

**Abstracts presented at the 34th Annual Conference of
Radiological Society of Pakistan
held on December 7th to 9th 2018, in Quetta, Pakistan**

Venue : Serena Hotel, Quetta.

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34th Annual Conference 2018
Radiological Society of Pakistan
ABSTRACTS

ORAL PRESENTATIONS (O)

SCIENTIFIC SESSION : Neuro/Intervention

O-1

Imaging of oral cancer

Najamuddin

Aznoetic Diagnostic Centre, Lahore, Pakistan.

O-2

Role of radiology in liver transplant

Atif Rana

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Pakistan has one of the highest prevalence rates for viral hepatitis in the world. In a national survey done in 2007, overall prevalence of hepatitis B was 2.4% and of hepatitis C was 4.8%. In a country of approximately 200 million people, 5% (10 million) are infected with hepatitis C virus, and more than 2 million are in need of liver transplantation to save their life. The living donor liver transplant was initiated in 2012 in our center and has so far performed more than 650 transplants. Radiology has been at the forefront in this endeavor. Our contribution includes preoperative donor work up which includes a liver dynamic CT to calculate liver attenuation index, liver volumetry as well as delineation of vascular anatomy for surgical planning. All patients undergo an MRCP as well for biliary anatomy. In the post-operative period, both recipient and donor may require imaging to look for complications such as post-operative collection, vascular complications, or biliary strictures. The most common recipient complication is biliary stricture. Interventional radiologists play an important part in treating these as well as other complications including post op collections, vascular complications such as portal vein stenosis or arterial stenosis and thrombosis.

O-3

Management of inoperable abdominal malignancies

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- Metal stents for Malignant strictures
- Palliative; plastic or metal
- Advanced tumours, Irresectable, poor surgical candidates, disseminated cancers
- Self-Expanding or Balloon Expandable
- Oesophageal: radiological insertion simple and easy
- Diagnostic Coeliac and Mesenteric Angiograms
- Therapeutic embolisation with coils, PVA particles, gelfoam
- Acute abdomen due to Bowel ischaemia SMA stenosis, occlusion, thrombosis: Angioplasty, thrombolysis, Stenting

O-4

Role of ADC values and ratios in differentiating typical from atypical/anaplastic meningiomas

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OBJECTIVE: Atypical/anaplastic meningioma's are prone to aggressive behavior which affects treatment planning and prognostication. Our aim was

to assess the role of Apparent Diffusion Coefficient (ADC) values of MRI brain in differentiating typical from atypical/anaplastic meningioma.

MATERIALS AND METHODS: We reviewed 84 typical and 37 atypical/anaplastic meningioma's and compared mean ADC values and ADC ratios of their preoperative MRI brain. MRI were performed on 1.5 and 3 Tesla.

RESULTS: Mean ADC ratios and the mean ADC values of typical and atypical/anaplastic meningioma's were significantly different ($p < 0.001$). At 3 tesla mean ADC value for typical meningioma was $1.03 \pm 0.10 \times 10^{-3}$ and $0.63 \pm 0.05 \times 10^{-3}$ for atypical/anaplastic meningioma. At 1.5 Tesla, mean ADC value for typical meningioma was $1.05 \pm 0.11 \times 10^{-3}$ and atypical / anaplastic meningioma was $0.70 \pm 0.04 \times 10^{-3}$. The mean ADC ratios were 1.08 ± 0.17 and 0.85 ± 0.15 for typical and atypical/anaplastic meningiomas respectively.

CONCLUSION: ADC values and ADC ratios have important role in differentiating typical from atypical/anaplastic meningioma's and it must be part of the routine preoperative MRI reporting.

O-5

A review of serial brain ct in patients with traumatic brain injury: A tertiary care experience

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BACKGROUND: Traumatic brain injury (TBI) remains a significant cause of neurological morbidity and mortality. The annual incidence of head injury in Pakistan has been estimated as 50/100,000 population based on data from public sector hospitals. Studies based on routine follow-up CT imaging have shown that approximately 20% to 50% of patients with TBI will develop progressive hemorrhagic injury (PHI).

OBJECTIVE: To identify and study the importance of serial brain CT brain imaging in Traumatic Brain Injury (TBI) and analyze their evolution to redefine treatment strategies for trauma research in our region.

MATERIALS AND METHODS: It is a retrospective study analyzing head trauma patients presenting to our emergency department over a period of six months between July and December 2016 in Liaquat National Medical College and Hospital, Karachi. Out of 468 patients, 202 patients were followed up and their data was recorded.

RESULTS: Out of all the causes, Road Traffic accidents (RTA) was most common cause 125 patients (61.8%). The most frequent age group affected was between the age of 31-50 years. Intraparenchymal contusions (IPC) was the most frequent CT finding found in 78.7% of the patients and the least common finding was pneumocranium only 10.8%.

On follow up studies, out of the 202 patients, 54 of them had significant increase since their last control CT and the remaining 148 had either stable or resolution in their findings. Patients with moderate GCS [=9-12], Intraparenchymal contusion (IPC) and subdural hematoma (SDH) were the common factors that were found to contribute to progressive hemorrhagic injury (PHI).

CONCLUSION: The results of our study suggest that follow up imaging after TBI allows for more suitable patient care, like the facilitation in identifying this specific group of patients and warranting change in their treatment plan, either conservative or surgical. This will result in a potentially favorable outcome.

O-6**Accuracy of SWI MRI for diagnosis of glioblastoma taking biopsy as gold standard**

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BACKGROUND: It is difficult to distinguish between lymphoma and glioblastoma. SWI is able to demonstrate the differences of tissues with susceptibilities and provide excellent contrast between blood products, venous blood vessels, iron-laden and calcification distinguishable from the surrounding tissues, which is not provided by conventional MR imaging.

OBJECTIVE: To determine Diagnostic accuracy of SWI MRI for diagnosis of glioblastoma taking biopsy as gold standard.

METHODOLOGY: Total 114 patients with focal neurological deficit, symptoms of increased intracranial pressure, seizures, and stroke and CT scan findings of a mass with irregular thick margins were included. All patients underwent SWI MRI. Biopsy of the brain was done during same hospitalization period. The sensitivity, specificity, PPV, NPV, DA of SWI MRI were calculated using biopsy diagnosis of glioblastoma as gold standard.

RESULTS: There were 60.5% male and 39.5% female patients with mean age 50.64 years. Mean lesion size was 4.34 cm with standard deviation 1.46 cm. 68.4% were diagnosed with glioblastoma by SWI MRI and 71.1% patients with biopsy. Sensitivity, Specificity, PPV, NPV and accuracy were 90.1%, 84.8%, 93.5%, 77.7%, and 88.59% respectively.

CONCLUSION: SW Imaging with Sensitivity, Specificity, and diagnostic accuracy of 90.1%, 84.8%, and 88.59% respectively are additional help in clinical practice to confirm the assumed diagnosis

O-7**Pre surgical embolization of nasopharyngeal angiofibroma, finding predominant arterial feeder**

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 Hospital/Fatima Jinnah Medical University, Lahore. Pakistan.

PURPOSE/OBJECTIVES: Nasopharyngeal angiofibroma is a benign fibrovascular tumor affecting young adolescent boys, originating from the posterolateral wall of the nasal cavity.

The young patients mostly present with chronic epistaxis, Nasal obstruction, rhinorrhea, Conductive hearing and diplopia. Study is done to find the predominant arterial feeder during pre surgical embolization of Juvenile Nasopharyngeal angiofibroma (JFA) in order to reduce blood loss and intra operative time during surgery.

MATERIAL AND METHODS: Four vessels angiography (DSA) was done in all patients including internal and external carotid angiography with superselective angiography of vessel supplying tumor. Presurgical embolization of 150 patients done with spongostone in angiography suit of Neuroradiology department, Lahore General Hospital, Lahore, Pakistan with age ranging from 12-18 years males from January 2014 to December 2017. All patients underwent surgery with in 24 hours.

RESULTS: Out of 150 patients Internal maxillary artery was supplying 111 patients, 30 were supplied by accessory meningeal artery and 09 were supplied by ascending pharyngeal artery. Presurgical embolization with Spongostone proved significant reduction in intra operative blood loss and reduced surgical resection time.

CONCLUSION: Internal maxillary artery proved to be the major feeder supplying JNFA. Presurgical embolization appears to be the treatment of choice prominently reducing intra operative blood loss, minimizing the need of blood transfusion with short intra operative time resulting in quick and better surgery.

O-8**Characteristics and trends in publication of scientific papers presented at the annual conferences of RSP from 2008 to 2016**

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² Department of Radiology, Civil Hospital / Dow Medical College (DUHS), Karachi, Pakistan.

PURPOSE: To determine the journal publication rates of scientific papers presented at the annual conferences of Radiological Society of Pakistan (RSP) from 2008 to 2016.

METHODS AND MATERIAL: All scientific papers presented orally at the annual conferences of Radiological Society of Pakistan from 2008 to 2016 were evaluated for publication using the Medline and Pakmedinet database. For the purpose of analysis, information was extracted from each article. City of origin, subspecialty, modality and study design adopted by the author were ranked by publication percentage. Chi-square tests were used to compare publication percentages for each category of variables. Total number of oral presentations that were subsequently published in journals were calculated. Data was analyzed using SPSS version 22.0.

RESULTS: In total, 80 out of 321 abstracts were subsequently published (25%). The author's city of origin ($p = 0.02$), subspecialty ($p = 0.02$), modality ($p = 0.02$) and study design ($p = 0.001$) were significantly associated with subsequent publication. Karachi, Lahore, Peshawar, Islamabad and Faisalabad were among the top five cities with publication rates of 55%, 11.4%, 11.4%, 11.4% and 7.6% respectively. Amongst all modalities CT (25%), MRI (23.7%), and nuclear medicine (13.7%) had the highest publication percentages. Among subspecialties miscellaneous (42.9%), cardiac (38.9%) and vascular (33.3%) imaging were the top trends. Though, there is an increase in the quantity of scientific papers presented from 2008 to 2016 from 9.9% to 19.3%. There is a relative decrease in the rate of publication from 2008 to 2016 from 37.5% to 12.9% respectively.

CONCLUSION: Our study demonstrates interesting characteristics and trends in the publication of scientific papers presented at the annual conferences of RSP. There has been a steady decline in the publication rate in recent years. Moreover, only a few studies were published in indexed journals. Significant effort is required to improve the quality and quantity of research output in the field of radiology in Pakistan. This can be achieved by provision of financial support, basic epidemiological skills and advanced technology and archiving facility within the radiology departments. In addition, we need to consistently convert the oral scientific papers presented at the radiological conferences into worthy publications.

SCIENTIFIC SESSION : Paeds/Women Imaging**O-9****Classification of vascular anomalies and radiological imaging spectrum**

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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.

O-10

Update on Breast MRI

Shaista Afzal

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Breast MRI has come up as an adjunctive tool to mammography in the evaluation of breast abnormalities. It has a high sensitivity and negative predictive value in the evaluation of breast cancer that makes its use suitable in different aspects of breast cancer workup and treatment. But due to its high sensitivity, there is overlap of the imaging features of some benign and malignant lesion leading to low specificity that leads to unnecessary interventions. The availability of breast MRI is limited and it is a costly examination, therefore it is essential to establish proper indications. In this review, an overview of breast MRI and its indications for diagnostic and screening purpose will be discussed.

O-11

Fetal echocardiography: an overview

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Congenital heart disease is the commonest fetal anomaly accounting for 6/1000 live births. Fetal echocardiography was introduced in early 1980's as a tool to diagnose fetal cardiac defects. This modality is still in its infancy in our set up and most of the congenital cardiac defects are detected post natally. This incurs a heavy burden on society as the infants suffering from grave congenital cardiac defects may be delivered in far flung areas of the country where resuscitation facilities as well as cardiac care may not be available. Consequently, there is increased morbidity and mortality and an overall increase in death rate of the infants.

Fetal echocardiography is capable of picking up almost all grave congenital cardiac defects including transposition of great arteries, tetralogy of fallots, hypoplastic left heart syndrome and many more. When a fetus with grave cardiac abnormality is diagnosed, delivery can be planned at a center where cardiac resuscitation facilities are available, and cardiac surgery is pre planned. Ductus dependent circulation can be identified pre natally and measures to keep the ductus arteriosus open post natally can be carried out.

Initial assessment of fetal heart is made on 04 chamber view. Symmetry of the cardiac chambers is seen. Base of the heart view shows the outflow tracts of both the ventricles. These views together help in excluding 90% of cardiac abnormalities. Additional views to see venous connections, arch abnormalities can be done. Doppler ultrasound of fetal heart assesses functional abnormalities of the heart.

As congenital heart disease is the commonest congenital abnormality, fetal echocardiography with four chamber view and outflow tract views should be incorporated in every fetal anomaly scan and residents should be trained accordingly.

O-12

Imaging of gynaecological malignancies

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Imaging plays a vital role in the pretreatment assessment of patients with gynecological malignancies. Several imaging techniques are used for comprehensive imaging of the female pelvis including ultrasound (USG), computed tomography (CT), MRI and [18F]-FDG-PET CT. USG is usually the first imaging modality for evaluation of a variety of gynecological symptoms such as pelvic pain and postmenopausal vaginal bleeding. CT is the modality of choice for staging patients with ovarian malignancy. It is also used to stage advanced endometrial and cervical cancers. MRI is better for evaluation of local extent of disease in uterine and cervical cancers and it is a problem-solving tool in patients with complex adnexal masses. FDG-PET CT is now gaining popularity for staging of gynecological malignancies. The purpose of this review is to focus on the role of imaging in the pretreatment assessment and overall management of patients with endometrial, cervical and ovarian cancers.

O-13

Breast Biopsy Radiologic - Pathologic Correlation

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The radiologists use the Breast Imaging Reporting and Data System (BIRADS) to categorize or classify breast imaging abnormalities and to standardize radiology reports. Any suspicious lesion (BIRADS 4) or a highly suggestive lesion (BIRADS 5) found on imaging warrants a biopsy and histo-pathologic evaluation. Percutaneous breast biopsy has become the foundation of diagnosing breast pathology, with most biopsies performed under imaging guidance. The success of an imaging-guided breast biopsy depends not only on the biopsy technique, but also on determining imaging-pathology concordance and appropriate post-biopsy management for patients after the procedure. I will briefly discuss the aspects to consider when establishing imaging-pathology concordance after US-guided breast biopsy and the different categories along with example cases.

O-14

Doppler ultrasonography in the antenatal diagnosis of abnormal placental invasion secondary to placenta previa-accreta

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BACKGROUND: Placenta previa is the fatal complication of pregnancy due to localization of placenta in the lower segment of the uterus over or near the internal cervical OS. A number of diagnostic modalities have been used in the detection of antenatal diagnosis of placenta previa and its various forms. Doppler USG is popular technique due to its low cost, non-invasiveness and easy accessibility. In this study if MAP is diagnostic at an early stage through this non-invasive and easily accessible technique, timely management can help prevent maternal mortality.

OBJECTIVES: To determine the diagnostic accuracy of Doppler ultrasonography in the antenatal diagnosis of abnormal placental invasion secondary to placenta previa taking operative findings of caesarean section as gold standard.

SETTING: Department of radiology, Ziauddin Hospital, Karachi.

DURATION: One year from 1st august 2013- 31st july 2014.

STUDY DESIGN: Cross sectional study.

SUBJECTS AND METHODS: A total of 591 pregnant women with multipara having placenta previa were included in this study. The diagnosis of abnormal

placental invasion was made by Doppler ultrasound.

RESULTS: Sensitivity, specificity, positive and negative predictive value as well as accuracy of Doppler ultrasound in the detection of abnormal placental invasion was 84.8% , 91.8%, 88.5%, 89.9% respectively.

CONCLUSION: In conclusion, we believe that any persistent placenta previa, must benefit from elaborate prenatal trans-abdominal colour Doppler ultrasound studies to identify abnormal utero-placental vascular flow patterns.

SCIENTIFIC SESSION : Musculo skeletal system

O-15

MRI shoulder in Glenohumeral instability

Kashif Siddique

UK

Glenohumeral instability encompasses a broad spectrum of clinical complaints and presentations. Imaging findings depend on numerous factors and range from gross labral abnormalities to subtle capsular injuries many of which may go un diagnosed. I will be discussing technique of shoulder arthrogram .The talk will cover different types of shoulder instabilities and their image interpretation along with clinical significance.

O-16

CT in pelvic trauma

Syed Anjum Mehdi

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Pelvic fractures are important in critical care because they are associated with:

- High energy mechanisms, such as:
 - Motor vehicle crashes, collisions with pedestrians, falls from height
- Major haemorrhage, which can be difficult to control
 - Other major injuries, Intra-abdominal organs (28%), including aortic injury, Hollow viscus injury (13%), Rectal injury (up to 5%)
- High morbidity and mortality (overall mortality is 10-30%; up to 50% if shocked)

CT Abdomen and Pelvis is the imaging modality of choice for assessing pelvic ring injury , it is performed in the haemodynamically stable patient to rule out intra-abdominal and retroperitoneal injury, and to characterize the type and severity of pelvic injury and may identify those suited to Interventional Radiology.

O-17

MSK ultrasound

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High frequency ultrasound for the diagnostic & therapeutic purposes has become a need of time in developing countries, not because of its cost effectiveness , but also due to its superior resolution; for superficial ligaments ,tendons,muscles nerve & vascularity ;ability of real time assessment of soft tissue's dynamics,pin point imaging evaluation of the point of tenderness and doppler capabilities for evaluation internal vascularity of a lesion. US has better resolution than MRI in superficial tendons,ligaments,vessels & nerve especially in limbs however its utility declines as the depth of the area of interest increases. Its therapeutic role as pain management is increasing day by day world wide due to its higher accuracy & less complication rates. Now time has come where radiology community should step ahead to learn these techniques for the benefit of the society while doing quality diagnostic & therapeutic imagine.

O-18

Standardised MRI reporting in degenerative spine disease-tips to dissolve the dilemma

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MRI of the lumbosacral spine is the most frequently requested investigation, which at times precedes even patient's clinical examination. Many guidelines

are provided by different radiological societies all over the world but in Pakistan still no set standardisation is provided. The purpose of this presentation is to make young radiologists familiar with basic anatomy of cervical, dorsal and lumbar vertebrae on MRI and to have a systematic approach to degenerative spinal disease. Various patterns of intervertebral disc involvement and the description of imaging findings according to various guidelines. We will also try to discuss to make reporting easy and make a report according to the Clinician's demand in which case clinical question and interaction matters a lot. Last but not the least Is there a need to formulate standardised guidelines for our country!

O-19

Microwave ablation of osteoid osteomas: Our preliminary experience

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PURPOSE: The purpose of this study is to evaluate efficacy and safety of CT guide microwave ablation (MVA) of osteoid osteomas(OOs).

MATERIALS AND METHODS: This retrospective study included four consecutive patients with computed tomographic (CT) diagnosis of OOs treated by CT guided MVA from 2017 to 2018. Under general anesthesia and CT guidance MVA of OOs done. DATA i.e age, gender of patients, severity of pre-procedural pain, site and nidus size, procedure time and post procedural pain resolution were assessed. Pain resolution was clinically assessed by using visual analog score (VAS) on 1day 1, 15days and 1 month and any need for re ablation. Safety was assessed based on complication rate i.e hematoma, burns or infection.

RESULTS: All procedures were technically successful and the success rate was upto 100% (4/4). One case was a previously failed Radiofrequency ablation of OOs which was followed by MVA and that was successful. Minor complications were observed.

CONCLUSION: MVA is a very simple, successful, minimally invasive and curative treatment for OOs without any major complications.

O-20

Structured reporting in Radiology: Are we ready to implement it

Pari Gul

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OBJECTIVE: The purpose of this talk is to provide a brief overview of structured radiology reporting and to emphasize the anticipated benefits from a new generation of standardized radiology reports. We will review the advantages and disadvantages of structured radiology reports and discuss the current prevailing sentiments among radiologists regarding structured reports. We will also discuss the obstacles to the use of structured reports and highlight ways to overcome some of those challenges. The future directions in radiology reporting in the era of personalized medicine will also be discussed.

BACKGROUND: Radiology reports are vital for patient care as referring physicians depend upon them for deciding appropriate patient management. Traditional narrative reports are associated with excessive variability in the language, length, and style, which can minimize report clarity and make it difficult for referring clinicians to identify key information needed for patient care. The benefits of structured reporting, both theoretical and practical, have received considerable attention in radiology. For example, structured reporting may reduce the incidence of errors in reporting and communication. It also may make it easier for referring health professionals, billing and coding

specialists, medico legal representatives, and researchers to extract and compare information from radiologic reports. Furthermore, it may help to reduce ambiguity and misunderstanding by encouraging the use of a standard lexicon in reporting. The Breast Imaging Reporting and Data System (BIRADS) often serves as the illustration of successful structured reporting.

CONCLUSION: Structured reporting has been advocated as a potential solution for improving the quality of radiology reports. The use of report templates requires personal and technical changes to the reporting process itself. Radiology should face these challenges in its leading role in the application of modern IT-based solutions.

SCIENTIFIC SESSION : Abdominal Imaging

O-21

Errors in abdominal imaging

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O-22

Diagnostic contribution of PET scan in abdominal malignancies

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What is PET /CT Scan? when it required?

OBJECTIVES: Indication of PET scan in various abdominal tumors, according to RCR, NCCN and IAEA guidelines. Role of PET scan in staging / restaging of tumor before radical treatment. Post therapy response evaluation/ selecting chemotherapy and planning radiotherapy. Utility of PET scan in evaluation of suspected recurrence with rising tumor marker, when other imaging findings are negative or equivocal. Limited value of PET scan in neuroendocrine tumor and in mucinous adenocarcinoma.

CONCLUSION: PET/CT scan is an important tool because it combine metabolic and anatomic imaging to provide guidance in staging as well as monitoring post therapy response, however utility of PET scan in cancer vary based on cancer type. Knowledge of particular indication in which PET CT is best utilized is important to appropriately guide clinician to order correct study and can be used by radiologist and clinician appropriately to maximize information for optimal patient care.

O-23

MR imaging of inflammatory bowel disease

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Magnetic resonance imaging has become a reliable and effective technique in evaluating patients with known or suspected inflammatory bowel disease by virtue of its ability to help confirm the diagnosis; localize lesions; assess their severity, extent, and inflammatory activity; and identify extra-intestinal complications that may require surgical intervention. MR enterography is an emerging diagnostic tool that combines the advantages of conventional MRI and gradient echo steady-state free precession images. This oral presentation will be focused on the MR enterography protocol and technique, MR appearance of inflammatory bowel disease such as mucosal abnormalities, transmural abnormalities, extramural manifestations and complications, and assessment of disease activity.

O-24

Imaging the Acute Abdomen

Babar Khan
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O-25

Prevalence of different portal vein variants using MIP reconstruction on MDCT at a tertiary care hospital

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BACKGROUND: Portal vein (PV) is the main solitary blood vessel transporting blood from the gastrointestinal tract and spleen to the liver, accountable for 75% of hepatic blood supply. Normally, the portal vein divides into two terminal branches: the right portal vein (RPV) and left portal vein (LPV) at the level of porta hepatis. Studies suggest that this classical anatomy is observed in only about 65 to 70% of individuals and disparity in PV anatomy is encountered in notable number of subjects. With the growing utilization of interventional radiological techniques like portal vein embolization, trans-jugular intrahepatic portosystemic shunting alongside liver transplantation and liver resections, the accurate knowledge of PV branching anatomy is extremely critical for surgeons and interventionists to avoid undesirable complications.

OBJECTIVES: The purpose of this study is to determine the frequency of different portal vein variants using MIP reconstruction on MDCT at a tertiary care hospital.

SETTING: Department of Radiology, Dr. Ziauddin Hospital, Karachi.

DURATION: 06 months from 1st May 2018- 31st October 2018.

STUDY DESIGN: Cross sectional study.

SUBJECTS AND METHODS: A total of 247 patients undergoing abdominal CT scan at our department were analysed using MIP reconstruction images for portal vein anatomical variants, after excluding those who had some concomitant hepatobiliary pathology, large central hepatic tumor and history of previous abdominal surgery.

RESULTS: Normal anatomy (Type I) was seen in 218 patients (88%) out of 247 patients in our study. Trifurcation (Type II) anomaly was seen in 25 (10%) of cases. Right posterior vein as first branch of main PV (Type III) anomaly was seen in 2 (1%) of cases. Other types of variations were observed in 2 patients (1%).

CONCLUSION: It is extremely vital to have sound knowledge and ensure adequate reporting of variations in branching anatomy of portal vein in especially in patients undergoing liver transplantation, segmental liver resection and other procedures like portal vein embolization, TIPSS etc in order to avoid intraoperative injuries and postoperative complications.

O-26

Impact of CT-fact on negative appendectomy rates: Prospective evaluation from a tertiary care hospital

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INTRODUCTION: Appendicitis is one of the most common surgical abdominal condition and appendectomy is one of the commonest emergency procedures performed globally. It is the most common cause of acute abdomen in all age groups where 10% of general population develops acute appendicitis with highest incidence in second and third decades of life. Where delayed diagnosis of acute appendicitis and treatment has adverse outcomes, like perforation which lead to death, there are also high rates of negative appendectomies (NA), that is appendectomies in patients with false diagnosis of appendicitis. Negative appendectomies rate of over 20% were considered normal previously, however, this has changed during the past few decades. The use of preoperative CT scan in diagnosis of acute appendicitis can significantly reduce the burden of such complications as well as the burden on health-care. This study aims to determine the decrease in the rate of negative appendectomies attributed to the use of preoperative CT scan in patients suspected of acute appendicitis.

OBJECTIVES: To determine and compare the frequency of negative appendectomy in cases of acute appendicitis with and without pre-operative computed tomography.

STUDY DESIGN: Experimental study (Clinical trial)

STUDY SETTING: Emergency Department, Departments of Radiology and Surgery, Ziauddin University Hospital, Karachi.

DURATION OF STUDY: Six months duration. (From July, 2016 to February, 2017)

SUBJECT AND METHODS: A total of 116 patients, presenting to the emergency department, Ziauddin University Hospital, Karachi, with acute abdominal pain were assessed using Alvarado scoring system(4) for the clinical diagnosis of acute appendicitis by primary attending surgeon. All patients fulfilling the inclusion criteria and diagnosed as acute appendicitis on clinical grounds through Alvarado score of 7 or more, were offered pre-operative CT scan and informed consent was sought. Those patients who were agree and gave consent for pre-operative CT scan were placed in group A while those who did not give consent for pre-operative CT scan were placed in group B. Patients in group A were subjected to computed tomography (CT scan) for the radiological diagnosis of acute appendicitis based on operational definitions, before going for appendectomy, whereas group B patients was proceed to appendectomy directly. After performing appendectomy, the resected sample was then sent for histopathological examination to the same laboratory and examination conducted by an experienced pathologist. Data was entered on a predesigned proforma.

RESULTS: The negative appendectomy rate was 6.9% in 4 patients with pre appendectomy CT and 19% in 11 patients without pre appendectomy CT (P-value 0.04).

CONCLUSION: The results show that CT in patients with suspected appendicitis leads to lower negative appendectomy rates. Therefore, we propose that preoperative imaging should be considered a part of the routine evaluation of women suspected of having acute appendicitis.

SCIENTIFIC SESSION : Thoracic Imaging

O-27

Cardiac magnetic resonance imaging: My experience and overview of CMR indications, basic techniques and role in assessment of cardiac pathologies.

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Cardiovascular disease, including coronary artery disease, hypertension, stroke, congenital cardiac defects, heart failure, and peripheral vascular disease, is one of the leading cause of morbidity and mortality in the world. Imaging remains an integral component of the diagnostic process and evaluation of cardiovascular disease. Different modalities have been traditionally used routinely to image the heart and vasculature including echocardiography, nuclear imaging, cineangiography, and computed tomography (CT).

Current advances in MR imaging technology have allowed for new and wide range of cardiovascular applications. Although currently under-utilized, cardiovascular MR imaging growth is expected to be explosive, enabling a comprehensive MR examination to answer a wide variety of clinical questions. Role of Cardiac Magnetic resonance (CMR) imaging has increased as an emergent tool for cardiovascular imaging showing many advantages over other radiologic modalities. These advantages include noninvasive nature of study and its ability to offer greater detail of soft tissues as compared to echocardiography, nuclear imaging and CT scanning. It can provide unique information with regard to scarring, viability and masses. Lack of ionizing radiation is an additional advantage, particularly in young patients and in those requiring multiple scans to follow their condition. CMR is an advanced form of magnetic resonance imaging utilizing electrocardiogram gating to avoid cardiac motion blurring.

Common indications for cardiac MRI studies include assessment of anatomy and function of the heart structures, detection of ischaemia and infarction, assessment of myocardial perfusion, congenital disease of the heart or a great

vessel, tumor of the heart, evaluation of infiltrative diseases (such as sarcoidosis, amyloidosis and hemochromatosis), exclusion of anomalous coronary origins, assessment of ventricular function and assessment of diseases of the pericardium. In this presentation, I shall discuss role of MR imaging in assessment of cardiovascular diseases. I will share my personal experience of CMR at our imaging center (Islamabad Diagnostic Center, Islamabad). Different indications for cardiac MR imaging will be presented by sharing cases applying special emphasis on impact of CMR on patient management. MR imaging techniques for assessment of the heart and vasculature will be described.

O-28

Many faces of tuberculosis

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Tuberculosis (TB) is one of the biggest health issues in the region. In Pakistan around 430,000 people contract TB with about 70,000 deaths attributed to TB, every year. Pakistan ranks fifth globally among the 22 high TB burden countries, contributes an estimated 43 percent of the disease in Eastern Mediterranean region and has fourth highest prevalence of multidrug resistant TB globally. TB can involve any organ of the body e.g. respiratory, cardiac, central nervous, musculoskeletal, gastrointestinal and genitourinary systems. Timely diagnosis of the disease is paramount, since delayed treatment leads to severe morbidity. Improvements in TB management can be made by raising the index of suspicion, having better knowledge of specific patterns of disease and extensive screening studies. Clinical features may vary especially in immunocompromised individuals, history of exposure may not be present and negative tuberculin skin test does not in itself exclude TB. Therefore radiological diagnostic workup is necessary for diagnosis. TB can present with variety of radiological findings. In complicated TB, owing to delayed diagnosis, clinical and radiologic features of TB may mimic malignancy. Although in many cases biopsy or culture specimens are required to make definitive diagnosis, it is imperative that radiologists understand the typical distribution patterns and imaging manifestations of TB in various organ systems with its complications. The goal of this talk would be to delineate the classical radiological findings of TB on different imaging modalities and to define a novel checklist to confirm TB presenting with different faces on imaging especially in complicated TB.

O-29

Neonatal Respiratory Distress

Abid Qureishi

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O-30

Characterization and localisation of mediastinal masses, basic approach

Shaista Shoukat

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OBJECTIVES:

-Basic radiological anatomy.

-How mediastinum is divided?

Mediastinal reflections; key of interpretation.

Anterior junction line.

Right paratracheal stripe

Azygosophageal recess

Posterior junction line

Paraspinal lines.

- Radiological signs for localization of abnormality.

Hilum overlay sign

Cervicothoracic sign

-How to approach mediastinal masses on plain X RAY with CT and MRI Correlation.

-Pitfalls.

CONCLUSION: Mediastinal reflections can be recognised at plain radiography, and their presence or alteration is the key to the interpretation of mediastinal abnormalities. Anterior mediastinal masses can be diagnosed when both the hilum overlay sign and normal visualisation of the posterior mediastinal lines are present. Widening of the right paratracheal stripe helps localizing the mass in the middle mediastinum. Distortion of the azygosophageal recess can be due to disease located in either the middle or posterior mediastinum. Paravertebral masses distort the parasagittal lines.

Although the divisions of the mediastinum are not absolute, attempting to more accurately localize an abnormality with reference to the local anatomy of the mediastinal reflections may assist to narrow the differential diagnosis and help determine appropriate further imaging.

Papers in Reserve

O-31

Prevalence and Risk factors of LBP among Radiology Technologists in Radiology Diagnostic Centers of Karachi

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INTRODUCTION: Low back pain is a common health problem in the workplace and most workers are expected to experience symptoms of low back pain during their working life. Computers and computer workstations have become increasingly common in both workplaces and private residences over the past 20 years. The risk factors for NP or LBP are commonly multidimensional, including muscular, skeletal and nervous system-related factors.

OBJECTIVE: To determine the Frequency of Lower back pain and Risk factors among Radiology Technologists in Radiology Diagnostic Centers of Karachi.

Methodology: Demographic information and Survey Questionnaire form was collected by self-report, Questionnaire form included with Work Station, age, sex, education, marital status, working hours, low back pain, Awareness of Spine Care, and Physical Exercise for identify significant risk factors of Low Back Pain.

RESULT: Total Samples 83, Male 68 (81%) females 15 (18%) Out of total figure 48 (57%) Participants reported Low back pain and 35 (42%) have no pain. 17 (35%) acute LBP and 31 (64%) Chronic LBP. Out of total duty hours 75% stay seated at console (Computer) are 43 (51%) 50% stay seated at console are 20 (24%) and 25% are 18 (21%) Workers are divided in two groups and one is Radiation area workers (X-Ray, CT scan and Fluoroscopy Technicians) and 2nd group is Non-Radiation workers (Ultrasound and MRI technicians), Majority Low back pain 43 (89%) is reported in Radiation area group. Non-Radiation group 5 (10%). 17 (20%) are not save from Radiation and 66 (79%) are save from Radiation. Cause of Low back Pain is that 82 (98%) are cannot do Physical Exercise.

CONCLUSION: This study investigated the working in Radiation area (X-Ray, CT scan and Fluoroscopy Technicians) is risk factor for Low back Pain, the shortage of Radiation facilities for workers can increase the dangers that they face on a daily basis. Namely, exposure to radiations many workers have stated that there is a lack of facilities/equipment. The level of exposure for all workers and it is also dangerous for Female workers. It has been noted that low back pain is prevalent among those who continue to stay seated at Console (computer).

O-32

Sonographic evaluation of cystic intracranial abnormalities in infancy as primary imaging modality

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INTRODUCTION: Neonatal cranial ultrasound continues to be the popular and excellent primary imaging modality of first choice because of safety, low

cost, accessibility and portability of examination without much disturbing the infants in intensive care Nursery section. Neurosonography is classically performed through the anterior and posterior fontanelle which provides excellent acoustic windows for the brain examination in the diagnostic evaluation of various cystic intracranial abnormalities in the infants that occur prior to their closure. The cystic intracranial abnormalities are well documented in infants with its characteristics radiological features, as the embryology of the brain is very complex and its abnormal development is not uncommon. The factors causing the faulty development may be either genetic or environmental in nature.

OBJECTIVE: To assess the Sonographic accuracy in the diagnostic evaluation of cystic intracranial abnormalities in infancy by comparing with Computed Tomography as primary imaging modality.

STUDY DESIGN: It was Cross sectional study on prospective data.

DURATION OF STUDY AND SETTING: The study was conducted from February 2007 to December 2007 at Neonatology unit pediatrics & Diagnostic Radiology Department, Mayo Hospital Lahore.

RESULT: In this prospective study all neonates were less than 18 months of age including 70 cases full term and 30 cases premature infants of both sexes fulfilling the inclusion criteria with clinical suspicion of cystic intracranial abnormalities underwent for Neurosonography which included 40% male and 60 % were female among which 70% full term and 30% were premature. In total study sample of 100 patients 52 case were normal and in 48 cases cystic lesions were detected. The most common cystic lesions were Ventriculomegaly followed by subdural effusion. The true negative cases were 46 and false negative cases were 6. The overall sensitivity was 86.3 %, specificity and diagnostic accuracy 92 %, PPV 88 % and negative predictive value was 88.8%. However in certain cases the CT scan of brain in infants may become complementary and mandatory for confirmation of the diagnosis. Predischarge follow up monitoring of ultrasound scan should be performed to every infant for detection of any late onset significant complications.

CONCLUSION: Real time high resolution Cranial Ultrasonography is the best primary neuroimaging technique in neonates, because of safety, low cost, accessibility and portability of examination especially in newborns for the prompt bedside diagnosis. It has certain limitations including operator's skill, acoustic window for ultrasonographic brain scan and equipment specifications. However in certain cases the CT scan of brain in infants may become complementary and mandatory for confirmation of the diagnosis.

Predischarge follow up monitoring of ultrasound scan should be performed to every infant for detection of any late onset significant complications while other neonatal intracranial cystic abnormalities can be distinguished from normal dilated ventricular structures including porencephaly as well as hydrocephalus with underlying etiologic factors such as arachnoid cyst or Dandy-Walker syndrome. The cystic intracranial abnormalities are well documented in infants with its characteristics radiological features.

O-33

Efficacy & Accuracy of Focused Assessment Sonography for Trauma (FAST) in Management of Isolated gastrointestinal Injury due to Blunt Abdominal Trauma

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OBJECTIVE: To determine the diagnostic accuracy of focused assessment Sonography for trauma (FAST) in patients having isolated gastrointestinal injury due to blunt abdominal trauma.

STUDY DESIGN SETTINGS AND DURATION: Prospective, interventional study was done in department of general surgery & diagnostic radiology, shaheed mohtarma Benazir Bhutto medical university, Larkana from July 2012 to June 2014.

MATERIALS AND METHODS: All patients who came with blunt abdominal trauma underwent emergency ultrasound with FAST technique to detect free / collection in abdominal cavity as an indicator of intra-abdominal organ injury. After ultrasound examination, most patients underwent surgical laparotomy to identify the gut and solid organ injury and were managed accordingly. The surgical findings were compared with ultrasound findings to see the correlation.

RESULTS: A total of 317 patients with blunt abdominal trauma underwent emergency US with FAST technique. Out of these, 296 (93.37%) underwent exploratory laparotomy. During surgery, 52 (17.56%) patients had evidence of bowel injury with 38 (12.83%) having solid organ injury plus bowel injury and 14 (4.72%) having only bowel injury. Amongst them, FAST ultrasound showed free fluid / collection in 28 (53.8%) patients (true positive) while it was negative in 24 (46.15%) patients (false negative). Among these, 24 patients with negative FAST, 15 (62.5%) had both solid organ injury plus bowel injury and 09 (37.5%) had only bowel injury (False negative).

CONCLUSION: FAST ultrasound missed 46% bowel injury with or without other solid organ injury and is therefore not reliable in diagnostic tool for assessing isolated bowel injury due to blunt abdominal trauma.

O-34

Evaluation of sonographically guided metallic clip placement for tumor localization in patients of early breast cancer undergoing neoadjuvant chemotherapy

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OBJETIVE: To determine the outcome of sonographically guided metallic clip placement for tumor localization in patients of early breast cancer undergoing neo adjuvant chemotherapy.

MATERIALS AND METHODS: 32 biopsy proven breast cancers in 30 patients were included in the study from May 2016 to December 2017. Under sonographic guidance metallic clips were placed as markers within the lesions before their scheduled preoperative neo adjuvant chemotherapy. The procedure was performed using an 18 gauge LP needle and 25 gauge needle by a locally devised simple and cost effective technique. Post procedure mammography was performed to confirm the location of clips within the lesions and to evaluate its role in imaging assessment of treatment response after neo adjuvant chemotherapy.

RESULTS: Following neo adjuvant chemotherapy breast conserving surgery was performed on 29 out of 32 lesions. Negative margins were achieved in all these cases facilitated by tumor bed localization by means of metallic clips visualized on preoperative mammograms. MRM was performed for three non-responding lesions. No complication was noted in association with metallic clip placement like clip migration or hemorrhage. Metallic clips were easily visualized on mammograms and did not interfere with treatment response.

CONCLUSION: Sonographically guided metallic clip placement by this simple locally devised technique before neo adjuvant chemotherapy is a well-tolerated, safe and cost effective method for accurate pre-operative localization of tumor bed and to assess response to therapy.

O-35

Cyberknife robotic radiosurgery an emerging treatment approach for organ confined prostate cancer

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PURPOSE: Hypofractionated radiotherapy has an intrinsically different normal tissue and tumor radiobiology. The results of single institutions of stereotactic

body radiotherapy (SBRT) for prostate cancer with toxicity and tumor control rates are presented, along with data of patients treated at our center in past six years.

METHODS AND MATERIALS: Almost one thousand patients are treated in six different institutes with clinically localized low, intermediate & high-risk prostate cancer. Cyberknife delivers highly accurate high dose of radiation to irregular shaped tumors by non isocentric, non coplanar beams. Highly compact, lightweight 6MV linear accelerator mounted on KUKA robot which gives 6 degrees of freedom enabling the linear accelerator to aim the target from more than 1300 different angles & real time image guidance system which is based on cruise missile technology that continuously tracks moving target during entire treatment. Treatment consisted of 36.25 Gy in majority of patients in 5 fractions. Minimally invasive Gold markers or fiducials are inserted in prostate for tumor tracking. Hormone therapy was given to only high risk group. Patient self-reported bladder, rectal & sexual potency toxicities.

RESULTS: PSA relapse free survival along with toxicities involving bladder, rectum & sexual potency are presented, PSA relapse free survival was 95% for low risk, 84% for intermediate risk and 81% for high risk groups. There are very low grade 3 & 4 toxicities observed with Cyberknife treatment.

CONCLUSION: PSA relapse-free survival compares favorably with other definitive treatments. Significant bladder and rectal toxicities from SBRT for prostate cancer are infrequent. The current evidence supports consideration of stereotactic body radiotherapy among the therapeutic options for localized prostate cancer.

O-36

Added Value of Curved Multiplanar Reformations over Multiplanar reformations and axial images in detecting zone of transition in patients of bowel obstruction from Isotropic Voxels with 16-MDCT

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O-37

Age-related prevalence of degenerative rotator cuff tears

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OBJECTIVE: To determine age-related prevalence of degenerative rotator cuff tears.

METHODS: It is a retrospective cross-sectional study conducted in Department of Radiology, Jinnah Postgraduate medical center, Karachi for a duration of 6 months i.e. from 1st May 2018 to 31st October 2018. A total of 27 patients aged between 30 to 60 years without history of trauma undergone MR examination of shoulder were included. Various rotator cuff tear, labral and ligamentous injuries were detected and the review was done by a consultant radiologist with more than 5 years of experience in MRI reporting. The scans were performed on Toshiba 1.5 T Vantage Elan.

RESULT: Overall, we found evidence of a rotator cuff tear in 51.8 % (n=14) of patients. Out of these 63 % (n=17) of the patients were male and 37% (n=10) were female. Most commonly involved muscles was supraspinatus muscle evident on 48 % (n=13) of cases. The common etiology being the acromioclavicular arthritis seen in 55.5 % of cases. Statistical analyses were performed with SPSS Statistics with a significant p value.

CONCLUSION: The advent of MR has made early recognition of rotator cuff tear possible. It is an excellent noninvasive modality without any radiation exposure and give the valuable information to a clinician.

POSTER PRESENTATIONS (P)

P-1

A rare case series of angio-osteo-hypertrophic syndrome of extremities (Klippel-trenaunay syndrome)

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A sporadic (nonhereditary) rare mesodermal abnormality with a rare incidence of 3-5/1,00,000 that usually affects a single lower limb characterized by a triad of: (1) port-wine nevus (2) gigantism (3) varicose veins on lateral aspect of affected limb. Symptoms vary according to the severity of the dominant vascular component and its location.

We have reported four cases of Klippel-Trenaunay Syndrome in our institute which is a rare entity that were difficult to diagnosis. Two patients came with long history and two with short history.

MR imaging depicts deep extension of low-flow vascular malformations into muscular compartments and their relationship to adjacent organs as well as bone or soft-tissue hypertrophy. T2-weighted MR images may show malformed venous and lymphatic lesions as areas of high signal intensity. The marginal vein of Servelle is a pathognomonic finding (a subcutaneous vein found in the lateral calf and thigh) which was also identified on MRI. Concomitant ultrasound showed varicosities in affected lower limb in two patients while in two other patients it cannot be excluded.

MRI is very useful to evaluate vascular malformations in soft tissues without ionizing radiation. Abnormalities can be identified prenatally. Prenatal ultrasound can demonstrate peripheral and visceral vascular anomalies and its associations. Treatment of a capillary malformation is usually most successful using laser therapy.

Imaging therefore plays an important role in the diagnosis, treatment and in avoidance of complications.

P-2

A rare case of acrocallosal syndrome – A case report

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The Acrocallosal syndrome is a true multiple congenital anomaly/mental retardation autosomal recessive syndrome, whose pleiotropic effects mainly involve the central nervous system/facial midline structures and skeleton. There is no reported sex predilection.

A 22 years old male presented with low IQ and fits was advised MRI brain with Gadolinium by his primary neurophysician. MRI brain with contrast revealed corpus callosum agenesis, heterotopia, polymicrogyria, choroid plexus cyst. Extra axial solid cum cystic lesion in right parasagittal region was seen. Solid component showing heterogeneous enhancement may represent interhemispheric cyst with choroid plexus in it or a neural crest. X Ray foot and hand showed polydactyly in his big toe and syndactyly of his little and ring finger.

CONCLUSION: ACS is very rare anomaly and so far very few cases are reported. Imaging plays an important role in the diagnosis of corpus callosum agenesis which is distinguishing feature of ACS. Imaging also helps in diagnosis of other features of ACS like arachnoid cyst of brain and polydactyly. The condition requires supportive management, with surgical correction of associated malformations like cleft palate, polydactyly, brain cyst/tumors and congenital cardiac defects. Genetic counselling is most important.

P-3

Azygous anterior cerebral artery causing bifrontal infarcts : A case report

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The azygous anterior cerebral artery (AACA) is a rare variant, characterized

by the absence of the anterior communicating artery and the union of two proximal segments of the anterior cerebral artery (ACA), forming a single trunk and ascending through the interhemispheric fissure. The incidence in the population varies from 0.3 to 2%. The presence of occlusion for this vessel causes bifrontal infarcts, with potentially devastating functional consequences, hence the recognition of this anatomical variation is of prime importance. Cerebrovascular infarction is common condition, however simultaneous symmetrical bilateral infarction secondary to arterial occlusion is a rare entity. We report a case of 50 year male with thromboembolic event in azygous anterior cerebral artery resulting in bifrontal cerebral infarcts with associated hypoplasia of right cerebral artery. The circle of Willis consists of three paired vascular divisions: anterior, middle and posterior. The paired anterior cerebral arteries arise from the internal carotid arteries, connected by the anterior communicating artery to complete the anterior portion of the circle. These arteries then supply the medial surface of each cerebral hemisphere. Comparatively, animals with a less developed prefrontal cortex, shows absent anterior communicating artery, however in humans the incidence of unpaired ACA is rare with an incidence between 0.1-1.1% .

P-4

Bony manifestations of the langerhans cell histiocytosis: A pictorial review

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INTRODUCTION: Langerhans cell histiocytosis (LCH) describes a group of syndromes that share the common pathologic feature of infiltration of involved tissues by Langerhans cells. Bony manifestations of Langerhans cell histiocytosis (LCH) are underestimated in frequency and diversity. Osseous involvement is typically in the flat bones, with lesions of the skull, pelvis, and ribs accounting for more than half of all lesions. About 30% of lesions are seen in long bones.

OBJECTIVE: The purpose of this study was to review the radiologic bony manifestations of patients diagnosed with Langerhans cell histiocytosis (LCH). This study will also compare the frequency of the various manifestations found in our patients with those reported in the medical literature.

CONCLUSION: In LCH, involvement of the calvaria, skull base, maxillofacial bones and ribs is fairly common. Sixty percent of our patients had a solitary bone abnormality, and 40% of the patients had multiple lesions. By far, the most common bone involved in the series was the skull, affecting 54 percent of the total patients. Thus this data is comparable to that reported in the literature.

P-5

Clinical audit of Radiology department communication system for critical, urgent, and unexpected significant findings

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AIMS AND OBJECTIVE: To analyze the existing system for communication of critical unexpected radiological findings in a tertiary care hospital according to the hospital policy and JCIA guidelines.

To create awareness of guidance on radiology results communication and of compliance with this guidance throughout the hospital.

MATERIALS AND METHODS: In our department, regular quarterly audits are done on critical results communication and we are presenting data from January 2017 to June 2018. Data of all the patients, whom critical alerts were generated within one hour of scan acquisition, were gathered from HIS, the parameters analyzed included findings, name, and employee code of the clinician and read back confirmation. Later, a template for the generation of critical alerts was introduced and doctors were also educated about communicating urgent findings on time.

RESULTS: In the first quarter the results of the critical findings were 88% which peaked to 92% by the end of 2017. Later in 2018 with the introduction of the template and regular education of doctors, the results soared up to 100% and have recently plateaued at 96%.

CONCLUSION: Responsibility of the urgent communication of critical results rests with the radiologists and record of communication should be made in the report as well. There should be a clear policy as to what constitutes critical, urgent and unexpected radiological findings. There should be regular audits and education of the doctors with implementation of set protocols to achieve high performance and compliance with the hospital policies.

P-6

Co-relation and comparison of prostate specific antigen with metastatic bone disease in prostate cancer on ^{99m}Tc-MDP bone scan and Gallium 68 PSMA PET/CT.

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OBJECTIVE: To evaluate the ability of serum concentration of prostate specific antigen with the most appropriate PSA cutoff value considering it as a predictor of metastasis with the comparison of ^{99m}Tc-MDP & Ga-68 PSMA PET/CT scan. Settings: Study is conducted at Department of Molecular Imaging PET/CT, Sindh institute of urology and transplantation SIUT.

MATERIAL AND METHOD: From November 2017 to October 2018, 79 consecutive patients with prostate cancer who underwent technetium-99m methylene diphosphonate (Tc-99mMDP) whole body bone scintigraphy and Gallium 68 PSMA PET/CT scan were retrospectively analyzed. The information was collected from the scintigraphic database at a Nuclear medicine and PET/CT Molecular Imaging department Sindh institute of urology and transplantation Karachi Pakistan. Patients who did not have a serum PSA concentration available within 1 month before or after the time of performing the Tc-99m MDP bone scan and PET/CT PSMA scan were excluded from this study. In addition, all patients necessarily have a pathological report available. Bony metastases were determined from the bone scan and Gallium 68 PSMA PET/CT studies and no further correlation with histopathology or other imaging modalities were performed. To preserve patient confidentiality, direct patient identifiers were not collected.

In all the patients, PSA values and skeletal scintigraphy were evaluated.

RESULTS: The mean age, mean PSA, and incidence of bone metastasis of Gallium 68 PSMA & Bone scan were 65years, 37.58ng/ml and 36/79 (45.56%) & 22 (28%) respectively. According to PSA levels, patients were divided into 5 groups, of the 22 positive bone scan and 36 positive Gallium 68 PSMA scans, 9 (41%) BS and 5 (14%) PSMA had serum PSA level (<2.5 ng/ml), 16 BS (73%) and 23(64%) PSMA had a PSA level (>2.5 ng/ml), 7 (32%) BS and 15 (42%) PSMA had a PSA level (<5ng/ml), 13 (59%) BS and 21 (58%) PSMA had a serum PSA level (>5ng/ml), 10 (45%) BS and 16 (45%) PSMA had a serum PSA (<10ng/ml), 12 (54%) BS and 31(86%) PSMA had a serum PSA level (>10ng/ml), 10 (45%) BS and 15 (42%) PSMA had a serum PSA level (<15ng/ml), 12 (54%) BS and 16 (44%) PSMA had a serum PSA level (>15ng/ml), 11 (50%) BS and 17 (47.22%) PSMA had a serum PSA level (<20ng/ml). 9(41%) BS and 14 (39%) PSMA had a serum PSA level (>20ng/ml). Of the 57 negative bone scan and 43 negative Gallium 68 PSMA scans, 13 (23%) BS and 17 (40%) PSMA had serum PSA level (<2.5ng/ml), 41 (%) BS and 34(79%) PSMA had a serum PSA level (>2.5ng/ml), 21(37%) BS and 13 (30%) PSMA had a serum PSA level (<5ng/ml), 38 (67%) BS and 30(70%) PSMA had a serum PSA level (>5ng/ml), 25(44%) BS and 25(58%) PSMA had a serum PSA level (<10ng/ml), 22(39%) BS and 22(51%) PSMA had a serum PSA level (>10ng/ml), 36(63%) BS and 31 (72%) PSMA had a serum PSA level (<15ng/ml), 21 (37%) BS and 17 (39%) PSMA had a serum PSA level (>15ng/ml), 39 (68%) BS and 33 (77%) PSMA had a serum PSA level (<20ng/ml), 20 (35%) BS and 15 (35 %) PSMA had a serum PSA level

(>20ng/ml) 7 (32%) bone scan and 15(42%) Ga-68 PSMA presented bone metastasis with PSA <5 ng/ml.

CONCLUSION: The results of present study allow us to conclude that The Gallium 68 PSMA PET/CT Scan is more sensitive in detection of bony metastasis in comparison with Conventional Bone scintigraphy a serum concentration of PSA higher than 5ng/ml was a more accurate cutting point to predict metastases from PSA cutoff 2.5,10,15 and 20 ng/ml. In this way, unnecessary costs can be avoided, since a considerable part of prostate adenocarcinomas present positive Gallium 68 PSMA PET/CT scan at normal PSA serum levels (<5ng/ml), and for these cases bone scintigraphy could be unnecessary.

P-7

CT Density measurement correlation with haematocrit values and its usefulness in diagnosis of acute cerebral venous sinus thrombosis in unenhanced brain CT examinations

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BACKGROUND: Brain CT is the first line of investigation in suspected stroke patients and is widely used for initial evaluation of cerebral venous sinus thrombosis. Haemoconcentration is thought to increase the CT density of blood in unenhanced examination. The purpose of this study was to assess the value of attenuation measurement on unenhanced brain CT scans in the diagnosis of acute cerebral venous sinus thrombosis and its correlation with haematocrit.

OBJECTIVES:

1. To find out correlation between CT densities (Hounsfield units) on unenhanced brain CT scans with haematocrit.
2. To evaluate the usefulness of CT Density measurement in diagnosis of acute cerebral venous sinus thrombosis.

MATERIALS AND METHODS: The first 1000 CT head examinations performed in year 2018 from emergency room (ER) of Aga Khan University Hospital were included in the study, who also had same day haematocrit done. Data was collected from hospital PACS (Picture archiving and communication system). The CT densities from the superior sagittal sinus and its correlations with haematocrit were calculated. SPSS was used for data analysis purpose.

RESULTS: The mean age of our study population was 47.8 ± 14.9 years. The mean CT density value, haematocrit value and haemoglobin values were 47.52 ± 5.24, 40.52 ± 6.82 and 13.32 ± 2.49 respectively. A significant difference in the average sinus attenuation was found between patients with cerebral venous sinus thrombosis and normal patients. A positive correlation was found between the CT density (Hounsfield unit) value and haematocrit in our study.

CONCLUSION: CT density measurement of Dural venous sinuses correlates with haematocrit value and a high density is suggestive of cerebral venous sinus thrombosis, which should warrant further investigation.

P-8

Disparity between ¹⁸F-FDG PET/CT and ^{99m}Tc MDP bone scan in detecting skeletal metastases

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BACKGROUND: Skeletal metastases are most common malignant bone tumors. Bone scintigraphy is the gold standard for diagnosing bone metastases.

PET/CT being hybrid imaging, accurately detects/excludes metastases by virtue of increased glucose metabolism within the neoplastic cells.

PURPOSE: To compare ^{18}F -FDG-PET/CT and $^{99\text{m}}\text{Tc}$ MDP bone scintigraphy for detection of skeletal metastases in cancer patients.

MATERIAL AND METHODS: This was a retrospective study carried out at the Department of Radiology of Jinnah Postgraduate Medical Centre, Karachi. One hundred and two consecutive histologically proven cancer patients in whom both bone scintigraphy and PET/CT were performed were included in the study. A radiologist and a nuclear medicine physician assessed the exams for bone metastases. Concordant readings between bone scintigraphy and PET/CT were taken as true. Discordant readings were verified with additional MRI imaging and follow-up studies in all patients.

RESULTS: A total of 207 lesions were detected on bone scintigraphy, PET/CT or both. According to the reference standard, 115/207 lesions (55%) were bone metastases, 81/207 (39%) lesions were benign, and eleven lesions (5%) remained unclear. The sensitivity of bone scintigraphy was 75% (87/115) compared to 96% (108/115) for PET/CT. The specificity of bone scintigraphy and FDG-PET/CT was 96% (78/81) and 96% (78/81), respectively. PET/CT was superior to bone scintigraphy in the detection of osteolytic lesions (92% vs. 73%), but inferior in the detection of osteoblastic lesions (74% vs. 95%).

CONCLUSION: On a lesion-basis PET/CT is more sensitive and equally specific for the detection of bone metastases compared with bone scintigraphy. Overall, PET/CT tends to be superior to bone scintigraphy in the detection of osteolytic lesions, but inferior in the detection of osteoblastic lesions.

P-9

Efficiency of bilateral inferior petrosal sinus sampling in differentiating cushing disease from ectopic cushing syndrome

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INTRODUCTION: ACTH dependent cushing syndrome is further divided into cushing disease and ectopic cushing syndrome. Bilateral inferior petrosal sinus sampling (BIPSS) is a reliable tool in differentiating these two entities specially in cases where MRI findings are equivocal.

OBJECTIVES: The primary objective of this study was to determine the efficiency of BIPSS in differentiating cushing disease from ectopic cushing syndrome.

MATERIALS AND METHODS: This is a retrospective study which includes all patients who underwent BIPSS at department of radiology AKUH with clinical diagnosis of ACTH dependent cushing syndrome. Histopathology correlation is considered gold standard.

RESULTS: In total 23 patients underwent bilateral inferior petrosal sinus sampling from 2006-2017, out of these 13 patients were diagnosed as having ectopic cushing syndrome while 10 patients were diagnosed as having cushing disease. Histopathology findings were concordant with the bilateral inferior petrosal sinus sampling results in all cases.

CONCLUSION: In our study sensitivity of bilateral inferior petrosal sinus sampling was found to be 100%. Although with advent of dynamic weighted MR imaging with pituitary protocol the utility of BIPSS has declined over time due to the invasive nature of the procedure however it is still a reliable test in cases where MRI findings are equivocal and inconclusive.

P-10

Meckel's cave sign: An effective indicator of perineural spread of head and neck cancers

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INTRODUCTION: Head and neck cancers are disseminated by various mechanisms such as direct extension, through hematogenous or lymphatic routes and by peripheral nerves using them as direct conduit for tumor growth away from the primary site, termed as perineural spread. Perineural spread is a worse prognostic factor for tumors of head and neck, reducing the life expectancy, increased morbidity of patients and increased incidence of disease recurrence. The facial and trigeminal nerves' branches are the most commonly involved. MRI is the modality of choice for detection of perineural spread. It is easily appreciated on the post gadolinium T1 weighted sequences. In this study, we detected perineural spread in Meckel's cave, anatomical site of Gasserian ganglion of trigeminal nerve, by using T2 weighted images. Hyperintense signal intensity is normally observed in the Meckel's caves due to Cerebro Spinal Fluid (CSF). We hypothesized that the normal increased signal in the Meckel's cave on the T2 weighted images will be lost or decreased if there was perineural spread of tumor along the trigeminal nerve, suggesting Meckel's cave sign. It will be useful for the patients with renal failure in which intravenous gadolinium cannot be administered.

OBJECTIVE: To observe the accuracy and specificity of Meckel's cave sign, by observing the loss of normal T2 bright signal in the bilateral Meckel's caves on the MR imaging of the brain, neck or skull base, as a surrogate marker of perineural spread of tumor.

MATERIAL and METHODS: This is a retrospective cross-sectional study in which consecutive 10 patients were selected with known perineural spread (along the trigeminal nerve) of the head and neck tumors from the medical record system of Shaukat Khanum Memorial Hospital and Research Center. Forty (40) patients were selected with normal MRI studies as control. These patients were randomly evaluated by two faculty radiologists, with more than one year experience in neuroradiology, one being fellowship trained in neuroradiology. Both the radiologists were blinded for the final radiological and histopathological diagnosis. They evaluated the signal intensity of the Meckel's cave on the axial and coronal T2 weighted images, and made the impression of the presence or absence of the disease on the basis of signal intensity. Their impressions were tabulated and then calculated for the specificity and sensitivity of Meckel's cave sign for the possible perineural spread of tumor. The statistical analysis was done on SPSS Windows Package Version 12. A 2 x 2 table was used to determine the accuracy, sensitivity, specificity, positive and negative predictive values.

RESULTS: Our results showed that 8 patients (total 10, sensitivity 80%) were correctly identified with perineural spread of tumor by both the radiologists. Similarly, 36 patients (specificity 90%) were correctly identified as normal (total 40 control patients). The positive and negative predictive values were 80% and 90% respectively. The overall accuracy was 87%.

CONCLUSION: We conclude that the perineural spread of tumor in Meckel's cave can be correctly identified on T2 weighted images with an accuracy of 87% and specificity of 90% (Meckel's cave sign).

P-11

Metastatic aneurysms of choriocarcinoma: A rare presentation

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20 year-old female presented with jaundice to radiology department of Rehman Medical institute Peshawar. Her ERCP was attempted at another center, which failed and complicated with intrabiliary hemorrhage. Her following CT scan

performed on 128 slice Toshiba machine at our center showed a large ruptured aneurysm in pancreaticoduodenal region causing obstruction of ampulla. In addition, there were multiple aneurysms in liver and lungs. Large AV malformation was seen in uterus. She had a 6 month old healthy daughter with uneventful pregnancy. On detailed probing of past history, it was revealed that she had an abortion 2 years back. Her recent beta HCG levels were markedly raised (>2000) confirming metastatic choriocarcinoma. This is very rare for choriocarcinoma to present after a succeeding normal pregnancy. The large pancreaticoduodenal aneurysm and aneurysms in lungs and liver were all metastatic. She was treated with embolization for large ruptured aneurysm and was referred to oncology after a detailed discussion in MDT meeting.

P-12

MRI findings in patients with Creutzfeldt-Jakob disease in clinically proven cases

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Creutzfeldt-Jakob disease (CJD) is a uniformly fatal disease which may be induced by proteinaceous infectious particles - prions. It is a spongiform encephalopathy that results in a rapidly progressive dementia and other non-specific neurological features and death usually within a year or less from onset.

The purpose of this study was to find out the spectrum of MRI imaging findings in clinically proven cases of Creutzfeldt-Jakob disease at our hospital. To our knowledge no large study has been conducted regarding imaging features of Creutzfeldt-Jakob disease in Pakistan.

RESULTS: We reviewed 12 of the cases and their MRI brain images that presented to Aga Khan University hospital that later on after extensive clinical and radiological workup proved to have Creutzfeldt-Jakob disease.

The most common finding in our sample was cortical ribbon sign. T2/FLAIR hyperintensities within the basal ganglia and thalamus were next. These lesions showed diffusion restriction on DWI/ADC sequences.

CONCLUSION: Our study confirms the presence in our population of Creutzfeldt - Jakob disease, an uncommon but important cause of dementia. Radiologists should be on a look-out for the above mentioned findings and further workup should be conducted including clinical assessment and EEG in suspected cases. Biopsy examination are needed for histopathological confirmation of CJD.

P-13

Outcome of thyroid FNAC

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OBJECTIVE: To evaluate the efficacy of FNAC in suspected malignant thyroid nodules.

MATERIAL & METHODS: This is a prospective cross sectional descriptive study of 226 patients (186 female and 40 male) conducted at Radiology department of Rehman Medical institute Peshawar. The age of patients range from 15 to 85 years. The duration of study was from September 2015 to September 2018. All included patients had at least one thyroid nodule. FNAC was performed after taking detailed history, thorough examination, relevant investigation and informed consent. Biopsy and surgery was later performed in patients with suspicion of malignancy. The statistical analysis was performed using Microsoft excel.

RESULTS: Most of the patients presented in 4th and 5th decade of life. Out of 226 patients, 6% patients (n=14) were diagnosed with malignancy i.e Bethesda category IV/3f, category V/4 and category VI/5. 80% patients (n=181) were

diagnosed with benign thyroid lesions i.e Bethesda category I & II / 2 whereas 4.4% (n=10) had atypical Bethesda category III / 3a lesion. 4.4% patients (n=10) had inflammatory thyroid nodule and 4.8% patients (n=11) were inconclusive.

CONCLUSION: We conclude from our results that only 6% malignant cases were confirmed with FNAC whereas rest of the large number of patients were benign. This shows poor role of FNAC in diagnosing thyroid malignancy.

P-14

Pictorial review of orbital neoplasms

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Orbital neoplasms include broad range of benign and malignant tumors with wide variety of differentials and diverse etiology. The management is directed to the causative process and anatomic compartment involved. According to literature vasculogenic lesions are the commonest followed by lymphoid, lacrimal gland, optic nerve and meningeal, metastatic, peripheral nerve, and primary melanoma lesions. Although melanoma was the most common primary ocular malignancy in the series, melanoma constituted only 1% of all lesions evaluated. Cross sectional imaging plays a vital role in proposing the possible differentials, describing the extent of the tumor, help correlating the radiological findings with clinical ophthalmic findings and the purpose the possible management plan. This imaging review summarizes the pertinent imaging features of some common and rare orbital tumors and their corresponding imaging based possible differentials. The purpose of this review is to provide an update on the diagnostic imaging of orbital masses and to narrow down the list of possible differentials.

BACKGROUND: Orbital neoplasms in adults and children are characterized on the basis of anatomical site, imaging features and histology. The orbit can be divided into intraconal, conal and extraconal space. The type of tissue involved is highly decisive of the management plan to be followed. However, based on imaging features it is possible to propose the possible differentials which can be further confirmed by histological analysis.

CASE SERIES: Retinoblastoma remains the most common intraocular tumor in the pediatric age group. These are characterized by heterogeneous retinal mass with calcifications and post-contrast enhancement on CT and MRI. Orbital lymphoma, primary or secondary remains the most common orbital neoplasm in older adults (≥60 years of age), in this case the diagnosis was made on the basis of histology. Metastatic tumors of retina are rare including non-calcified orbital masses particularly involving the uveal layer. Orbital meningiomas can be primary or secondary. Primary orbital meningiomas commonly involve the optic nerve while secondary orbital meningiomas include direct extension of primary CNS meningioma into the orbit. Tolosa-Hunt syndrome is an idiopathic inflammatory disease involving the cavernous sinus and orbital apex. In this case diagnosis was made on the basis of clinical presentation and radiological features. Multiple myeloma in the orbit in the setting of systemic disease is unusual. MRI demonstrated multiple bilateral lobulated enhancing masses involving both orbits. Orbital rhabdomyosarcoma constitutes 15% of cases of rhabdomyosarcoma and affects children and young adults. Typical MRI features include T2 high signal with considerable post-contrast enhancement.

P-15

Carotid cavernous sinus fistula

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INTRODUCTION: Carotid cavernous sinus fistulas are abnormal communication between the carotid arterial system and cavernous sinus. Carotidocavernous fistulas may be classified based on etiology (spontaneous

or acquired) and based on anatomy (direct or indirect). Patient with carotid cavernous fistula presented with classical clinical triad of pulsatile exophthalmos, conjunctival chemosis / edema, persistent auscultatory orbital bruit. Barrow classification of carotidocavernous fistulas includes: type A: direct connection between the intracavernous ICA and CS, type B: dural shunt between intracavernous branches of the ICA and CS, type C: dural shunts between meningeal branches of the ECA and CS, type D: B + C

CASE PRESENTATION: A 48 years old female came to our radiology department referred by ophthalmologist with chief complain of chemosis and proptosis. She was advised plain CT orbit. On plain CT there is evidence of dilatation of right superior ophthalmic vein. There is also evidence of anterior displacement of right eye ball. Her complementary B-scan with Doppler ultrasound showed increased and arterialized flow in right superior ophthalmic vein. On MRI tortuous flow voids seen in different sequences. On MRA contrast is seen opacifying carotid arteries and cavernous sinus at same time. Contrast also appreciated in the dilated superior ophthalmic vein.

CONCLUSION: Our case highlights the importance of having high index suspicion for carotid cavernous fistula in patients presenting with chemosis and pulsatile exophthalmos with importance of Diagnostic imaging which includes B-Scan with Doppler, CT Angiography, MR Angiography and interventional radiology in treatment of carotid cavernous fistulas.

P-16

Unusual presentation of choledochal cyst (Type IV choledochal cyst)

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INTRODUCTION: Choledochal cysts are rare congenital biliary tract anomaly characterized by dilatation of extra / intrahepatic bile ducts without involvement of gallbladder / cystic duct. Multiple factors probably leads to development of choledochal cysts, but the majority of cysts are associated with an anomalous junction of common bile duct and pancreatic duct. The abnormal pancreatobiliary junction allows pancreatic enzymes to reflux into the common bile duct which may lead to inflammation and weakening of the walls of the bile duct. Jaundice, RUQ pain and RUQ palpable mass compromise the classical triad of findings seen with a choledochal cyst. Traditionally, Choledochal cysts have been classified under 5 main types by Todani et al. 's modification of alonjo-Lej classification.

CASE PRESENTATION: A 2 year old female child presented to the radiology department with history of persistent jaundice since birth. On Ultrasound dilated intrahepatic biliary channels appreciated with large cystic lesion with low level echoes extending from portahepatis up to pelvis. On CT SCAN Minimal free fluid seen in peritoneal cavity. Intrahepatic biliary ducts are dilated. A large cystic lesion seen extending from the portahepatis up to pelvis. On HIDA SCAN radiotracer seen within the choledochal cyst. No activity seen in bowel up to 24 hrs.

CONCLUSION: Type IV choledochal cyst with atypical presentation. Type IV common in 10% cases. Diagnosis was confirmed surgically.

P-17

Posterior reversible encephalopathy syndrome in the pediatric age group: An experience from a tertiary care hospital in Pakistan

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INTRODUCTION: Posterior reversible encephalopathy syndrome (PRES) is a clinical entity with a distinctive radiological appearance. The features of this

syndrome in pediatric patients remain obscure. This study was conducted to evaluate the radiological and clinical spectrum of PRES in pediatric population and determine its possible causation.

MATERIAL AND METHOD: We performed a retrospective evaluation of the pediatric patients with PRES seen over the last 10 years in Aga Khan University Hospital, Karachi. The radiological findings were independently reviewed by two experienced pediatric radiologists along with the clinical profile, contributory factors, and outcome.

RESULTS: Out of 29 patients, 19 were males and 10 females with a mean age of 9 years. The most common primary disease was hematological malignancy (72 %). Seizures in 82%, headache in 76 %, and altered mentation in 55% were frequent presenting symptoms. The most common contributory factor was uncontrolled hypertension (100%); with mean highest blood pressure of 155/102 mmHg.

Imaging showed involvement of parietooccipital lobes (96 %) and atypical findings were noted in 56% with predominantly frontal lobe involvement. All patients had complete clinical neurological recovery within an average of one week, however, on long-term (>1 year) follow-up 1% of the patients presented with recurrent PRES and seizures. Complete and partial restitution of imaging abnormalities was seen in 85% and 15% of cases, respectively.

CONCLUSION: It is imperative to be familiar with the clinical spectra and radiological findings in children with PRES to avoid misdiagnoses. Our results show that resolution of imaging findings is slower than clinical recovery.

P-18

Preoperative embolization of RCC femoral mets with pathological fracture: Case series

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Metastasis from certain primary cancers to bones are hypervascular. Renal cell carcinoma is notorious for such metastasis besides bronchogenic carcinoma. Such hypervascular metastasis pose a major threat of hemorrhage during surgery for stabilization of osseous metastasis. Preoperative transcatheter arterial embolization minimizes bleeding and facilitates surgery for hypervascular metastatic bone tumors. I present here two cases of Renal cell carcinoma that metastasized to femur causing pathological fractures and were embolized preoperatively. Conclusion: At our institution, embolization of femoral metastasis showed high technical success, however, a study is needed on a larger number of patients for the exact clinical outcome.

P-19

Primary intracranial extra-osseous Ewing's sarcoma

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INTRODUCTION: Ewing's sarcoma (ES) / peripheral primitive neuroectodermal tumor (pPNET) is a malignant small, round cell tumor that is the second most common bone tumor in children. The chromosomal translocation t(11;22)(q24;q12) is pathognomonic for Ewing's sarcoma family of tumors and is present in around 85% of cases.

Common sites of occurrence of extrasosseous Ewing's sarcoma include the soft tissues and bones of the lower extremity, 12 paravertebral, and retroperitoneal regions. Primary intracranial Ewing's sarcoma/pPNET is usually intraparenchymal located 13 when supratentorially, and an extraaxial epidural tumor radiographically mimicking a meningioma is extremely rare.

CASE PRESENTATION: A 20-year old male presented to the emergency department with a 1-day history of drowsiness, headache, and fever. Neurological exam revealed decreased muscle strength (4/5) in the left lower limb. Head computed tomography scan showed an extra-axial space-occupying lesion in the right temporoparietal region, which was suspected to be a meningioma. The patient underwent craniotomy and complete tumor excision. Intraoperatively, the tumor was arising from the dura and extended to the bone, with evidence of bone invasion. Histopathologic examination of the resected tissue showed the presence of bone and fibrocollagenous tissue exhibiting an infiltrating neoplastic lesion arranged in sheets, nests, and rosettes. A diagnosis of small round blue cell tumor was made with the morphological and immunohistochemical features pointing towards Ewing's sarcoma/pPNET. Post-operative recovery was unremarkable.

CONCLUSION: Primary intracranial extraosseous Ewing's sarcoma is a rare condition that may mimic a meningioma on imaging. Physicians must be cognizant of this possibility, particularly in any young individual with a solitary contrast-enhancing dural-based lesion.

P-20

Pulmonary tumor embolism secondary to recurrent chondrosarcoma presenting as dyspnea: A case report

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INTRODUCTION: Acute pulmonary embolism has varied clinical presentations ranging from asymptomatic, incidentally discovered emboli to massive embolism, resulting into sudden death. Tumour embolism is a rare but unique complication of malignancies. This uncommon catastrophe of a malignant tumor in a young patient with chondrosarcoma, is being reported.

CASE PRESENTATION: A 25-year-old girl presented to the oncology department at our hospital with acute onset dyspnoea and fatigue. She had a past history of chondrosarcoma left humerus which was resected one year back. A large recurrent mass was seen with suspicion of distant metastasis. A computed tomographic imaging scan of the chest and abdomen was planned, which showed a large lesion epicentered around proximal humerus representing recurrent mass. Intraluminal filling defects were noted in the right inferior pulmonary vein and few segmental branches of pulmonary arteries representing intravascular tumour embolism. A peripheral wedge shaped hypodense non enhancing areas of consolidation were noted in both upper and right lower lobes. Few soft tissue nodular areas also seen in both lobes suspicious of pulmonary metastasis. Based on these imaging findings diagnosis of pulmonary tumour embolism with metastatic consolidation was made. The patient was referred back to the oncology team for further work up and management.

CONCLUSION: Pulmonary intravascular tumour embolism is often difficult to diagnose at imaging. It is often mistaken for venous thromboembolism. Chondrosarcomas are the third most common malignancy which often metastasize to the lung parenchyma. Intravascular pulmonary tumour has rarely been reported in chondrosarcoma.

Tumour embolism is a rare but deadly cause of pulmonary embolism in sarcoma therefore a high index of suspicion is necessary in individuals who present with respiratory-related symptoms, especially dyspnoea. Diagnostic confirmation with a computed tomography scan of the chest and echocardiogram should be immediate. Unlike venous thromboembolism, pulmonary embolectomy is the preferred therapeutic approach.

P-21

MRI mimickers of retinoblastoma and their frequency taking histopathology as gold standard

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BACKGROUND: Retinoblastoma is the commonest malignant intra ocular paediatric tumor. Many congenital / acquired, benign / malignant ocular pathologies mimic retinoblastoma both clinically and radiologically resulting in a diagnostic dilemma. Although MRI helps in characterizing and differentiating orbital lesions simulating retinoblastoma the final diagnosis can only be made through histopathology, unfortunately after enucleation. In this study we assessed retinoblastoma and its mimickers on MRI, taking histopathology as gold standard. The types and frequency of these conditions were also determined.

METHODS: This retrospective study was done at Fauji Foundation Hospital, Rawalpindi from January 2015 to August 2018. Patients with high clinical suspicion of retinoblastoma referred from paediatric ophthalmologist were randomly selected. MRI was performed under general anesthesia. Patients with high suspicion of retinoblastoma had enucleation while rest were put on ultrasound / MR surveillance. Thereafter, histopathological findings were studied.

RESULTS: Total 113 children (age 1 month - 9 years) were included in the study. 91 (80.5 %) patients were diagnosed as retinoblastoma and 22 (19.5 %) were found to have pseudo-retinoblastoma. Persistent hyperplastic primary vitreous PHPV 5.3% (n=6) was found to be the most prevalent mimicker. Coats disease 2.6% (n=3) and retinal dysplasia 2.6% (n=3) were next. Other mimicking conditions were retrolental fibroplasia 1.7% (n=2), optic nerve glioma 1.7% (n=2), phthisis bulbi 1.7% (n=2), vitreo-retinal detachment 0.88% (n=1), choroidal hemangioma 0.88% (n=1), retinal detachment 0.88% (n=1), vitreal hemorrhage 0.88% (n=1) and frontoethmoidal mucocele 0.88% (n=1).

CONCLUSION: MRI is an important imaging modality for retinoblastoma. It differentiates retinoblastoma from intraocular lesions such as PHPV, Coats disease, retinal dysplasia; however, in certain cases there is still ambiguity regarding the final diagnosis. With better understanding of the clinical presentation and the characteristic MRI imaging features, differential diagnosis can be narrowed and therefore misdiagnosis of retinoblastoma and unnecessary enucleation can be prevented.

P-22

Risk factors affecting incidence of breast cancer in pakistani women

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INTRODUCTION: With 1 million new cases in the world each year, breast cancer is the commonest malignancy in women and comprises 18% of all female cancers. There are more than 14,000 deaths each year, and the incidence is increasing particularly among women aged 50-64. Early age at menarche, late age at menopause, and late age at first full-term pregnancy are linked to a modest increase in the risk of developing breast cancer. Nulliparity is related to an increased risk for breast cancer diagnosed after 40 years old. The incidence of breast cancer in Karachi, Pakistan is 69.1 per 100,000 women with cancer presentation in stages III and IV being common (≥50%). An increased risk of breast cancer in women with a family history of breast cancer has been demonstrated by many studies using a variety of study designs. However, the extent of this risk varies according to the nature of the family history (type of relative affected, age at which relative developed breast cancer and number of relatives affected).

OBJECTIVE: Purpose of this tertiary care center study is to evaluate the risk factors associated with breast cancer. Moreover, we can also evaluate the effect of other less common variables on our local population.

RATIONALE: Many studies have proved the association of certain risk factors with breast cancer. With this study we would like to assess the association of those risk factors in our local population. By establishing the most commonly risk factor associated with malignancy we can optimize our screening programs and help in early detection of breast cancer with subsequent timely intervention and improved prognosis and quality of life.

MATERIALS AND METHODS:

CLINICAL SETTING: Aga Khan University Hospital.

DURATION OF STUDY: Data from past three years will be reviewed.

INCLUSION CRITERIA: Patients with suspicious abnormalities on mammograms (BI-RADS category IV and V) will be followed for histopathology. Biopsy proven cases of breast cancer will be included in the study.

EXCLUSION CRITERIA: Patients with negative mammograms (BI-RADS Category I) and with benign and probably benign findings on mammogram (BI-RADS category II and III) will be excluded from the study.

DATA COLLECTION: After taking approval from ethical review committee history forms which are filled prior to mammogram will be retrospectively reviewed for risk factors in histopathology proven cases of breast cancer. Risk factors involved in this study are age, gender, family history, parity, menstrual history, previous treatment i.e. birth control pills or any kind of hormonal treatment.

DATA ANALYSIS: Data will be recorded and analyzed using SPSS version 23.

P-23

Role of cyberknife surgery in pituitary mass and improvement in growth hormone levels

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OBJECTIVE: Role of Cyberknife surgery in pituitary mass and improvement in Growth hormone levels.

STUDY DESIGN: A prospective study.

PLACE AND DURATION OF STUDY: This study was conducted in the Department of Radiology JPMC Karachi from Jan 2013 to Aug 2015.

METHODOLOGY: A prospective study was conducted during the year of Jan 2013 to Aug 2015 in the department of Cyberknife Radiology, JPMC, Karachi in patients with pituitary adenoma diagnosed through MRI having clinical symptoms of amenorrhea, visual disturbances and headaches. Tumor size and Growth hormone levels were assessed before going through surgery and after Cyberknife treatment, reduction in tumor. A total of 50 patients with pituitary adenoma underwent Cyberknife gamma radiation procedure. The patient group comprised of 50 diagnosed cases of pituitary adenoma of men (56%) and women (44%). All patients were treated for recurrent or residual disease after surgery or radiotherapy, with 83% presenting with extensive tumor involvement. The median tumor volume was cm³ and median radiation dose was 15 GY defined to the 50% isodose line. The mean and median follow-up periods were 3 months and 6 months respectively.

RESULTS: Before and after treatment of mean GH value is 2.26 + 3.64 and 1.49 + 2.75 respectively. 2 (4%) patients showed stable size radiologically with reduced hormone level but 2 (4%) patients showed mildly increased size initially then reduced size on followup. Out of 46 (92%) patient's clinically successful outcome and radiological improvement in 40 (86.95%) patients were size reduced after 5 sessions, 5 (10.86%) patients received 3 sessions and one patient received only one session.

Conclusion: Cyberknife is a cutting edge technology in modern world of Radiology. After the resection of tumor through cyberknife surgery, the normal functioning of pituitary gland is less affected.

P-24

Role of imaging in evaluation of breast pain, experience from tertiary care centre

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INTRODUCTION: Breast pain is a very common clinical symptom and over 70% of women experience breast pain at least once in their lives and consult a doctor. The causes of breast pain are commonly functional, occasionally organic and most often benign; in spite radiological imaging are frequently requested via primary and tertiary care practitioners.

The objective of this study is to inquire and inspect value of mammography along with ultrasound in evaluation of localized or diffuse breast pain in patients in whom physical examination shows no abnormalities.

MATERIAL AND METHOD:

STUDY TYPE: Cross sectional study

SETTING: Department of Radiology, JPMC hospital

DURATION: over one 1 year from September 2017 to 2018

INCLUSION CRITERIA: Patients referred to our department with prime complaint of diffuse or localized breast pain in whom clinical examination showed no abnormality. Age range 20 to 60 years

EXCLUSION CRITERIA: Patients having palpable lump
Breast implants
Underwent surgery or chemo radiation treatment

DATA COLLECTION: Mammography, CC and MLO views, with complimentary ultrasound breast done in patients with age greater than 35 years. Patients below age 35 were evaluated with ultrasound breast. Patients were asked questions from questionnaire about nature of pain. Patients were followed up on phone after 3 months of imaging and inquired about their symptoms and treatment.

RESULTS: A total of 92 patients met are inclusion criteria. In 71 patients imaging was negative for any pathology, BIRADS1. 13 patients had inflammatory breast disease i.e. mastitis= 10 Mondor's disease= 3. 6 patients had benign findings, BIRADS 2 including breast cyst=4 and fibro adenoma=2. 2 patients had BIRADS IV lesion and underwent ultrasound guided biopsy showed malignancy.

CONCLUSION: The role of imaging in breast pain is primarily reassuring. Frequent imaging requests are to rule out malignancy. Patients with breast pain alone do not have increased risk of malignancy. Further work up like breast MRI and biopsy are not justifiable in breast pain evaluation.

P-25

Role of PET CT in post therapy response evaluation in lymphoma patients using Deauville criteria

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Objectives:

- To highlight the usefulness of PET CT in assessing the response evaluation in treated cases of lymphoma using Deauville criteria.
- To be able to analyse different areas of involvement and extent of disease process taking PET CT as imaging tool and histopathology as gold standard.

MATERIAL AND METHODS: This cross sectional observational study was carried out at the department of PET CT Jinnah Post Graduate Medical Centre Karachi Pakistan. Data was reviewed for a period of 7 months and 10 days i.e from 1st June 2017 till 10th January 2018. Biopsy proven post treated cases of lymphoma were included in the study. Patients were referred from all over Pakistan from different hospitals mainly by oncologists. SPSS 17 was used for data analysis.

RESULTS: A total no of 264 patients of lymphoma underwent PET CT examination in department of PET CT Jinnah Post Graduate Medical Centre Karachi, Pakistan from the period of 1st June 2017 till 10th January 2018. Out of 264 patients, 159 patients were post treated cases of lymphoma while 105 patients didn't had any treatment at the time of scanning and their PET CT was done for staging purposes. Using Deauville five point scale criteria we evaluate the treatment response in the patients. 50 patients had complete metabolic response (CR), 43 patients had partial metabolic response (PR), 12 patients had stable disease / no metabolic response, 21 patients had progressive disease (PD), 18 patients had recurrence / relapse while 9 scans were inconclusive and either biopsy or close follow up was advised. 5 patients had infectious disease and other pathologies.

CONCLUSION: PET CT is now an important cancer imaging tool, both for diagnosis, staging as well as offering prognostic information based on response evaluation. Most radiologic procedures map the anatomy and morphology of tumors with little or no information about their metabolism. FDG Positron emission tomography (PET) provide qualitative and quantitative metabolic information in treated lymphoma patients.

P-26

Shear wave Elastography in evaluation of chronic liver disease

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In this poster presentation we will highlight importance of non invasive imaging in diagnosing and staging chronic liver disease. We will discuss available non invasive imaging techniques used for this purpose. We have argued in favour of Shear wave elastography stating its basic principle, advantages as well as touching its pitfalls.

There are several chronic progressive liver diseases that lead to liver fibrosis. The final common pathway of chronic liver disease is tissue destruction and attempted regeneration, a pathway the triggers fibrosis and eventual cirrhosis. Viral hepatitis are an important cause of liver fibrosis in Pakistan. Other causes include long term alcohol abuse, Non alcoholic hepatic steatosis and autoimmune hepatitis.

Liver fibrosis is progressive disease. If diagnosed early and staged accurately early clinical intervention may arrest the disease or slow down progression to end stage liver cirrhosis.

Gold standard in diagnosis and staging of liver cirrhosis is liver biopsy. Liver biopsy evaluates 1/50000 of liver parenchyma. It has complication rate though small. It has intra and interobserver variability. The focus is shifting to non invasively diagnose and stage liver cirrhosis. Ultrasound and MRI have been used to measure liver elasticity. MRI is promising however has much higher cost, long examination times and is subject to respiratory artifact. In a liver with high iron overload MRI can not be performed due to signal to noise issues. Ultrasound elastography assess portion of liver tissue 100 times more than liver biopsy.

Shear wave elastography (SWE) is preferred technique for assessing liver elastography because unlike transient elastography, ultrasound can be simultaneously performed in shear wave elastography. Shear waves produced by ultrasound beam are directly related to stiffness of liver from where they are generated. Being non invasive repeated measurements can be performed in patients in follow up. However this technique does have pitfalls which will be discussed in this poster presentation.

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Single Anchor Technique for radiologically inserted gastrostomy (RIG): 5 year experience of a tertiary care center in Pakistan

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OBJECTIVE: The purpose of this study was to determine the indications for use and the potential complications of Single Anchor Technique for (RIG) at our hospital.

PATIENTS AND METHODS: In this retrospective study over a five-year period, 209 patients were referred for gastrostomy procedure with various indications; the most common indication was Buccal region malignancy. The mean age was 51 years; 159 patients were male and 50 were female. The medical files and follow-up records of these patients were studied thoroughly. Results: Percutaneous radiologic gastrostomy was technically successful in all patients however, 5/209 (2.3 %) patients had immediate/early post procedural complication. Major complications (gross pneumoperitonum / peritonitis) occurred in 4/209 (1.9 %) patients. Minor complications occurred in 28 patients, the most common minor complication was tube occlusion which occurred in 7.1 % (15/209) patients.

CONCLUSION: Success and complication rate for Single Anchor Technique for RIG in our center is in concordance with other studies. Therefore, it is a safe and effective technique for the instalment of catheters in the stomach.

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A vanishing tumour: Spontaneous involution of a large pituitary macroadenoma

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BACKGROUND / AIM: Pituitary macroadenomas are pituitary adenomas more than 10mm in diameter. These can be functional or non-functional and in latter case can be diagnosed as incidentalomas on imaging. The large pituitary lesions are more likely to produce hypopituitarism and with suprasellar extension, can cause compression on the optic chiasma resulting in visual field defect. These tumours may also invade the cavernous sinus leading to cranial nerve palsies. These are managed as surgically mostly when symptomatic presenting with signs of bitemporal hemianopia, sign of increase intracranial pressure and also as symptoms of endocrine dysfunction. The objective of this case presentation is to discuss spontaneous resolution of a pituitary macroadenoma with resultant secondary empty sella. Etiology, pituitary function, and imaging discussed.

CASE REPORT: A 35-year-old Pakistani Peshawar-based-Pathan woman was referred for MRI Dynamic Pituitary for vomiting, headache and amenorrhea. She was referred to look for prolactinoma. MRI showed a large macroadenoma (1.6 cm) causing mass effect on optic chiasma, involvement of cavernous sinus and partial encasement of right internal carotid artery. Her prolactin levels were normal. She was already a diagnosed case of multinodular goiter and was on thyroxine and dexamethasone for deranged Thyroid functions and cortisol levels. She did not get any surgery or interventional procedure done due to financial problems. After 2 years she presented to her physician with 1 month history of severe headache and vomiting. Considering the presence of macroadenoma in mind, she was referred for a follow up imaging to look whether the size of lesion might have increased. Re-MRI done showed a complete empty sella with intrasellar herniation of optic chiasma and optic nerves. There was no sign of the large pituitary mass. Patient's identity was cross checked, recalled and confirmed that both MRI were of the same patient. The diagnosis of spontaneous involution of large pituitary macroadenoma was made.

CONCLUSION: In our patient the natural fate of large pituitary tumor was that it spontaneously involuted and resulted in an empty sella. In this case, secondary empty sella was associated with herniation of optic nerves and optic chiasma.

P-29

Tuberous sclerosis complex with sub-ependymal giant cell astrocytomas

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Tuberous sclerosis complex (TSC) is a rare autosomal disorder that typically affects children. The manifestations of TSC include development of benign lesions in various organs, primarily in the brain, skin, kidneys, heart, and lungs. TSC management often involves multidisciplinary specialties. Herein, we present a case of a 5-year-old male patient who presented with a headache, vomiting and fever. Radiological assessment demonstrated a lobulated enhancing tumor in the right lateral ventricle near the foramen of Monro for which he underwent craniotomy (total tumor resection), which turned out to be subependymal giant cell astrocytomas upon histopathological examination. A follow-up MRI after 10 months showed cortical dysplasias, with tiny subependymal nodules. Dermatology examination revealed hypomelanotic macules, angiofibromas and shagreen patch. At his one-year follow-up, the patient exhibited normal mental and physical growth. Therefore, calling attention to TSC diagnosis and management depending upon the particular presentation may improve the quality of life of TSC patients.

P-30

Tumefactive demyelinating disease - A diagnostic dilemma and case report

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INTRODUCTION: Tumefactive demyelinating disease have atypical appearance that mimic neoplastic intra cranial lesion. It poses grave consequences. They have considerable diagnostic uncertainty, make it difficult both clinically and radiologically to distinguish between inflammatory demyelination and other space occupying lesions. Their diagnosis is important to avoid unnecessary inadvertent invasive neurosurgical or toxic chemotherapeutic interventions.

CASE REPORT: A 29 year old lady presented with headache and blurring of vision with loss of vision in left eye for last 2 months. She also complained of weight loss in this period. Her general examination showed left hemianopia. Laboratory biochemical tests were within normal ranges. Contrast enhanced MRI brain was advised. T1W, T2W and post-gadolinium T1W images in axial, coronal and sagittal planes were taken and reviewed.

CONCLUSION: Tumefactive demyelinating disease are important differentials of intracranial space occupying lesions and poses diagnostic dilemma for neurosurgeons, radiologists and pathologist. Multimodality approach, proper analysis of imaging pattern and disease progression play an effective role in differentiating tumefactive demyelinating disease from others. Timely diagnosis spares patient from harmful, unnecessary investigations, interventions and therapies.

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Uterine artery embolization (UAE) and its outcomes

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OBJECTIVE: To evaluate the success rate of uterine artery embolization in patients with menorrhagia.

METHODOLOGY: The study was performed in Radiology department of Rehman Medical Institute, Peshawar. Ten patients who had undergone UAE between 2016 and 2018 were selected for a prospective study. 8 of which had UAE for menorrhagia and/or pain due to fibroids, one patient with uterine AVM and one patient with Ca endometrium. Pre procedure imaging work-up was performed by magnetic resonance imaging (MRI) of the pelvis. Informed consent was taken from each patient and the procedure along with its complications and outcomes was discussed with them and attendant. Patients who wished to conceive were also told about the fertility outcomes. A pre embolization lab work up was performed which included complete blood count (CBC), International Normalised Ratio (INR) and Renal function tests (RFTs). A consultant interventional radiologist performed all the procedures in an angiography suite on a digital subtraction angiography (DSA) unit (Seimens artis zee). Post procedure all the patients had clinical review by a Gynaecologist and interventional radiologist.

RESULTS: The age of our patients ranged between 20-79 years. The most common indications for UAE was menorrhagia, that was seen in about 70% of the patients and the least common was post menopausal bleeding i.e 10%. 90% of the patients were pre menopausal and all the patients were referred by a gynaecologist. Failure and success of the procedure was assessed by improvement of the clinical symptoms as well as improvement in radiological imaging.

Out of our 10 patients, 90% of the patients came back for follow up. 80% of the patients had their procedure for uterine fibroids, out of which 75% i.e 6 patients, showed reduction in size of fibroid on follow up scans. One patient with a hyper vascular fibroid showed complete necrosis. One of the patients came back with post procedure vaginal discharge, which is a common complication. No other procedure related complication seen. She was treated successfully without any further sequelae. 90% of the patients who had pain and pressure perineum, reported improvement. One patient with uterine AVM conceived post procedure and delivered a healthy baby. One patient with CA endometrium was lost to follow up.

CONCLUSION: As an initial experience in our institute, UAE has showed promising results, with a success rate of almost 90%. Further multicenter studies with larger patient population are needed in order to establish definitive results in our population.

P-32

Utility and accuracy of primary and secondary ultrasonographic signs for diagnosing acute appendicitis in pediatric patients

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INTRODUCTION: Making an accurate diagnosis of acute appendicitis (AA) is vital to prevent the morbid complications associated with untreated AA. This is challenging in up to 30% of pediatric patients which is a significantly high number. Ultrasound (US) has been generally used as the initial mode of imaging in pediatric patients due to the lack of ionizing radiation. Given its variable accuracy, adjuvants such as secondary signs can be used to aid the radiologist in making an accurate diagnosis.

MATERIAL AND METHODS: Patients between the ages of 2-16 years with acute abdominal pain suspicious for AA, who underwent right lower quadrant ultrasound between 2003 and 2016, were retrospectively identified. Corresponding computed tomography (CT) and histopathology findings were noted. Based on the presence of primary and secondary signs, results were classified into three groups to determine accuracy. The number of secondary signs and cases with perforated appendices were also correlated with sonographic accuracy.

RESULTS: 1115 patient met the inclusion criteria of which 29% had confirmatory acute appendicitis. The positive appendectomy rate was 89% (337/380). Using a 3-category classification of US results, the sensitivity was 79%, specificity 97%, positive predictive value was 93%, negative predictive value was 91% and the overall accuracy was 91%. The presence of two or more

secondary signs had a high likelihood of appendicitis. The perforation rate was 10% with the highest percentage seen in Group 2 patients.

CONCLUSION: Despite inescapable limiting factors, US should be used as first line imaging for suspected appendicitis in pediatric patients especially since its accuracy rivals CT when the appendix is visualized. The use of secondary sonographic signs has solid potential to aid the radiologist in making an accurate diagnosis with our study demonstrating a proportional relationship between the number of secondary signs and likelihood of true appendicitis. However, further investigation is needed to determine the individual accuracy of secondary signs and whether certain combination of secondary signs has a higher association with appendicitis.

P-33

Vestibular Schwannomas in Radiosurgical OPD - A Tertiary care Experience

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AIMS AND OBJECTIVES: To study age, sex and sites of vestibular schwannoma on contrast enhanced MRI.

METHODS AND MATERIALS: This retrospective study was conducted at the department of Cyberknife Robotic Radiosurgery, Jinnah Post graduate Medical Centre Karachi, Pakistan from January 2016 to September 2018 and comprised 500 patients with Vestibular schwannomas which were referred to Radiosurgery. Some of them were histologically proven and rest of them were on the basis of radiological findings. Cases were reviewed on Contrast enhanced MRI brain.

RESULTS: A total of 500 cases of vestibular schwannomas in our study group, Male: Female ratio was 1.5:1 with mean age of 46.4 years (SD- 16.76). The most common site was right. Bilateral vestibular schwannomas are highly suggestive of neurofibromatosis type 2 (NF2), although bilateral tumors are encountered in the familial form of acoustic schwannomas in the absence of other stigmata of NF2. We found 15 cases in which only 5 cases were proven NF2.

CONCLUSION: Vestibular Schwannoma is a non-cancerous tumor which not only affects hearing but also balance when the tumor presses on the nerves in the inner ear. It must be diagnosed using hearing tests and imaging tests. As management and treatment strategies are predicated on presenting symptoms and patient factors, MRI Brain with contrast technique and audiometry has played beneficial role to see the site of primary tumor and plan for Radiosurgery.

P-34

Behcet's disease: A rare case report with associated complication of budd-chiari syndrome

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INTRODUCTION: Behcet's disease is a rare, chronic, relapsing and remitting multi system disorder characterized by mucocutaneous, ocular, vascular, neurological, gastrointestinal and pulmonary manifestations. Although the etiopathogenesis of the disease remains unknown, certain genetic, environmental and immunological factors have been implications to play a role.

BD is most frequent in Mediterranean, Middle east and far east countries (highest prevalent rate in Turkey as 80-370 per 100,000). It is mostly seen in third decade of life and is more prevalent in men (with more severe course in those younger than 25 years at disease onset).

The clinical triad includes recurrent oral and genital ulcers and uveitis. The involvement of vascular system is the major cause of mortality and involves 25% to 30% of patients. The most serious venous complications in BD are SVC syndrome and budd-chiari syndrome whereas arterial manifestations of the disease include aneurysm formation and occlusion.

CASE REPORT: Here we present a case of young male patient with bilateral pulmonary arterial aneurysms, pulmonary nodules and budd-chiari syndrome.

CONCLUSION: In BD, pulmonary arterial aneurysms is typical for vascular involvement of the disease and significantly associated with poorer prognosis. The development of associated budd chiari syndrome increases the mortality rate to 61%. CT is valuable imaging technique in diagnostic work up and to determine the associated complications of BD.

P-35

Outcome of thyroid FNAC

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OBJECTIVE: To evaluate the efficacy of FNAC in suspected malignant thyroid nodules.

MATERIAL & METHODS: This is a prospective cross sectional descriptive study of 226 patients (186 female and 40 male) conducted at Radiology department of Rehman Medical institute Peshawar. The age of patients range from 15 to 85 years. The duration of study was from September 2015 to September 2018. All included patients had atleast one thyroid nodule. FNAC was performed after taking detailed history, thorough examination, relevant investigation and informed consent. Biopsy and surgery was later performed in patients with suspicion of malignancy. The statistical analysis was performed using Microsoft excel.

RESULTS: Most of the patients presented in 4th and 5th decade of life. Out of 226 patients, 6% patients (n=14) were diagnosed with malignancy i.e Bethesda category IV/3f, category V/4 and category VI/5. 80% patients (n=181) were diagnosed with benign thyroid lesions i.e Bethesda category I & II / 2 whereas 4.4% (n=10) had atypical Bethesda category III / 3a lesion. 4.4% patients (n=10) had inflammatory thyroid nodule and 4.8% patients (n=11) were inconclusive.

CONCLUSION: We conclude from our results that only 6% malignant cases were confirmed with FNAC whereas rest of the large number of patients were benign. This shows poor role of FNAC in diagnosing thyroid malignancy.