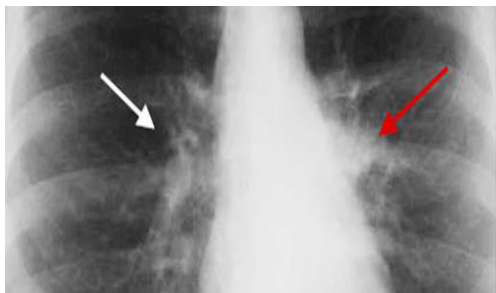


# IRIA Telangana e-Newsletter



**Achievements**

*Page 07*



**Articles**

*Page 11*



**Interesting Cases**

*Page 21*



**Academic Activities**

*Page 34*

## Office Bearers:

**President: Dr. T Ramesh**

**President Elect: Dr. J Jagan Mohan Reddy**

**Vice Presidents: Dr. NLN Moorthy  
Dr. Anitha Mandava**

**General Secretary: Dr. P Krishna Mohan**

**Treasurer: Dr. P Vikas Reddy**

**Joint Secretaries: Dr. Sudheer K  
Dr. Shirisha J**

## Indian Radiological & Imaging Association

### Telangana State Chapter 2024

IRIA HOUSE, 101, First Floor, 8-2-675/1/A,  
Hasna 13<sup>th</sup> Avenue, Plot No. 16, Road No. 13,  
Banjara Hills, Hyderabad - 500 034.

Ph. No: 040-29803049,

Email: [iriatschapter@gmail.com](mailto:iriatschapter@gmail.com)

Website: [www.iriatelangana.org](http://www.iriatelangana.org)

**Adviser & Chairman IRIA House Committee**

**Dr. K Prabhakar Reddy**

9849037049, kundur.prabhakarreddy@gmail.com

**President**

**Dr. T Ramesh**

9985447788, rameshtippani@yahoo.co.in

**President Elect**

**Dr. J Jagan Mohan Reddy**

9000192332, jaganmreddy@gmail.com

**General Secretary**

**Dr. P Krishna Mohan**

9849320032, krishnapottala@gmail.com

**Immediate Past President**

**Dr. R Venkataramana**

9246580984, randhivenk@yahoo.com

**Vice Presidents**

**Dr. NLN Moorthy**

9848041825, moorthinln@rediffmail.com

**Dr. Anitha Mandava**

7702844822, dranitha96@gmail.com

**Joint Secretaries**

**Dr. Sudheer K**

9346021219, kunkusud@gmail.com

**Dr. Shirisha J**

9701398484, shirisha.jakka@gmail.com

**Treasurer**

**Dr. P Vikas Reddy**

9700000974, pallevikas@yahoo.co.in

**Central Council Members**

**Dr. S Venkat Ramana**

9701529625, dr.venkat@aol.com

**Dr. Aruna Karnawat**

9703499978, arunakarnawat@gmail.com

**Dr. M Srinivas Reddy**

9949960570, doctormsreddy@gmail.com

**Dr. NS Uday Kumar**

9246502024, nks\_diagnostics@yahoo.com

**State Council Members**

**Dr. T Surekha**

9849026246, surekha55@gmail.com

**Dr. Gaddam Ramakrishna Reddy**

7680080088, rkrkgaddam9@gmail.com

**Dr. T Sudha Bindu**

9849312534, drtirumani@rocketmail.com

**Dr. S Naveen Kumar**

9866057257, kodisiripuram@gmail.com

**Dr. Vijayanand Kelkeri**

9741053368, drvijay2010@gmail.com

**Dr. Sapna Marda**

7702090101, drsapnamarda@gmail.com

**PC PNDT Co-ordinator**

**Dr. Ravi Teja**

9000160610, raviteja\_peace@yahoo.com

**Trade Representative**

**Mr. Ganesh**

9963276677, ganesh@focusmedicalsyste.ms.com

## From the President's Desk



### Dear Esteemed members,

I am Happy to share the news that TSIRIA will be hosting 78th IRIA Annual conference, January 2026 in Hyderabad. a pride moment for all our members. It will be organized under the leadership and guidance of Dr. K.Prabhakar reddy. It will be first annual conference in our city after Telangana state formation. I request all members to volunteer and work for the grand success of annual conference.

Our association academic activities are conducted as per schedule given. It is heartening to see increased attendance in monthly meetings/scientific sessions and enthusiastic participation from residents.

As a Radiologist, we have major role to play in the society to provide Radiological services to reach common man at affordable rates maintaining international standards.

Our TSIRIA Newsletter is released once in three months. It includes academic activities, articles from experts, case reports from post graduates and achievements from members. I request members to contribute articles, interesting cases and other useful information to the Newsletter.

Please give feedback about our association and newsletter for improvement.

I thank and congratulate the Newsletter team for their hard work and bringing out newsletter regularly.

Wishing you all the best,

**Dr. Ramesh T**

President

Indian Radiological Imaging Association

Telangana State Chapter

## From the General Secretary Desk



**Dear Esteemed Members,**

I am thrilled to announce that the Telangana state chapter of IRIA has been granted the honor of hosting the 2026 national conference of IRIA. This is a moment of great pride for all of us.

This year, we are also hosting the Dr. Gyan P. Lal CME in Hyderabad, jointly organised by central IRIA and ICRI focusing on Abdominal Imaging. I urge all postgraduates, senior residents, and consultants to take advantage of this opportunity and register for the conference. It promises to be a valuable learning experience and an excellent platform for networking with peers.

Our monthly meetings have been receiving fantastic support, with a significant turnout of students who actively participate by presenting interesting cases and engaging in quizzes.

I encourage all postgraduates to become provisional members of IRIA and provisional members to convert to Life members. Consultants who are members of IRIA from other states can easily transfer their membership to Telangana by submitting a transfer request.

As we approach the Telugu New Year (Ugadi), I extend my warmest wishes to all our members for a happy and prosperous year ahead. Let's continue to work together to promote excellence in radiology and strengthen our association.

Warm regards,

**Dr P. Krishna Mohan**

General Secretary

Indian Radiological Imaging Association

Telangana State Chapter

## EDITORIAL BOARD

### ADVISORS



**Dr. K. Prabhakar Reddy**



**Dr. Ramesh T**



**Dr. Krishna Mohan Pottala**

### EDITORIAL TEAM



**Dr. J. Jagan Mohan Reddy**  
Editor-in-chief



**Dr. Srinadh Boppana**  
Member



**Dr. Annapurna S**  
Member



**Dr. Sudha Bindu**  
Member



**Dr. Anuj Jain**  
Member



**Dr. Sandeep M.**  
Member





**Dr. P Krishna Mohan**  
Senior Consultant & Director  
Vijaya diagnostic center

### Editorial: Understanding and Addressing Radiology Report Errors

As radiologists, we are entrusted with the critical task of interpreting imaging studies and providing accurate and comprehensive reports.

However, despite our best efforts, errors in radiology reporting are not uncommon.

In this editorial, we delve into the types, causes, and possible strategies to minimize these errors.

A well-crafted radiology report should not only be accurate but also complete in identifying relevant findings, offering opinions on underlying causes, and providing guidance on further investigations if needed. However, the art of radiology reporting is nuanced, and errors are inherent to this process.

Two primary types of errors are cognitive and perceptual.

Cognitive errors, accounting for 20-40% of total errors, occur when abnormalities are identified but not correctly understood or reported (misinterpretation).

On the other hand, perceptual errors (60-80%) happen when abnormalities are missed initially but recognized later in retrospect.

Perceptual errors are relatively consistent across various modalities, indicating the complexity of radiologists' work. They are most common in plain radiography cases, followed by CT and MRI studies.

Causes of errors range from under-reading and satisfaction of search to faulty reasoning and inadequate clinical history. Satisfaction of search means having identified a first abnormality,

radiologist fails to continue to look for additional abnormalities. Missing abnormalities outside area of interest (but visible). Satisfaction of report means uncritical reliance on previous report in reaching diagnosis, leading to perpetuation of error through consecutive studies.

Common failings that contribute to misunderstanding in reports include poor organization, vocabulary choice, grammar errors, and reliance on suboptimal voice recognition software.

System issues such as staff shortages, inexperience, inadequate equipment, and subpar reporting environments can also lead to errors.

Cognitive biases like anchoring, framing, availability, and confirmation biases can further influence reporting accuracy. For instance, the zebra retreat bias reflects reluctance to diagnose rare conditions due to lack of confidence, while outcome bias can lead to favoring diagnoses with better outcomes, regardless of evidence.

While errors are inevitable, we can take steps to minimize them. This includes understanding our reasoning processes, being aware of biases and system issues, and utilizing available strategies to mitigate negative influences.

Common Errors in Radiology Practice: 1. Missing Fractures on X-rays: Inadequate views or poor image quality can lead to overlooked fractures. 2. Incorrectly Reporting Gallbladder Presence: Especially in post-cholecystectomy cases, stating the presence of a gallbladder can cause confusion. 3. Missing Major Tendon and Ligament Injuries on MRI Reports: Careful evaluation is essential to detect these subtle

yet significant injuries. 4. Misinterpretation of BIRADS Category and Missing Cancers: Errors in breast imaging categorization can lead to missed diagnoses or unnecessary interventions. 5. Writing "Prostate" in Female Abdomen CT Reports 6. Missing Subtle Diffusion Abnormalities in MRI Brain: Diligent assessment of diffusion-weighted images is necessary for early detection of brain pathologies. 7. Misinterpretation of CT Chest Abnormalities: Differentiating between tuberculosis and malignancy is critical to guide appropriate management. 8. Not Recommending Further Investigations or CT-Guided Biopsy: Radiologists must provide clear guidance for follow-up investigations based on imaging findings. 9. Missing Ectopic Pregnancy on Ultrasound: Thorough evaluation is necessary to detect this

potentially life-threatening condition, 10. Missing skull base abnormalities on CT brain and MRI brain

Addressing these errors requires continuous education, adherence to guidelines, meticulous image analysis, and effective communication with referring physicians. Quality assurance measures, peer review, and multidisciplinary discussions can also help minimize these errors and improve patient outcomes.

In conclusion, radiology report errors are a reality, but with vigilance, education, and systematic improvements, we can strive towards delivering more precise and reliable reports, ultimately enhancing patient care and outcomes.



4 కేటగిరీ మంది భారతీయుల విశ్వాసం

Lokal App

### శామీర్ పేట్ రిసార్ట్ లో డాక్టర్ మృతి

నాగర్ కర్నూల్ జిల్లా కల్వకుర్తి పట్టణానికి చెందిన డాక్టర్ భరత్ రెడ్డి శామీర్ పేట్ రిసార్ట్ లో గుండెపోటుతో మృతి చెందాడు. కల్వకుర్తి పట్టణంలో మేదినీ స్కానింగ్ సెంటర్ నిర్వహిస్తున్న రేడియాలజిస్ట్ డాక్టర్ చింతల భరత్ రెడ్డి బుధవారం రాత్రి రిసార్ట్ లో జరిగిన పార్టీకి హాజరైయ్యారు. మిత్తుడు ఏర్పాటు చేసిన పార్టీకి వెళ్లిన అతడు గురువారం ఉదయం మృతి చెందినట్లు కుటుంబ సభ్యులు తెలిపారు.

**Dr. Bharath Reddy** (34yrs) MBBS 2k5 batch Mamata Medical College did MD Radiology and Practicing in Kalwakurthy had sudden cardiac arrest, and was found dead in the early morning of 15-2-24. May his soul rest in peace.

He has 2 girl children; younger one is 2yrs old.

Please have a healthy life style. Reduce stress. Our loss to our family is irreplaceable.!

# ACHIEVEMENTS

**Glad to share that dept of Radiology Apollo Medical College, Hyderabad has presented 6 Papers and 10 Posters in the IRIA National Conference held in Vijayawada.**

1st Prize



**Dr. Addepalli Nikita Srilalitha**  
Apollo Medical College

2nd Prize



**Dr. R Pratyusha**  
Apollo Medical College

**Dr. Preethi from KIMS 2nd Prize in IRIA National Conference held in Vijayawada.**

1st Prize



**Dr. Preethi**  
KIMS

**CONGRATULATIONS Dr.Varsha Joshi for being Awarded" WOMEN'S LEADERSHIP AWARD 2024" in the Healthcare Category by Hybiz TV for outstanding contributions in the field of Radio-Diagnosis.**



## Doc at Niloufer gets patent on biopsy device

**Hyderabad:** In a first, a government doctor from the city with Nilo-



ufer Hospital has got a patent for a 'multi-functional biopsy device' he de-

veloped. The device has integrated two types of sample collection devices — fine needle aspiration cytology and biopsy — into a single process. **Dr Ravi Teja**, assistant professor, radiology, Niloufer Hospital, was awarded the patent this week.

Currently, anaesthesia is given for either of the processes but in certain cases like breast tumour, gall bladder and prostate, the location might not be accessible for needle, which means patients have to undergo the painful process. "There are three types of sample collections — a small piece, a large piece or a biopsy — and this is done in three steps. With this device, we can draw all three types of samples at a single time and a needle for anaesthesia can also be used alongside, making the process painfree," he said. TNN

**Dr. Ravi Teja**  
Assistant Professor  
Osmania Medical College





"We extend our heartfelt congratulations to Dr. Akila, Dr. Lalitha, Dr. Sunitha Lingareddy, Dr. Sujatha Patnaik, Dr. Madhavalatha, and Dr. Uma Karri for their remarkable achievements and exceptional contributions to the fields of radiology and medicine, especially on the occasion of International Women's Day.

Your unwavering dedication, expertise, and commitment to advancing healthcare have not only enhanced patient care but have also inspired countless individuals within our community. The felicitation ceremony organized by the IRIA TS Chapter and ISNR at HICC served as a fitting tribute to your tireless efforts and significant impact in the field.

Your exemplary work ethic, professionalism, and compassionate approach to patient care have set a high standard for all of us to aspire to. We commend each of you for your outstanding accomplishments and for serving as role models for future generations of healthcare professionals.

May your continued success and dedication continue to bring pride and honor to our profession, particularly as we celebrate the achievements of women in radiology and medicine on this special day.

Once again, congratulations to all the awardees for this well-deserved recognition. Your achievements truly highlight the excellence and dedication of women radiologists in our community."

\* \* \*



**Congratulations Dr. Mohd Abdul Khalid on winning the Paediatric Neuroradiology Quiz at the Indian Society of Neuroradiology annual conference in HICC Hyderabad.**





Dr Rakhee K Paruchuri Wanted to share that I participated as a Faculty in the 5th Joint Annual Meeting of the Arabian Gulf Society Skeletal Radiology (AGSSR) and Asian Musculoskeletal Society (AMS) (26th Annual Conference) (13th AGSSR Conference) "MSK Imaging the Current and Future" Conducted from 12th to 15th of February at King Faisal Hospital and Research Centre, Riyadh, Kingdom of Saudi Arabia.



Dr Ankit Balani am happy to share my recent publication titled "International Consensus Statement on the Radiological Evaluation of Dysraphic Malformations of the Spine and Spinal Cord" published in the February issue of the American Journal of Neuroradiology for the upcoming April Newsletter. PFA the snippet of the article below.

<https://www.ajnr.org/content/early/2024/02/15/ajnr.A8117/tab-article-info>

**Congratulations  
Dr. Sikandar Shaik  
RSNA 2024 Abstract  
Reviewer- to review  
Nuclear Medicine /  
Molecular Imaging  
Science Abstract for  
2024**



Dear Dr. Sikandar Shaikh:

On behalf of the RSNA Annual Meeting Program Planning Committee (AMPPC), thank you for volunteering to serve as an Abstract Reviewer. You have been selected to review **Nuclear Medicine/Molecular Imaging Science** abstracts for the 2024 meeting year.

The AMPPC Chair, Dr. Kate Hanneman, oversees the subcommittees responsible for administering the Science and Education Exhibit programs for the Annual Meeting. The Nuclear Medicine/Molecular Imaging subcommittee is chaired by Don C. Yoo, MD.

## Quiz Winners in February Monthly Meeting



**1st Prize**  
**Dr. Ramya**  
Osmania Medical College &  
**Dr. Anand**  
Continental Hospital



**2nd Prize**  
**Dr. Aswathy**  
Continental Hospital &  
**Dr. Laxmi**  
Osmania Medical College



**3rd Prize**  
**Dr. Sahiti**  
Continental Hospital &  
**Dr. Swetha**  
Osmania Medical College

## Quiz Winners in March Monthly Meeting



**1st Prize**  
**Dr. V Vikram Sharma**  
NIMS



**2nd Prize**  
**Dr. J Sahitya**  
NIMS



**3rd Prize**  
**Dr. Sankeerth**  
NIMS



Congratulations to Dr. Siripuram Naveen Kumar for contributing Maximum signs at the National Conference IRIA 2024, Vijayawada. Sir was appreciated well by the organizing committee for his efforts as a single person contribution to the radiological signs displayed at the conference venue. Best wishes for all future endeavours.



Congratulations to Dr. Sudha Bindu for presenting and receiving the merit of excellence for two oral papers at the IRIA national conference.



# ARTICLES



**Dr Nadeem Ahmed**

Professor of Radiology, Osmania Medical College

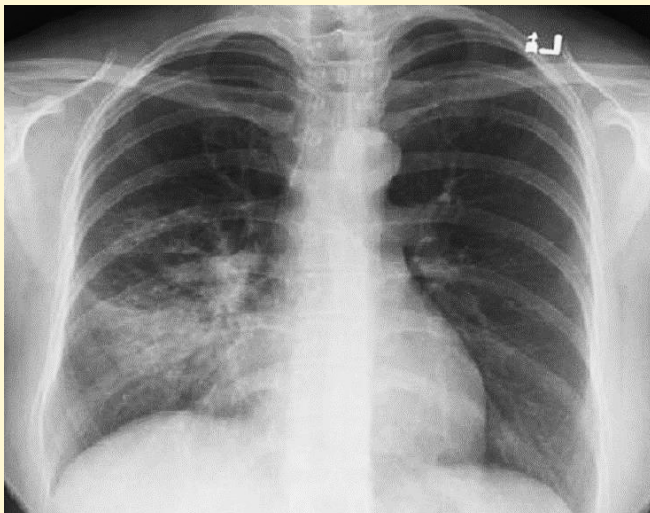
## CLASSICAL SIGNS IN CHEST RADIOLOGY

Chest radiograph is the most common method of evaluating the thorax, widely available and a low cost - low radiation technique. Certain patterns of disease on the thoracic imaging which suggest a particular characteristic or pathology are called "signs". A radiologic "sign" serves as an aide de memoire and helps in communicating a complex pattern in a simple way. Some of the classic signs on chest radiograph are being discussed below.

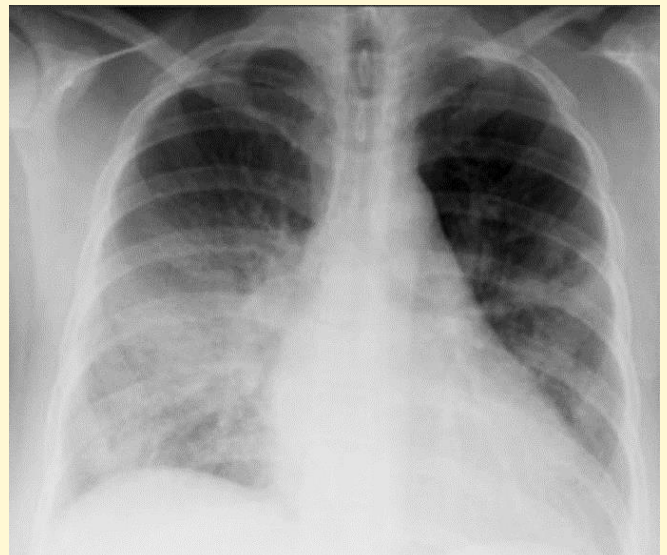
### SILHOUETTE SIGN

When two structures of similar densities lie in the same plane, then their borders are lost, i.e. silhouetted. For example, right middle lobe consolidation will silhouette the right heart border whereas right lower lobe consolidation does not silhouette the right heart border.

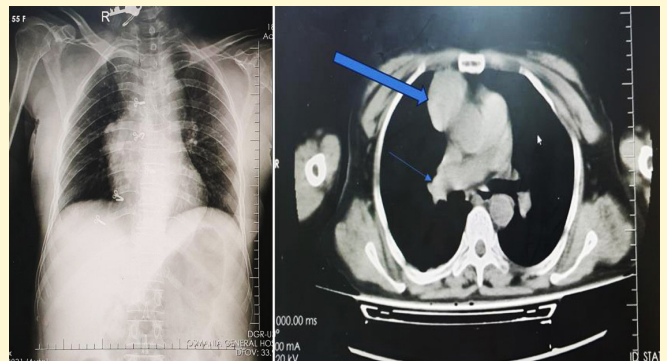
#### RIGHT MIDDLE LOBE PNEUMONIA



#### RIGHT LOWER LOBE PNEUMONIA

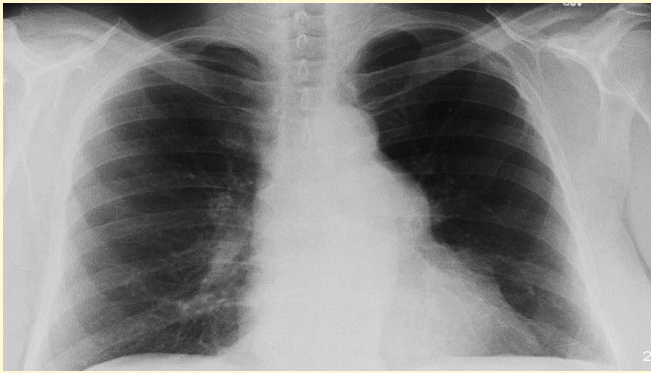


#### HILUM OVERLAY SIGN



*Enlarged right hilum. Pulmonary artery (thin arrow) seen separately through the enlarged hilum (applying silhouette sign, it means that lesion is anterior or posterior to the pulmonary artery) Outer borders of right Pulmonary artery and the lesion (large arrow) are more than one centimetre apart - it means that the enlarged hilum is not due to cardiomegaly as in cardiomegaly the pulmonary artery lies within 1 cm of the heart border*

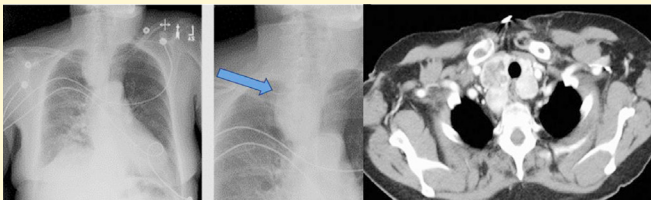
## HILUM CONVERGENCE SIGN



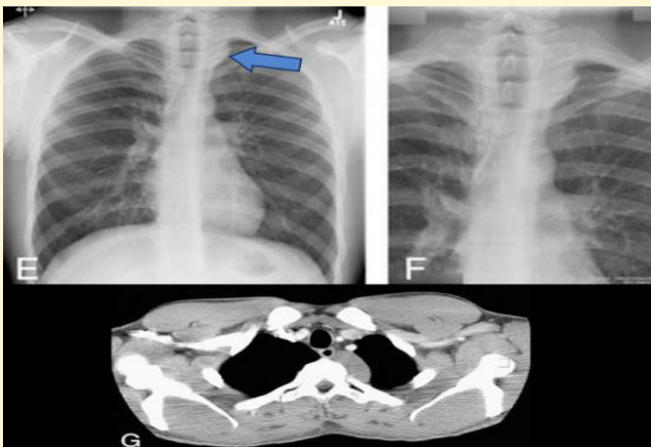
Used to distinguish hilar mediastinal mass from an enlarged pulmonary artery. If the vascular markings converge towards the "mass", then it is an enlarged pulmonary artery. In case of a hilar mass, the pulmonary artery branches are seen coursing through the lesion towards the heart.

## CERVICOTHORACIC SIGN

Used to differentiate an anterior from a posterior superior mediastinal mass. Posterior aspects of the lung apices extend further superiorly than the anterior portions. If the superior border of a mass is well delineated above the clavicle (as it is bordered by air density ie lung), then it is a posterior mediastinal mass. When the superior border of a mass is obscured at or below the level of the clavicles, it is considered to involve the anterior mediastinum.

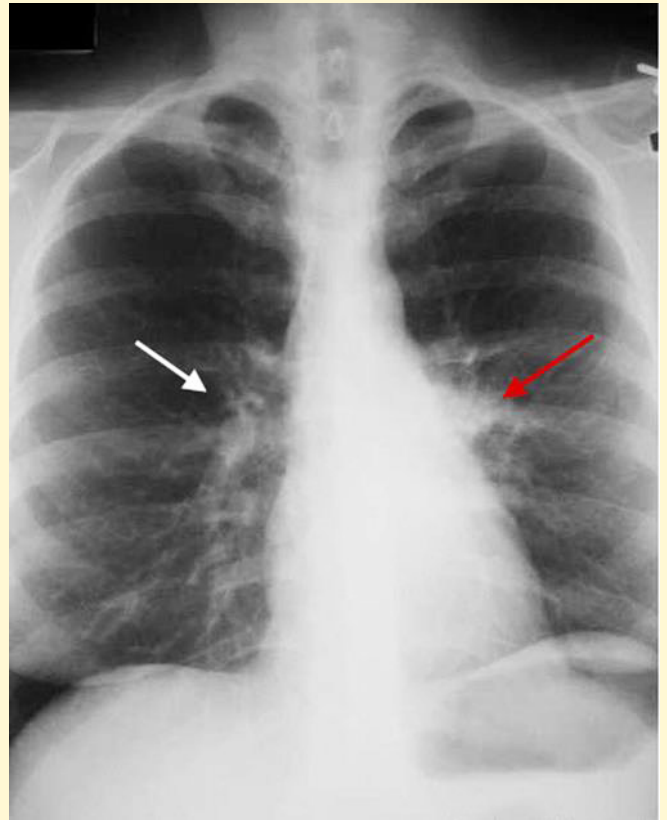


When the superior border of a mass is obscured at or below the level of the clavicles, it is considered to involve the anterior mediastinum.



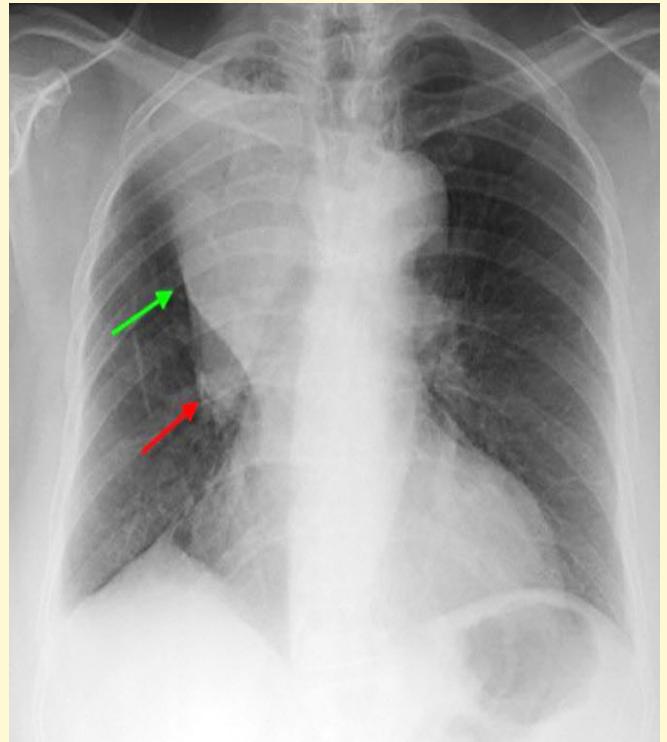
If the superior border of a mass is well delineated above the clavicle (as it is bordered by air density ie lung), then it is a posterior mediastinal mass

## DENSE HILUM SIGN



Hilum of one side appears denser than the other. Indicates abnormality in the hilum itself or the lung. May be seen in lymphadenopathy or lung pathology including carcinoma. Needs further evaluation with a lateral CXR or a CT.

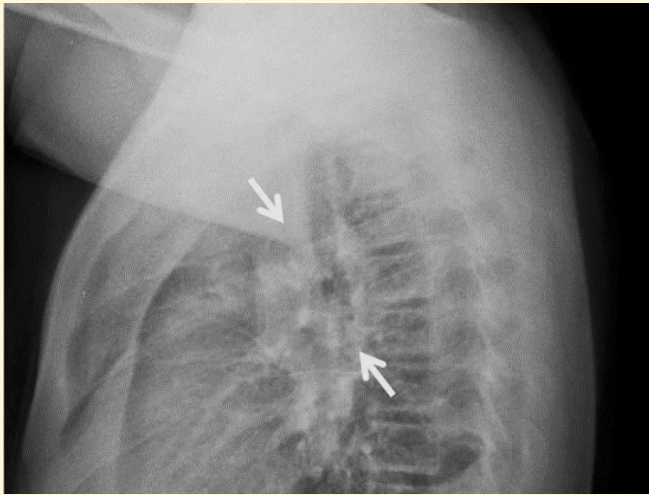
## GOLDEN S SIGN



Reversed S configuration –lower margin formed by central mass causing lateral bulge in mediastinal contour and upper margin by the displaced minor fissure due to right upper lobe collapse

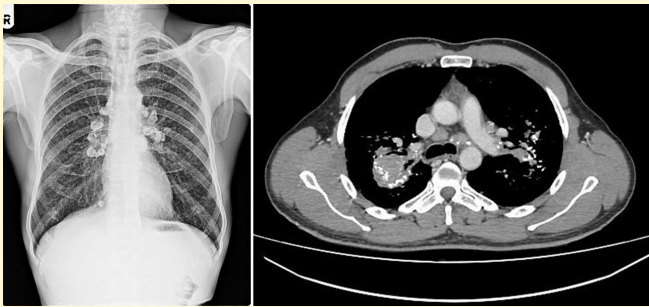


### DOUGHNUT SIGN



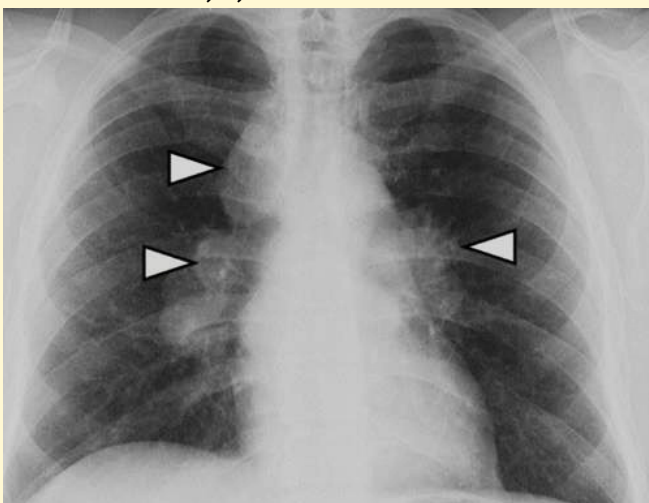
In lateral chest radiograph, it is reproduced by normal profiles of right and left pulmonary arteries and aortic arch anteriorly and superiorly and by lymphadenopathy (subcarinal, hilar, and retrocarinal nodes) inferiorly. Radiolucent center of the "doughnut" consists of the trachea and the bronchi for the upper lobes. This sign is frequently found in cases of tuberculosis and lymphoma.

### EGGSHELL CALCIFICATION SIGN



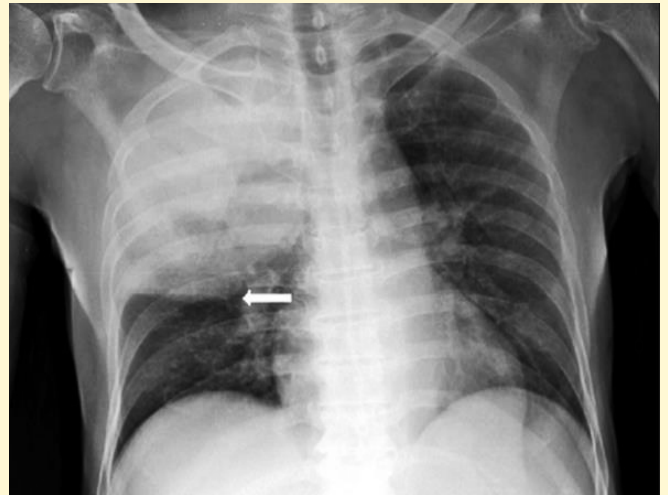
Calcification around the periphery of lymph nodes. Most commonly seen in silicosis and coal-worker's pneumoconiosis (3-6%), also seen in sarcoid (5%). Differentials on CXR include Pulmonary artery aneurysms and Calcification of pulmonary arteries from prolonged pulmonary arterial hypertension

### GARLAND OR 1, 2, 3 SIGN



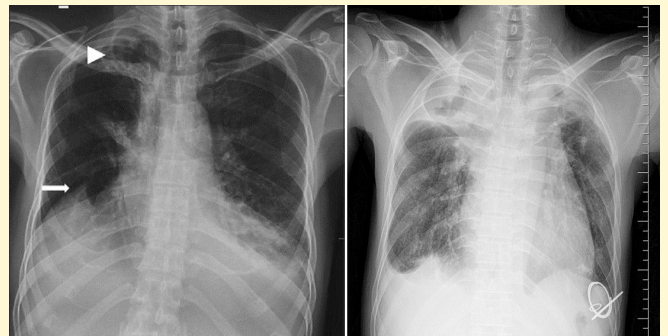
Enlarged right paratracheal and bilateral hilar nodes, classically described sign in sarcoidosis

### BULGING FISSURE SIGN



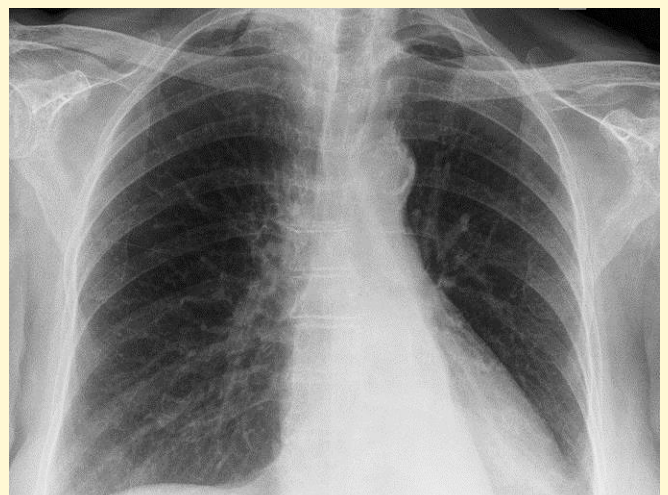
Classically described in right upper lobar pneumonia with Klebsiella. Hemophilus influenzae, tuberculosis and pneumococcal pneumonia, large lung abscesses, and lung neoplasms can also cause bulging fissure sign.

### JUXTAPHRENIC PEAK SIGN



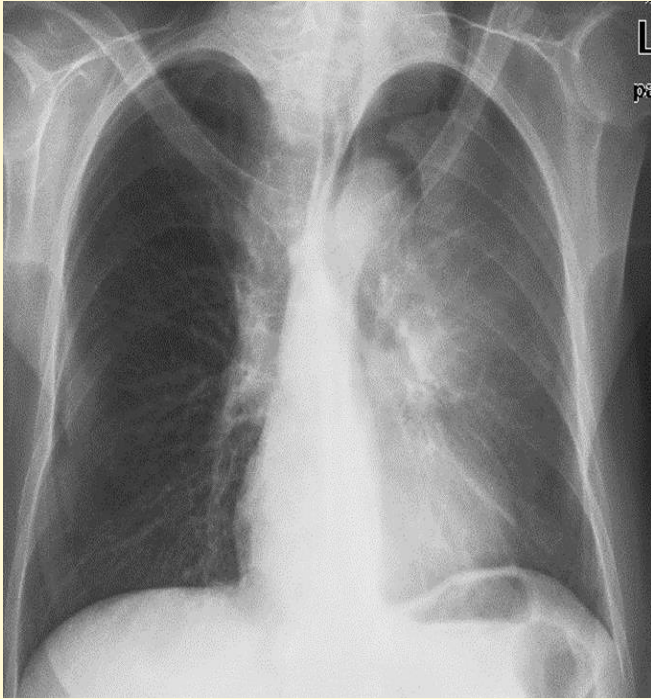
Peak arising from medial part of diaphragm- seen in upper or middle lobe collapse

### RETROCARDIAC SAIL SIGN



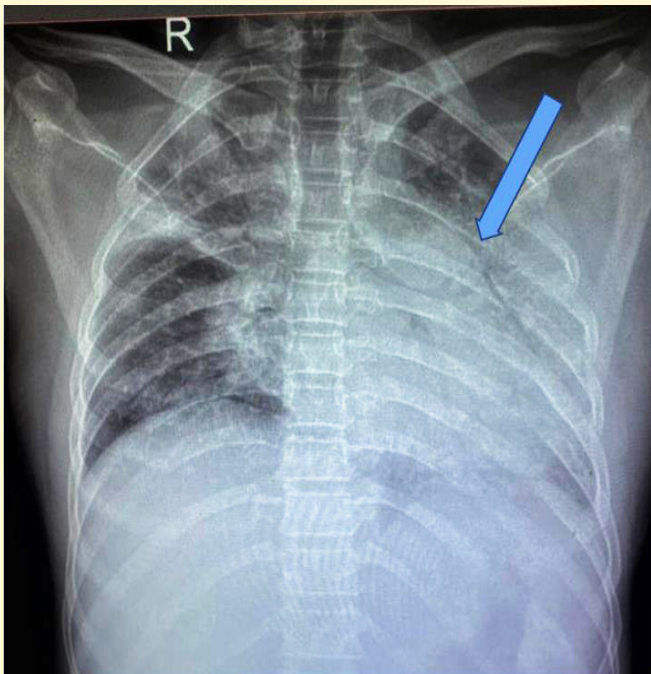
Retrocardiac triangular density -seen in left lower lobe collapse Characteristic appearance of left lower lobe collapse on a frontal chest radiograph with high specificity. The collapsed left lower lobe is medially displaced and appears as a triangular increased density superimposed on the heart shadow and resembles the sail of a ship. The heart border is not silhouetted, but the left hemidiaphragm is at least partially effaced.

## LUFTSICHEL SIGN



*In left upper lobe collapse there is a diffuse haziness in left upper and midzones which should also cause silhouetting of aortic knuckle. Visualisation of the aortic knuckle due to interposition of air containing lung ( hyperinflated superior segment of left lower lobe) in case of LUL collapse is called luftsichel sign. (luft means air, sichel means sickle).*

## AIR BRONCHOGRAM SIGN



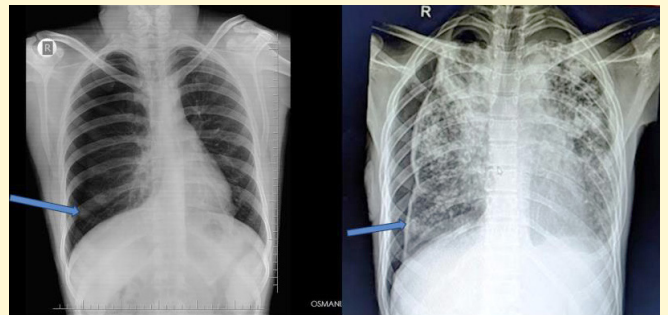
*Describes branching and tubular lucencies of bronchi seen in opacified lung.. Indicates that the pathology is parenchymal. It is most commonly seen in pneumonia, pulmonary edema and respiratory distress syndrome. Pulmonary lymphoma, bronchioalveolar carcinoma ,alveolar hemorrhage, sarcoidosis , interstitial fibrosis and post radiation fibrosis can also show this sign.*

## DEEP SULCUS SIGN



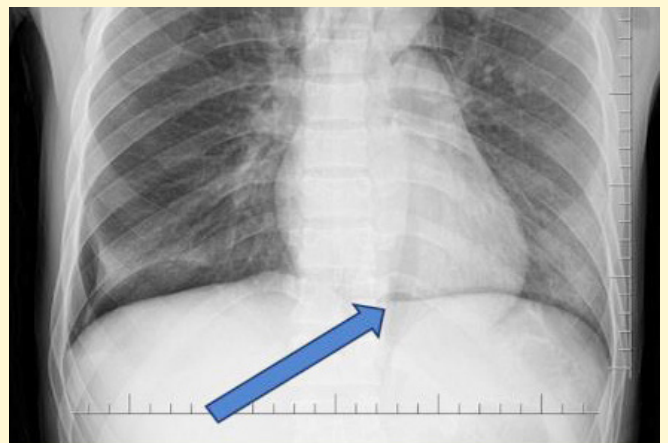
*Lucent and deeper right costophrenic angle – sign of pneumothorax on supine radiograph. This sign is seen in supine chest radiographs of pneumothorax in which air accumulates in the lateral costophrenic angle, which appears lucent and deep when compared to the other costophrenic angle.*

## VISCERAL PLEURAL WHITE LINE



*seen in pneumothorax due to separation of the visceral and parietal layers of the pleura by air, leading to visualization of a white line of visceral pleura in a plain X-ray Hence, it is called the visceral pleural white line. A skin fold might mimic visceral pleural white line; however, when traced, it tracks outside the lung field.*

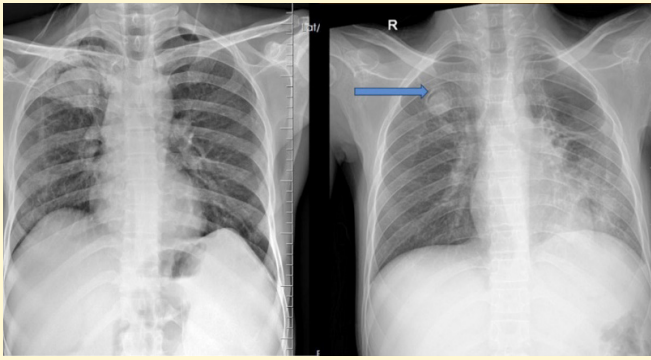
## CONTINUOUS DIAPHRAGM SIGN



*Seen in pneumomediastinum, as the air in mediastinum prevents the usual silhouetting of diaphragm by the heart*

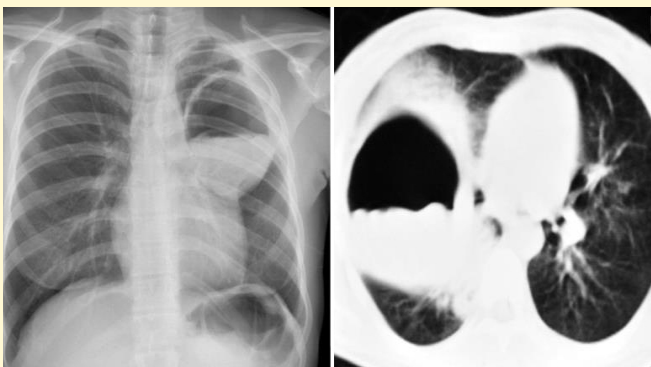


### AIR CRESENT SIGN



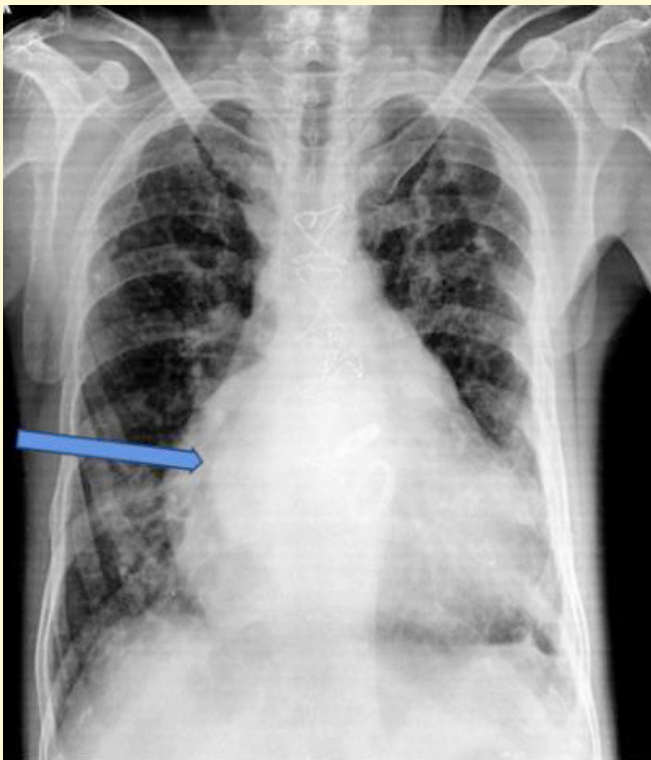
*Causes are invasive pulmonary aspergillosis – heralds recovery  
Tuberculous cavity and aspergillosis fungal ball – Monod sign  
cavitating neoplasms, bacterial lung abscesses, hydatid cyst*

### WATER LILLY SIGN



*Cystic cavitary lesion with wavy air fluid level*

### DOUBLE DENSITY RIGHT CARDIAC MARGIN



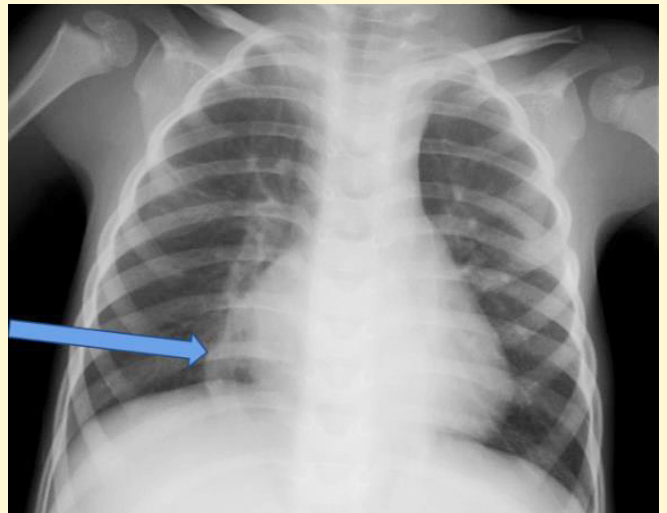
*Double cardiac border due to enlarged left atrium in mitral valve disease*

### SHAGGY HEART MARGIN



*Irregular interface between lung and heart borders- suggests  
interstitial lung disease*

### SCIMITAR SIGN



*Curvilinear opacity(anomalous pulmonary vein) extending along  
right paracardiac region , resembling a Turkish sword (scimitar)  
Scimitar syndrome, is characterized by a hypoplastic lung that  
is drained by an anomalous pulmonary vein into the systemic  
venous system*



**Dr Santhosh Reddy K. MD FNVIR(CMC Vellore)**  
Consultant Neuro & Vascular Interventional Radiology, Care Hospitals, Banjara hills.

## INTERVENTIONS IN ACUTE ISCHEMIC STROKE

Stroke is one of the leading causes of morbidity and mortality. More than 85 percent of strokes are ischemic strokes. Within minutes of oxygen deprivation neuronal death occurs resulting in irreversible injury of brain parenchyma termed as infarct core. The nonfunctioning tissue surrounding the infarct core is called as ischemic penumbra. The ischemic penumbra has just enough blood flow to avoid cell death. The conversion of ischemic penumbra is time and collateral circulation dependent. Collaterals can be large, like between the arteries of circle of willis or small pial – pial collaterals or between external carotid and internal carotid arterial branches. Multiple recent randomized control trials have shown the benefit of rapid reperfusion of ischemic penumbra resulting in reduced disability (1-3).

CT with CT angiography is the most employed imaging modality for diagnosing stroke. Certain centers do prefer MRI based protocol for diagnosing acute stroke. Once the diagnosis of ischemic stroke is made and large vessel occlusion is identified, the management depends mainly on two parameters: Duration and severity of symptoms and amount of infarct core.

Intravenous tissue plasminogen activator is administered for immediate restoration of blood flow to the ischemic brain parenchyma. According to current guidelines IV tPA is beneficial in patients presenting in less than 3-4.5 hours of duration of symptoms. Endovascular treatment is by mechanical thrombectomy and should be offered to all the patients regardless of Intravenous tPA

administration. The thrombus is physically removed by mechanical thrombectomy leading to immediate reperfusion. Based on data from recent trials mechanical thrombectomy is offered to patients presenting upto 24 hours after symptom onset. The selection of patients is based on multiple factors, imaging findings being Large vessel occlusion and salvageable area. Other important factors are baseline functional status, NIHSS score, prestroke disability(mRS).

Patients who are presenting within six hours, called as early window, mechanical thrombectomy is standard of care. Perfusion imaging is not needed. Either CT with CT angiography or MRI with MR angiography are sufficient to take a decision. The extended window period (6-24hrs) is primarily based on two trials DAWN and DEFUSE3. Perfusion imaging or MRI is mandatory to select the patients for mechanical thrombectomy. According to DEFUSE3 trial, the following criteria need to be met: Infarct volume should be less than 70 ml, A ratio of volume of ischemic tissue to infarct volume of 1.8 or more, an absolute volume of potentially reversible ischemi (penumbra) of 15 mL or more(4). In the DAWN trial the following criteria need to be met: In patients 80 years or older, with an NIHSS of 10 or higher, infarct volume less than 21 mL., In patients younger than 80 years, with an NIHSS between 10 and 19, infarct volume less than 31 mL., In patients younger than 80 years, with an NIHSS of 20 or higher, infarct volume between 31 and 51 mL(5). Basically, according to both these trials, patients should have a mismatch between the severity of the clinical deficit and the infarct volume.



Certain recent studies have shown benefit of transferring the stroke patient directly to Angio suite without imaging where a dynaCT can be done before intervention to rule out hemorrhage (6).

Recent advancements in hardware from mechanical thrombectomy had made significant improvement in success rates of thrombectomy. Few such devices being Large bore reperfusion catheters with 0.071 – 0.072 inch inner diameters which can be navigated distally with ease. The advancement is also in the stent retriever technology where the cell construction is rapidly evolving to improve the first pass success rate and at the same time preventing distal clot migration. Vessels beyond the M1 segment of MCA like M2,M3 are now termed medium vessel occlusion and with the advancement in thrombectomy devices, are being targeted for recanalization.

### Case 1:

A 39-year-old lady with no comorbidities presented with left upper limb ischemic pain. Initial CT angiography revealed thrombus in left proximal subclavian artery extending into the origin of left vertebral artery. She did not have any neurological symptoms at the time of presentation. She was advised thrombectomy for subclavian and vertebral thrombus, however she did not turn up for the procedure. She came to ER 72 hours later with drowsiness and altered sensorium which started two hours ago. On examination anisocoria of pupils was seen. MR brain stroke protocol revealed acute infarct in left PICA territory involving the cerebellar hemisphere and left thalamus. Basilar artery occlusion was noted on MR angiography. She was immediately taken up for mechanical thrombectomy. Right common femoral artery access was obtained and 6F sheath was placed. Angiogram confirmed basilar artery occlusion. The left subclavian thrombus was seen migrated into axillary artery. The 6F short sheath was exchanged for Neuron Max guide and was navigated into left proximal vertebral artery. The thrombus was negotiated with microcatheter(PX slim) and Wire(Synchro 14). Red 68 reperfusion catheter was navigated up to the proximal portion of the clot and was connected to Penumbra aspiration system. After two passes a long firm clot was aspirated. Post aspiration angiogram showed complete recanalization of the basilar artery and complete filling of its branches. She was

shifted to intensive care unit and was extubated the following day. She did not develop any new onset symptoms and MRI 24 hours later showed no progression of infarcts and there was no reperfusion injury. She underwent transbrachial thrombectomy for left axillary artery thrombus three days later. Her symptoms gradually improved over five days and was discharged with no neurological deficits.



Figure 1: CT angiography reformatted image showing thrombus in left proximal subclavian artery extending into the left vertebral artery origin.

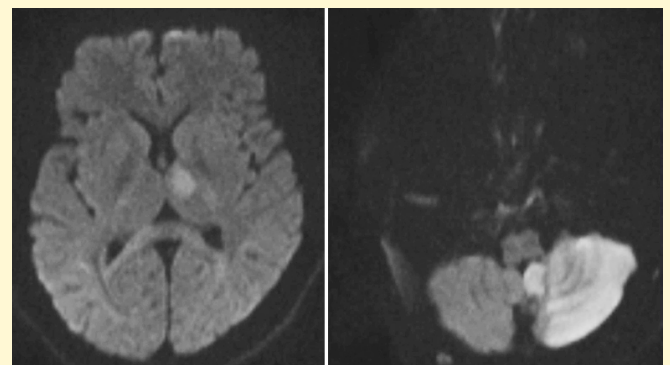


Figure 2 and 3: DWI axial images showing acute infarcts in left PICA territory and left thalamus.

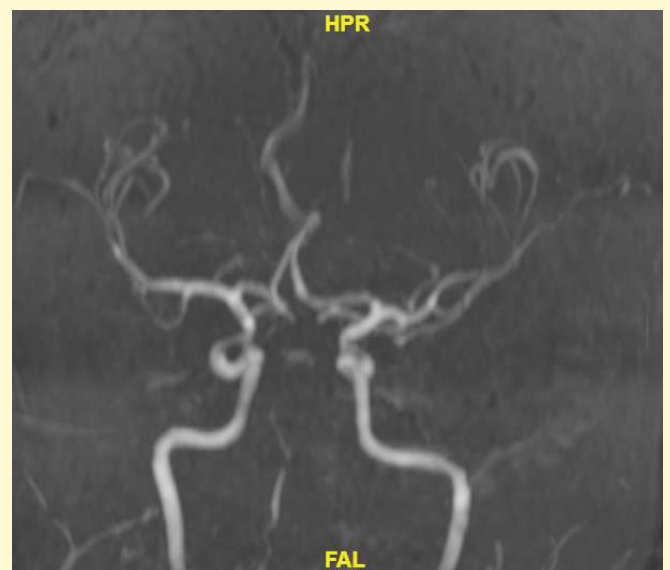


Figure 4: TOF MR angiography maximum intensity projection image showing no flow related signal in basilar artery.



Figure 5: Frontal DSA projection of left vertebral injection showing no opacification of left distal vertebral and basilar artery.

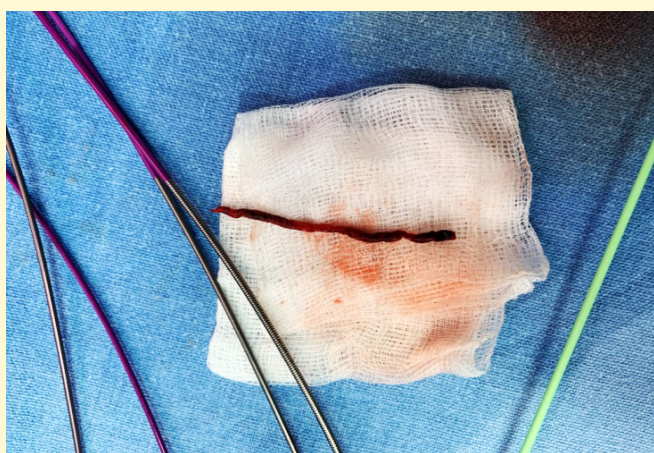


Figure 6: Retrieved clot.

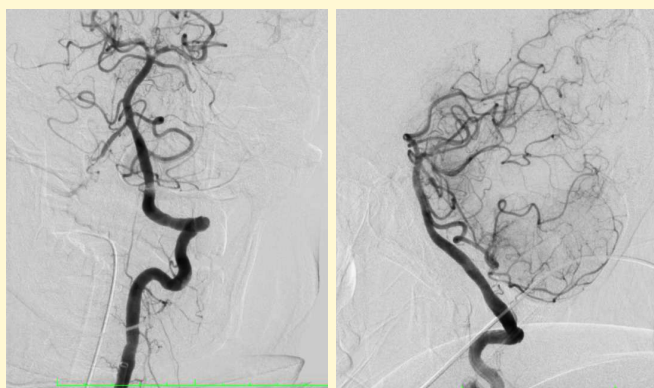


Figure 7&8: Frontal and lateral DSA post thrombectomy vertebral injections showing complete recanalization of basilar artery with opacification of all its branches.

## Case 2:

A 41-year-old gentleman with no prior comorbidities presented with acute right hemiplegia and aphasia who was last seen normal two and half hours ago. On examination power in right upper limb is 0/5, Right

Lower limb is 1/5, NIHSS score was 16. MRI brain stroke protocol revealed acute infarct in left MCA territory involving left insula and adjacent frontal operculum. MR angiography showed cut off of left M1 MCA. He was thrombolysed and immediately taken of thrombectomy. Right groin access was obtained and 6F short sheath was placed. Angiogram confirmed left M1 occlusion. Reed 72 reperfusion catheter was navigated upto the occluded segment coaxially over XT 27 microcatheter and Synchro wire combination. Aspiration was done using penumbra aspiration system. A firm clot was retrieved after two passes. Post thrombectomy angiogram showed complete recanalization of left MCA territory (mTICI3).

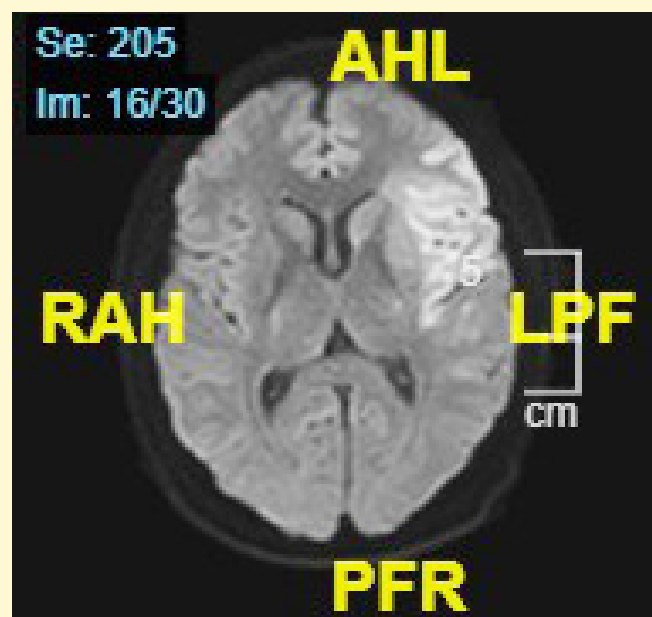


Figure 1: Diffusion weighted MRI image showing acute infarct in left MCA territory involving insular cortex and adjacent frontal and temporal operculum.



Figure 2: MR angiography maximum intensity projection image showing cut-off of left M1 middle cerebral artery.

Angiography of left carotid bifurcation revealed carotid web. He was shifted to ICU and CT following day did not reveal any reperfusion injury. He gradually



improved over three days. He was discharged with 3+ plus power in right upper and lower limbs. Further workup did not reveal any other etiology of stroke. Carotid web was assumed to be the cause for embolus and was advised endarterectomy.

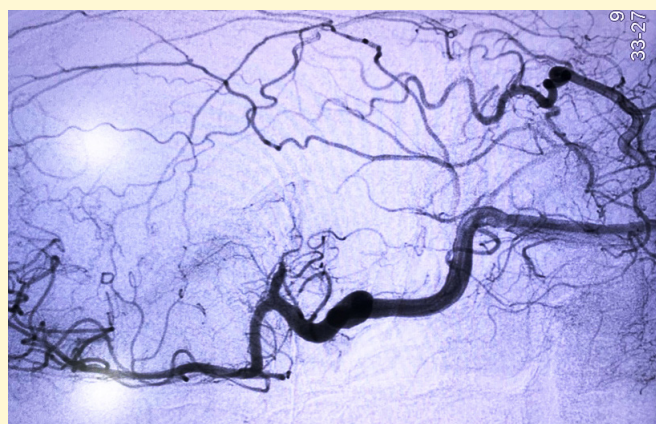


Figure 3: DSA image of left carotid injection showing occlusion of left M1 middle cerebral artery.

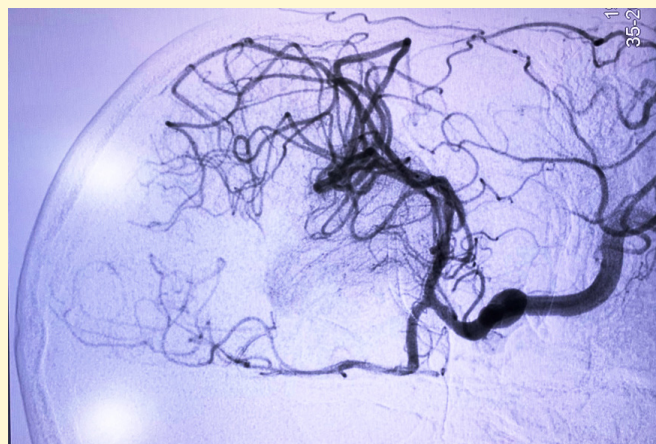


Figure 4: DSA image of left internal carotid artery after aspiration thrombectomy showing complete revascularisation of left MCA

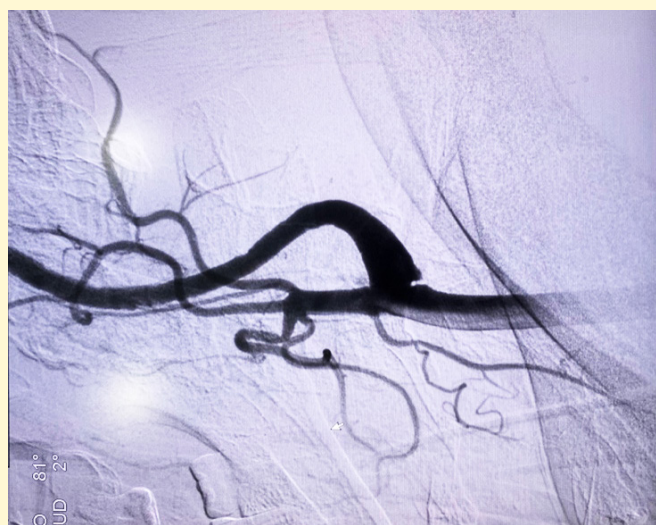


Figure 5: DSA image of left carotid bifurcation showing an intraluminal shelf like filling defect in the left carotid bulb – “web”.

### Case 3:

A 43-year-old gentleman presented with right hemiplegia (NIHS 14), he was last seen normal two hours ago. MRI brain revealed acute infarct in left corona radiata. MR angiography revealed occlusion of superior division of left MCA. He was immediately taken up for mechanical thrombectomy. After securing right CFA access, angiogram confirmed left MCA superior division occlusion. Neuron max guide was navigated into left ICA. The thrombus was negotiated with XT 27 microcatheter and synchro wire, once distal patency is confirmed, a 4x40 mm Solitaire stent retriever was deployed across the thrombus and clot was retrieved after first pass. Complete recanalization of the superior division and its territory was seen. The patient showed complete recovery immediately after the procedure.

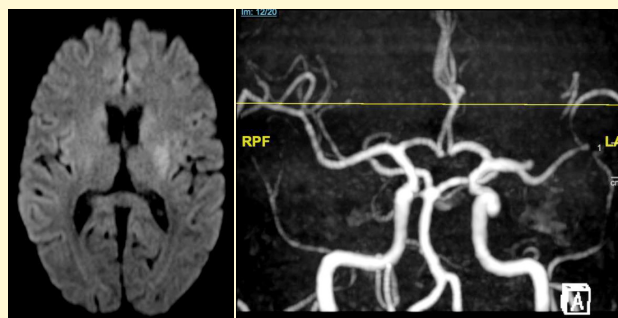


Figure 1 and 2: DWI image showing acute infarct in left lentiform nucleus. MRA frontal MIP projection showing cut off of superior division of left MCA.

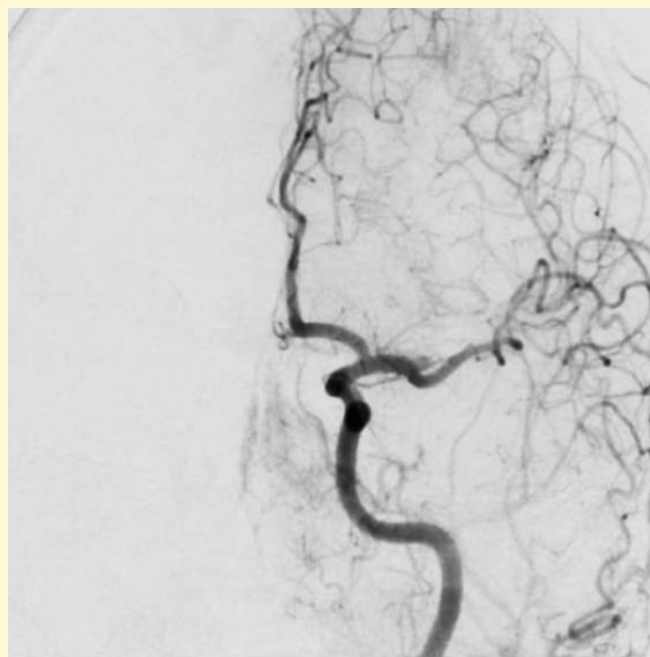
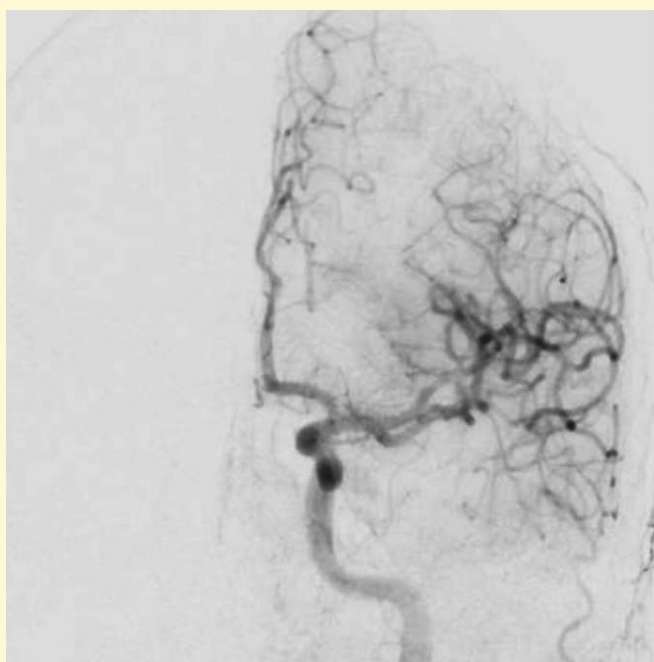


Figure 3: Frontal DSA projection of left ICA injection showing cutoff of left MCA superior division.



*Figure 4: Frontal projection of left ICA roadmap showing deployed stent retriever across the occluded left MCA superior division.*



*Figure 5: Frontal DSA projection of left ICA injection after thrombectomy showing complete filling of left MCA and its branches.*

Stroke causes significant morbidity and mortality. There is still lack of awareness among the treating physicians as well as general population about the concept of window period and benefits of thrombectomy. In the above discussed examples, timely intervention has prevented neuronal loss and thereby preventing morbidity. Increasing awareness among the people regarding the available treatment options can minimize the burden of stroke. “TIME IS BRAIN” should never be forgotten.

## References:

1. Powers WJ, Rabinstein AA, Ackerson T, et al; American Heart Association Stroke Council. 2018 guidelines for the early management of patients with acute ischemic stroke: a guideline for healthcare professionals from the American Heart Association/American Stroke Association. *Stroke* 2018;49(03):e46–e110
2. Zerna C, Thomalla G, Campbell BCV, Rha J-H, Hill MD. Current practice and future directions in the diagnosis and acute treatment of ischaemic stroke. *Lancet* 2018;392(10154):1247–1256
3. Goyal M, Menon BK, van Zwam WH, et al; HERMES Collaborators. Endovascular thrombectomy after large-vessel ischaemic stroke: a meta-analysis of individual patient data from five randomized trials. *Lancet* 2016;387(10029):1723–1731
4. Albers GW, Marks MP, Kemp S, et al; DEFUSE 3 Investigators. Thrombectomy for stroke at 6 to 16 hours with selection by perfusion imaging. *N Engl J Med* 2018;378(08):708–718
5. Nogueira RG, Jadhav AP, Haussen DC, et al; DAWN Trial Investigators. Thrombectomy 6 to 24 hours after stroke with a mismatch between deficit and infarct. *N Engl J Med* 2018;378(01):11–21
6. Mendez B, Requena M, Aires A, et al. Direct transfer to Angio-Suite to reduce workflow times and increase favorable clinical outcome. *Stroke* 2018;49(11):2723–2727



# INTERESTING CASES



**Dr. Sai Harshini**

Kamineni institute of Medical Sciences.

## A RARE CASE OF LIPOMA ARBORESCENS

**Dr. T. Venkat Kishan<sup>1</sup>, Dr. A. Sai Harshini<sup>2</sup>, Dr. Y. Hrudaya<sup>3</sup>, Dr. Kranthi Kumar<sup>4</sup>,  
Dr. Sudheer Reddy<sup>5</sup>, Dr. Sai Charan<sup>6</sup>, Dr. Sravan Reddy<sup>7</sup>**

Professor<sup>1</sup>, Resident<sup>2</sup>, Resident<sup>3</sup>, Resident<sup>4</sup>, Resident<sup>5</sup>, Resident<sup>6</sup>, Resident<sup>7</sup>

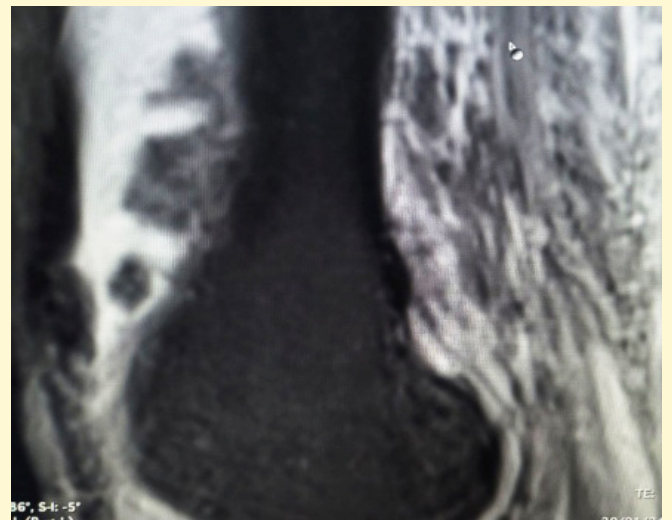
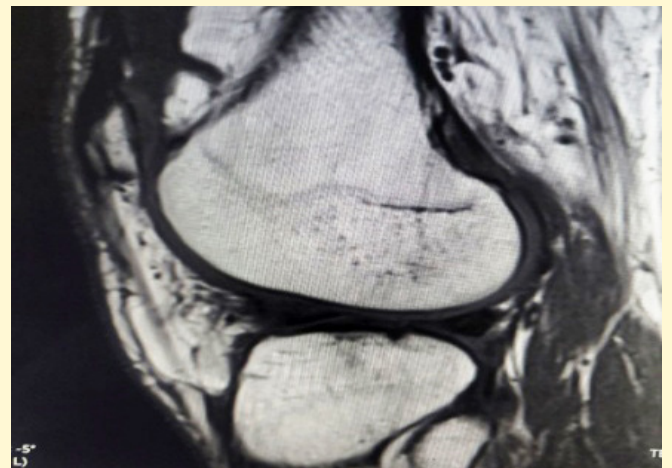
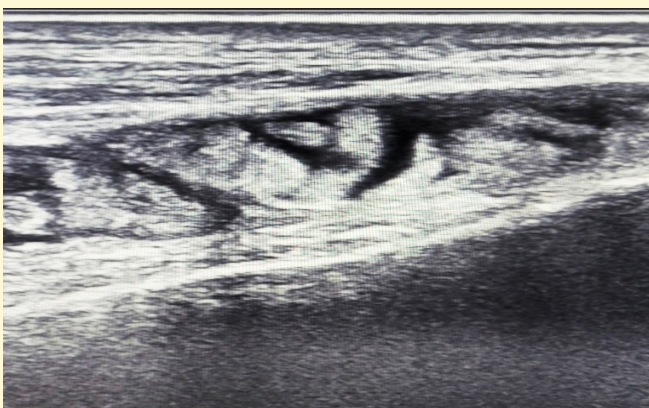
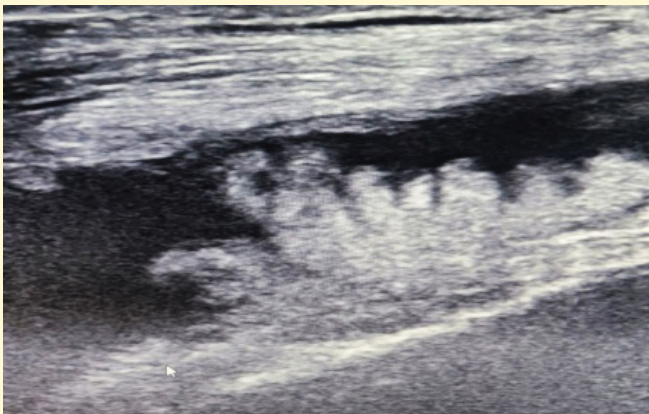
### Case report:

A 70yr old man was referred by department of orthopedics with complaints of pain and swelling in left knee since 4 months. There was no history of trauma or other joint pain. On examination, there was an evident knee swelling with no redness or tenderness. Patient was advised ultrasonography and MRI of left knee.

### Imaging findings:

On ultrasonography, there were multiple hyperechoic frond like projections arising from synovium with mild joint effusion noted in the suprapatellar recess.

On MRI, T1 W axial and sagittal images showed hyperintense thickened synovium with villous and globular configuration noted in suprapatellar recess giving an appearance of classical frond-like projections with surrounding hypointense joint effusion. PD-FS sagittal and axial images showed suppression of T1 hyper intense tissue (fatty synovium). Based on the above imaging findings, a diagnosis of lipoma arborescens was made.

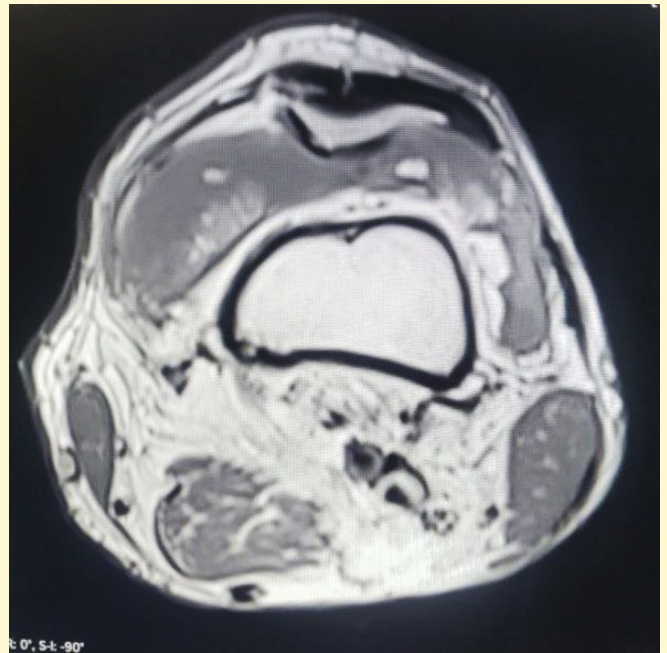
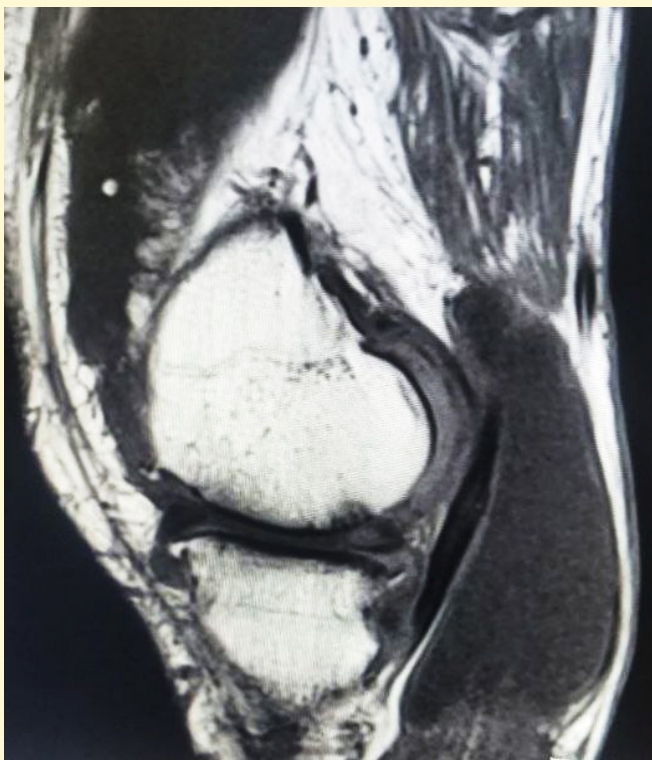


## Case discussion:

Lipoma arborescens is a rare benign articular lesion arising from subsynovial villous proliferation of mature fat cells(1). Arborescence is a Latin term for “tree-like appearance”, which classically simulates the frond-like morphology of this condition . Though the exact cause is unknown, it is stated that chronic traumatic or inflammatory stimuli can trigger nonspecific reactive synovial fatty proliferation, which may lead to this condition . These stimuli may be degenerative disease, trauma, meniscus injury and synovitis, usually seen in elderly patients(2).

Plain radiography is of little value however may demonstrate mass-like soft tissue opacity with lucent areas of fat globules in intra or periarticular tissue. Ultrasonography depicted echogenic, frond-like hypertrophy of the synovium in the suprapatellar recess. CT scan would demonstrate low density heavy proliferation with frond-like projection in the bursa and periarticular tissue. MR is the investigation of choice, which shows high T1 and T2 signals in soft tissue mass with classical frond-like projections. The Signals are suppressed in STIR and fat saturation sequences(3).

Due to its benign indolent course, no surgical treatment is required; however, surgery may be considered in complex cases with complications. An open or arthroscopic synovectomy is the procedure of choice.



## Differential Diagnosis:

1. Loose bodies - can be differentiated by appearance of hypointense on all sequences and have a peripheral rim.
2. Rice bodies - can be differentiated by appearance of numerous small sized, mobile lesions of intermediate signal intensity.
3. Synovial osteochondromatosis- appear as multiple nodules of intermediate signal intensity(hyaline cartilage) noted in subsynovial connective tissue. May calcify centrally which appear as hypo intense punctuate foci.
4. Synovitis- can be differentiated by presence of thickened synovium that doesn't suppress on fat saturation sequences.

## Bibilography:

1. Ryu KN, Jaovisidha S, Schweitzer M, et al MR imaging of lipoma arborescens of the knee joint. AJR Am J Roentgenol 1996;167:1229-32
2. kushima K, Ueda T, Kudawara I, et al Lipoma arborescens of the knee as a possible cause of osteoarthritis. Orthopedics 2001;24:603-5.
3. Sanamandra S. K., Ong K. O. Lipoma arborescens. Singapore Medical Journal. 2014;55(1):5-11. doi: 10.11622/smedj.2014003. [Pubmed]





**Dr. Katakam Lakshmi Prathyusha**  
Osmania Medical college

## Secondary Hyperparathyroidism with brown tumours in a chronic kidney disease patient: A case report

Katakam Lakshmi Prathyusha<sup>1</sup>, Nadeem Ahmed<sup>2</sup>, Sunitha Bajaj<sup>3</sup>, Supraja<sup>4</sup>

Resident<sup>1</sup>, Professor<sup>2</sup>, Professor and HOD<sup>3</sup>, Assistant professor<sup>4</sup>,  
Department of Radiodiagnosis, Osmania Medical college, Hyderabad

### Case report:

A 19-year-old male patient known case of end stage renal disease on dialysis with secondary hyperparathyroidism complained of severe bilateral facial swelling, which started insidiously about 3 years ago. He complained of pain during mastication and speech difficulties. The physical examination showed a mass in the palatum durum and mandible. The mass has rough surface, hard-solid consistency, with no tenderness.



Laboratory workup showed elevated creatinine, urea, alkaline phosphatase ( $>1500\text{U/L}$ ), parathormone or serum PTH ( $>2000\text{pg/ml}$ ), phosphate. Total and ionic serum calcium levels were decreased.

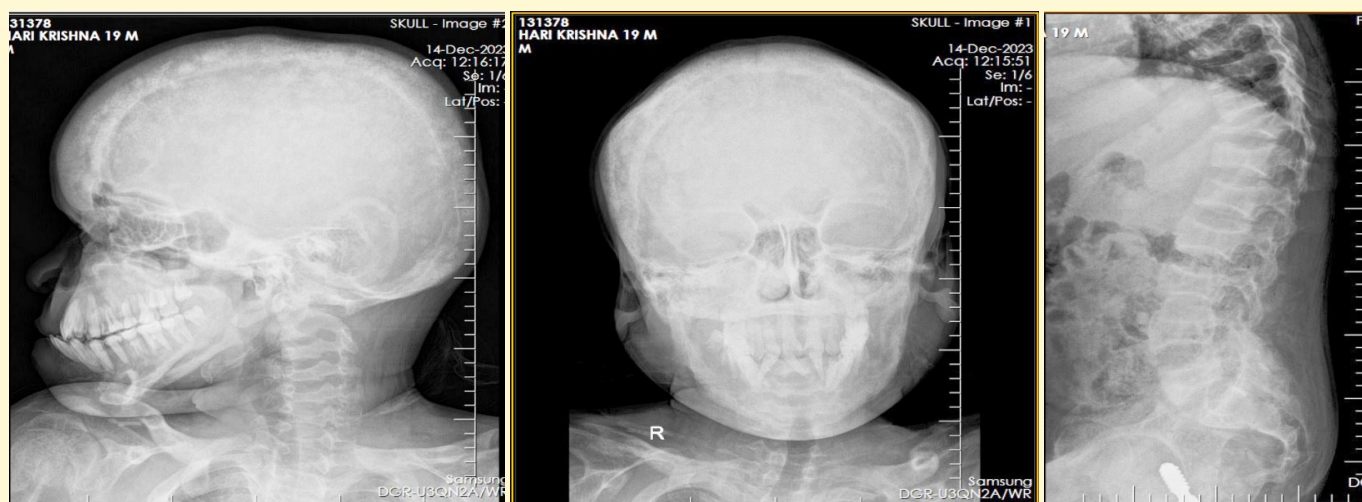
An abdominal ultrasound (US) revealed decreased size of bilateral kidneys with grade two RPC changes, alongside multiple bilateral cysts noted. There were no signs of urinary obstruction.

### Discussion:

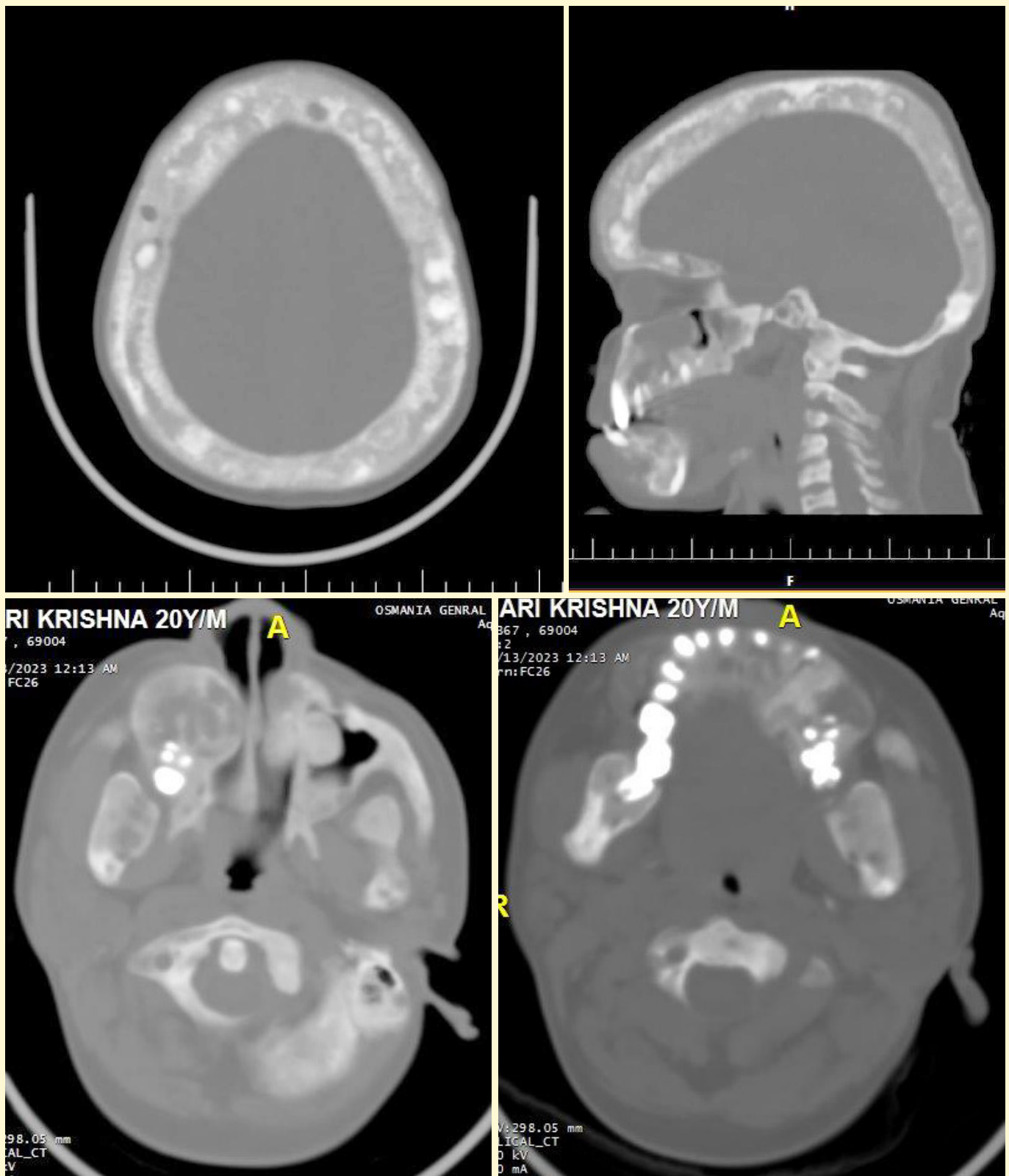
Hyperparathyroidism arises from an excess of parathyroid hormone in the body and can manifest in primary, secondary, or tertiary forms.

### Types:

Primary hyperparathyroidism is attributable to intrinsic parathyroid factors such as parathyroid adenoma, parathyroid hyperplasia, and parathyroid carcinoma.



X-ray, (A) AP and (B) lateral view of skull revealed thickened calvarium with multiple tiny well-defined lucent and sclerotic foci noted diffusely in the skull giving it mottled appearance. (C) X-ray lateral view of spine revealed diffuse decrease in bone density with biconcave appearance of vertebrae and complete collapse of D11 vertebra.



*(D,E)CT scan of skull revealed thickened calvarium with multiple lytic and sclerotic foci and (F,G) multiple well defined expansile lytic lesions involving the mandible and bilateral maxillary process of hard palate.*

Secondary hyperparathyroidism is induced by chronic hypocalcemia, with renal osteodystrophy being the predominant cause (other factors include malnutrition and vitamin D deficiency), resulting in parathyroid hyperplasia.

Tertiary hyperparathyroidism involves autonomous parathyroid adenoma triggered by the prolonged overstimulation of hyperplastic glands in cases of renal insufficiency.



**Laboratory findings include:**

|           | Primary Hyperparathyroidism | Secondary Hyperparathyroidism | Tertiary Hyperparathyroidism |
|-----------|-----------------------------|-------------------------------|------------------------------|
| Calcium   | ↑                           | ↓/N                           | ↑                            |
| PTH       | ↑                           | ↑                             | ↑↑                           |
| Phosphate | ↓                           | ↑/N                           | ↑                            |

**Imaging findings:**

Conventional radiography is usually sufficient to demonstrate its characteristic features: generalized osteopenia; subperiosteal, subchondral, and cortical bone resorption; brown tumours; and soft-tissue and cartilage calcifications. Subperiosteal resorption is particularly well demonstrated on radiographs of the hands, where it usually affects the radial aspects of the middle phalanges of the middle and index fingers. Commonly, subchondral bone resorption is present resulting in depression of overlying articular cartilage. Also characteristic of this condition is resorption of the acromial ends of the clavicle. Another characteristic feature is loss of the lamina dura around the tooth socket, which normally is seen as a thin sharp white line surrounding the peridental membrane that attaches the tooth to bone. In the skull, there is a characteristic mottling of the vault, which yields a “salt-and-pepper” appearance.

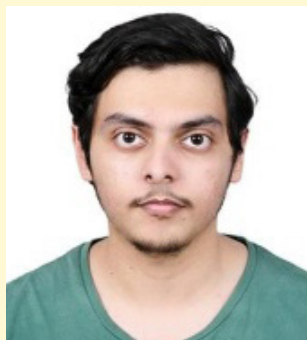
Brown tumours are also known as osteitis fibrosa cystica that results from sustained high levels of PTH and high rates of bone reabsorption. They are either isolated or multiple osteolytic lesions, with progressive growth, cystic morphology, and the ability to shape and erode the cortical bone without the major involvement of the adjacent soft tissues. Histologically, multinucleated osteoclast-like giant cells are visible with invasion and destruction of the trabecular bone, together with a stromal component constituted by mononuclear cells. The nomenclature of brown tumours is related to the macroscopic red-brown colour derived from foci of hemosiderin and secondary hemorrhage.

**Conclusion:**

In this case report, we have described a case of secondary hyperparathyroidism (SHPTH) in end stage renal disease patient with brown tumours in maxilla and mandible without adequate response to calcimimetic therapy. Surgical option will be assessed during follow up of patient.

**Reference :**

- 1 Soundarya, N; Sharada, P1; Prakash, Nilima2; Pradeep, GL2Cite: Bilateral maxillary brown tumours in a patient with primary hyperparathyroidism: Report of a rare entity and review of literature. Journal of Oral and Maxillofacial Pathology 15(1):p 56-59, Jan-Apr 2011.
2. Diani Kartini,1Maria K. Siswiandari,1Gunawan Wibisana,1Erwin D. Yulian,1Ahmad Kurnia,1Sonar S. Panigoro,1Azdi Z. Albar,1and Muchlis Ramli1: Craniofacial Brown Tumor in Patients with Secondary Hyperparathyroidism to Chronic Renal Failure: Report of Two Cases in CiptoMangunkusumo Hospital. Published 12 Sept 2018
3. Pradhuman Verma, Kanika Gupta Verma,1 Dinesh Verma,2 and Nitin Patwardhan3: Craniofacial brown tumor as a result of secondary hyperparathyroidism in chronic renal disease patient: A rare entity” Oral Maxillofac Pathol. 2014 May-Aug; 18(2): 267-270. Doi: 10.4103/0973-029X.140779, PMCID: PMC4196298 PMID: 25328310.



**Dr. Muatasim Mirza**

Deccan college of medical sciences

## A RARE SIMULTANEOUS OCCURENCE OF LIVER AND OVARIAN HYDATID CYSTS: A CASE REPORT

**Dr. Muatasim Mirza<sup>1</sup>, Dr. Sravan Kumar<sup>2</sup>**

<sup>1</sup>Second year resident, Deccan College of Medical Sciences.

<sup>2</sup>Head of Department, Dept. of Radiology, DCMS

### Case Report:

A 53y old lady presented with right hypochondriac pain associated with nausea and 2 episodes of non-bilious vomiting. Her hemoglobin was 12.5g/dl, WBC count was mildly raised – 12400 cells/mm<sup>3</sup> with a normal platelet and differential count. LFT and RFT were normal with negative viral markers. The patient was then referred to the department of Radiodiagnosis for an abdominal ultrasound which revealed a 64x69mm heteroechoic, ill-defined lesion within the left lobe of liver and multiple, anechoic, cystic lesions in bilateral adnexal regions, largest measuring 58x56mm on the left side.



*Fig. A) Ultrasonographic image showing large heteroechoic lesion with multiple tiny cystic areas within it, in the left lobe of liver.*

Contrast enhanced Abdominal CT scan revealed a large, well-defined cystic mass lesion in segments II and III of the liver with thin peripheral rim of calcification and enhancing internal septations. There was no upstream or downstream biliary dilatation thus decreasing the likelihood of cystadenoma. Large hypodense cystic lesions in both ovaries with daughter cysts of even lower attenuation within the

mother cysts were noted. Based on these findings, a diagnosis of Liver hydatid cyst with bilateral ovarian daughter cysts was made.



*Fig. B) Ultrasonographic image showing anechoic cystic SOL in left adnexal region with few daughter cysts adjacent to it.*

An open cystectomy was done in this case. Intraoperatively, the left ovarian cyst showed mild adhesions with the sigmoid colon for which adhesiolysis and bilateral ovarian cystectomy was done.

### Discussion:

Pelvic echinococcosis symptomatology is non-specific and can include abdominal tumefactions, abdominal pain, menstruation irregularities, infertility and urinary disturbances. Hydatid cysts involving both the liver and ovary are rare. Pelvic involvement accounts for <5% of the cases. It is usually secondary to systemic dissemination or intra-peritoneal spread from a ruptured hepatic cyst. The ovarian hydatid cyst may simulate simple



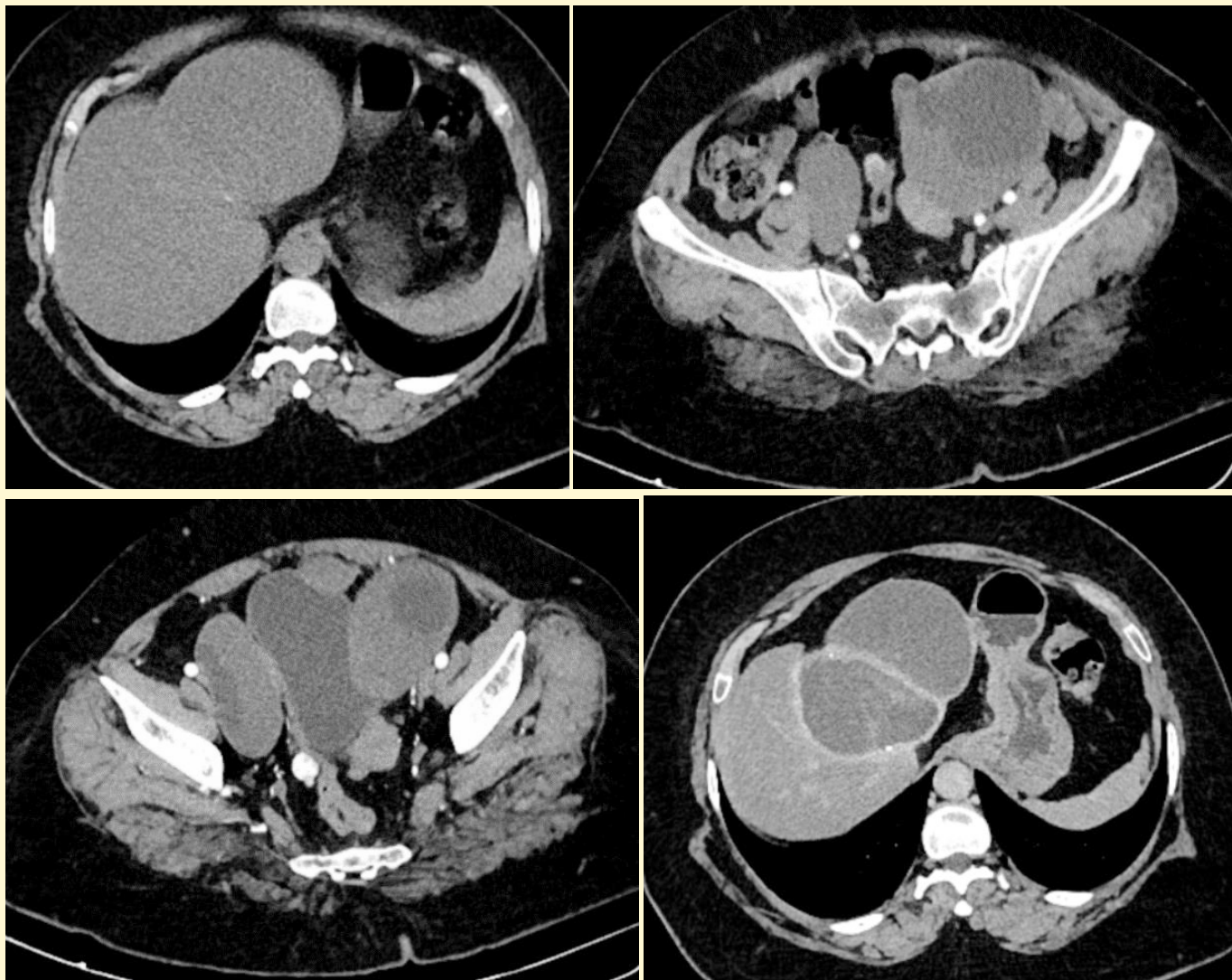


Fig. C) Axial sections of plain CT showing large hypodense cystic lesion with thin rim of calcification in left lobe of the liver. Fig D) Enhancement of walls and septations is evident on delayed phase post-contrast scan. Fig. E and F) Large ovarian cysts containing multiple daughter cysts of lower attenuation.

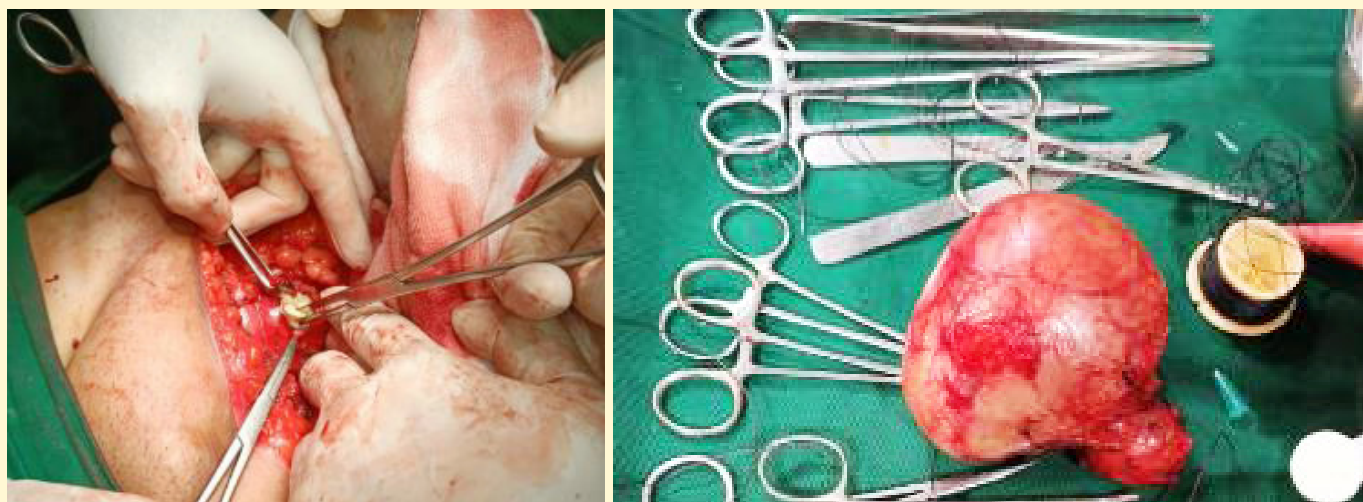


Fig. G and H) Intraoperative images

ovarian cysts or cystic tumors. The patient may present as an emergency with life-threatening systemic anaphylaxis if the cyst ruptures into the peritoneum.

### **Radiological Features:**

- The larval stage of *Echinococcus* species with scolices appears as “hydatid sand” on sonography.

- On slight disturbance, the hydatid sand gets dispersed in the cyst and appears as falling snowflakes known as “snowstorm” sign.
- On maturation, the endocyst separates from the wall of the cyst and appears as an undulating floating membrane. Complete separation of endocyst is sonographically described as a “water lily sign.”

Definite diagnosis of hydatid disease is through histopathological examination of the fluid and histology.

## References:

1. Abdullah A, Alsafi R, Iqbal J, et al. unusual case of pelvic hydatid cyst of broad ligament mimicking an ovarian tumour. JMM Case Rep 2016;3(4):e005057. DOI: 10.1099/jmmcr.0.005057.
2. Aksu MF, Budak E, Ince U, Aksu C. Hydatid cyst of the ovary. Arch GynecolObstet 1997;261(1):51–3.
3. ] C. Sohrabi, et al., The SCARE 2023 guideline: updating consensus Surgical Case Report (SCARE) guidelines, Int. J. Surg. 109 (2023) 1136–1140, <https://doi.org/10.1097/JS9.0000000000000373>.





**Dr. S. Rohini**

Osmania Medical College

## “Unraveling the Enigma: A Comprehensive Case Report on Lymphocytic Hypophysitis”

**Dr. S. Rohini, Dr. Sushma Chary<sup>2</sup>, Dr.Sunita Bajaj<sup>3</sup>,  
Dr. Nadeem Ahmed<sup>4</sup>, Dr. Vijay pavan<sup>5</sup>**

Resident<sup>1</sup>, Assistant Professor<sup>2</sup>, Professor and HOD<sup>3</sup>, Professor<sup>4</sup>, Associate Professor<sup>5</sup>,  
Department of Radio-diagnosis, Osmania Medical College

### Case Report

A 48-year-old female patient presented with insidious and progressively worsening headaches over the past few months, accompanied by fatigue. Additionally, the patient reported increasing thirst (polydipsia) and excessive urination (polyuria) noticed over last few weeks.

There was no significant history of head trauma, infections or recent surgeries, and the patient had no known chronic medical conditions. Medication history revealed no current medications impacting hormonal or pituitary function, and there was no family history of endocrine disorders or pituitary issues. The patient had a sedentary job with limited physical activity and no significant exposure to toxins or environmental hazards.

Water deprivation test was positive indicative of diabetes insipidus .

MRI brain was done to rule out a central cause of diabetes insipidus.

### Imaging Findings:

On MRI homogenous T1 hypointense , T2/FLAIR hyperintense fusiform thickening of hypophysis with a maximum width of 7 mm, with homogenous enhancement on post contrast with no adjacent dural enhancement. Notably, the post-pituitary bright spot is conspicuously absent on T1.

The Gutenberg scoring, quantifying the degree of hypophysial involvement, is recorded at -8.

These radiological features collectively signify a distinct pattern indicative of lymphocytic hypophysitis. The fusiform thickening, homogenous

enhancement, and the absence of the normal bright spot contribute to the overall characterization of the inflammatory process affecting the pituitary gland and stalk in this particular case.

Gutenberg scoring was developed to correctly identify lymphocytic hypophysitis.

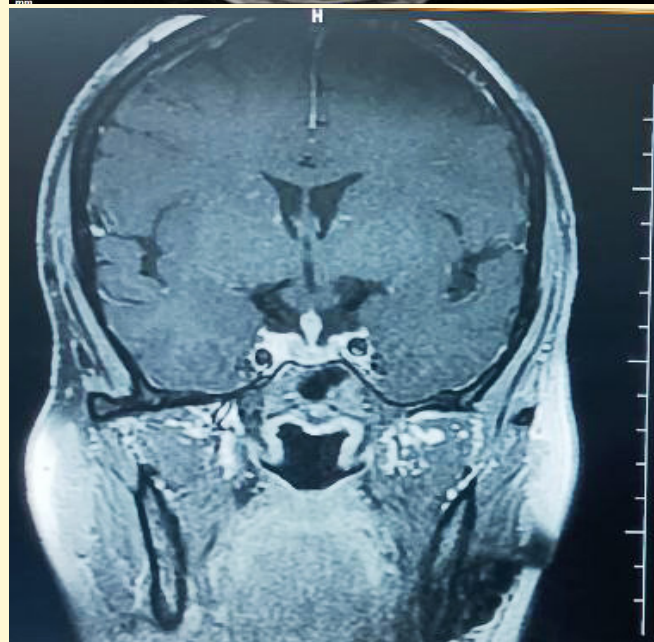
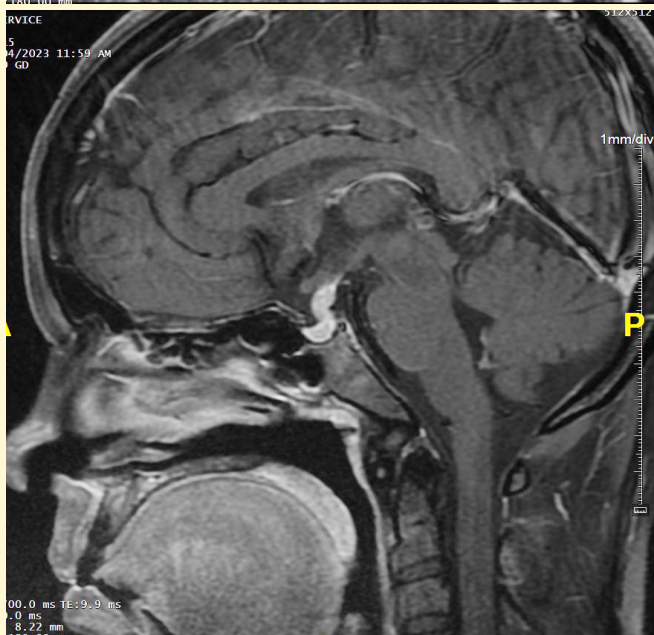
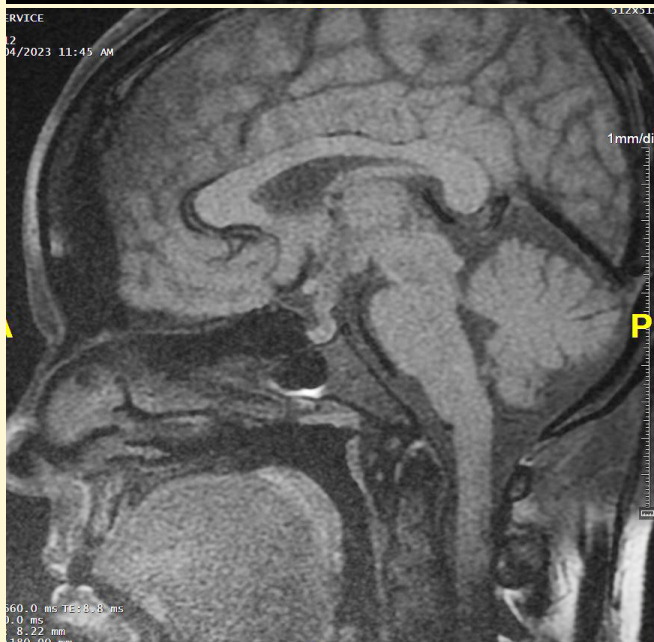
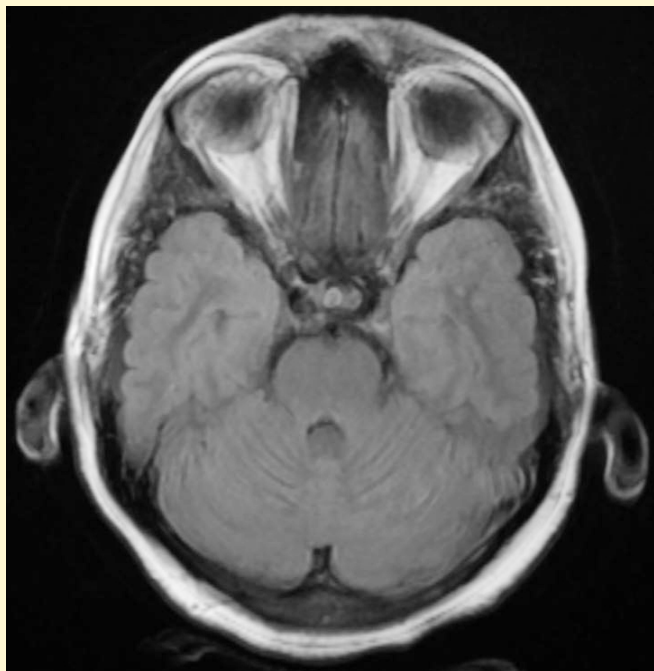
### The scoring system is as follows:

- Age less than or equal to 30 receives a score of -1
- Current pregnancy or being less than or equal to 6 months postpartum receives a score of -4
- An increased stalk size receives a score of -5
- Increased gadolinium enhancement receives a score of -1
- Loss of pituitary bright spot receives a score of -2
- Pituitary volume greater than 6cc receives a score of +2
- Sphenoid mucosal thickening receives a score of +2
- Heterogeneous gadolinium enhancement receives a score of +1
- Asymmetrical sellar enlargement receives a score of +3

A score exceeding 1 indicates the likelihood of a pituitary adenoma, whereas a score of zero or below suggests lymphocytic hypophysitis, with a specificity of 99%, a sensitivity of 92%, and positive and negative predictive values of 97%.<sup>5</sup>

### Differential Diagnosis

1. Pituitary macroadenoma – Enhancement pattern ,stalk compression ,sellar widening helps to differentiate these. Macroadenomas can be giant, but LH only occasionally exceeds 3 cm in diameter.<sup>1</sup>



*MRI BRAIN PLAIN AND CONTRAST  
(a- plain, b - post contrast axial  
images, c-plain, d- post contrast  
sagittal, e- post contrast coronal  
images show fusiform thickening  
of hypophysis with homogenous  
enhancement post contrast. )*



2. Pituitary hyperplasia – Stalk is normal. 1
3. Metastasis – Older age with known primary.1
4. Granulomatous hypophysitis – occurs secondary to infections, sarcoidosis ,LCH . Enhances heterogeneously.1

## Discussion:

Lymphocytic hypophysitis is a rare autoimmune inflammatory condition affecting the pituitary gland. The majority of LH cases, ranging from 80% to 90%, occur in females, with a higher prevalence during the peripartum period.1

Most common presenting symptoms are headache and multiple endocrine deficiencies with partial or total hypopituitarism. Diabetes insipidus is common.

Adrenocorticotrophic hormone deficits often appear first. Hyperprolactinemia occurs in 1/3 of all patients, probably secondary to stalk compression. Lymphocytic hypophysitis continues to be a diagnosis of exclusion.2

While histology provides a definitive diagnosis of lymphocytic hypophysitis it is not a very practical approach. Clinical, laboratory data, and imaging can all help with the diagnosis.

Gadolinium-enhanced MRI of the pituitary is the imaging of choice. 2 Shows the presence of a combined mass in both the intra- and suprasellar regions, accompanied by a thickened, non-tapering infundibular stalk.

It is important to distinguish lymphocytic hypophysitis from a pituitary adenoma. With a pituitary adenoma, MRI shows asymmetrical pituitary enlargement, with the pituitary stalk being deviated as well.

In lymphocytic hypophysitis, the pituitary gland and the pituitary stalk are symmetrically enlarged, but there is no stalk deviation. MRI also shows a homogeneously intense pituitary with dural enhancement, also referred to as a dural tail along with arachnoid enhancement.3

In those with a pituitary adenoma, there is no enhancement of the dura or arachnoid. Notwithstanding these discoveries, differentiating between an adenoma and lymphocytic hypophysitis

through radiological imaging is not always straightforward.

The posterior pituitary “bright spot” is absent in 75% of cases of LH.1

## Treatment:

The primary treatment for lymphocytic hypophysitis involves administering high doses of corticosteroids. In severe cases or those not responding to corticosteroids, other immunosuppressive therapies such as azathioprine or rituximab may be considered. Management of diabetes insipidus may require desmopressin, a synthetic form of vasopressin.

## Conclusion:

This case exemplifies the successful diagnosis of lymphocytic hypophysitis in a 48-year-old female through thorough clinical evaluation and detailed gadolinium-enhanced MRI imaging. The absence of the post-pituitary bright spot, along with a Gutenberg score of -8, strongly supports the diagnosis of lymphocytic hypophysitis. Patient was started on desmopressin and responded well. This case report adds to the collective knowledge of intricate endocrine disorders, emphasizing the collaborative efforts of healthcare professionals in delivering effective and personalized care.

## References:

1. Essentials of Osborn's Brain, A Fundamental Guide for Residents and Fellows / Anne G. Osborn 3rd edition.
2. Jaya Naran; Ahmet S. Can. Lymphocytic Hypophysitis 2023.
3. Jamshid Ahmadi, MD; G. Scott Meyers, MD; Hervey D. Segall, MD; Om P. Sharma, MD; David R. Hinton, MD . Lymphocytic Adenohypophysitis: Contrast-enhanced MRI imaging in Five Cases. 1995;195:30-34.
4. Ryo Kurokawa, Mariko Kurokawa, Akira Baba, Moto Nakaya, Shimpei Kato, Jayapalli Bapuraj, Yasuhiro Nakata, Yoshiaki Ota, Ashok Srinivasan, Osamu Abe & Toshio Moritani. Neuroimaging of hypophysitis: etiologies and imaging mimics 2023
5. Nanda A, Savardekar AR, Patra DP. Diagnosis and management of lymphocytic hypophysitis: A synopsis on current perspective. Neurol India. 2018 Mar-Apr;66(2):405-406.



**Dr. Sai Ruchika Lathker**  
Deccan College of medical sciences

## INFANTILE PRESENTATION OF CANAL OF NUCK HERNIA CONTAINING INFARCTED OVARY : A CASE REPORT

**Dr. Sai Ruchika Lathker<sup>1</sup>, Dr. Sravan Kumar M<sup>2</sup>**

<sup>1</sup>First Year Resident, Deccan College of Medical Sciences

<sup>2</sup>Head of Department, Dept. of Radiodiagnosis, DCMS

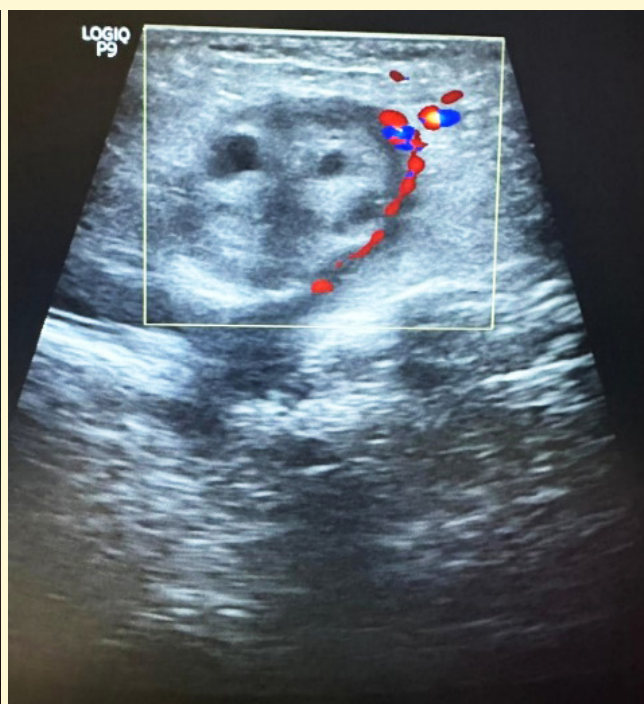
### Case Report :

A 4 month old female baby presented with c/o swelling in the groin region on the left side, noticed by her mother 4-5 days ago. On local examination, A swelling of about 4x3cms , soft, firm in consistency, non-fluctuant with tenderness present and no raise of temperature was noted. No history of increase or decrease in the size of the swelling on crying, no history of vomiting, abdominal distension, fever or similar swellings in the past.

USG abdomen and pelvis and MRI pelvis were advised. USG abdomen and pelvis of the palpable swelling and MRI pelvis revealed Left sided Canal Of Nuck Hernia with content as enlarged infarcted left ovary.

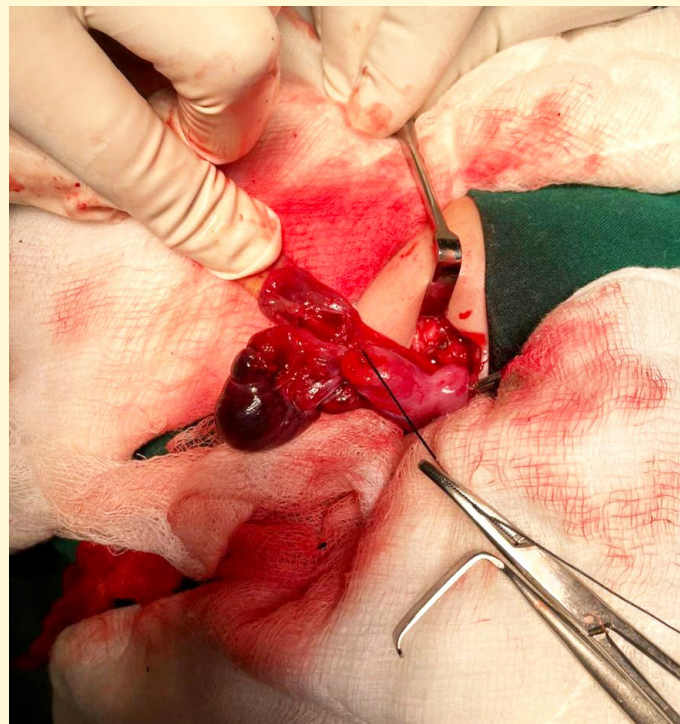
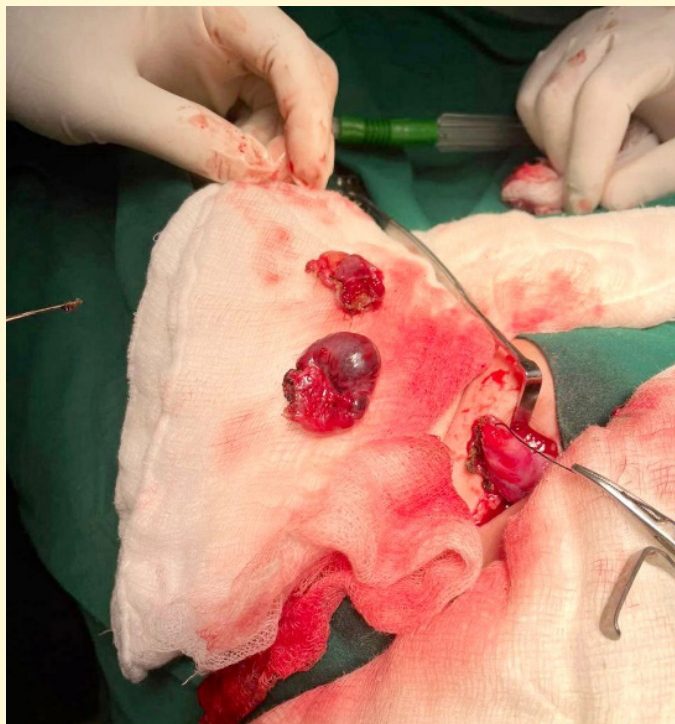
### Discussion:

Hernia of canal of Nuck, a rare congenital entity, results from the incomplete closure of processus vaginalis in female infants through which pelvic contents herniate into the inguinal canal to the labia majora. The processus vaginalis normally obliterates within the first year of life. If it remains patent in a female, it forms a potential space (canal of Nuck) which provides a direct pathway for herniation of pelvic organs and/or accumulation of collections through the inguinal canal to the labia majora. The direct continuation of the herniated contents with the peritoneal cavity is the hallmark of a hernia. The herniated organs may include bowel, omental fat, fluid, ovary, fallopian tube, and the urinary bladder. A herniated ovary should be differentiated from



*Fig. A) 10mm defect noted in the left inguinal region with contents as enlarged ovary with peripheral follicles. Fig. B) Heterogenous echotexture with peripheral vascularity, no internal vascularity on colour doppler.*





*Fig. C) and Fig. D) Show intra-operative findings: Gangrenous left ovary showing ischemic changes and twisted pedicle suggestive of Ovarian Torsion (fig. C); Edematous and gangrenous left fallopian tube showing ischemic changes till isthmus (fig. D)*

other possible herniated contents by its shape being soft tissue structures containing follicles and the presence of vascular pedicle.

Clinically, patients present with a labial mass/swelling in the groin or labial region that may or may not be associated with pain.

Ultrasound is the ideal modality for evaluation inguinal hernias in the pediatric group whereas computed tomography and magnetic resonance are more commonly used for the adult population. To exclude strangulation and incarceration, color and pulsed Doppler evaluation is helpful. For inguinal hernias, the contents of the hernia sac are easily recognized sonographically, because of the specific features of the structures. Ovaries are solid oval structures with a characteristic homogeneous echo pattern and multiple tiny cysts representing follicles.

Surgical correction is required in almost all inguinal hernias in children while in adult population, surgical correction is only used if patients are symptomatic and conservative approach is used in asymptomatic patients.

## References:

1. Yang DM, Kim HC, Kim SW, et al. Ultrasonographic diagnosis of ovary-containing hernias of the canal of Nuck. *Ultrasonography* 2014; 33:178–183
2. Jedrzejewski G, Stankiewicz A, Wieczorek AP. Uterus and ovary hernia of the canal of Nuck. *Pediatr Radiol* 2008; 38:1257–1258
3. Ovarian torsion within an incarcerated inguinal hernia; Ultrasound and color Doppler findings, *Cumhuriyet Medical Journal*, 39 (1) (2017) pp. 449-452
4. Pediatric ovarian torsion: case series and review of the literature, *Can J Surg*, 56(2) (2013), pp. 103-108
5. Inguinal hernia in girls: a retrospective analysis of over 1000 patients, *J Pediatr Surg*, 55 (9) (2020), pp. 1908-1913.



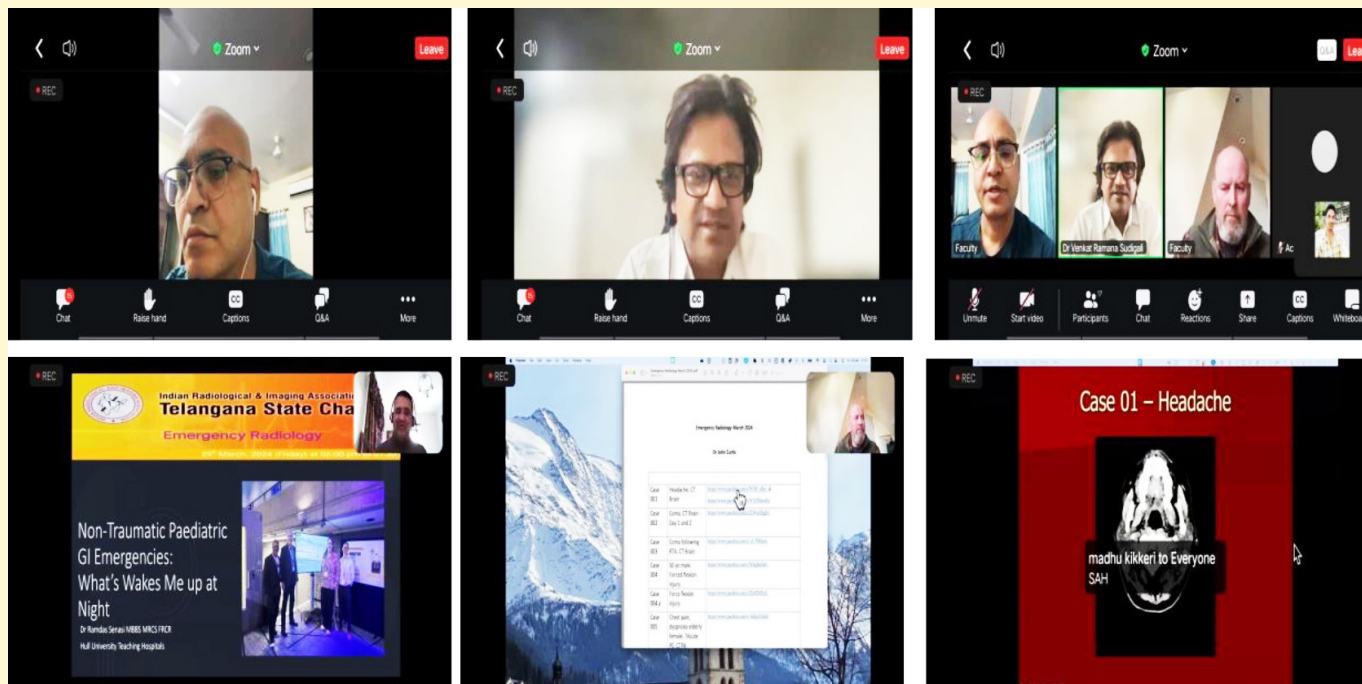
# ACADEMIC ACTIVITIES OF IRIA TS CHAPTER



**Monthly Meeting on 09th February 2024 at Hotel SVM Grand, Banjara Hills**



**Monthly Meeting on 16th March 2024 at KIMS - Sunshine Hospital Begumpet**



**Webinar on Emergency Radiology on 29th March, 2024 Trough Digital Platform**



# TELANGANA STATE CHAPTER OF IRIA ACADEMIC SCHEDULE FOR THE YEAR-2024

- 1 12<sup>th</sup> April, 2024 - Monthly Meeting
- 2 11<sup>th</sup> & 12<sup>th</sup> May, 2024 - Dr. GYAN P. LAL CME,  
Basavatarakam Indo American Cancer  
Hospital, Banjara Hills, Hyderabad  
Theme: Abdominal Radiology
- 3 16<sup>th</sup> June, 2024  
June, 2024 - Outreach Program  
Webinar - Chalmeda Medical College,  
Karimnagar - Online
- 4 21<sup>st</sup> & 28<sup>th</sup> July,  
2024 23<sup>rd</sup> Hyderabad Annual Radiologic  
Physics Course (HARP) - Online
- 5 9<sup>th</sup> August, 2024 - Monthly Meeting
- 6 13<sup>th</sup> September, 2024  
September, 2024 - Monthly Meeting  
Webinar - Online
- 7 18<sup>th</sup>, 19<sup>th</sup> & 20<sup>th</sup> Oct,  
2024 10<sup>th</sup> State Annual Conference  
(Michigan University Team)
- 8 16<sup>th</sup> & 17<sup>th</sup> Nov, 2024 MSK Conference  
with workshop  
Kamineni Hospitals LB Nagar
- 9 08<sup>th</sup> December, 2024  
December, 2024 - Outreach program  
Webinar Warangal - Online
- 10 15<sup>th</sup> & 22<sup>nd</sup> Dec, 2024 8<sup>th</sup> Radiologic Anatomy  
Course (RAC) - Online
- 11 8<sup>th</sup> Kakatiya Academy Of Radiology Education  
Program (KARE) will be decided later  
depending on the exams of PGS



**IRIA Telangana State Chapter:**  
[www.iriatangana.org](http://www.iriatangana.org)

**IRIA National Chapter:**  
[www.iria.org.in](http://www.iria.org.in)

**ICRI (Indian College  
of Radiology and Imaging):**  
[www.icri.co.in](http://www.icri.co.in)

**AOSR (Asian Oceanian Society of Radiology):**  
<https://theaosr.org>

**AMS (Asian Musculoskeletal Society):**  
[www.asianmsk.org](http://www.asianmsk.org)