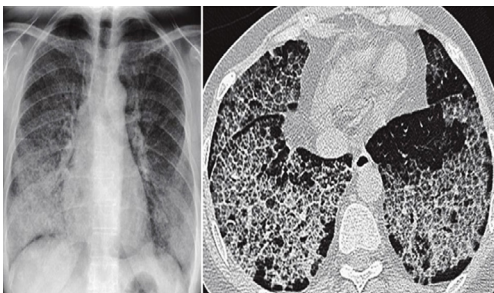


IRIA Telangana e-Newsletter

**Achievements***Page 08***Articles***Page 14***Interesting Cases***Page 17***Academic Activities***Page 24*

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Indian Radiological & Imaging Association

Telangana State Chapter 2023

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From the President's Desk



Dear friends, senior and junior colleague members of TS IRIA chapter,

Wish you all a happy and safe new year (2023).

I am happy to share that the new edition of IRIA newsletter will be released in this month of new year.

The news letter provides information regarding the Academic activities of the Radiology Association at various levels and highlights the Academic and personal achievements of the members.

It provides the details of the monthly meetings, special programmes of the IRIA TS chapter in a colorful presentation.

I request the members to contribute interesting cases and provide personal achievements to the editorial team.

I thank and congratulate Dr. Jagan Mohan Reddy and all other members of the editorial board for their hard work and coordination to bring the news letters.

Wishing you all the best.

Dr. Randhi Venkata Ramana

President TS Chapter IRIA

From the General Secretary Desk



Dear Esteemed Members,

Happy New Year 2023.

I am very happy to inform you that the membership strength of the Association is 1044 life members and 874 provisional life members.

I request the faculty of the medical colleges to encourage their postgraduates to become members.

I congratulate senior members Dr Sikander Shaik, Dr Sunitha lingareddy, Dr Vijaybhasker Nori and Dr Varsha Joshi being elected at the national level.

This month IRIA TS chapter is conducting a mega free medical camp at Vikarabad with active coordination by Dr Prabhakar Reddy Sir and financial and logistic support by Dr Vivek Keesara. IRIA TS Chapter is organizing national preventive Radiology workshop on Liver elastography in the month of February.

Telangana State chapter is always in the forefront of organising various academic programmes for the benefit of consultants and postgraduates.

A quiz is conducted in every monthly meeting. I request all the postgraduates to actively participate in all the monthly meetings of IRIA.

I congratulate Dr Jaganmohan Reddy sir for bringing out a colorful and informative newsletter.

Long live IRIA

Dr. Krishna Mohan Pottala

General Secretary

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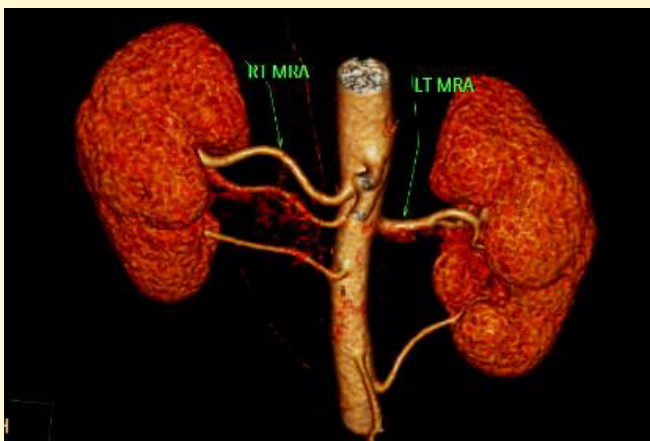


Dr. Gayatri S

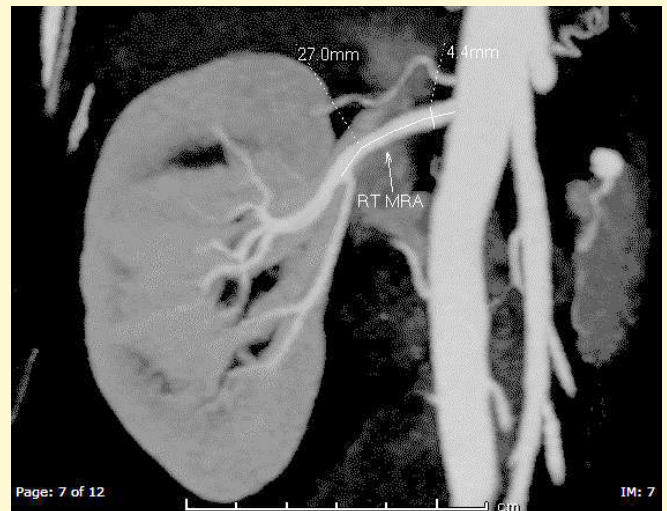
Associate Director GI Radiology and Lead Liver transplant imaging,
Asian Institute of Gastroenterology,
Hyderabad

TRANSPLANT IMAGING

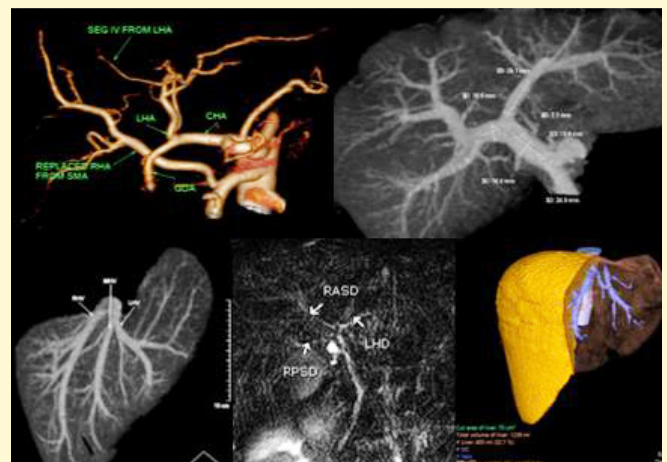
Transplantation as a solution for the deficiencies and failures in the existing organ systems has come a long way from being a part of legends and mythologies, the multiple failed attempts at heterologous transplants in the 19th and early 20th century, to the present era of successful homologous transplants. While the early successful transplants primarily focussed on immunology and infection control, the present-day protocols rely heavily upon imaging for post-transplant follow up and detection of complications. As the use of organ transplant for end stage disease and the post operative survival of the recipients increases, multimodality evaluation of the graft will continue to increase and it is imperative that the radiologists be familiar with the normal and abnormal post-transplant imaging findings. It is also important to be familiar with the timeline of the potential post-transplant complications and advice the clinician on the most appropriate method of imaging.



CT angiography of a potential renal donor. Accessory artery in to the right kidney (green arrow) entering the hilum, bilateral aberrant arteries (yellow arrows) supplying the poles without passing through the hilum. Length of the vessels and their branching pattern guides the surgeons in choosing the right donor and surgical technique



The responsibilities of the radiologists increase manifold when a living donor transplant is involved since donor organ evaluation plays a major role in the feasibility and success of the surgery and subsequent graft function. Evaluation of the potential renal donors requires MDCT to assess the vascular anatomy and collecting system.

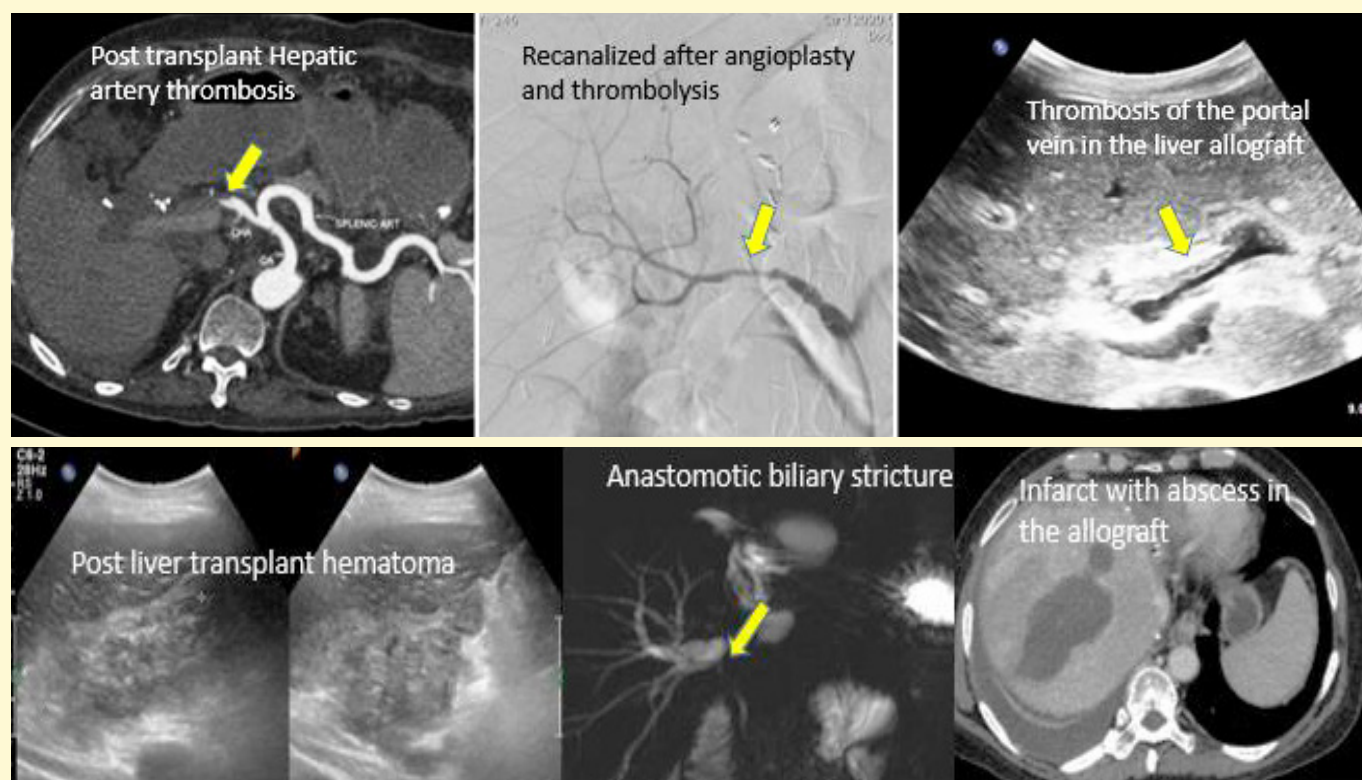


Liver donor evaluation with CT angiogram for arterial, portal, venous anatomy, MRCP for biliary anatomy. Volumetry is performed in the venous phase to segment the right and left lobes along the plane of the MHV

Donor evaluation in living donor liver transplant is more elaborate as the anatomy must be assessed for the hepatic arteries, portal vein, hepatic veins and the biliary system. In addition, liver volumetry together with segmentation to determine the graft volume to the recipient for optimal graft function and the remnant liver volume percentage for donor safety are also imperative.

The most commonly transplanted solid organ is the kidney. Post- transplant duplex ultrasound in the immediate post operative period establishes a baseline for comparison at future surveillance imaging. In the setting of allograft dysfunction, multimodality imaging, including serial duplex ultrasound, contrast enhanced ultrasound and MRI help at to exclude the non-rejection causes of graft dysfunction and evaluate for potential vascular causes such as arterial insufficiency or venous thrombosis. Whenever a pathological diagnosis is deemed necessary, ultrasound guided biopsy is a quick and safe way. Renal Scintigraphy using radionuclides such as 99m TcMAG3 or 99mTc-DTPA can provide both qualitative and quantitative information on the renal allograft perfusion and function.

The post-transplant complications in liver transplant are more varied and complex, given the greater number of vascular and biliary anastomosis involved and the potential discrepancy between the calibre of the donor and recipient vessels and ducts in living donor grafts vis a vis that of the recipients' vessels and ducts. Post operative duplex ultrasound at regular intervals is performed in most institutes to ensure vascular patency and for the early detection of any vascular insufficiency. It also helps in the early detection of non-vascular complications such as bile leaks, hematoma and collections. Arterial insufficiency in the form of stenosis or thrombosis is a grave situation requiring emergency intervention either in the form of intravascular thrombolysis or surgical re-exploration, since arterial insufficiency can lead to biliary necrosis as the arterial system is the sole supply to the biliary tree. Though duplex ultrasound is the first step in the detection of arterial insufficiency, CT Angiogram must be performed prior to intervention to establish and assess the site, nature and extent of arterial stenosis/ thrombosis, followed by DSA for intervention. Biliary complications such as bile leaks and strictures require MRCP for detection of the site and extent and also to look for secondary complications such as biloma and cholangitis.



Lung transplant for the treatment of end-stage lung disease is being increasingly seen in the wake of the recent Covid 19 pandemic. Combined heart and lung transplant is performed in patients with coexisting

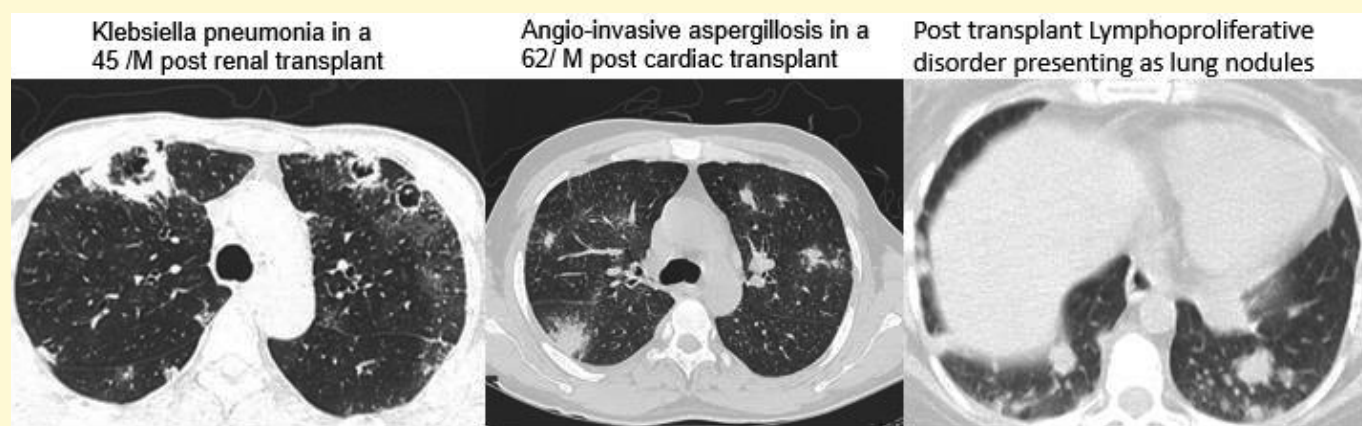
severe heart disease and severe lung disease as in patients with congenital heart disease developing severe and irreversible pulmonary hypertension. Lung transplant can be lobar, bilateral lung, or

unilateral lung, depending on factors such as donor type, underlying lung disease, and organ availability. Pre operative CT is done as part of surgical planning and followed by serial post operative imaging with radiographs and CT when required. Knowledge of the surgical techniques and expected postoperative appearance prevents confusing normal post-transplant imaging findings with complications.

Orthotopic heart transplants for end stage ischaemic and non-ischaemic cardiac has overtime shown improvement in outcomes and survival rates. Though serial radiographs and echocardiography remain the main imaging modalities for follow up, cardiac MRI has emerged as a promising tool and is currently

considered the best non-invasive imaging modality to evaluate for rejection. Conventional coronary angiography is performed at intervals to assess for cardiac allograft vasculopathy, a late complication of the coronary vessels.

All patients with solid organ transplants are under immunosuppression and thereby face the risk of opportunistic infections, and in the long term, face the threat of developing post-transplant lymphoproliferative disorders. Knowledge of the timeline of such complications, coupled with interaction with the clinicians goes a long way in narrowing down the differential diagnosis based on the clinical presentation and the lab parameters.



ACHIEVEMENTS

Congratulations to our poet Laureate Dr. U.V. Krishna Murthy! the salutation written by him was accepted in CCM meeting to be read before each IRIA meeting here after. It was selected from the 18 salutations received from all over India. He will be the guest of honor in 75th Platinum Jubilee Annual conference of IRIA at Amritsar. This was announced by the IRIA President in the CCM meeting Today at IRIA House New Delhi.

Platinum Jubilee Celebrations (75th) Annual Conference of IRIA Tamilnadu & Pondicherry State Chapter on 17th December 2023 - Felicitated & Awarded Radiology Legacy Award to Dr. Anand Abkari, Hall of Fame Award to Dr. Sikandar Shaikh, And Radiology Leadership Award to Dr. Prabhakar Reddy.



Dr. Prabhakar Reddy



Dr. Anand Abkari



Dr. Sikandar Shaikh



Congratulations to Dr Jagan Mohan Reddy sir, Professor of Maheshwara medical college, former professor of NIMS and Vice President of IRIA Telangana state chapter, being conferred with Life time achievement award in recently conducted IRIA Telangana annual state conference 2022 at Prathima institute of medical sciences, Karimnagar.



Congratulations to Dr Vijaya Bhaskar Nori elected unanimously as President of Indian association of Cardiac imaging for the period of 2023 to 2025



Happy to convey that Dr Varsha Joshi has been elected as President of ISHNR.



TIMES HEALTH EXCELLENCE

TELANGANA
2022



Brig. S K Majumdar Memorial Oration Award: Brig. Majumdar, a physician by profession, is considered as 'Father of Nuclear Medicine' in India. The oration in his memory was started in 1986 during the annual conference at Madras.

Prof. Kavita Reddy

Professor, NIMS, Hyderabad

Brig. SK Mazumdar Memorial Oration Award

Happy to convey that Dr V N Varaprasad from AP as President Elect National IRIA- 2023, Dr Sikandar as Vice Chairman ICRI-2022-24 and Dr Sunita Lingareddy as Governing Body Council member 2022-24 elected unopposed.

Heartiest congratulations and wish them all the best.



Dr V N Varaprasad



Dr Sikandar



Dr Sunita Lingareddy

JCA Seminars Pvt Ltd UK has given recognition to Dr. Siripuram Naveen Kumar youtube channel



GLOBAL EDUCATION SERVICES

Dr Siripuram Naveen Kumar -
Creator of Rad Vision Youtube
(India)

Felicitations to Dr. N Jayalatha & Senior Radiologists Dr. R Govadhan Reddy & Dr. N Vijaya Bhaskar on IDOR Day



PROF. T. MANDAPAL GOLD MEDAL - 2022



Dr. Abdul Razick
3rd year Resident
Gandhi Medical College

SCIENTIFIC POSTER WINNERS IN 8th ANNUAL STATE CONFERENCE - 2022

1st Prize



Dr. Kuldeep Singh
Primary DNB Radiology
Third Year Resident at BIACH & RI
Indo American Hospital

2nd Prize



Dr. K Vinay Krishna
3rd yr Radiology PG
NIMS

3rd Prize



Dr. Laxmi Shreya
3rd yr Radiology PG
Kakatiya Medical College

ORAL PAPER WINNERS IN 8th ANNUAL STATE CONFERENCE - 2022

1st Prize



Dr. Pooja Venavi
Final year Radiology PG
Srivenkateswara Institute of
Medical Sciences

2nd Prize



Dr. Koluguri Sravya
Final year Radiology PG
Kakatiya Medical College

3rd Prize



Dr Murali S
3rd Year Radiology PG
Kakatiya Medical College

QUIZ WINNERS IN 8th ANNUAL STATE CONFERENCE - 2022

1st Prize



Dr. Arul Jabrez
Final Year Resident
Kakatiya Medical College

2nd Prize



Dr. Binoj C
DNB Resident
Continental Hospital

3rd Prize



Dr. Kayathi Sravya
PG
Osmania Medical College

QUIZ WINNERS IN 6th RAC - 2022

1st Prize



Mohammed Omer
1st Year PG
Osmania Medical College

2nd Prize



Nithisha Mary Jacob
3rd Year PG
AIMS

3rd Prize



Smruti Snigdha Sahoo
3rd Year PG
S.C.B. Medical College

QUIZ WINNERS IN 21st HARP - 2022

1st Prize



Dr. Kabir Khader Eliyas
1st Year PG
Fathima Institute of
Medical Sciences

2nd Prize



Dr. Chetan B
3rd year PG
Kidwai Memorial Institute
of Oncology

3rd Prize



Dr. Sandhya Rani
1st Year PG
Prathima Institute of
Medical Sciences

ARTICLES

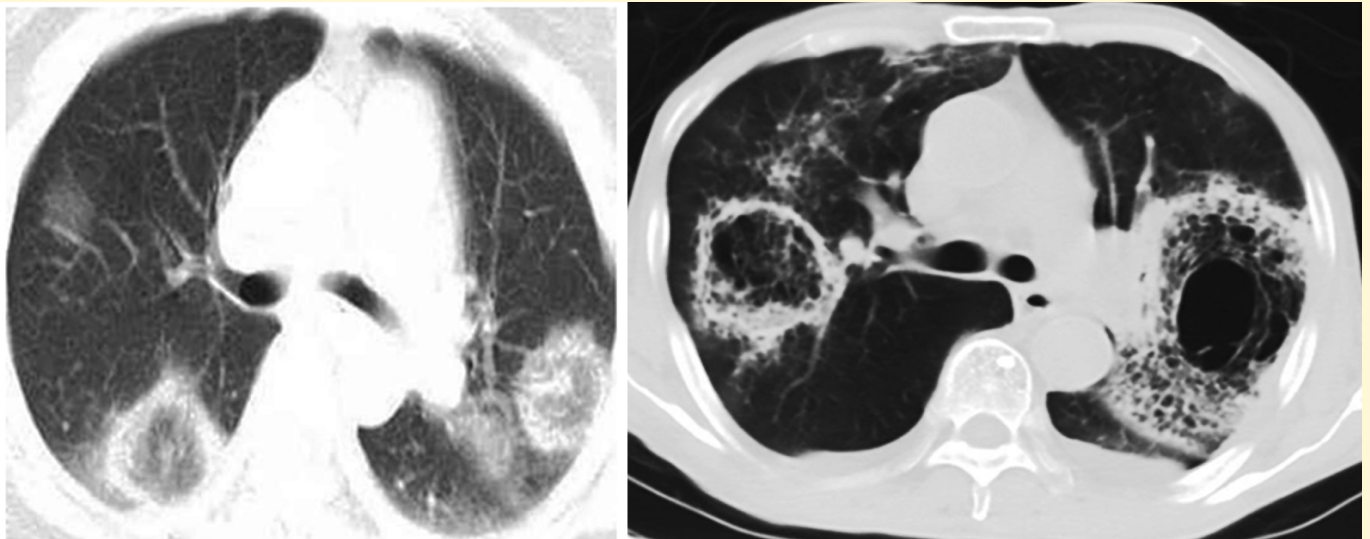
LUNG SIGNS IN RADIOLOGY



Dr. S Naveen Kumar

Professor of Radiodiagnosis, Chalmeda Anand Rao Institute of Medical Sciences,
Chief Radiologist and director, Mahalakshmi MRI and Diagnostics PVT Ltd karimnagar.

Reverse halo sign and Bird nest sign



The **bird's nest sign** refers to the appearance created by a reverse halo sign with associated irregular and intersecting areas of stranding or irregular lines within the area of ground-glass opacity, both bird's nest sign and reverse halo signs are suggestive of invasive pulmonary fungal infection (e.g., Angio invasive aspergillus or Mucormycosis) in susceptible patient populations

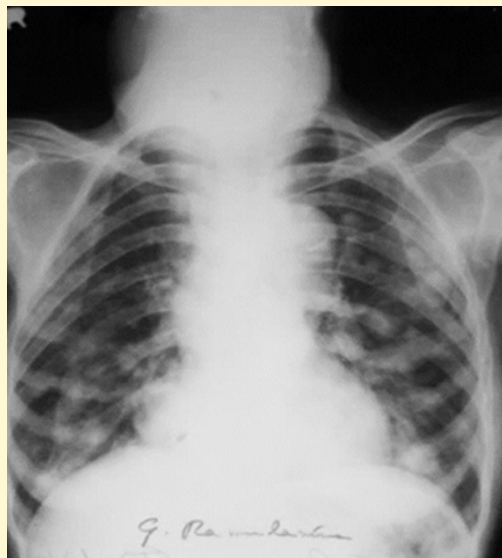
Crazy Paving Pattern



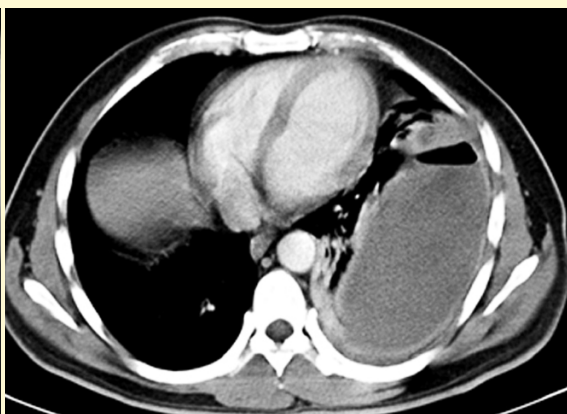
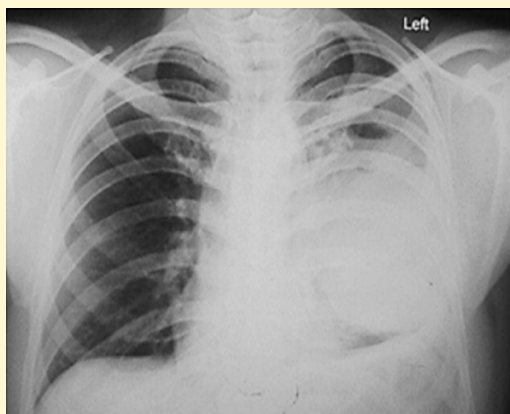
HRCT Smooth thickening of intralobular structures and interlobular septa is visible interspersed within areas of ground-glass opacification, often in polygonal shapes giving crazy paving pattern

Canon ball metastasis

- Te R PACS -Mnemonic TeleRadiology PACS
- Testicular/Thyroid carcinoma
- Endometrial carcinoma
- Renal cell carcinoma
- Prostate carcinoma
- Adrenal carcinoma
- Choriocarcinoma
- Synovial sarcoma



Split pleura sign



Enhancing parietal and visceral pleura separated by collection -Empyema thoracis

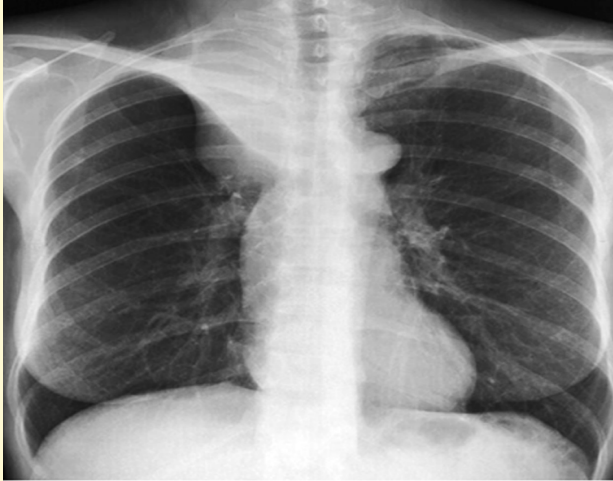
Holly leaf sign



The **holly leaf sign** refers to the appearance of pleural plaques on chest radiographs in asbestosis. Irregular thickened nodular pleural edges mimic appearance of a holly leaf.

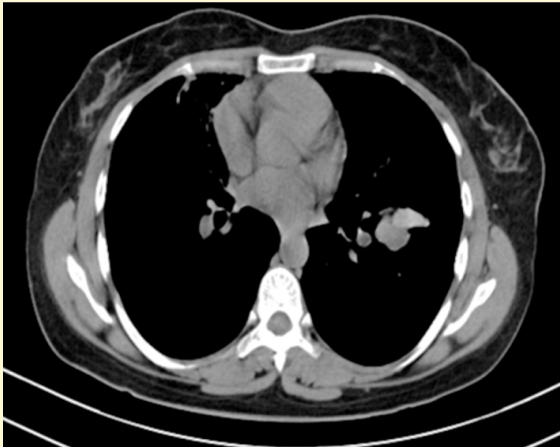
Golden S sign

S Curve of Golden When there is a mass adjacent to a fissure, the fissure takes the shape of an “S”.



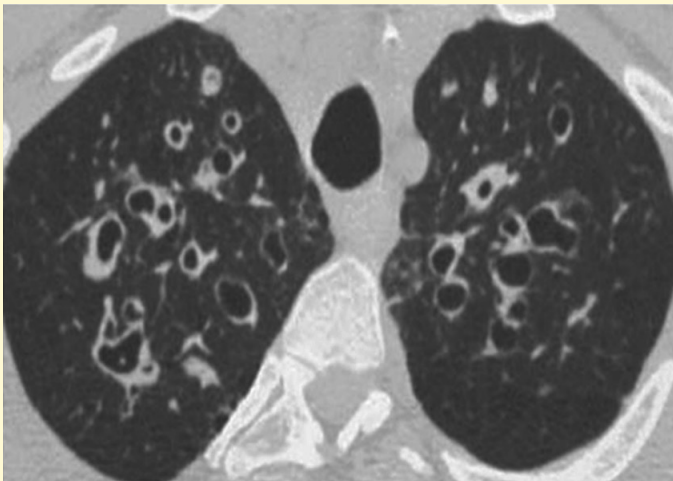
The proximal convexity is due to a mass, and the distal concavity is due to atelectasis.

Finger in glove sign



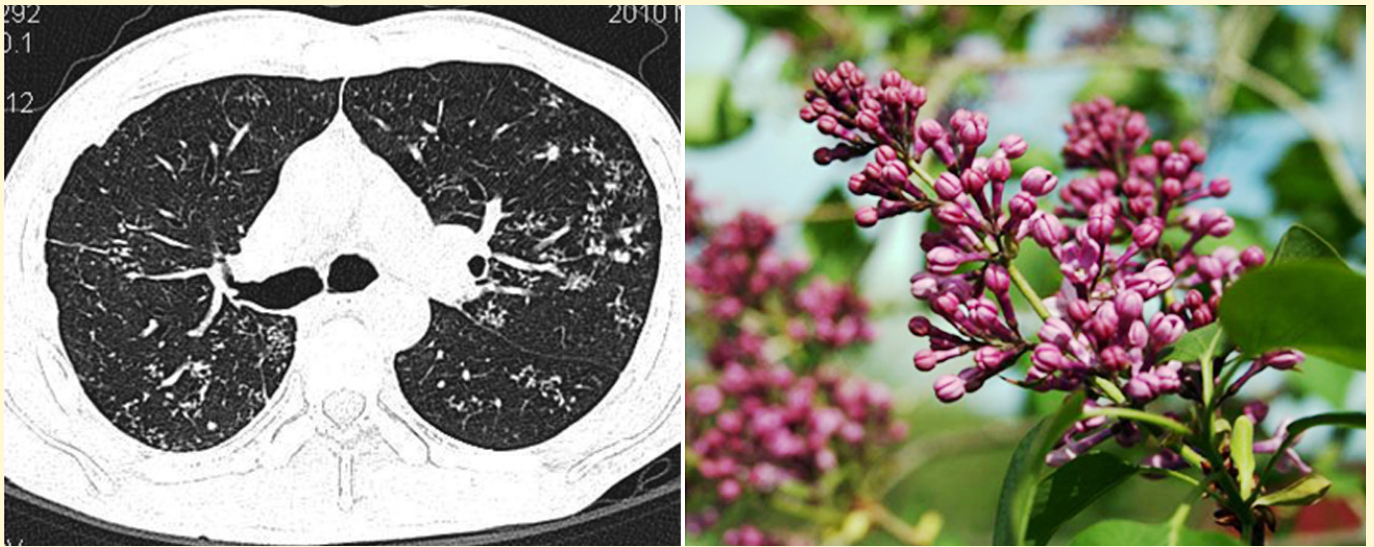
Dilated bronchi with inspissated secretions give finger in glove appearance in Allergic broncho pulmonary aspergillosis (ABPA)

Signet ring sign



CT bronchiectasis
-Ring shadow representing dilated thick-wall ed bronchus associated with an nodular opacity representing pulmonary artery

Tree in bud sign



Small centrilobular nodules of soft-tissue attenuation connected to multiple branching structures mimicking tree in bud appearance, common in endobronchial Tuberculosis but can also be seen in infective bronchiolitis, Kartagener's syndrome, lymphoma, leukemia, broncho alveolar carcinoma and metastasis too.

INTERESTING CASES

CASE REPORT:

A RARE CASE OF COMMON PERONEAL NERVE SHWANNOMA:

Dr. Mohd Mohsin Khan¹, Dr. Sandeep Madineni², Dr. Geethika Mandepudi³, Dr. Subhash Reddy⁴, Dr. G. Ramakrishna Reddy⁵, Dr. K. Venkat Ram Reddy⁶

¹Resident, ²Assistant professor, ³Associate professor, ⁴Assistant professor, ⁵Professor, ⁶Professor and HOD of Dept of Radiodiagnosis, SVS medical college.



Dr. Mohd Mohsin Khan

3rd Year Resident
SVS MEDICAL COLLEGE

A 53-year-old man presented with a complaint of chronic right knee pain of six months history. Physical examination revealed a palpable mass in the popliteal fossa and numbness around the deep peroneal nerve course.

Plain Radiograph of Knee was obtained which showed a well-defined radio opacity in the popliteal fossa.

On Gray scale ultrasound of the knee, a well-defined heterogeneously hyperechoic lesion with multiple internal anechoic cystic areas was seen in the popliteal fossa. Inferiorly, the lesion was contiguous with the nerve fibres of the proximal aspect of common peroneal nerve. On Color Doppler exam, internal vascularity noted in the solid component of the lesion.

Further evaluation with CT and Contrast MRI was done.

On CT, well-defined Hypodense lesion noted in continuity with the common peroneal nerve.

On Contrast MR, Well-defined predominantly cystic lesion with solid component was seen in the lateral aspect of the popliteal fossa arising from the proximal common peroneal nerve showing moderate enhancement in the solid component with non-enhancing cystic areas. Tibial nerve was separately visualized from the lesion.

Based on the above imaging features, possibility of **Schwannoma of the Common peroneal nerve** was considered.

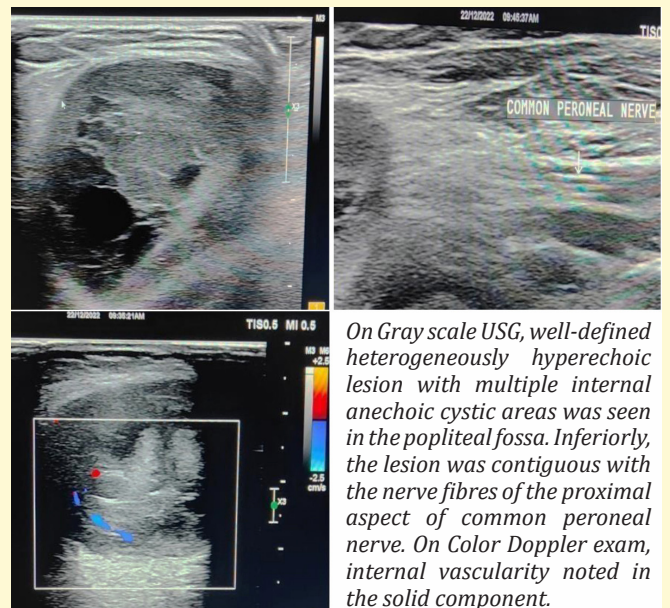
Histopathology confirmed the diagnosis of Common peroneal nerve Schwannoma.

IMAGING MODALITIES:

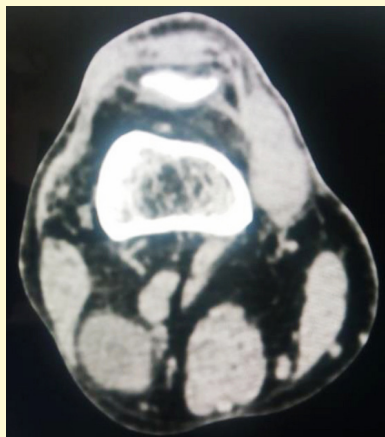


On Lateral plain Radiograph of knee, a well-defined radio opacity in the popliteal fossa.

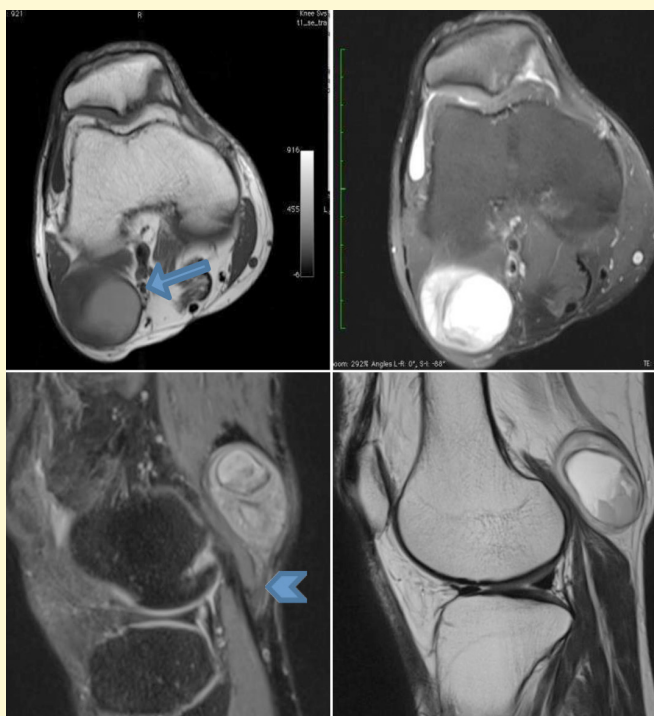
Visualized bones appear normal.



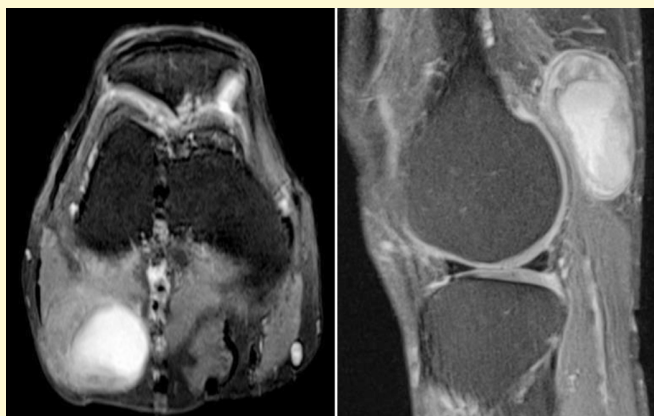
On Grayscale USG, well-defined heterogeneously hyperechoic lesion with multiple internal anechoic cystic areas was seen in the popliteal fossa. Inferiorly, the lesion was contiguous with the nerve fibres of the proximal aspect of common peroneal nerve. On Color Doppler exam, internal vascularity noted in the solid component.



On Plain CT axial image, a well-defined Hypodense soft tissue lesion noted in the lateral aspect of the popliteal fossa.



On Plain MR, a well-defined lesion seen in the popliteal fossa appearing heterogeneously hypointense on T1WI, heterogeneously hyperintense on T2WI and hyperintense on PDFS images with hypointense septae. The lesion is in continuity with the Common peroneal nerve [chevron] below. Tibial nerve [arrow] seen separately from the lesion coursing medially.



On Post-contrast MR, moderate contrast enhancement noted in the solid component with non enhancing cystic areas.

DISCUSSION:

Schwannomas and neurofibromas are the most commonly seen benign peripheral nerve sheath tumors that arises from the Schwann cells of the nerve sheath [1-3]. Most of schwannomas present as a slowly growing, painless soft-tissue mass [1]. They are usually solitary, encapsulated and mobile in palpation. Schwannomas occur in the 2nd to 5th decade of life with no sex predilection [2,3]. Degeneration and cystic cavitation are much more common in schwannomas than in neurofibromas [1]. Schwannomas of the peroneal nerve are very rare, and one can find in the literature only a few cases in the last 20 years.

Sonography shows a well-defined, homogeneous, hypoechoic ovoid mass with a healthy nerve at the proximal and distal aspects of the mass [2,3]. CT reveals a low density well-circumscribed, inhomogeneous mass. MRI is the best imaging modality for evaluating schwannomas. The “target sign” has been reported for 52% of benign nerve sheath tumors which is composed of a peripherally hyperintense rim and a central low intensity area on T2-weighted images [3].

Although the target sign is seen more frequently in neurofibromas, it may be seen in schwannomas as well [4]. Schwannomas are generally separable from the underlying nerve fibers, surgical excision can usually spare the parent nerve.

REFERENCES :

- [1] Lin J, Martel W (2001) Cross-sectional imaging of peripheral nerve sheath tumors: characteristic signs on CT, MR imaging, and sonography. *AJR Am J Roentgenol* 176(1):75-82. (PMID: 11133542)
- [2] Stuart RM, Koh ES, Breidahl WH (2004) Sonography of peripheral nerve pathology. *AJR Am J Roentgenol* 182(1):123-9. (PMID: 14684524)
- [3] Isobe K, Shimizu T, Akahane T, Kato H (2004) Imaging of ancient schwannoma. *AJR Am J Roentgenol* 183(2):331-6. (PMID: 15269020)
- [4] Beaman FD, Kransdorf MJ, Menke DM. Schwannoma: radiologic-pathologic correlation. *Radiographics*. 2004 Sep-Oct;24(5):1477-81.



Dr. D. Mohit Rao
2nd Year Resident
SVS Medical College

CASE REPORT OF SPLIT CORD MALFORMATION WITH TETHERED CORD AND DORSAL DERMAL SINUS

Dr. D Mohit Rao¹, Dr. Sandeep Madineni², Dr. Subhash Reddy³,
Dr. Geethika Mandepudi⁴, Dr. G. Ramakrishna Reddy⁵, Dr. K. Venkat Ram Reddy⁶

¹Resident, ²Assistant professor, ³Assistant professor, ⁴Associate professor, ⁵Professor,

⁶Professor and HOD of Dept of Radiodiagnosis, SVS medical college.

A 12 year old male child presented with complaints of pain abdomen since two years and open defect on the back since birth. The child apparently had normal milestones and no neurological deficits were noted.

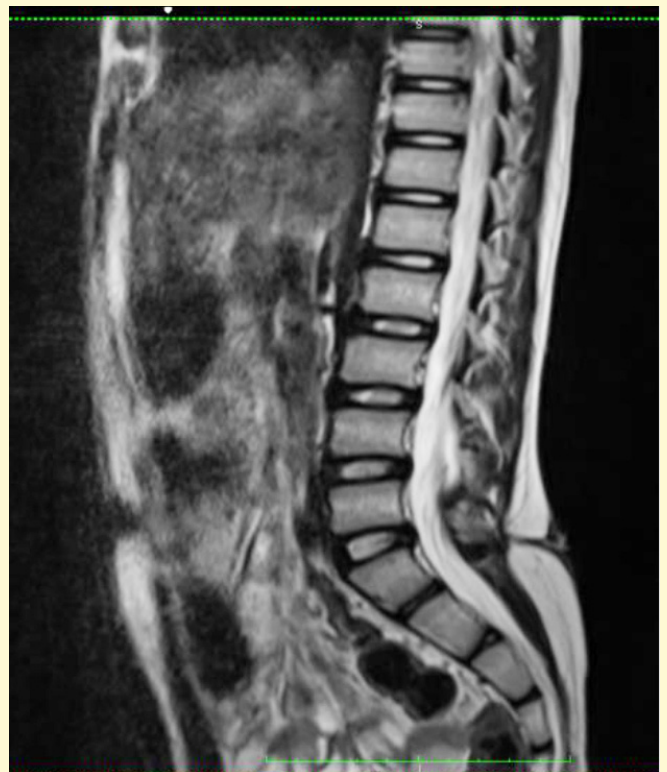
On examination, an open defect onto the skin was noted at lower back at the level of sacrum with no discharge or induration.

Ultrasound examination revealed no sonologically detectable abnormality except for a heterogeneously hypoechoic sinus tract extending from external opening upto posterior aspect of L4 spinous process.

Magnetic resonance imaging was done to rule out any neurological abnormality, spinal cord abnormality and underlying extent of the defect.

MRI revealed :

1. Sacralisation of L5 vertebral body.
2. Dermal sinus extending from skin to posterior aspect of L4 spinous process.
3. Spina bifida at L5 vertebral body with lipoma in the dorsal epidural region at L4-L5 intervertebral disc level.
4. Type-II split cord malformation extending from inferior border of L2 vertebral body level to superior border of L5 vertebral body level.
5. Syrinx extending from inferior endplate of L1 vertebral body level to inferior endplate of L2 vertebral body level.
6. Tethered cord at L4-L5 intervertebral disc level.
7. Craniovertebral junction and posterior fossa appears normal.



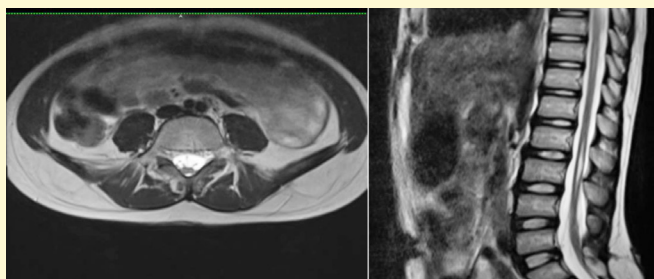
T2W hypointense dermal sinus noted extending from skin to posterior aspect of L4 spinous process.





Splitting of lumbar portion of spinal cord extending from inferior border of L2 vertebral body level to superior border of L5 vertebral body level, without a bony (or) fibrous septum between the two hemicords.

i.e., Type-II split cord malformation



There is spinal bifida at L5 vertebral body level with a small well defined T1W/T2W hyperintense, hypointense on fat suppressed sequence measuring 23x10x5.3mm (CCxAPxTR), noted in the dorsal epidural region at L4-L5 intervertebral disc level.

i.e., Spina bifida at L5 vertebral body level with lipoma in the dorsal epidural region at L4-L5 intervertebral disc level.



T2W hyperintense, T1W hypointense signal intensity syrinx within the central portion of spinal cord extending from inferior endplate of L1 vertebral body level to inferior endplate of L2 vertebral body level.

Conus ends at L4 vertebral body level with tethering of cord & thickened filum terminale



There is spinal bifida at L5 vertebral body level with a small well defined T1W/T2W hyperintense, hypointense on fat suppressed sequence measuring 23x10x5.3mm (CCxAPxTR), noted in the dorsal epidural region at L4-L5 intervertebral disc level.

i.e., Spina bifida at L5 vertebral body level with lipoma in the dorsal epidural region at L4-L5 intervertebral disc level.

DISCUSSION:

Split cord malformations (SCMs) are rare congenital anomalies in which the cord is split over a portion of its length to form a double neural tube in a single dural sac.

SCMs associated with a split of the spinal column, spinal bony spurs, myeloceles, myelomeningoceles, lipomas, and dermal sinuses have been reported.

SCMs are often located in the lumbar and thoracolumbar regions.

Classification

Split cord malformations are divided into two types according to the presence of a dividing septum and single vs dual dural sac:

- type I: duplicated dural sac, with common midline spur (osseous or fibrous) and usually symptomatic
- type II: single dural sac containing both hemicords; impairment less marked

Type I

Type I is the classic diastematomyelia, characterized by:

- duplicated dural sac
- hydromyelia: common
- midline spur often present (osseous or osteocartilaginous)
- vertebral abnormalities: hemivertebrae, butterfly vertebrae, spina bifida, fusion of laminae of adjacent levels

- skin pigmentation, hemangioma, and hypertrichosis (hair patch) are common
- patients are usually symptomatic presenting with scoliosis and tethered cord syndrome

Type II

Type II is milder than type I, and lack many of the features of the latter:

- single dural sac and no spur/septum
- cord divided, sometimes incompletely so
- hydromyelia may be present
- spina bifida may be present, but other vertebral anomalies are far less common
- patients are less symptomatic or may even be asymptomatic

EMBRYOLOGY:

Embryologically, SCM is caused by a primary neurulation defect. An abnormal communication (endomesenchymal tract) between the ectoderm and endoderm causes regional splitting of the notochord, and each separated notochord induces the surrounding paraxial mesoderm and subsequent dysgenesis of the spinal cord.

REFERENCES:

1. Andro C, Pecquery R, De Vries P, Forlodou P, Fenoll B. Split cervical spinal cord malformation and vertebral dysgenesis. *Orthop Traumatol Surg Res.* 2009;95:547-550.
2. Anderson RC, Ragel BT, Mocco J, Bohman LE, Brockmeyer DL. Selection of a rigid internal fixation construct for stabilization at the craniovertebral junction in pediatric patients. *J Neurosurg.* 2007;107:36-42.
3. Jindal A, Mahapatra AK. Split cord malformations--a clinical study of 48 cases. *Indian Pediatr.* 2000;37:603-607.

**Dr Naga Sai Mandadi**

2nd Year Resident
Osmania Medical College

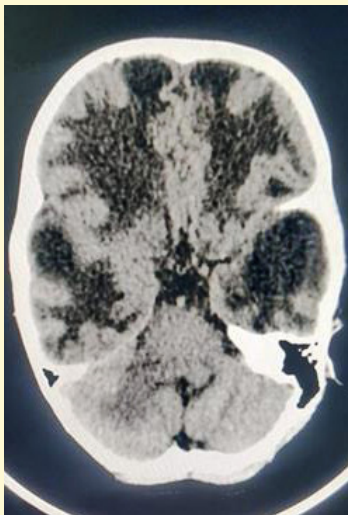
CASE REPORT - MEGALENCEPHALIC LEUKOENCEPHALOPATHY WITH SUBCORTICAL CYSTS

Dr Naga Sai Mandadi

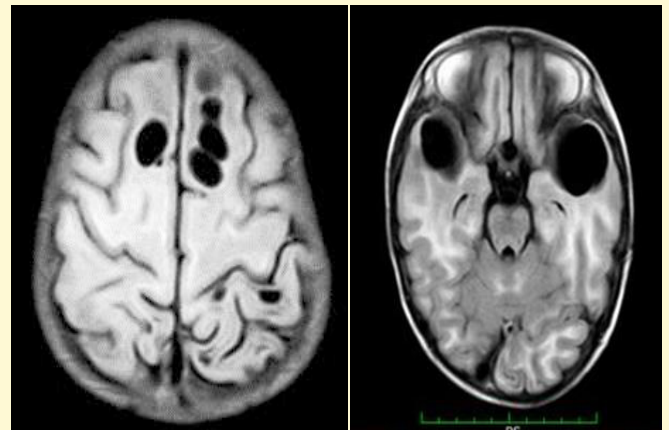
3rd Year Pg, Osmania Medical College,

Co- Author- Dr Supraja Bingi, Asst Proff, Osmania General Hospital

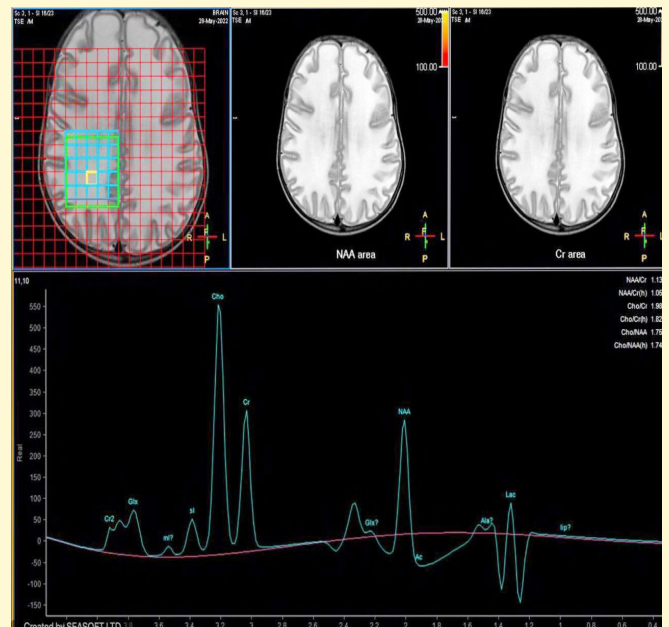
- 5 year old child with history of recurrent falls for 2 years which started after an episode of left-sided simple focal seizure. H/o increase in size of head at age of one year and since. The antenatal period was uneventful.
- Progressive difficulty in walking and tightness of all limbs. Mild developmental delay in the form of delayed sitting and walking and she could never run or climb stairs, had clumsiness and frequent falls while walking, had seizures of simple partial motor type beginning with right lower limb jerking and followed by generalization. The seizures responded well to treatment. The child had moderate impairment of cognitive and language abilities and could not go to school.
- The head circumference was 56 cm which was above the 95th percentile for age. The motor system examination was suggestive of severe spasticity with grade 4 power of all limbs. He had exaggerated reflexes and bilateral plantars were extensor.



CT plain axial sections showing diffuse hypodensity of white matter with hypodense subcortical cysts



MRI T2 FLAIR axial sections showing hyperintensity in diffuse white matter of cerebral hemispheres with hypointense subcortical cysts.



MRI spectroscopy showing elevated choline peak with altered choline: creatine and NAA: choline ratio

Megalencephalic leukoencephalopathy with subcortical cysts

AKA Van der Knaap syndrome

- A neurodegenerative disorder characterized by infantile onset megalencephaly and cerebral leukoencephalopathy.
- Megalencephalic leukoencephalopathy with subcortical cysts - inherited **autosomal recessive disorder**. Gene locus has been mapped at MLC1 at chromosome 22q
- Has a variable but mild clinical course.
- **Frontal and temporal subcortical cysts are diagnostic.**
- Gradual onset of ataxia, spasticity, dysarthria, and sometimes extrapyramidal findings. Mild mental deterioration can be observed late in life
- Megalencephaly is usually detected early.

Hallmarks of radiological diagnosis:

- Megalencephaly
- Diffuse, B/L and symmetrical T2-hyperintensity and T1- hypointensity in the cerebral white matter- characteristic '**swollen' appearance**
- subcortical white matter involved early in course of disease with involvement of the subcortical u fibres.
- relative sparing of the deep and cerebellar white matter
- bilateral subcortical cysts of CSF intensity affecting the anterior temporal regions and frontoparietal lobes
- eventual cerebral atrophy with increase in size of the subcortical cysts
- Central white matter sparing is also seen and corpus callosum, brainstem, internal capsule and occipital lobes are particularly spared.
- MR spectroscopy reveals dip in NAA in affected white matter

DIFFERENTIAL DIAGNOSIS

- Cystic leukoencephalopathy without megalencephaly-
- AR inherited condition
- Moderate to severe psychomotor retardation and spasticity.
- Non progressive condition presenting in early childhood.
- Bilateral anterior sub cortical temporal lobe cystic lesions
- Multimodal white matter hyperintensities. Includes occipital lobes.

- Caravans disease
- Alexander disease
- Vanishing white matter disease
- Pelizaeus merzbacher disease

REFERENCES:

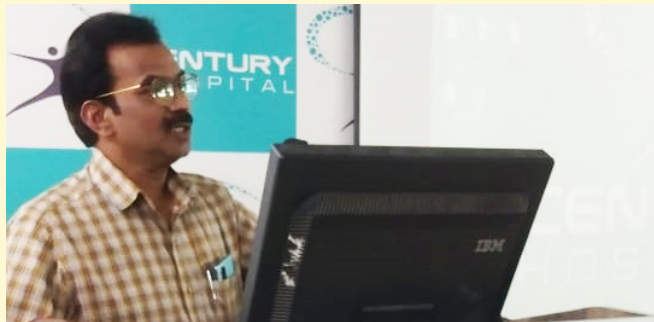
1. Sharma A, Gupta M, Gupta N, Garg A. Van der Knaap Disease: Megalencephalic Leukoencephalopathy with Subcortical Cysts. Saudi J Med Med Sci. 2016 Sep-Dec;4(3):238-239. doi: 10.4103/1658-631X.188256. Epub 2016 Aug 11. PMID: 30787739; PMCID: PMC6298348.
2. Van der Knaap MS, Barth PG, Stroink H, van Nieuwenhuizen O, Arts WF, Hoogenraad F, et al. Leukoencephalopathy with swelling and a discrepantly mild clinical course in eight children. Ann Neurol. 1995;37:324-34
3. Gorospe JR, Singhal BS, Kainu T, Wu F, Stephan D, Trent J, et al. Indian Agarwal megalencephalic leukodystrophy with cysts is caused by a common MLC1 mutation. Neurology. 2004;6

ACADEMIC ACTIVITIES OF IRIA TS CHAPTER

The 8th Annual Telangana State Conference was held on 15th & 16th Oct 2022 at Prathima Institute of Medical Sciences Karimnagar, Organized by IRIA Telangana State Chapter in association with Karimnagar Sub-chapter & hosted by Prathima Institute of Medical Sciences. 205 Delegates participated in the conference. Organizing Chairman Dr V.N. Goud, Organizing Secretary Dr P. Krishna Mohan, Joint, Organizing Secretaries, Dr Chennamaneni Vikas, Dr Sudheer kunkunuru & Dr S. Naveen Kumar. International Faculty Co-ordinator Dr K. Prabhakar Reddy. speakers were 3 International faculty & 23 National faculty, 2 orations. Prof. T. Jayanarsimhulu Memorial Oration by Dr Ch. Amarnath, topic- Pancreatic Imaging-What Radiologist should know & Roentgen Oration by Dr Hemanth Patel, topic -MRI in Prostate Cancer. Competitive Papers - Prof. T. Mandapal Gold Medal Presentations for Postgraduate Students, Proffered Paper Presentation & Poster Presentations were also part of the conference. Quiz conducted by Dr Abhishek Arora & Dr Sudheer K. Life time achievement award was given to Dr. J Jagan Mohan Reddy during the conference.



IDOR meeting was held on 08th Nov 2022 at Century Hospital, Guest speakers were Dr. JAYALATHA Professor and Director, MNJ institute of oncology, Guest lecture on Radiological evaluation of Ovarian pathologies - update & Dr. GEETA RANJANI, Yashoda Hospital, Secunderabad, the Guest lecture on Imaging spectrum of spinal dysraphism on MRI. About 10 Cases presented by the students

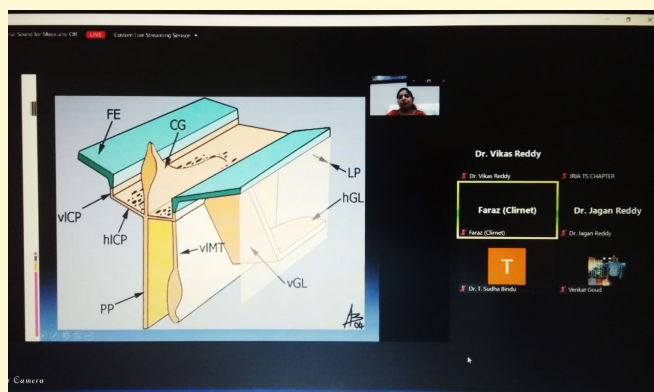


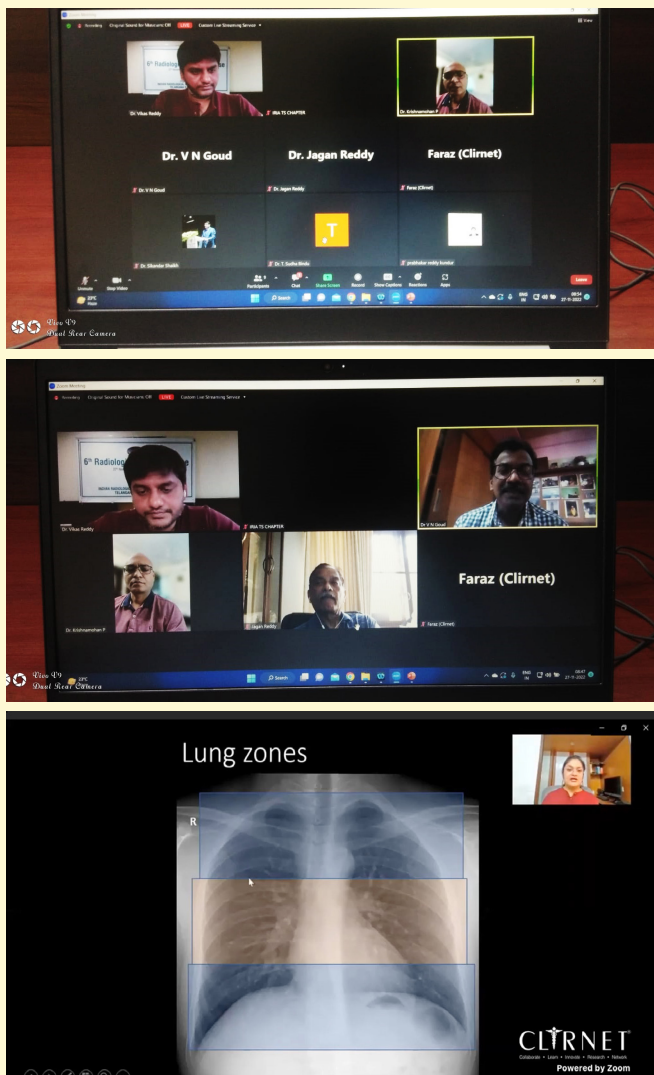


IDOR Celebration on 8th Nov, 2022 at IRIA Sub Chapter Karimnagar.



The 6th RADIOLOGIC ANATOMY COURSE (RAC)-2022 was held on 27th Nov & 04th Dec 2022 on online mode with 272 Delegates, Course Coordinator - Dr. P. Vikas Reddy, Quiz conducted by Dr Abhishek Arora.





IRIA Telangana State Chapter:
www.iriatelangana.org

IRIA National Chapter:
www.iria.org.in

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

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

AMS (Asian Musculoskeletal Society):
www.asianmsk.org



TS CHAPTER IRIA EXECUTIVE COMMITTEE MEMBERS -2023

Slno	Post	Name
1	Adviser & Chariman IRIA House Committee	Dr. K Prabhakar Reddy
2	President	Dr. R Venkataramana
3	President Elect	Dr. T Ramesh
4	Immediate Past President	Dr. V N Goud
5	Vice president	Dr. J Jagan Mohan Reddy
6	Vice president	Dr. M Anitha
7	General Secretary	Dr. P Krishna Mohan
8	Treasurer	Dr. P Vikas Reddy
9	Joint Secretary	Dr. K Sudheer
10	Joint Secretary	Dr. Divya Raju Alluri
11	Central Council Member	Dr. R Prabhakar Rao
12	Central Council Member	Dr. Rajesh Engala
13	Central Council Member	Dr. U Rajesh
14	Central Council Member	Dr. S Venkat Ramana
15	State Council Member	Dr. T Surekha
16	State Council Member	Dr. K Veeraiah
17	State Council Member	Dr. G Ramakrishna Reddy
18	State Council Member	Dr. S Naveen Kumar
19	State Council Member	Dr. S. Annapurna
20	State Council Member	Dr. M Srinivas Reddy
21	PC PNDT Co-ordinator	Dr. Vivek Vardhan Reddy Keesara
22	Male Student Representative	Dr. Chilakala Harish
23	Female Student Representative	Dr. Vardireddy Nivedita
24	Trade Representative	Mr. K Ravinder Reddy
25	Chariman ICRI	Dr. Shaikh Mohd Sikandar
26	Member Governing Body ICRI	Dr. Sunitha Lingareddy

TELANGANA STATE CHAPTER OF IRIA

ACADEMIC SCHEDULE FOR THE YEAR-2023

S.No.	Date and Month	Program	Venue
1	13 th Jan-2023	1. Monthly Meeting	--
	22 nd Jan-2023	2. 10 th Annual Multi Specialty Free Rural Medical Camp	Saraswathi Shishumandir High School, Vikarabad
	28 th Jan-2023	Paediatric Neuroradiology	--
2	19 th Feb-2023	Preventive Radiology	Indo American Cancer Hospital
3	08 th Mar- 2023	International Women's Day Celebrations	--
4	14 th , 15 th & 16 th Apr- 2023	7 th KAKATIYA ACADEMY OF RADIOLOGY EDUCATION PROGRAM (KARE)	Indo American Cancer Hospital
5	12 th May- 2023 May Last Week	Monthly Meeting Webinar	--
6	9 th Jun- 2023	Monthly Meeting	--
7	14 th , 15 th & 16 th July- 2023	22 nd Hyderabad Annual Radiologic Physics Course (HARP)	KIMS
8	11 th Aug- 2023	Monthly Meeting	--
9	8 th Sep- 2023 Sep Last Week	Monthly Meeting Webinar	--
10	13 th , 14 th & 15 th Oct- 2023	9 th State Annual Conference (Indo US Imaging) (Faculty Team from Moffitt Cancer Hospital, Tampa, USA)	--
11	08 th Nov- 2023 19 th Nov- 2023 25 th & 26 th Nov Nov Third Week	IDOR Day Celebrations (Monthly Meeting) Outreach Program 7 th Radiology Anatomy Course (RAC) TS Chapter Elections	--
12	8 th Dec- 2023 Dec 3 rd Sunday Dec Last Week	Monthly Meeting Social Gathering with family members outside of Hyderabad Webinar	--

Dr. R Venkataramana
President
IRIA TS Chapter

Dr. P Krishna Mohan
General Secretary
IRIA TS Chapter