normalized within 4-6 months following LDLT.

A wide range of portal venous velocities can be encountered following LDLT without clinically significant outcome and these usually normalize within 4-6 months following LDLT.

P-134

Audit of radiology reports of patients with suspected renal cell carcinoma performed on computed tomography

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Our audit results found that some core features were satisfactorily mentioned in most of the reports, these include size of the mass lesion 52/52 (100%), cranio-caudal location of the mass 52/52 (100%), solid enhancement 51/52 (98%), lymph nodes 49/52 (94.23%) and metastasis in FOV 45/52 (86.57%). However, many of the essential features were lacking in most of our reports, these include the presence or absence of macroscopic fat 0/52 (0%), presence or absence of bland thrombus 0/52 (0%), axial location of the mass 4/52 (7.69%), capsular location of the mass 6/52 (11.5%), Bosniak classification (whether applicable or not) 13/52 (25%), mass margins 34/52 (65.4%), tumor thrombus 35/52 (67.3%), and type of enhancement 37/52 (71.15%). Similarly many preferred features were also not included in many of our departmental reports that includes length of tumor thrombus 0/52 (0%), caval wall invasion 0/52 (0%), ipsilateral renal vein variant anatomy 0/52 (0%), favored histology 0/52 (0%), ipsilateral renal artery variant anatomy 8/52 (15.38%), description of Bosniak details 14/52 (26.9%), follow up imaging recommendation 15/52 (28.84%), necrosis 23/52 (44.23%) and portion or all of the mass enhances 37/52 (71.15%).

The audit conducted suggest that our Radiology reports are lacking many of the essentials and preferred features for suspected renal cell carcinoma, So to meet up the standard criteria for renal masses according to society of Abdominal Radiology (SAR) we suggested few steps that includes, Application of a disease focused structured reporting in place of free text dictation, getting the Radiologists familiar with the core and preferred features through teaching and Conducting a second round of audit.

P-135

Non-malignant lung conditions in immunocompromised cancer patients

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Patients with a diagnosis of cancer are vulnerable to infections and the risk is increased by tumor-associated immunosuppression and the effects of the chemotherapy.

Lung is the most common organ that is affected in chemotherapy-related complications, either due to drug toxicity or more commonly due to infections caused by immunosuppression. We at a cancer hospital daily see many pulmonary complications due to adverse effects of drugs or immunosuppression. Here we are sharing many interesting non malignant lung conditions in cancer patients. Cryptogenic Organizing Pneumonia (COP) demonstrates pulmonary response to injury in the form of inflammatory interalveolar infiltrates. CT findings of COP are seen as fluffy, discrete air space opacifications in subpleural peripheral, peribronchovascular and para hilar locations. Many patients who have received radiotherapy at chest region now have patches of air space opacification that represents post radiation pneumonitis. The incidence of pulmonary tuberculosis increases in cancer patients due to decreased immunity. CT chest shows infiltrates in the form of tree in bud pattern, thick walled cavities and consolidation. Staphylococcus Aureus pneumonia has been seen with multiple cavities. Fungal pneumonia are common infectious complication in hematological cancer patients. We have seen leukemia patients with multiple pulmonary opacities with surrounding ground glass haze suggesting angioinvasive aspergillosis. Few of leukemia patients have shown cavitation with a fungus ball in it suggestive of aspergilloma. Cyclophosphamide is a medication used as chemotherapy. Few patients who were receiving cyclophosphamide as chemotherapy presented with fever, cough and shortness of breath. CT chest showed bilateral interstitial infiltrates, ground glass opacities, multifocal airspace consolidation with interstitial thickening in peribronchovascular distribution in both lung fields suggesting cyclophosphamide-induced toxicity. Fibrotic NSIP, pulmonary edema and pulmonary hemorrhage has also been seen.

Our aim is to enlighten these non malignant pulmonary conditions with their features on CT scan in cancer patients.

P-136

The normal variation in hepatic venous doppler waveform post living donor liver transplant

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We present the rare case of left main stem coronary artery aneurysm diagnosed on CT coronary angiography. A 50-year-old male with exertional chest pain underwent routine CT coronary calcium scoring revealed severe aortic valve stenosis, with a calcium score of 10,759. Subsequent CT coronary angiography showed a trifurcation of the left main coronary artery with an aneurysmal dilation measuring 13 mm, along with left ventricular outflow obstruction due to the aortic valve stenosis.

Teaching points

1. Left coronary artery aneurysms are very rare. According to literature review, the largest study conducted by Topaz et al. found 22 cases making an incidence of 0.1% among 20,332 adult patients undergoing routine coronary angiography.
2. The most common cause of CAAs is atherosclerosis, which accounts for at least half of the CAA. Other known causes include congenital malformation, Kawasaki disease, traumatic injury, previous balloon angioplasty, sub-acute bacterial endocarditis, rheumatic fever, syphilis, systemic lupus erythematosus, Takayasu arteritis.
3. Lesions are classified as aneurysms if their diameter is 1.5 to 2 times that of adjacent vessels, with those over 8 mm classified as giant. Coronary angiography is the most effective for detailed assessment.
4. Complications include thrombosis within an aneurysm resulting in distal embolization and myocardial infarction.
5. Treatment options are controversial and include medical management, surgical resection, and placement of polytetrafluoroethylene (PTFE)-covered stents.

CASE OUTLINE: Primary cutaneous B-cell lymphoma (PCBCL), a common extra nodal non-Hodgkin s lymphoma, primarily affects elderly men and presents without systemic involvement. We present a rare case of PCBCL of the scalp, where MRI revealed a hypointense lesion with post-contrast gadolinium enhancement, infiltrating subcutaneous tissue. This posed a diagnostic challenge, as the lesion mimicked interosseous meningioma. Additional imaging, such as CT and PET/CT, can help assess systemic involvement. A biopsy confirmed the diagnosis of PCBCL. This case report highlights the radiological features of PCBCL and discusses its differentiation from meningioma and abscess, with histopathology as the confirmatory test.

P-137

Diagnostic accuracy of fluid-attenuated inversion-recovery magnetic resonance imaging in detection of acute subarachnoid hemorrhage keeping lumbar puncture as gold standard

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OBJECTIVE: To determine the diagnostic accuracy of FLAIR MRI in identifying acute subarachnoid hemorrhage (SAH) using lumbar puncture (LP) as a gold standard. This was a validation study conducted from 3rd September 2020 to 3rd February 2021 at the Department of Radiology, Khyber Teaching Hospital, Peshawar. The sample size was 266. A non-probability consecutive sampling technique was used. All alert patients aged 20-70 years with sudden acute headache, other signs of SAH (nausea, vomiting, blurring of vision, sensitivity to light, and neck stiffness), and GCS >13 were included in this study. SAH on FLAIR-MRI was determined based on high signals in the subarachnoid space on FLAIR. Diagnostic accuracy was calculated regarding sensitivity, specificity, and positive and negative predictive values. SPSS version 22 was used to perform statistical analysis of the data.

RESULTS: Mean age ranged from 20 to 70 years (46.3 + 14.1 years), with 58.6% male, and 41.4% female subjects. On FLAIR-MRI, SAH was observed in 65.4% of patients while SAH was recorded in 57.5% on follow-up LP. Sensitivity of FLAIR-MRI was found to be 91.5% and specificity 69.9%. FLAIR-MRI has 80.5% positive predictive value and 85.8% negative predictive value.

CONCLUSION: FLAIR-MRI is effective in accurately identifying SAH with high sensitivity and fair specificity. As such, it is a useful radiological tool for diagnosis of SAH in adults and further studies are recommended to confirm its usefulness.

P-138

Assessment of breast cancer awareness among female patients presenting to radiology department in HMC, Peshawar

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OBJECTIVE: The primary goal of this study is to assess the level of breast cancer awareness among female patients presenting to the radiology department at HMC, Peshawar

METHODS: A cross-sectional study was conducted among female patients attending the Radiology Department of HMC, Peshawar, over a three-month period. A structured questionnaire was administered to assess knowledge of breast cancer risk factors, symptoms, and the importance of early detection methods such as mammography and self-breast examination. Data were analysed using descriptive statistics to evaluate the overall awareness levels.

RESULTS: In a survey of 300 female patients visiting the radiology department at HMC Peshawar, the assessment of breast cancer awareness revealed suboptimal knowledge levels. Only 40% of respondents were aware of common breast cancer risk factors, while 38% could identify key symptoms. Knowledge of diagnostic modalities, such as mammography, was limited to 35% of participants, and just 30% were familiar with available treatment options. Despite these low awareness levels, 25% of women reported practicing breast self-examinations, and 18% had previously undergone a clinical breast exam. Awareness was higher among women with better education and socioeconomic status.

CONCLUSIONS: In conclusion, the level of awareness of breast cancer was very low among women in Peshawar, in terms of risk factors, symptoms, and early detection methods like breast self-examinations and mammographic screening. The results underscore the urgent need for targeted educational programs to improve breast cancer awareness and promote early detection practices in this population.

P-139

A rare case of left main coronary artery aneurysm

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CASE OUTLINE: We present the rare case of left main stem coronary artery aneurysm diagnosed on CT coronary angiography. A 50-year-old male with exertional chest pain underwent routine CT coronary calcium scoring revealed severe aortic valve stenosis, with a calcium score of 10,759. Subsequent CT coronary angiography showed a trifurcation of the left main coronary artery with an aneurysmal dilation measuring 13 mm, along with left ventricular outflow obstruction due to the aortic valve stenosis.

TEACHING POINTS: Left coronary artery aneurysms are very rare. According to literature review, the largest study conducted by Topaz et al. found 22 cases making an incidence of 0.1% among 20,332 adult patients undergoing routine coronary angiography.

The most common cause of CAAs is atherosclerosis, which accounts for at least half of the CAA. Other known causes include congenital malformation, Kawasaki disease, traumatic injury, previous balloon angioplasty, sub-acute bacterial endocarditis, rheumatic fever, syphilis, systemic lupus erythematosus, Takayasu arteritis. Lesions are classified as aneurysms if their diameter is 1.5 to 2 times that of adjacent vessels, with those over 8 mm classified as giant. Coronary angiography is the most effective for detailed assessment. Complications include thrombosis within an aneurysm resulting in distal embolization and myocardial infarction. Treatment options are controversial and include medical management, surgical resection, and placement of polytetrafluoroethylene (PTFE)-covered stents.

P-140

Left coronary artery aneurysm, insights into the radiology resident training programs and learning opportunities in pakistan; A survey study

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Resident satisfaction with training programs is seldom evaluated in Pakistan. Few studies assess factors from the resident's perspective regarding their training experience. Radiology, a continually evolving field, requires ongoing teaching, research, and diverse educational opportunities, coupled with a

supportive work environment. This study explores the factors impacting resident satisfaction with their residency experience and education.

A 42-item survey was distributed to radiology residents in public and private programs across Pakistan. The survey included multiple-choice questions and a five-point Likert scale. Statistical analysis for significance ($P < 0.05$) was conducted using chi-square tests, T-tests, and logistic regression of the 113 radiology residents surveyed, 70% were female and 30% male. Over 50% would recommend their programs, yet more than 75.6% reported that work hours negatively impacted their personal life, with 81% working over 56 hours per week. Although 71% managed more than 20 cases daily, only 3% felt they had adequate time to learn from each case. This issue was associated with poor workstation experiences and limited faculty involvement, with 42% feeling faculty lacked time for educational efforts. Educational conference attendance was also insufficient, with 47% attending fewer than 3 per year and 18% attending none. Despite adequate case and modality exposure, residents felt they lacked essential resources.

Satisfaction was significantly associated with supportive consultants ($r_s = 0.447$, $P < 0.032$) and good peer support ($r_s = 0.411$, $P < 0.032$). Satisfaction improved with program advancement, especially among recent graduates. Residency training is pivotal in shaping a radiologist's career. Most trainees reported low satisfaction with teaching. This was influenced by factors such as a supportive work environment, effective consultant support, positive peer interactions, and a balanced work/life scenario. Junior residents and those in training reported the lowest contentment. To enhance satisfaction, residency programs should focus on providing a rich, educational, and supportive environment.

P-141

Imaging insights into a rare case of primary B-cell lymphoma involving the scalp

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Primary cutaneous B-cell lymphoma (PCBCL), a common extra nodal non-Hodgkin's lymphoma, primarily affects elderly men and presents without systemic involvement. We present a rare case of PCBCL of the scalp, where MRI revealed a hypointense lesion with post-contrast gadolinium enhancement, infiltrating subcutaneous tissue. This posed a diagnostic challenge, as the lesion mimicked interosseous meningioma. Additional imaging, such as CT and PET/CT, can help assess systemic involvement. A biopsy confirmed the diagnosis of PCBCL. This case report highlights the radiological features of PCBCL and discusses its differentiation from meningioma and abscess, with histopathology as the confirmatory test.

Teaching points: MRI signals are nonspecific with diffusion restriction, variable hypo to hyperintense on T2 and hypo intense on T1 with post contrast enhancement.

Imaging modalities like CT and PET/CT help assess spread and treatment response. Differentials like interosseous meningioma may be difficult to differentiate alone on imaging. Histopathology remains gold standard for definitive diagnosis.

P-142

Audit on reporting of incidental thyroid nodules detected on computed tomography: implementation of the white paper of the acr incidental thyroid findings committee

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Audit on reporting of incidental thyroid nodules detected on computed tomography is conducted in Department of Radiology, Sandeman provincial hospital, Quetta. The purpose of the audit is to achieve greater consistency in reporting and managing incidental thyroid nodules (ITNs) detected on CT according to the ACR white paper recommendations, in order to reduce unnecessary ultrasound (US) workup and downstream risks for clinically insignificant ITNs and lastly, to ensure proper workup for clinically significant ITNs.

We retrospectively reviewed patients with ITNs reported on CT studies over 1-2 month's period i.e. (from 1st January to 31st March 2024). We identified patients with ITNs that underwent workup and the factors associated with workup. The ACR white paper recommendations were retrospectively applied to estimate how their use would have changed the number of nodules reported in the impression section of radiology reports and the number of cancers diagnosed. The recommendations are based on: Patient age/sex Indication of the CT scans ITN size ITN size mentioned in reports ITN mentioned in conclusion/impression Suspicious CT features (i.e. cervical lymphadenopathy and/or extrathyroidal spread) Prior thyroid workup/surgery/radiation Limited life expectancy/comorbidities.

A total of 50 patients had ITNs reported. For 18 of these patients (36%), ITNs were reported by radiologists in the impression section of their reports; 6 patients (12%) received workup. Patients with ITNs reported in the impression section were 14 times more likely to undergo workup than were patients with ITNs reported only in the findings section of the radiology report. On multivariate analysis, the only factors associated with workup were younger patient age and larger nodule size ($p = 0.002$). The ACR recommendations resulted in reduction in the number of ITNs reported in the impression section.

Only one in five patients with ITNs reported in the impression section of CT reports underwent additional workup, and this decision was influenced by younger patient age and larger nodule size. These factors are components of the ACR recommendations, which have the potential to reduce the number of reported ITNs and improve the standardization of radiology reporting.

P-143

Pansuture craniosynostosis; case study

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Craniosynostosis is a condition where one or more of the cranial sutures close too early, resulting in characteristic changes in the shape of the skull. Craniosynostosis can occur spontaneously, be associated with syndromes, or run in families, and it may involve one or multiple cranial sutures. Recognizing the distinct head shapes associated with this condition can enable bedside diagnosis and help differentiate it from positional plagiocephaly. Craniosynostosis could of single suture of multisuture phenomenon. Minor sutures consist of the squamosal, mendosal, intraoccipital, and others. When a major suture fuses prematurely, it can lead to cranial deformities and may restrict overall skull growth, potentially causing increased intracranial pressure. Multisuture synostosis is a rare type of craniosynostosis in which multiple skull sutures fuse prematurely. This congenital condition disrupts normal brain growth and alters head shape, as the skull cannot expand properly in areas where the sutures have closed, leading to abnormal growth in other regions.

The exact causes are not fully understood, but it can sometimes be associated with genetic disorders such as Carpenter syndrome, Crouzon syndrome, Pfeiffer syndrome, and Saethre-Chotzen syndrome. Due to the various ways skull sutures can fuse, there are over 70 types of multisuture synostosis. Among these, the most common include Cloverleaf deformity (Kleeblattsch del) and pansynostosis.

This is a rare and remarkable case of pansuture craniosynostosis in a 28-day-old male, presenting with premature fusion of all major cranial sutures. The patient was referred from the neurosurgery outpatient department for a 3D CT scan, following a clinical diagnosis of craniosynostosis. Imaging confirmed the fusion of all major sutures and the posterior fontanelle, with a small size anterior fontanelle. This case highlights the critical need for early diagnosis and comprehensive evaluation in managing complex cranial deformities.

P-144

Congenital cholesteatoma of the mastoid: A rare case of diagnostic and surgical complexity

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A congenital cholesteatoma is an epidermoid cyst located behind an intact tympanic membrane, originating from congenital remnants of keratinizing squamous epithelium within the temporal bone. This type of cholesteatoma can develop in various areas of the temporal bone, including the petrous apex, cerebellopontine angle, middle-ear cavity, and mastoid process. The mastoid process is the least common site for this condition, with only a few cases reported globally. We present a rare case of a 27 year old male with unilateral progressive conductive hearing loss for the last six months. There was no history of acute otitis media, previous ear surgery or local trauma. MRI brain and temporal region revealed a T2 hyperintense lesion in the right mastoid air cells and right middle ear cavity showing restricted diffusion on DWI and heterogeneous post contrast enhancement. Histopathological analysis of the specimen confirmed the presence of keratinous material and the diagnosis of congenital cholesteatoma was established.

P-145

Isolated substantia nigra signals in viral encephalitis: An uncommon MRI pattern

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Viral encephalitis is the result of human virus with sparing of meninges. Encephalitis can involve any age group from children to old people. Patient can present with fever, headache, altered mental status and paralysis or limb weakness. Cerebrospinal fluid(CSF) analysis reveal viral picture. Magnetic resonance imaging(MRI) plays a major role in diagnosis of encephalitis. We present a case of viral encephalitis with isolated signals in substantia nigra which is an uncommon presentation with only few cases reported.

Magnetic resonance imaging(MRI) of the patient showed isolated high signals only in substantia nigra on T2 weighted and Fluid attenuated inversion recovery (FLAIR) sequences with areas of restricted diffusion on Diffusion weighted images(DWI).

P-146

Hirayama's disease in a young male with upper limb weakness

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Hirayama's disease is a rare neurological condition. It is a type of cervical myelopathy which affects the upper extremities. Usually young males are affected. The underlying cause for this disease is believed to be due to compression of cervical by dural sac. We report a case of 22year old man who complained of weakness in both upper limbs. MRI cervical spine showed T2W high signals in cervical cord from C3 to C5 levels with mild volume loss.

P-147

Assessment of segmental hepatic fat distribution using magnetic resonance proton density fat fraction MR-PDFF in non-alcoholic fatty liver disease (NAFLD)

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To determine the heterogeneity of hepatic fat distribution across different liver segments and both lobes in patients with non-alcoholic fatty liver disease (NAFLD).

This cross-sectional descriptive study included 35 patients of NAFLD. MR-PDFF sequence was performed, two regions of interest (ROI) were drawn at the periphery of each hepatic segment and their mean was taken. We calculated mean values, ranges, and standard deviations for individual segments, both lobes and the entire liver. Pearson's correlation was used to assess the relation between MR-PDFF and MR-PDFF variability. Paired sample t-test was utilized to compare the means of the right and the left lobe of the liver.

The fat fraction in segment I was the lowest and in segment VII the highest. The right and left lobes showed a significant difference in fat fraction with values of 14% and 11.4% respectively (paired sample t-test, p<0.005). The left lobe showed a greater MR-PDFF variability than the right lobe (1.9 vs 1.6%).

In patients with NAFLD, segments VII and VIII show the greatest while segments I and IV show the least fat infiltration. Hepatic fat preferentially gets deposited more in the right lobe of the liver.

P-148

Pictorial review of pancreatico-duodenal groove pathologies: An imaging perspective on diagnostic challenges

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The pancreatico-duodenal groove, a pivotal yet intricate anatomical space, harbours a wide array of pathologies, each with distinct aetiologies that complicate diagnosis and management. This pictorial review offers an engaging and comprehensive visual exploration of these conditions, categorized by congenital, infective, and malignant origins, with a focus on their unique imaging features.

Congenital Pathologies: We delve into annular pancreas and choledochal cysts, highlighting their characteristic appearances on imaging modalities such as CT and MRI. The annular pancreas often encircles the duodenum, presenting as a rare but significant congenital anomaly, while choledochal cysts, typically congenital in origin, require careful differentiation from other cystic structures in the region. Lemmel syndrome secondary to congenital or acquired duodenal diverticulum also be covered in the presentation.

Infective Pathologies: Abscesses, collections and pseudocysts, often sequelae of acute pancreatitis, present as fluid-filled masses that may be challenging to distinguish from cystic neoplasms. The review provides imaging clues to accurately identify these conditions and avoid misdiagnosis.

Malignant Pathologies: Periampullary carcinoma and duodenal adenocarcinoma, both presenting as masses in this region, are notorious for their aggressive nature and the difficulty in early detection. Through detailed imaging comparisons, we illustrate how these malignancies differ from benign conditions like groove pancreatitis, which can closely mimic cancer but usually shows fibrotic changes in the groove.

Additionally, pancreatic cystadenomas, neurogenic tumors, gastrointestinal stromal tumors (GISTs), and lymphadenopathy are discussed for their distinctive imaging characteristics.

By integrating imaging appearances and clinical correlation, this review aims to enhance diagnostic accuracy and patient outcomes. This presentation is designed for radiologists, gastroenterologists, and surgeons committed to navigating the complexities of pancreatoduodenal groove pathologies.

P-149

Portal vein non bifurcation

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Absence of portal vein bifurcation is a very rare anomaly. Anomalies related to the branching of the portal vein are caused by the deviation from typical anastomotic patterns and the involution of the vitelline veins during the development of portal vein. Absence of portal vein bifurcation accounts for 0.03-2% of all the hepatic vasculature anomalies. The other congenital portal vein variants include total or partial agenesis of the portal vein, aberrant branching pattern of the portal vein and arteriovenous malformations. Understanding of the portal venous anatomy is crucial in surgeries like liver transplants, partial hepatectomy, and portal vein embolization.

We are reporting a case of absence of left portal vein due to non-bifurcation of main portal vein at hepatic hilum leading to a single right lobar intrahepatic portal vein (IHPV) with gradually arches towards left hepatic lobe while decreasing in caliber and giving rise to left lobe segmental branches, in a young male patient undergoing contrast-enhanced computed tomography (CT) of abdomen as workup for liver donation. Understanding the diverse portal vein anatomies and branching pattern is crucial for medical practitioners, particularly surgeons, as these variations may have significant implications in clinical scenarios. Awareness of these anomalies is important to avoid misinterpretations and complications in surgical and radiological interventions involving the hepatic vascular system.

P-150

Breast cancer and mammography: Knowledge, attitudes, practices and patient satisfaction post- mammography at the CMH muzaffarabad, AJK Pakistan

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In Pakistan, breast cancer awareness and the utilization of mammography are low, particularly in rural areas like AJK, and Kashmir. This study aims to assess the KAP regarding mammography among women who underwent the procedure at the SKBZ AJK Hospital, Muzaffarabad and to evaluate their satisfaction with the mammography services provided.

The multivariate logistic regression analysis identifies several key predictors of regular mammography screening. Higher education, particularly at the tertiary level, was associated with a threefold increase in the odds of regular screening (AOR = 3.0, 95% CI: 1.9-4.7, $p < 0.001$). A positive family history of breast cancer also emerged as a significant predictor (AOR = 1.8, 95% CI: 1.1-2.9, $p = 0.015$). Additionally, women with adequate knowledge about mammography had more than twice the odds of regular participation in screening (AOR = 2.2, 95% CI: 1.4-3.4, $p = 0.002$). Finally, a positive attitude toward screening significantly increased the likelihood of regular mammography (AOR = 2.7, 95% CI: 1.7-4.2, $p < 0.001$).

The findings helped to identify gaps in awareness and service delivery, informing targeted interventions to improve early detection and management of breast cancer in the region. Enhanced education programs and quality healthcare services are expected to lead to increased screening uptake and better health outcomes for women.

P-151

Case of successfully managed emphysematous pancreatitis presenting as hypovolemic shock

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A 71 years old female patient presented with vomiting, constipation, abdominal pain and abdominal distention in emergency department from 2 days. On examination, she was found to be in hypovolemic shock and was transferred to ITC and resuscitated. Hypovolemic shock was reversed but rest of her complaints persisted. Her baseline showed normal blood CP except for slightly raised TLC count (14.7x10⁹/L), normal LFTs and RFTs with mildly raised serum amylase (292U/L). Ultrasound showed cholelithiasis. Intestinal obstruction was suspected keeping in view the symptoms of patient and CECT abdomen was advised. On CECT abdomen, extensive emphysematous pancreatitis was seen with necrosis of more than 70% of pancreas. Multiple peripancreatic collections were seen with air foci. Non enhancing edematous wall thickening of ascending colon was noted with stranding in right paracolic gutter. Bilateral mild pleural effusions with mild abdominopelvic ascites were noted. Few small thrombi were seen in splenic vein causing incomplete obstruction. No intestinal obstruction was found. Patient was managed conservatively with successful outcome and was shifted to medical ward from ICU after 3 days and was sent home after 7days.

P-152**An audit to assess practical knowledge of advanced resuscitation skills****Rabea Ihtesham***Department of Radiology, Hayatabad Medical Complex, Peshawar, Pakistan.
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An audit to evaluate practical knowledge of advanced resuscitation awareness, expected of medical staff in our radiology department. Patients attending the Radiology Department are often very unwell and there is risk of cardiopulmonary arrests. It often takes several minutes for the hospital cardiac arrest team to arrive depending upon their engagement elsewhere. It is therefore crucial that all clinical staff maintain basic resuscitation skills. As it rapidly fades if not in practise every day therefore clinical staff should update their skills annually. Currently training is offered in different formats and targeted at different aspects depending on job status of different groups of staff. New Resuscitation Council (UK) Guidelines were published in 2021.

Total number of doctors assessed in our department was 45. Overall correct responses were about 75 % however our target was 100% according to resuscitation guidelines.

We discussed the results at department meeting highlighting position of resuscitation equipment and identified need for staff training. Resuscitation training was arranged and whole department was updated with regard to new guidelines as part of postgraduate lecture programme. Repeat audit in 1 month is planned thus adhering to the criteria set by RCR and resuscitation council.

P-153**Morquio syndrome (MPS iv) in a 13-year-old female: A case report****Bushra Kalsoom, Fareeha Jabeen, Sahib Noor***Department of Radiology, Khyber Teaching Hospital, Peshawar, Pakistan.
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Mucopolysaccharidoses IV is caused by a deficiency of N-acetylgalactosamine-6-sulfatase, leading to glycosaminoglycan accumulation. We present a case of Morquio syndrome (MPS IV), a rare lysosomal storage disorder, incidence estimated 1:40,000. A 13-year-old female presented with short stature, skeletal deformities, and difficulty in walking, with normal intelligence. Initially, achondroplasia and rickets were considered as differential diagnoses however, a skeletal survey revealed characteristic radiological features of MPS IV, including anterior beaking of vertebra, posterior vertebral body scalloping, proximal pointing of metacarpals, coxa vulga and thoracolumbar kyphosis thus confirming the diagnosis. This case highlights the importance of considering MPS IV in children with skeletal abnormalities and short stature, even in the absence of intellectual disability. It also emphasizes the need for awareness and timely diagnosis to improve patient outcomes. Our report contributes to the existing literature on MPS IV, providing valuable insights into its clinical presentation and radiological features.

P-154**Penetrating aortic ulcer with hemopericardium: A rare but life-threatening complication****Sahib Noor, Muhammad Khubaib Khan, Laila Haleem***Department of Radiology, Khyber Teaching Hospital, Peshawar, Pakistan.
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BACKGROUND: Penetrating aortic ulcer (PAU) is a localized, crater-like lesion that extends from the aortic lumen into the surrounding aortic wall,

often associated with atherosclerosis and calcifications. First identified by Shennan in 1934, PAU typically presents with severe, acute chest pain that radiates to the interscapular region, indicating a potentially life-threatening condition. Unlike aortic dissections, PAU does not propagate longitudinally along the aorta, but can still lead to serious complications if left untreated."

CASE PRESENTATION: A 65-year-old man with a history of essential hypertension presented to the emergency department with sudden-onset chest pain and shortness of breath. Despite adhering to his prescribed antihypertensive medication regimen, he exhibited concerning vital signs: blood pressure of 98/70 mmHg, heart rate of 135 beats per minute, respiratory rate of 24 breaths per minute, and a body temperature of 37.2°C. Initial diagnostic tests, including electrocardiogram and cardiac enzymes, revealed no evidence of ST segment elevation or cardiac damage. Chest radiography also showed no mediastinal widening.

However, a computed tomography angiogram (CTA) confirmed the diagnosis of penetrating aortic ulcer (PAU) with hemopericardium. The patient was subsequently referred to the surgical department for appropriate management and treatment

CONCLUSION: This case report demonstrates that hemopericardium is a grave complication of penetrating atherosclerotic ulcers of the aorta, underscoring the need for urgent diagnosis and treatment in patients with underlying atherosclerotic disease, to mitigate mortality and improve clinical outcomes.

P-155**Small bowel volvulus in an adult - A rare presentation****Fareeha Jabeen***Department of Radiology, Khyber Teaching Hospital, Peshawar, Pakistan.
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Small bowel volvulus refers to an abnormal twisting of a loop of bowel around its own mesentery, leading to mechanical obstruction of the intestine. Mesenteric torsion also leads to occlusion of the mesenteric vasculature with intestinal ischemia and finally necrosis. In malrotation the mesentery often has a short root, which can act as a pedicle (through which SMA and SMV pass) around which volvulus can occur. Small bowel volvulus is a rare cause of intestinal obstruction in adult patients. This disease is more common in children and its etiology and management is different to that in adults. Adult presentation is very rare accounting for only 0.2-0.5% of cases, of which only 15% present with midgut volvulus. Diagnosis of the midgut volvulus was predominantly made via CT (67%) but also by ultrasound (15%) and theatre (18%). The abdominal CT scan revealed a swirling appearance of the bowel and mesentery twisted around the superior mesenteric artery axis ("whirlpool sign"). In our study, we report a case of small bowel volvulus in 78-year-old man at Khyber Teaching Hospital Peshawar, diagnosed on abdominal CT scan for which exploratory laparotomy was done which revealed congenital adhesions with malrotation and narrow base of small bowel mesentery.

P-156**Delayed diagnosis of bochdalek hernia in an adult with tuberculosis: A rare co-occurrence****Muhammad Khubaib Khan, Laila Haleem, Sahib Noor***Department of Radiology, Khyber Teaching Hospital, Peshawar, Pakistan.
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Bochdalek hernia is a congenital defect in the posterio-lateral diaphragm which results in herniation of abdominal content into the thorax. It is the most common type of congenital diaphragmatic hernias, happening in about 1 in 2,000 to 12,000 newborns. It's more likely to happen on the left side of the chest. The Bochdalek hernia was first identified in 1848 by a scientist named

Vicent Alexander Bochdalek. It usually affects children. It's very rare in adults, with only around 100 reported cases. Most adults with this condition don't show any symptoms. A clear diagnosis can be made using a CT scan, which shows distinct features of the hernia. 2. Until now, lung TB has only been reported in one baby with a congenital diaphragmatic hernia (CDH). We are now reporting the first known case of an adult with both CDH and lung TB. 3. Our case highlights the need to screen TB patients for Bochdalek hernias, even if they're not showing symptoms. Additionally, CT scans can be a valuable tool when chest X-rays don't provide clear results.

P-157

Congenital stenosis of infracardiac segment of inferior vena cava

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Developmental anomalies of IVC exist in approximately 8.7% of the general population. The embryology of the inferior vena cava involves the formation, regression, and fusion among three longitudinal pairs of veins i.e. the postcardinal, subcardinal, and supracardinal veins. Congenital stenosis of the IVC is characterized by narrowing with or without a web formation mostly at the diaphragmatic level or hepatic segment of the IVC. The membrane can be complete or fenestrated and almost always occurs in proximity to the IVC drainage into the right atrium or infradiaphragmatic level. It is a rare condition and most commonly occurs in Asian and South African countries. Prominent collaterals develop in intrahepatic and extrahepatic regions. Clinically, the web leads to hepatic venous outflow obstruction. Clinical findings depending on the variant drainage patterns or collaterals. This case report presents a rare congenital anomaly of the Inferior Vena Cava (IVC) in a 6-year-old female child with symptoms of suspected Chronic Liver Disease (CLD). Imaging revealed stenosis/narrowing of the infracardiac segment of IVC with tortuous engorged lumbar collaterals, dilated azygous and hemiazygous veins, and normal hepatic veins drainage into intrahepatic IVC.

P-158

An audit to assess appropriate storage of lead equipment in the fluoroscopy suites

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An audit to evaluate appropriate storage of, lead radiation protective equipment, in the fluoroscopy suite to determine if our radiology department meets the standard as lead aprons and thyroid collars play an important role in efforts to reduce radiation dose to the staff. The proper information about use and care of personal protective equipment should be provided to radiation employers and defined in local rules by radiology departments according to Royal College of Radiologists. Poor care causes damage which leads to increase staff dose unnecessarily along with the cost implications for yearly replacement. During the five days period ten fluoroscopy procedures were performed. The Fluoroscopy staff included technicians, trainee technicians and residents. Among the forty pieces of personal protective equipment only one lead apron was inappropriately stored not reaching standards. 97.5% compliance was seen with locally agreed standards.

Almost all lead aprons and thyroid collars not in use in the fluoroscopy room were properly stored. The audit will be presented and lead apron manufacturer will be invited to demonstrate the relationship between damaged lead aprons/collars and staff dosage. And afterwards re-audit will be performed to assess adherence to the local rules and accomplish 100% results.

P-159

Caudal duplication syndrome

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Caudal duplication syndrome is a rare condition characterised by a range of abnormalities, primarily involving the partial or complete duplication of organs in the gastrointestinal, genitourinary, and distal neural tube systems. These anomalies are believed to result from abnormal embryonic development. The reported prevalence of caudal duplication syndrome at birth is less than 1 in 100,000, though the condition appears to be even rarer. The female-to-male ratio is about 2:1, with no known familial or racial predisposition, and no associated risk factors. It is suggested that CDS arises from an insult to the fetus around the 23rd to 25th days of gestation. Interestingly, the duplicated organs initially form at their origin separated by a septum and later develop as independent structures. Since 1953, fewer than 100 cases of caudal duplication syndrome have been reported, each with varying clinical presentations. The majority of these cases are diagnosed in pediatric patients. A 28-year-old female patient presented with complaints of urine discharge from two separate openings. On examination, she was found to have duplication of the urethra, vagina, and anal opening. CT scan and MRI study revealed that the urinary bladder was duplicated, separated by a thick septum. There were two separate uteri, each located in the right and left iliac fossae, with individual cervical and vaginal canals. Additionally, the entire colon, rectum, and anal canal were duplicated.

P-160

Hemophagocytic lymphohistiocytosis (HLH) with development of progressive reversible encephalopathy syndrome (PRES)

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Hemophagocytic lymphohistiocytosis is a rare immune system disorder which is potentially life threatening and is characterized by benign histiocytes proliferation which begin to attack the body's own tissues resulting in organ damage and multi organ failure. It commonly involves brain, bone marrow, liver, spleen and lymph nodes. Brain magnetic resonance imaging (MRI) findings can be variable and non-specific, however are important in the early diagnosis of the disease. We here present a case of a 6 year old boy with hemophagocytic lymphohistiocytosis who developed features of Posterior reversible encephalopathy syndrome (PRES). Occurrence of PRES is even rarer in this condition and might develop during its treatment and can be difficult to distinguish from other neurologic manifestation. Magnetic resonance imaging (MRI) showed T2 weighted and Fluid attenuated inversion recovery (FLAIR) high signals in subcortical white matter of left parietal, occipital, frontal and temporal lobes with a focus of restricted diffusion on diffusion weighted images (DWI) in left temporal lobe. Brain atrophy with associated periventricular demyelination is also noted.

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Radiological enigma: a rare case of long bone hydatid disease mimicking osteomyelitis and fibrous dysplasia

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This case report describes the diagnostic challenges of a rare long bone hydatid disease that mimicked osteomyelitis and fibrous dysplasia. The patient, a

resident of Peshawar, sustained a right arm fracture following a road traffic accident (RTA) in 2013. Since the trauma, he presented with intermittent pain, swelling, recurrent infections at the fracture site, weight loss, loss of appetite, and episodic fever. Initial imaging and clinical findings suggested osteomyelitis, prompting antibiotic therapy and conservative management.

However, due to persistent symptoms, a subsequent MRI was performed, revealing features suggestive of fibrous dysplasia with superimposed infection, adding to the diagnostic complexity. The patient's symptoms continued despite treatment, leading to an open surgical biopsy for definitive diagnosis. Histopathological examination of the biopsy revealed a hydatid cyst an uncommon cause of long bone infection, especially in the absence of typical visceral involvement.

The overlapping radiological appearance of hydatid disease with conditions like osteomyelitis and fibrous dysplasia posed significant diagnostic challenges. This case highlights the vital role of imaging in recognizing atypical presentations and the importance of considering parasitic infections, particularly hydatid disease, in the differential diagnosis of persistent bone pathologies in endemic regions. The findings underscore the necessity for radiologists to remain vigilant about the diverse imaging characteristics of hydatid disease, which can closely mimic other bone disorders, often leading to diagnostic delays.

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Accuracy of O-RADS ultrasonography classification in ovarian cancer: Sensitivity and specificity compared to histopathological findings

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OBJECTIVE: This study aimed to assess the diagnostic accuracy of O-RADS ultrasonography classification in ovarian cancer compared to histopathological findings.

METHODS: A retrospective study was conducted in Radiology department of Hayatabad medical complex on patients with suspected ovarian lesions who underwent transvaginal ultrasonography followed by surgical resection. O-RADS classifications were assigned based on ultrasonographic findings, and histopathological results were used as the gold standard for diagnosis. The sensitivity, specificity of O-RADS were calculated using SPSS.

RESULTS: The study included a total of 65 patients out of which 18 lesions were reported as O-RADS 3 while 22 lesions were classified as O-RADS 4, and 25 lesions as O-RADS 5. O-RADS demonstrated a sensitivity of 89 % and a specificity of 64 % with 83 % accuracy for detecting ovarian cancer.

CONCLUSION: O-RADS is a reliable and effective tool for evaluation of adnexal lesions, offering high diagnostic accuracy. Its use in routine clinical practice could enhance early detection of malignancies while reducing unnecessary interventions for benign conditions. Larger, multi-centre studies are recommended to further establish the generalizability of these findings.

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Unveiling Van Wyk-grumbach syndrome: A pediatric case report

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Van wyk grumbach syndrome is a rare and intricate endocrine disorder that manifest in children, predominantly in girls as a triad of isosexual precocious

puberty, juvenile hypothyroidism and accelerated disproportionate bone maturation resulting in shunted growth. We present a case where juvenile primary hypothyroidism due to absence of the thyroid gland, manifested as abdominal masses caused by large bilateral ovarian cysts, pituitary hyperplasia and premature thelarche. The precocious puberty presents as premature breast development and enlarged uterus and disproportionate bone maturation. Complete absence of thyroid gland causes prolonged hypothyroidism which results into over stimulation of pituitary gland to release high amount of TSH. Thyroid stimulating hormone, follicular stimulating hormone and luteinizing hormone has same beta subunits, the TSH act on the beta subunit of FSH resulting into isosexual precocious puberty. Thyroid hormone replacement significantly improves the condition with resultant decrease in ovarian masses and pituitary gland size. This highly enlightens the importance of considering hypothyroidism and other endocrine disorders when evaluating young girls with short stature and ovarian masses, thereby preventing life threatening complications and unnecessary surgical interventions.

P-164

Supraclinoid internal carotid artery dolichoectasia causing compression of optic chiasm

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Intracranial arterial dolichoectasia is a rare angiopathy resulting in abnormal elongation, dilatation and tortuosity of the main cerebral arteries. It is commonly seen in elderly patients with hypertension and usually involves the posterior cerebral circulation with extremely rare involvement of internal carotid arteries (anterior circulation). Patients can be asymptomatic or can present with certain symptoms including stroke, visual disturbances, headache or dizziness. Imaging plays a key role in diagnosing the disorder. We present a very rare case of a 72 years old lady who presented with sudden loss of vision in the left eye and was found to have dolichoectasia of the supraclinoid part of left internal carotid artery causing displacement and compression of the optic chiasm on MRI.

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Breast density as an individual risk factor for development of breast cancer in our population. A study carried out at Tertiary care hospital, Karachi

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To determine the association of breast density with development of breast cancer in local Asian population Total 108 female patients were included in the cross-sectional study. A full-field digital mammography equipment was used for the mammograms. For bilateral breasts, four mediolateral oblique and craniocaudal images were acquired. The American College of Radiology Breast Imaging Reporting and Data System (BI-RADS) was used to guide the interpretation of mammogram. The categories were recorded as follows: 1) Almost entirely fat (25% fibroglandular tissue); 2) Scattered fibroglandular (26%50%); 3) Heterogeneously dense (51%-75%); and 4) Extremely dense (>75%). Stratification was done and post stratification Chi square test or Fisher's exact test was applied. P-value 0.05 was considered statistically significant. The categories of BI-RADS were found as 16(14.8%) had category A, 48(44.4%) had category B, 38(35.2%) had category C and 6(5.6%) had category D. The breast cancer was noted in 5(31.3%) cases of category A, 24(50%) of cases of category B, 30(78.9%) of cases of category C and 5(83.3%) cases of category D, the breast cancer was significantly associated with the categories of BI-RADS (p=0.002). There is a significant association between the risk of breast cancer in our population with mammographic breast tissue density categorized by BI-RADS.

P-166**Deciphering the dance - A case of non-ketotic hyperglycemic hemichorea-hemiballismus syndrome**

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Non-ketotic hyperglycemia hemichorea-hemiballismus syndrome is a rare condition characterized by glucose levels greater than 200 mg/dL and continuous, uncontrollable, and irregular jerky movements localized to one side of the body. It is more commonly seen in type 2 diabetics compared to type 1 diabetics.

68 years of age female presented with sudden onset involuntary movements of left upper and lower limbs for 3 days. She had a background of hypertension but denied history of diabetes mellitus. On general physical examination, she had a blood pressure of 150/90mmHg and raised blood Glucose levels of 475 mg/dL. She had involuntary flailing and dance like movements of left upper and lower limbs with variable amplitude and undefined direction. She had no focal neurological deficit. Further workup showed HbA1c of 12.7% and blood sugar fasting of 244 mg/dL. Her venous blood gases showed no acidemia and her urine was found negative for ketone bodies. Her CT head showed subtle hyperdensities in right lentiform nucleus; features suggestive of non ketotic hyperglycemic hemichorea. The radiological findings were confirmed by MRI Brain which revealed hyperintense signals in same location on T1 weighted sequences. She was managed with variable rate IV insulin infusion. Her involuntary movements abated over the next 4 days as her glycemic control improved. She was discharged home on a regular insulin regimen.

In general, for patients presenting with the clinical picture of sudden onset of uncontrolled movements, the initial workup should include neurological evaluation, as well as evaluation for non-ketotic hyperglycemia syndrome. MRI and serum glucose levels are both helpful in the prompt diagnosis of non-ketotic hyperglycemia hemichorea-hemiballismus syndrome.

P-167**Diagnostic accuracy of diffusion-weighted magnetic resonance imaging in the diagnosis of myometrial resonance imaging with endometrial carcinoma invasion among patients with endometrial carcinoma**

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To determine the accuracy of magnetic resonance diffusion-weighted imaging in the diagnosis of myometrial invasion in patients with carcinoma endometrium keeping histopathology as the gold standard.

It was a descriptive cross-sectional study carried out from 11 July 2019 to 10 July 2021 at the Radiology Department, Khyber Teaching Hospital, Peshawar. The sample was collected via a non-probability sampling technique. The sample size was 141 taking the prevalence of myometrial invasion 46% 12 with sensitivity and specificity of DW-MRI 90% and 73%, 95% confidence level, and 10% margin of error. All women presenting with biopsy-proven endometrial carcinoma scheduled for hysterectomy, aged between 30 to 70 years were included. The myometrial invasion via MRI pelvis including DWI, with a 1.5 T machine (Philips), was evaluated for all patients. After a hysterectomy, myometrial invasion was confirmed on histopathology. Among 141 women, 58 (41%) patients were between 30 and 50 years of age, and 83 (59%) were in the 51-70 age group. DW-MRI had 91.11% sensitivity, 66.66% specificity, 98.4% Positive predictive value, 25% Negative predictive value, and 90.07% diagnostic accuracy.

In carcinoma endometrium, MR-DWI has good diagnostic accuracy in detecting myometrial invasion.

P-168**Malignant epithelioid angiomyolipoma of the submandibular gland: A case report**

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An epithelioid angiomyolipoma (a perivascular epithelioid cell tumor) is a rare mesenchymal neoplasm with distinctive cellular morphology and non-specific imaging appearances. Mostly reported perivascular epithelioid cell tumors (PEComas) are benign; however, rarely, PEComas can be malignant with pulmonary, hepatic, nodal, and osseous metastases. We present a case of a 40-year-old man with malignant right submandibular salivary gland PEComa, metastasized to the bones, lungs, and liver. We are going to discuss the diagnosis and management options of the rare disease of metastatic PEComa of the submandibular salivary gland.

P-169**Distinct neuroimaging insight: A rare case of semilobar holoprosencephaly linked with congenital aqueductal stenosis and parietal encephalocele from Karachi, Pakistan**

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Holoprosencephaly, a rare congenital brain malformation due to failure of cleavage of forebrain resulting in fused right and left cerebral hemisphere, midline and deep brain structures. Prosencephalic cleavage failure are of three types depending on the degree of segmentation: Lobar, semilobar and a lobar. Here we present a case of a fifteen days old girl presented with enlarge head size. Her mother antenatal scan only revealed mild hydrocephalus which was gradually increased in late trimester. She was born via c section due cephalopelvic disproportion. At birth she didn't cry immediately and was lethargic. Sunset phenomenon of eyes was also observed on examination. Due to her increasing head size and sunset eyes, provisional diagnosis of hydrocephalus was made. Her neuroimaging revealed classic appearance of semilobar holoprosencephaly but it was associated with congenital aqueductal stenosis as well as parietal encephalocele which makes this case unique as well as underscore the importance of prompt magnetic resonance imaging. Moreover, her Magnetic resonance angiogram (MRA) revealed presence of both anterior cerebral artery (ACA) but are divergent at distal aspect. Only left sided Middle cerebral artery noted upto M3 segment. Left MCA was absent. Bilateral persistent trigeminal artery was also detected. Posterior circulation MRA revealed normal vertebral artery and basilar artery but posterior cerebral artery (PCA) was absent.

Magnetic resonance venogram revealed presence of superior sagittal sinus and absent inferior sagittal sinus and deep internal veins. To the best of our knowledge, this is the first ever reported Neuroimaging case of semilobar holoprosencephaly with congenital aqueductal stenosis and parietal encephalocele, from Karachi, Pakistan. We expect this case would enrich the literature by providing valuable insights and a fresh perspective on the topic.

P-170**Imaging findings of a very rare case: Spindle cell carcinoma of the lung**

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Spindle cell carcinoma is a very rare malignant sarcomatoid neoplasm which is a type poorly differentiated non-small cell carcinoma of the lung. Incidence

of this tumor is between 0.3 to 1.3% of all lung malignancies. It commonly affects the peripheral portions of the lungs. Due to limited literature no definite imaging findings are available.

We present a case of 19 years old female presented in outpatient department with breathing difficulty. Patient was advised contrast enhanced CT chest which showed a large right upper lobe heterogeneously enhancing mass with internal septations and solid enhancing components predominantly involving periphery of the lesion. There was also adjacent T3 and T4 vertebral invasion with extension of the tumor into spinal canal. It was causing compression upon right pulmonary hilum and right main bronchus. Another similar mass lesion was also noted in contralateral lung involving medial basal segment. Later contrast enhanced MRI of chest was done which revealed a large cystic mass with solid nodular peripheral enhancement. Vertebral involvements with neural foraminal extension was seen as described above with marked spinal cord compression at the level of T3. Altered marrow signals were seen in these vertebrae.

After histopathologic and immunohistochemistry evaluation diagnosis of spindle cell neoplasm with rhabdoid differentiation was made.

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Collet Sicaud syndrome; A consequence of glomus paraganglioma

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Collet-Sicaud syndrome, also known as condylar jugular syndrome, involves a combination of cranial nerve IX, X, XI, and XII palsies resulting from either neoplastic or non-neoplastic lesions at the jugular foramen. Common non-neoplastic causes include traumatic skull base fractures, while neoplastic causes include glomus jugulare tumors, schwannomas, and metastases. Paragangliomas represent less than 1% of all neoplasms in the head and neck region and are typically classified as benign, slow-growing, locally invasive and highly vascular tumors.

We present the case of an 83-year-old female who reported hoarseness and decreased hearing for the past 1 year. Examination revealed multiple cranial nerve palsies, including leftward tongue deviation, an absent gag reflex, left-sided uvular palsy, sternocleidomastoid and trapezius muscles weakness. A CE-CT scan of the neck showed an enhancing mass centered in the left jugular fossa, eroding the petrous bone and extending into the cerebellopontine angle with erosion of the hypoglossal canal, jugular foramen, and carotid canal. A follow-up CE MRI revealed an infiltrative mass in the jugular fossa with avid post contrast enhancement giving "salt and pepper" appearance. The left internal carotid artery was partially encased, cranial nerves IX, X, XI, and XII were involved. Based on these clinical and radiological findings, a diagnosis of Collet-Sicaud syndrome secondary to glomus jugulare paraganglioma was established, which was confirmed by histopathological examination. Surgical debulking is being planned.

Collet-Sicaud syndrome is a rare disorder characterized by complex clinical manifestations that can result in delayed diagnosis. In the absence of trauma, it is important to consider and exclude neoplastic or metastatic diseases involving the temporal bone.

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An uncommon cause of tinnitus: Vascular loop of the posterior inferior cerebellar artery - A case report

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Tinnitus and vertigo are common auditory symptom with various aetiologies. Despite this, the precise cause is not always determined. Vascular loop syndrome refers to compression or irritation of the nerve root by aberrant or tortuous vessel. It is thought to be related to unilateral symptoms of tinnitus, vertigo, and sensorineural hearing loss, but its true clinical significance remains controversial. While compression by the anterior inferior cerebellar artery is well-recognized in medical literature, involvement of the posterior inferior cerebellar artery (PICA) is uncommon. MRI play a crucial role in diagnosing these syndromes prior to surgery by identifying vascular loops that compress cranial nerves such as the fifth, seventh, ninth, eighth, and fourth, while also helping to exclude secondary causes. We present a rare case of tinnitus caused by a vascular loop of the PICA compressing the vestibulocochlear nerve. The patient, a 41-year-old male, experienced persistent left sided tinnitus and vertigo with no significant hearing loss. MRI and three-dimensional constructive interference in steady state (CISS) imaging revealed a tortuous vascular loop of the left PICA in the left cerebellopontine angle (CPA) in contact with the cisternal segment of vestibulocochlear. No mass was found at the CPA. Vascular loop syndromes such as this are rare, and early imaging is essential for accurate diagnosis. The patient was managed with a multidisciplinary approach, highlighting the importance of early detection and intervention. This case underscores the role of neuroimaging in identifying vascular causes of tinnitus and guiding appropriate treatment.

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Advanced imaging in hyperacute stroke and the radiologist's crucial role: Navigating the thin line between life and death

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To highlight the critical impact of imaging in distinguishing viable brain tissue from irreversible damage and guiding life-saving interventions.

There were 29(58%) males and 21(42%) females having mean age of 62±14 years. Advanced imaging successfully identified large and medium vessel occlusions in all patients, allowing for the differentiation between salvageable penumbra and irreversibly infarcted core. Of the 50 patients, 10 (20%) were deemed suitable for mechanical thrombectomy based on favorable imaging profiles, characterized by a large penumbra and minimal infarct core. However, 2 patients (4%) who were selected for thrombectomy did not show improvement in modified Rankin Scale (mRS) scores and developed reperfusion hemorrhage. The remaining 8 patients (16%) achieved successful recanalization, resulting in significant improvement in clinical outcomes. In contrast, 40 patients (80%) were not considered candidates for thrombectomy due to the presence of an extensive infarct core or poor collateral flow, both of which were clearly demonstrated on advanced imaging.

Advanced imaging is crucial in hyperacute stroke evaluation, guiding decisions on mechanical thrombectomy by accurately identifying the infarct core and salvageable penumbra. It helps enable timely, life-saving interventions while avoiding unnecessary procedures in non-salvageable cases, highlighting the importance of advanced imaging in improving stroke outcomes.

P-174**Malignant anomalous origin of left anterior descending artery**

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The anomalous origin of the left anterior descending artery (LAD) following an interarterial course is considered a malignant condition, as it can lead to sudden cardiac death. This case involves a young man who presented with chest pain. After initial investigations at our cardiac center, a CT coronary angiography (CTCA) was performed, which revealed an anomalous origin of the LAD from the proximal part of the right coronary artery. The artery courses between the right ventricular outflow tract and the aortic root, ultimately reaching the anterior interventricular groove. The malignant LAD exhibits a milking effect during systole. The left main stem (LMS) bifurcates into a rudimentary small LAD and the left circumflex artery (LCx). The rudimentary LAD provides septal and diagonal branches.

P-175**Orbital hydatid cyst in a 4-year-old child: A case report**

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Hydatid cyst is a zoonotic infection cause by tape worm *Echinococcus granulosus*. Dogs are definitive hosts for the parasite while sheep and cattle's serve as intermittent host and humans as accidental intermediate hosts. Mostly the organs effected by this parasite are lungs and liver while orbital involvement is rare and uncommon. Here we present a case of 04 years old child with orbital hydatid cyst who presented with proptosis and ocular pain.

P-176**CT coronary angiography in a patient with stable chest pain referral audit**

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An audit to assess whether requesting of CT coronary angiography in investigating patients with stable chest pain meet NICE clinical guidelines The investigation aims to diagnose either myocardial ischemia (by non-invasive functional testing) or luminal stenosis (by anatomical imaging or angina not to simply screen for CAD.

P-177**MRI characterization of tumor necrosis by comparison of PD FATSAT and T2 weighted images in patients with known musculoskeletal neoplasms**

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MRI is used as a tool to determine the necrotic component of the tumor with high accuracy. This helps oncologist to determine the response to the chemo and radiotherapy. This study was aimed to assess the efficacy of PDFS and T2WI images in determining the necrotic component of tumor taking T1 post

contrast fat sat as standard. If any of these sequences proved to be efficient comparable with the standard can help reduce the no of MRI sequences, hence the time of scan in overburdened, busy centers

This was retrospective observational study which included 107 patients with known malignancies, 50 male, 57 female, and age range 8 to 76 years. These patients underwent MRI during last 4 years. Each sequence was assessed separately for tumor necrosis by an experienced radiologist. Comparison was made with standard sequence T1 post contrast fat sat (T1+C FS), sensitivity, specificity were calculated for each sequences.

We concluded from our results the PDFS has more specificity and sensitivity as compared to T2WI.

P-178**An audit of provisional versus final reports of on-call CT imaging**

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This audit was performed at RMI, Peshawar from 25 August 2022 to 27 august 2022. Consecutive 36 out of hour (on call) scans were viewed on PACS (synapse 5) reported by senior residents on HMIS and provisional reports were printed. Later, these provisional reports were verified by a consultant radiologist. Discrepancies were identified, categorized as major (need change patient management and can alter outcome) or minor (do not change patient management and do not alter outcome). Our target, keeping in reference international guidelines, was 5% for major discrepancies and 10% for minor discrepancies.

36 out of hour scans were performed. Total of brain, brain with contrast, lumbar spine, Neck, Chest, CTPA, abdomen and pelvis, limb, HRCT, KUB were 3,3,1,1,5,1,15,1,2 and 4, respectively. Major discrepancies missed were brain metastasis and portal vein and thrombosis I.e., 2 out of 36 and minor discrepancies were 6 out of 36. Most minor discrepancies were noted in CT abdomen & pelvis subgroup. The percentage of major discrepancies was 5.5% and minor discrepancies were 16.6%.

P-179**Comparison of post contrast chemical shift T1 and FSE T1 for identification of internal openings of perianal fistulas on MRI**

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Total of 44 consecutive scans of patients with perianal fistula were selected, age range 26-70 years. MRI sequences routinely performed for perianal fistulas with additional imaging using 3D LAVA post contrast with chemical shift technique in axial plane performed. Both T1 fatsat FSE and LAVA were compared.

Agreement for each sequence for determination of internal opening was assessed separately by an independent experienced radiologist. The radial site of the internal opening was defined based on clock positions (12 o'clock anterior and 6 o'clock posterior).

44 fistula tracts were found: 42 inter-sphincteric and 2 trans-sphincteric, and only a few with additional ramification. A single case was with a secondary ramification with two separate internal opening. Total 45 internal openings

were identified. 7 were only visualized on post contrast LAVA (15.55%) and 6 were only visualized on post contrast T1 FS (13.34%). 32 internal openings were visualized on both post contrast T1 FS and LAVA (71.11%). The best sequence for depiction of internal opening was post contrast LAVA with 15.55% internal openings only visualized on this sequence followed by post contrast T1 FS with 13.34% openings only detected on this sequence. Comparing the post contrast T1 FS and LAVA sequences showed that, for best results, both sequences were necessary.

Both post contrast T1 FS and LAVA sequences were necessary for better detection of internal openings as fair percentage of internal openings were detected by only one of the both sequences.

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Joubert syndrome - The molar tooth mystery

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Joubert Syndrome (JS) is a rare autosomal recessive genetic condition that affects the cerebellum, the part of the brain responsible for balance and coordination. This disorder is characterized by a distinctive MRI finding known as the "molar tooth sign" and the "batwing sign", which highlight abnormalities in the brain stem and the underdevelopment or absence of the cerebellar vermis. The most common features of Joubert Syndrome include loss of muscle control (ataxia), abnormal breathing patterns such as periods of rapid breathing (hyperpnea) or sleep apnea, unusual eye and tongue movements, and low muscle tone (hypotonia). Treatment for Joubert Syndrome is primarily symptomatic and supportive, focusing on managing individual symptoms. Developmental delays are typically addressed through physical, occupational, and speech therapy, as well as early stimulation programs to support a child's growth and development.

In this case, we present an 8-year-old patient who came to us with concerns of delayed development, unsteady gait, and abnormal eye movements. Upon conducting an MRI, the characteristic findings of Joubert Syndrome were confirmed, providing a clear diagnosis. The MRI revealed the molar tooth sign, a hallmark of the condition.

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Bone or balloon - Pneumatized anterior clinoid process mimicking an ophthalmic artery aneurysm

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Ophthalmic artery aneurysms are rare but carry significant risks. This condition involves the weakening of the artery wall, resulting in abnormal widening or ballooning. Common symptoms include headaches, blurred vision, eye pain, and photosensitivity. Left untreated, complications such as rupture, vision loss, brain hemorrhage, increased intracranial pressure, and impaired eye movement can occur. Early detection and prompt intervention are critical to preventing these serious outcomes.

We present the case of a 35-year-old male who arrived with complaints of headache and facial pain. MRI initially raised concerns for an ophthalmic artery aneurysm. However, to further investigate the anatomy of surrounding structures, a CT scan was performed. Surprisingly, the scan revealed pneumatization of the anterior clinoid process, which mimicked the appearance

of an aneurysm on imaging. This unexpected finding altered our course of diagnosis, allowing us to rule out the initial suspicion of an ophthalmic aneurysm.

This case underscores the importance of integrating both MRI and CT imaging in diagnosing complex cases where bone anatomy may obscure or mimic vascular anomalies.

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Deep infiltrating pelvic endometriosis, an insight on MRI pelvis. A case based discussion. An insight on MRI pelvis an insight on MRI pelvis. A case-based discussion

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Pelvic endometriosis especially deep infiltrating type is a debilitated condition affecting the female in their reproductive age. It is unfortunately also associated with infertility. Diagnostic laparoscopy is considered the gold standard for endometriosis, but it is invasive with possible false negative results. Nowadays MRI pelvis is the most sensitive and non-invasive method to diagnose the disease and in follow up response to therapy. MRI is highly accurate for the diagnosis of Deep Infiltrating Endometriosis however the diagnostic results of MRI depend on an accurate imaging technique and on the comprehension of specific MR-findings.

This Presentation will focus on MRI protocols, findings pertinent to DIE on MRI with case based discussion. This will be followed by literature review.

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A rare congenital disorder across a life span; case report of heterotaxy syndrome (left isomerism) in an infant and elderly patient

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Heterotaxy syndromes refer to abnormal left/right distribution of thoracic and abdominal organs that is neither situs solitus nor situs inversus. They are frequently associated with congenital heart disease and other visceral abnormalities. Isomerism implies mirrored organs, and can be defined as mirrored atrial appendages. Congenital heart disease and splenic anomalies are frequently associated giving rise to the term cardiopulmonary syndrome. There are many individual variations, and each case should be individually documented. It affects 1 in 10,000 patients

CASE PRESENTATION: We present 2 cases of left isomerism. A nine months old female patient with associated biliary atresia and a 61 years old female patient. The case was diagnosed early in the former patient due to associated comorbidities while in the second patient it remained silent throughout her life unless she presented with cough and shortness of breath for HRCT where the findings were seen incidentally. The had different features of the spectrum, i.e polysplenia., azygous or hemiazygous continuation, bilateral hyperarterial bronchi, bilateral bilobed lungs, intestinal malrotation, midline liver.

CONCLUSION: Heterotaxy syndrome defined in the context of left or right isomerism and may be associated with other serious disorders. However it can just be an incidental finding in some patients where it may be present just as normal anatomical variant.

P-184**A patient with cardiac anomalies and splenic torsion**Faryal Asmat, **Fatima Zahra***Department of Radiology, Fauji Foundation Hospital, Rawalpindi, Pakistan.
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OBJECTIVES: Reporting a case involving a child with cardiac anomalies suffering from splenic torsion in the context of polysplenia syndrome (PSS). Background: PSS represents a type of situs ambiguus characterized by the presence of multiple spleens, cardiac anomalies, abdominal heterotaxia, and major venous system malformations. It is a rare syndrome, predominantly observed in childhood

RESULTS: A 7-year-old boy presented with abdominal pain and a mass in the left side of his abdomen. He underwent an abdominal laparotomy due to suspicion of intestinal volvulus. It was discovered that he had polysplenia, and one of his spleens had experienced infarction.

CONCLUSION: In summary, PSS is an uncommon congenital disorder distinguished by the existence of two or more spleens, coupled with several congenital abnormalities in the abdominal and thoracic regions. Surgery is a highly effective treatment choice. The prognosis is favorable, with the ultimate outcome contingent upon the extent of the cardiac anomalies.

P-185**Unveiling a rare splenic neoplasm: Composite hemangio-endothelioma- a case report highlighting clinical, radiological and histopathological correlations**Abeer Shahid, Khizer Ahmed Khan, Kiran Ali Mian, Usama Shafiq, Khurram Khaliq Bhinder, Saira Afeef Zia
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Composite hemangioendothelioma is a rare vascular tumor having intermediate malignant potential. Extra hepatic involvement is very rare. In our case 59 year old female presented with abdominal pain, thrombocytopenia and weight loss. Patient underwent CT abdomen which showed enlarged spleen with multiple hypoenhancing lesions. Correspondingly MRI abdomen showed T2 hypointense non enhancing splenic lesions. Patient underwent splenectomy. Diagnosis of composite hemangioendothelioma was made on histopathology. Follow up CT scan of abdomen showed multiple liver lesions, pulmonary nodules and diffuse osseous lesions representing metastases.

Composite hemangioendothelioma can have variable imaging features, it is necessary to combine clinical features, laboratory tests and histopathology to make correct diagnosis.

P-186**Tracheobronchopathia osteochondroplastica: A rare airway pathology with clinical and radiological correlates**

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Tracheobronchopathia Osteochondroplastica (TO) is a rare idiopathic benign disease that was first identified by Rokitoynski in 1855. It is frequently underdiagnosed. Numerous submucosal osseous and cartilaginous tracheobronchial nodules that spare the posterior wall are its defining feature. It often affects older people, with a 0.11% documented incidence.

CASE PRESENTATION: A 43-year-old male presented with complaints dyspnea, cough, and on and off chest pain for the last two months. Initially, he was treated on the lines on the lines of lower respiratory tract infection. Unfortunately, his symptoms didnot improve. His HRCT chest revealed increased wall thickness of trachea in the lower 2/3rds and proximal parts of bilateral main bronchi with multiple discrete calcified nodules: confirming Tracheobronchopathica Osteochondroplastica. Furthermore, bronchoscopy and histopathology augmented the same.

CONCLUSION: Patients with dyspnea and a persistent cough should be evaluated for the possibility of TO, a rare and unidentified illness. Because the diagnosis of TO is challenging, early use of clinical imaging and fiberoptic bronchoscopy is recommended.

P-187**Tuberculous epididymo-orchitis demonstrating a sonographic miliary pattern**

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Tuberculosis is an infectious disease that continues to be a significant public health concern in Pakistan (Balochistan).Tuberculous epididymo-orchitis may lead to infertility due to obstruction of the vas deferens, thus an early diagnosis and timely management is important. We report a case of sonographic miliary pattern of tuberculous epididymo-orchitis in a young patient who presented with scrotal pain.

P-188**Aggressive vertebral hemangiomas with intraspinal soft tissue components causing spinal cord compression: A case report**

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A 49-year-old female presented with progressive paraplegia. An MRI of the lumbar spine, initially performed without contrast at an outside facility and later reviewed at our center, revealed significant abnormalities at the DV12 and LV3 vertebrae. Both vertebrae were diffusely infiltrated by abnormal bone marrow signals, appearing high on T1-weighted (T1W) and T2-weighted (T2W) images, with some areas of low signals on T1W images. The involvement extended to both the vertebral bodies and posterior elements.

Large soft tissue components were observed within the spinal canal at both levels, resulting in significant compression on the spinal cord, thecal sac, and nerve roots. The compression effects were most pronounced at the LV3 level. The final diagnosis was aggressive vertebral hemangiomas. Hemangiomas are benign vascular lesions that occur due to the proliferation of blood vessels within the bone. While most vertebral hemangiomas are asymptomatic and discovered incidentally, a small percentage can become aggressive, leading to symptoms such as pain, neurological deficits, or, as in this case, paraplegia. Aggressive hemangiomas may extend into the spinal canal, leading to spinal cord compression and necessitating urgent intervention.

The patient was referred to a neurosurgeon, and a multidisciplinary approach was adopted. Given the extent of compression and the aggressive nature of the lesions, the team decided on spinal embolization by an interventional radiologist to reduce blood flow to the hemangiomas and alleviate pressure on the spinal cord. This case highlights the need for timely diagnosis and intervention in aggressive vertebral hemangiomas to prevent irreversible neurological damage, emphasizing the role of advanced imaging and minimally invasive treatment techniques in managing complex spinal pathologies.

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Unmasking neurofibromatosis type 1: A case of facial swelling and chronic otorrhea in an 8-year-old

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Neurofibromatosis type 1 (NF1) is a genetic disorder characterized by a variety of clinical features, including neurofibromas, cafe-au-lait spots, and skeletal abnormalities. We present a case of an 8-year-old male with persistent facial swelling, chronic otorrhea, and neurological symptoms. The patient reported mild swelling on the left side of his face since birth, accompanied by purulent discharge from the left ear starting at age 3. Despite multiple medical interventions, these symptoms persisted, prompting an extensive diagnostic workup. Imaging studies, including carotid Doppler, CT, and MRI, revealed significant findings suggestive of vascular involvement and bony abnormalities, including potential sphenoid wing dysplasia. Surgical intervention for a suspected parotid mass ultimately led to the diagnosis of a plexiform neurofibroma, a hallmark feature of NF1. This case underscores the importance of recognizing the diverse manifestations of NF1, particularly in pediatric patients presenting with facial deformities and recurrent ear issues. It highlights the necessity of a multidisciplinary approach for early diagnosis and comprehensive management, which can significantly improve clinical outcomes for affected individuals.

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CT KUB: Invaluable tool for detecting rare asymptomatic pathology

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Persistent descending mesocolon is an uncommon congenital anomaly present in 1.3% to 4.0% of the population. It is due to failure of fusion of left colonic mesentery with posterior and lateral parietal peritoneum, resulting in location of right margin of descending colon medial to the left renal hilum. It predisposes to intestinal obstruction, intussusception, volvulus, internal hernia and difficulty in colorectal surgery (increased operative time and failure of anastomosis). Preoperative imaging is vital prior to large bowel surgical intervention. This entity can be picked up incidentally even via CT kub (kidneys, ureters and bladder).

A 33-year-old married afebrile female was referred for CT KUB by the urologist. She had on and off right lumbar region pain for past 10 years, settling with medication. Recent previous ultrasound showed markedly hydronephrotic right kidney with 1.2 cm calculus at interpolar location. No vascularity was detected in paper-thin renal parenchyma. Urine routine examination revealed numerous pus cells. Blood complete picture was normal. Markedly hydronephrotic right kidney was present on CT KUB with anteriorly facing hilum and 2.0 cm (1233 HU) calculus in interpolar location with overlying

cortical scarring. Pelviureteric junction obstruction was also present. Left kidney, ureters and urinary bladder were normal. Descending colon was located medial to hilum of left kidney, with small intestinal loops lateral to it. No wall thickening, dilatation or pericolonic fat stranding was present. Imaging diagnosis of persistent descending mesocolon is often incidental, as in this case. Preoperative knowledge of this variant anatomy is important for surgeons in planning colorectal surgery to avoid intraoperative complications, and also in counseling the patients about their increased risk of developing intestinal pathologies. Incidental findings, other than KUB, must be reported to avoid potentially catastrophic complications.

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Post cholecystectomy pseudo aneurysm of hepatic artery

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Latrogenic injuries to hepatic artery system may evolve to pseudo aneurysm in the late postoperative period. Although rare, pseudo aneurysm after laparoscopic cholecystectomy can occur, are a serious clinical entity and very difficult to detect.

We present a case with history of laparoscopic cholecystectomy for symptomatic gallstones dated 8 months back. Right hepatic artery pseudo aneurysm formation occurred afterwards. IR guided embolization of distal branches as well as segment proximal to pseudo aneurysm was done with multiple micro coils. Post embolization angiogram showed flow stasis in pseudo aneurysm without any antegrade or retrograde filling.

On ultrasound pulsatile hypoechoic mass can be seen within the liver with doppler flow showing bidirectional flow. Upper GI endoscopy is often first investigation in cases of upper GI bleed; however, they are commonly inconclusive. Contrast enhanced CT can demonstrate pseudo aneurysm formation or hemorrhage which can sometimes be missed on ERCP. The modality with the most reliable diagnostic outcome is celiac and SMA angiography.

Knowledge of the condition should result in early diagnosis and thus limit the resultant morbidity. Embolization is the first line of treatment and surgery is reserved for more complex injuries and cases with life-threatening rupture of the aneurysm.

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A mass in disguise: Kikuchi Fujimoto disease masquerading as lymphoma

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First identified by Kikuchi in 1972 and by Fujimoto separately a year later. Kikuchi disease, also called histiocytic necrotizing lymphadenitis, is a benign lymphadenopathy of unclear etiology that primarily affects young adults. Previous authors have observed homogeneously enhanced, numerous, enlarged lymph nodes without substantial necrosis on computed tomography (CT), along with clinico-pathologic characteristics and CT that mimicked malignant lymphoma.

CASE PRESENTATION: A 26-year-old female presented with complains of high grade intermittent fever, chills, rigors, and headache for last one month. Patient was treated for typhoid and malaria. Her symptoms got a bit relieved but no proper cure. Ultrasound revealed lymph nodal mass at porta hepatis. Suspicion of lymphoma was made. CT scan confirmed Kikuchi Fujimoto. Cervical lymph node biopsy also supported this diagnosis.

CONCLUSION: Radiological appearance of Kikuchi disease can vary and may resemble a number of nodal disorders, including lymphoma, metastasis, and tuberculosis. So a proper history, clinical suspicion may help in diagnosing this rare case. Our case report augments that physicians must keep this disease in differential diagnosis list.

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Unveiling the hidden complexity: A case of dextrocardia, tracheoesophageal fistula, and atrial septal defect in a neonate

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A 3 months old child presenting with transient tachypnea of the newborn (TTN) and respiratory distress underwent a comprehensive evaluation, revealing a complex constellation of congenital anomalies. A chest X-ray disclosed dextrocardia, a rare anomaly in which the heart is situated on the right side of the chest.

Subsequent barium swallow examination revealed a tracheoesophageal fistula, a communication between the trachea and esophagus, which necessitated prompt intervention. Furthermore, echocardiography detected an atrial septal defect (ASD), a hole in the atrial septum that can lead to complications if left untreated. This case highlights the importance of a multidisciplinary approach and meticulous evaluation in neonates with complex congenital anomalies, underscoring the need for a nuanced understanding of these conditions to ensure optimal patient care.

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Primary umbilical endometriosis: A rare presentation of extra-pelvic endometriosis

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BACKGROUND: Primary umbilical endometriosis is a rare condition, accounting for less than 1% of all endometriosis cases. It is characterized by the presence of ectopic endometrial tissue in the umbilicus, often without a history of prior abdominal surgery. Due to its unusual location, it can be misdiagnosed as other umbilical pathologies, such as hernias or neoplasms.

CASE PRESENTATION: We present a case of a 42-year-old multiparous woman who presented with four years history of cyclical umbilical pain and bleeding coinciding with her menstrual cycle. Physical examination revealed a tender, firm, and bluish mass at the umbilicus. The patient had no prior history of abdominal surgery or known endometriosis. Ct was done which revealed subcutaneous skin thickening at umbilicus region. Ultrasound showed echogenic subcutaneous mass, suspicious for endometriosis, and subsequent histopathological evaluation confirmed the diagnosis of primary umbilical endometriosis following excisional biopsy. The patient was managed with surgical excision of the lesion.

CONCLUSION: Primary umbilical endometriosis is a rare and often misdiagnosed condition due to its atypical presentation. This case strongly indicates that endometriosis should be included in the differential diagnosis when evaluating an umbilical swelling in women of reproductive age. Surgical excision remains the definitive treatment, providing both diagnostic confirmation and symptom relief.

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A case report on prenatal diagnosis of two successive fetal Harlequin ichthyosis

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BACKGROUND: Harlequin ichthyosis (HI) is a rare and severe autosomal recessive genetic disorder, leading to abnormal skin barrier function. It is associated with high neonatal mortality and presents prenatally with characteristic skin abnormalities. Recurrence in successive pregnancies, while uncommon, can occur due to the genetic nature of the condition.

CASE PRESENTATION: We report two successive cases of harlequin ichthyosis in a 30-year-old gravida 3, para 1 woman with no known family history of genetic disorders. Both pregnancies were complicated by abnormal prenatal ultrasound findings, including echogenic liquor, abnormal thickening of the fetal skin, facial deformities, and restricted fetal movements. Post-natal evaluation confirmed the ultrasound findings.

Despite extensive prenatal counselling, the parents elected to continue both pregnancies. Both neonates exhibited the typical features of harlequin ichthyosis at birth and required immediate neonatal intensive care. Unfortunately, both infants succumbed to complications shortly after birth.

CONCLUSION: This report highlights the recurrence risk of harlequin ichthyosis in successive pregnancies and emphasizes the importance of early prenatal diagnosis, multidisciplinary and genetic counselling for at-risk families. To reduce parental distress and guide informed decisions.

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Occipital encephalocele in a preterm infant: A case report

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A 3-month-old male infant, born preterm at 34 weeks via C-section with a birth weight of 2.5 kg, presented with a congenital protrusion of the occipital region. An MRI revealed a midline occipital encephalocele characterized by a defect in the posterior skull, with a large cyst containing herniated brain parenchyma and meninges. Within this larger cyst, a smaller cyst encased the posterior aspect of the herniated brain parenchyma. These findings resulted in an intracranial mass effect, causing slight inferior displacement of the tentorium and crowding of the cerebral tonsils at the foramen magnum. Additionally, only the rostrum, genu, and anterior half of the corpus callosum body were visualized, suggestive of corpus callosum dysgenesis. Occipital encephalocele is a rare congenital neural tube defect involving herniation of brain and meninges through a skull defect, often associated with other brain malformations. Early detection through imaging, such as MRI, is crucial for diagnosing the condition and guiding clinical management to prevent complications. This case emphasizes the importance of detailed imaging in understanding and managing congenital encephaloceles in infants.

P-197**Avascular necrosis of femoral head leading to synovial osteochondromatosis of hip: case report****Muhammad Ayub***Department of Radiology, Bolan Medical Complex Hospital, Quetta, Pakistan.
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Synovial osteochondromatosis is a rare benign condition characterized by intra-articular and occasionally extra-articular cartilaginous / osseous or osteocartilagenous loose bodies. Primary type which is often considered idiopathic and affects younger individuals; results from metaplastic transformation of synovium into osteocartilagenous nodules in the joint capsule which eventually detach and accumulate in joint space. Many predisposing factors for secondary type are quoted in literature including trauma, arthritides, degenerative joint disease and as in our case, avascular necrosis. Synovial osteochondromatosis can cause pain, swelling, limitation in range of movements, degenerative changes in joints and secondary osteoarthritis. The most common site affected is the knee while hip joint is relatively rarely involved.

Radiography, computed tomography, magnetic resonance imaging and arthroscopy, all with different advantages can aid in diagnosis, extent of involvement and future management of the patients. Treatment approach for synovial osteochondromatosis can be conservative for self-limiting disease with anti-inflammatory medications or it can be extensive surgical debridement, removal of loose bodies and synovectomy for progressive disease with marked mechanical symptoms.

We present a case of 40 years old female who was initially presented in orthopedic clinic with complains of pain and limited range of motion in right hip. Initial radiograph revealed avascular necrosis of right femoral head with reduced head volume and widened acetabulum. Early development of synovial osteochondromatosis was also evident showing few calcified loose bodies. Conservative management was pursued by orthopedic team. Patient progressively developed increased swelling of right hip region and follow up imaging after four months with radiography and computed tomography demonstrated extensive encapsulated synovial osteochondromatosis with innumerable intra and extra-articular osseous and osteocartilagenous loose bodies. Signs of development of secondary osteoarthritis were also present. Patient was put on list for open surgical management by orthopedic team after radiological evaluation.

P-198**Transitional cell carcinoma of bladder diverticulum; A rare presentation****Ameema Munir, Marriam Malik, Rana Bilal Idrees, Rafia Shahzad**
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Bladder diverticulum is the herniation of bladder mucosa through bladder wall musculature. They can be congenital or acquired. Urinary stasis in the bladder diverticula secondary to muscular wall weakness predisposes it to chronic infection, inflammation, urolithiasis and even malignancy.

Transitional cell carcinomas (TCC) of the bladder diverticulum are rare and are the most common primary neoplasm in the bladder diverticula and are more prevalent in men. Wall of the diverticula is devoid of muscular layer hence tumors of diverticula easily breach through the diverticular wall and can have extra vesical extension into peri vesical soft tissue.

We present an interesting case of 73-year-old male patient presented with complaint of on and off gross painless hematuria and deranged RFTs for last three months. Ultrasound showed a large bladder mass. Patient underwent TURBT in private setting and histopathology revealed transitional cell carcinoma. Patient was referred to our hospital for further management. Initial

workup CT scan of pelvis revealed a large diverticular mass breaching diverticular wall along the right lateral aspect, extending into the Para diverticular extravascular location reaching up to the right pelvic side wall. TCC usually metastasize to lungs, bones, liver and lymph nodes, however in our case there were few discrete peritoneal and retroperitoneal deposits while no pulmonary, hepatic or osseous metastases were noted. Patient was referred to oncology department for treatment.

In this case we reviewed an interesting case of bladder diverticular TCC and emphasized its potential to have extravascular extension across the bladder wall into the pelvis with retroperitoneal and peritoneal metastatic deposition upstaging the malignancy leading to poor prognostic outcomes.

P-199**Juvenile nasopharyngeal angiofibroma in an adolescent female: A rare case report with literature review****Sobia Ahmed***Department of Radiology, Bolan Medical Complex Hospital, Quetta, Pakistan.
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Juvenile nasopharyngeal angiofibroma is a relatively rare benign highly vascular tumor which constitutes less than 1 % of all head and neck tumors. It most commonly affects adolescent and young adult male individuals between 10 to 20 years of age. Occurrence of this tumor is much rare in older age females and extremely rare in adolescent females which is our case report. It mostly arises from posterior nasal cavity adjacent to sphenopalatine foramen and is locally aggressive. It is considered androgen dependent keeping in view male adolescence predominance due to high levels of sex hormones in this age group. However, incidences of this tumor are also reported in young and pregnant females suggesting a more complex pathophysiology. Patients usually present with nasal obstruction, sinusitis, otomastoiditis due to blockage of Eustachian tube and epistaxis. The mass appears as reddish blue lesion on rhinoscopy. Radiological evaluation help in establishing diagnosis, staging and identifying feeding vessels for embolization before open or endoscopic surgical resection of the tumor.

We present a case of a fourteen years old female who was presented in otorhinolaryngology clinic with complains of headache, sino-nasal blockage, post-nasal dripping and on and off episodes of epistaxis. After initial clinical evaluation a contrast enhanced CT scan was requested which showed an avidly enhancing soft tissue mass lesion in nasopharyngeal region centered on sphenopalatine foramen causing its widening. The main bulk of the mass was noted in left nasal cavity. Adjacent soft tissue extension and erosion of bony walls with invasion of paranasal sinuses was evident including destruction of hard palate and left medial pterygoid plate. Intracranial extension was also noted in left middle cranial fossa by visualization of an enhancing component. After definitive radiological evaluation patient underwent multidisciplinary management involving ENT and neurosurgical teams.

P-200**Diagnostic accuracy of ultrasound compared to unenhanced CT for obstruction in patients with hydronephrosis detected on ultrasound****Sumyya Hafeez, Kiran Fatima Farooq, Anisa Kalsoom***Department of Radiology, Fauji Foundation Hospital, Rawalpindi, Pakistan.
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The aim of this audit is to assess diagnostic accuracy of ultrasound compared to unenhanced CT for obstruction in patients with hydronephrosis detected on ultrasound.

STUDY DESIGN: Retrospective cross-sectional study Setting This study was conducted at Fauji Foundation Hospital Rawalpindi. A total of 50 patients presenting with flank pain were prospectively examined over a period of one month. The results of hydromephrosis detected on ultrasound of these patients were compared with their CT KUB to detect the cause of obstruction causing hydronephrosis.

Of 50 patients 40% patients had similar findings of obstructing renal calculi causing hydronephrosis on both ultrasound and CT KUB. 6% patients had renal calculi on ultrasound and hydronephrosis on CT KUB. 6% patients had hydronephrosis on ultrasound and renal calculi on CT KUB. 9% patients showed hydronephrosis on ultrasound and both renal calculi and hydronephrosis on CT KUB. 2% patients had stone on ultrasound and both hydronephrosis and renal calculi on CT KUB. 6% patients showed hydronephrosis on ultrasound and obstructing mass causing hydronephrosis on CT KUB 2% patients showed hydronephrosis on ultrasound and obstruction caused by perivesical fat at bladder neck causing hydronephrosis.

CT KUB is more sensitive for detecting obstruction leading to hydronephrosis. The difference in findings of ultrasound and CT KUB might not be clinically significant, however giving concern or potentially harmful long-term effect of radiations, ultrasound should be considered first.

P-201

Radiological diagnosis of obstructive jaundice - A rare cause

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Duodenal diverticula are present in 27% of the patients undergoing upper gastrointestinal tract endoscopy, with majority of those being periampullary diverticula. Lemmel syndrome is an uncommon clinical entity in which obstructive jaundice is caused by a periampullary duodenal diverticulum compressing the intrapancreatic common bile duct leading to upstream dilation of biliary drainage ducts. We present the case of a 65 year old woman, known case of hepatitis C, who presented with fever, vomiting and epigastric pain. She had ultrasound abdomen, which did not reveal any diverticulum. Her laboratory investigations revealed raised bilirubin (99 micromol/litre), raised ALT (207 IU/L), positive anti hepatitis C antibody, negative antinuclear antibody titre and slightly raised alpha feto protein (61.9 IU/L). She had raised serum ferritin (328 ng/ml). She underwent contrast enhanced CT (CECT) of abdomen which revealed 1.6 cm diverticulum at the medial margin of the second part of the duodenum. It was compressing distal end of CBD (which was dilated measuring 1 cm) along with mild prominence of pancreatic duct (0.25 cm). Minimal intrahepatic cholestasis was also appreciated. Liver had nodular appearance with no focal lesion; cirrhosis was the likely cause of raised alpha feto protein. The patient was lost to follow-up after the CT scan. This case illustrates the fact that not all duodenal diverticula are asymptomatic, and that imaging is essential to guide the surgeon before intervention.

P-202

Carpal tunnel syndrome due to plexiform neurofibroma of the median nerve: Magnetic resonance imaging features

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Peripheral nerve sheath tumors comprise approximately 5% of all the benign soft tissue tumors and usually occur due to underlying neurofibromatosis. Plexiform neurofibromas are pathognomonic for neurofibromatosis type I (NF-I) and occur when there is diffuse involvement along a nerve segment

and its branches. These tumors are classified as WHO grade-I tumors, however they have a significant risk of eventual malignant transformation. We here present a case of carpal tunnel syndrome secondary to a plexiform neurofibroma in a 53 years old man who presented with a right forearm swelling that has been growing for the last 4 years with some nocturnal numbness. There was no overlying skin changes. Magnetic resonance imaging (MRI) revealed multiple well defined altered signal intensity lobulated lesions in the flexor compartment of the right forearm and along the course of median nerve showing heterogeneous post contrast enhancement.

P-203

Sprengel's deformity: A case report

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Sprengel's shoulder is a congenital anomaly of unknown etiology in which there is dysplasia and malposition of the scapula, mainly due to abnormal descent of scapula in the embryonic period. It is commonly associated with other anomalies usually involving vertebrae, ribs or muscular abnormalities which includes rib fusion or vertebral deformity. The restricted movements of the shoulder and or arm with the lump at the back are the common presenting clinical features. The elevated scapula can be clearly visualized and there is an associated restriction in the scapular and shoulder joint movement. We present a case of 4 years old male child who presented orthopedic department with left sided shoulder deformity and restricted movement of left arm since birth. On examination there was asymmetry in both shoulders. The left shoulder was elevated in position as compared to right shoulder. Movements of left shoulder were restricted and abduction of arm above 90° elicited pain. The neck was also tilted to the left side. Plain X-ray showed elevated left scapula. CT scan of thorax and cervical spine was also performed which showed uplifted left scapula, hypoplastic spine of left scapula along with partial fusion of cervical vertebrae at two vertebral levels. Initial Diagnosis can usually be made on plain Radiograph but CT scan or MRI is required for exact evaluation of the features of abnormality to help in the management. Surgery is performed to improve the functional disability and cosmetic purpose.

P-204

Ewing's sarcoma presenting as recurrent sacrococcygeal mass

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Ewing sarcoma, a highly aggressive bone and soft-tissue cancer. More than half of all patients present in the second decade of life with male preponderance of approximately 1.5:1. It usually arises in the metaphysis or diaphysis of the long bones of extremities. Pelvic area, ribs and scapulae are less frequent site. Sacral Ewing sarcoma has a unique anatomic limitation due to neurological structures, vertebral column, and pelvic involvement. Primary Ewing's sarcoma of the spine is considered a rare case. The diagnosis remains a challenge since the diagnosis should rely on histological examination and the symptoms are not specific. In addition, the suspicion of sacral Ewing's sarcoma requires radiological examination including MRI scans or CT scans. We present a rare case of Ewing's sarcoma presenting as sacrococcygeal mass. A 25 years old male from Afghanistan was referred from Oncology department, HMC Peshawar to radiology department as a case of recurrent sacral Ewing's sarcoma with complaints of lower back pain radiating to right lower limb and inability to walk for last 4 months. His CT Chest Abdomen and Pelvis was performed which revealed ill defined lytic destructive lesion with internal bony fragments,

soft tissue component and air foci centered on sacrum with involvement of bilateral sacral ala, left sacroiliac joint left iliac blade, bilateral gluteal muscles and erector spinae muscle. with pulmonary metastasis. His MRI pelvis also revealed marginally enhancing lesion involving the left sacroiliac joint with infiltration of erector spinae and bilateral gluteal muscles. CECT abdomen pelvis and MRI provide essential information in determination of the severity of the disease and assists in planning regarding management.

P-205

Correlation of HRCT findings with bronchoalveolar lavage: a tertiary care institutional study

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This study aims to evaluate the correlation between high-resolution computed tomography (HRCT) findings and the diagnostic yield of bronchoalveolar lavage (BAL) in patients with suspected lung infections. This includes identifying HRCT patterns that may predict higher or lower BAL yields, thereby enhancing diagnostic accuracy and minimizing complications in patients undergoing BAL.

Patients with respiratory symptoms who underwent HRCT were included, excluding those with known malignancies or pulmonary edema. The study took place at Fauji Foundation Hospital from August 15 to September 15, 2024. Primary pathologies included pulmonary tuberculosis, aspergillosis, and other infections. Diagnostic yields were defined by positive microbiological cultures and cytopathological results.

HRCT findings of reticulo-nodular infiltrates are associated with lower BAL yields compared to air space opacities and centrilobular tree-in-bud nodules. Symptomatic patients generally experience better outcomes from BAL than asymptomatic ones.

P-206

Marjolin's ulcer presenting as squamous cell carcinoma decades after initial injury

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Marjolin ulcers reflect malignant degeneration within pre-existing scars or areas of chronic inflammation such as burns or venous ulcers. Incidence is around 1-2% from all burn scars. The average latency period between initial injury to malignant transformation is 30-35 years. Men are more commonly affected than females. Squamous cell carcinoma is the most common histologic variant. Marjolin ulcers can develop in any anatomic location, though the most common site is the lower extremities, followed by the upper extremities. We report a rare case of 67-year-old elderly female referred from oncology department, HMC to radiology department as a biopsy proven case of moderate to poorly differentiated Squamous cell carcinoma arising from the left scalp lesion after latency period between the initial injury and the malignant transformation of about six decades. She previously had history of burn injury to left parieto occipital region when she was 2 years old. She developed nodular ulcerated non healing wound on the left scalp for the last 7 years. She underwent biopsy of that lesion in May 2024, which came out to be positive for moderate to poorly differentiated squamous cell carcinoma. CT chest abdomen and pelvis was performed which showed lytic expansile lesion involving the left parietal bone with intra and extracranial soft tissue component

with no evidence of metastasis. Another similar nature lesion was also seen involving the left side of occipital bone. Her CEMRI redemonstrated the left extra axial parietal bone lesion involving the overlying scalp tissue. No intra-axial involvement noted by the lesion. There should be a low threshold to obtain a biopsy. Radiological imaging after biopsy is performed to assign TNM staging.

P-207

Polysplenia with unilateral renal agenesis and infected hydrocele of canal of nuck in an adult female: Case report

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Polysplenia syndrome is said when there are two or more spleens present. Polysplenia syndrome is part of left isomerism. It is associated with cardiac, gastrointestinal, urogenital and vascular pathologies.

Associated cardiac anomalies are most common and often present in pediatric patients however in our case, patient is an adult female with no associated cardiac anomalies. There is no association of polysplenia syndrome with hydrocele of canal of nuck described in previous literature.

We present a case of 35 year old female patient presented in urology department with left inguinal swelling. No previous imaging were performed. Current contrast enhanced CT showed a normal spleen in left hypochondrium and another similar large splenic tissue adjacent to fundus of stomach. Left renal agenesis with compensatory hypertrophy of right kidney is seen. An elongated cystic structure extending along left round ligament of uterus into inguinal region. Which showed a thick enhancing lateral wall. Patient was referred to multidisciplinary committee for further evaluation.

P-208

Stercoral colitis due to massive fecal impaction: A case report

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Stercoral colitis is an uncommon inflammatory condition of the large bowel caused by fecal impaction. This can lead to life-threatening colonic perforations. Chronic constipation is a major risk factor for it. We herein report a case of a 62-year-old diabetic male who presented with abdominal pain, abdominal distension and absolute constipation for a few days. The patient had pain and tenderness in the left thigh with underlying abscess formation for which incision drainage was done. Physical examination showed distended and tender abdomen. Abdominal radiographs demonstrated distended loops of bowel with air fluid levels.

Computed tomography (CT) images demonstrated abundant fecal material with massive dilatation in the rectosigmoid colon, focal mural thickening, subtle pericolic fat stranding. Based on these findings, the diagnosis of stercoral colitis was made. The patient was treated conservatively and eventually discharged with a good health condition.

P-209**Quality control in mri shoulder joint imaging parameters: A clinical audit on its adequacy in a tertiary healthcare setting in southern Punjab, Pakistan****Sarah Nisar***Department of Radiology, Quaid.e.Azam Medical College, Bahawalpur, Pakistan.
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MRI is the preferred modality for assessing shoulder joint injuries due to its superior ability to visualize soft tissues, including muscles, tendons, ligaments, and cartilage. It offers detailed, high-resolution images without using ionizing radiation, making it a safer choice, especially for repeated imaging. MRI's multi-planar capabilities allow for comprehensive views of the shoulder, crucial for diagnosing complex injuries.¹

To obtain high-quality images of the shoulder joint, it is essential to capture scans from three different planes: axial, oblique coronal, and oblique sagittal. This imaging is done while the patient is lying on their back (supine position) with their arm in a neutral position. These multiple perspectives provide comprehensive views of the shoulder, allowing for detailed visualization of its structures and any potential issues.² Appropriate coverage is also crucial for a comprehensive assessment of shoulder pathologies.

P-210**Pictorial presentation & case discussion of genital pathologies****Maham Munir Awan***Department of Radiology, Nishtar Medical University & Hospital Multan,
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This poster includes pictorial presentations of following cases about genital pathologies: Cryptomenorrhea, Mullerian Duct Anomalies in Patient with Anorectal Malformation, Krukenberg Tumor and Undescended Testes.

P-211**Radiating confidence through reporting - Understanding the power of words****Rafeah Khan***Department of Radiology, The Indus Hospital and Health Network, Karachi,
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Radiology reporting is truly an art. With the passage of time the need for diagnostic imaging is increasing with the help of developing technology. Physicians and surgeons rely on radiology reports for diagnosis and patient management, therefore it is imperative that the report should be concise and clear to guide the referring physician or surgeon in the right direction. Unfortunately there is no formal training in radiology reporting during the residency training and therefore there is lack of homogeneity of reports in radiology departments across various institutes. I would like to discuss a systematic review of how to ensure safety and quality of radiology reports and the need for incorporating proper reporting training in the radiology residency curriculum.