INDIAN RADIOLOGICAL & IMAGING ASSOCIATION

TELANGANA STATE CHAPTER

# IRIA TELANGANA

## e-Newsletter, Issue -9

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Issue 9 : July 2021

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# FROM THE PRESIDENT'S DESK

**I am happy to inform you that the IRIA TS chapter releases its 9th edition of newsletter to update the members about the current and forthcoming events happening at the state, National and International level which are very important and informative.**

**Besides the above information it highlights any achievements and laurels achieved by individual members.**

**I congratulate Dr. Jagan Mohan Reddy, Dr Aruna Karnawat & Team for their laudable effort , to make this newsletter a colorful and eventful one.**

**I request all the members to contribute in a big way to the scientific sessions and to provide interesting case materials for the success of this newsletter which is going to be a regular feature**

**Wishing you all the best.**

**Dr Prabhakar Rao.**
**President IRIA TS chapter.**

# FROM THE GENERAL SECRETARY DESK

Dear Friends,

Welfare of Radiologists is one of the key objectives of IRIA. In order to truly achieve this objective, the IRIA TS Chapter must welcome participation from young and energetic Radiologists as they are the future of our fraternity. The next generation must be involved in all the aspects of management of the organization and their ideas must be given due consideration. In any elected organization, the idea of democracy should be given due importance by allowing discussions to take place. It is only by encouraging large scale participation from the Radiological fraternity and entertaining multiple perspectives we can progress as an organization and thereby achieve the objective of welfare of Radiologists.

Even in the sphere of academics, we need to evolve a mechanism whereby there is large scale participation especially from young and upcoming Radiologists. We need to encourage them in order to infuse innovative ideas and formulate efficient mechanisms to disseminate knowledge related to Radiology. Young Radiologists should be given a chance to prove their mettle in organizing academic activities.

Reforms in the organizational structure of IRIA TS Chapter are needed to reinvigorate the organization and thereby making it truly democratic, transparent and participative. It must be recognized that there is a need for new leadership to emerge and bring in substantial reforms. There is also an urgent need to reform the election process and make it free, fair and transparent. By giving the new generation of Radiologists a chance to drive forwards the academic program of IRIA TS Chapter, we would greatly benefit both from their energy and their technological capabilities. We all recognize that reforming the organization is a continuous process which will eventually make it more efficient and productive.

Regards,

Dr. Ravuri Power

GENERAL SECRETARY IRIA TS CHAPTER

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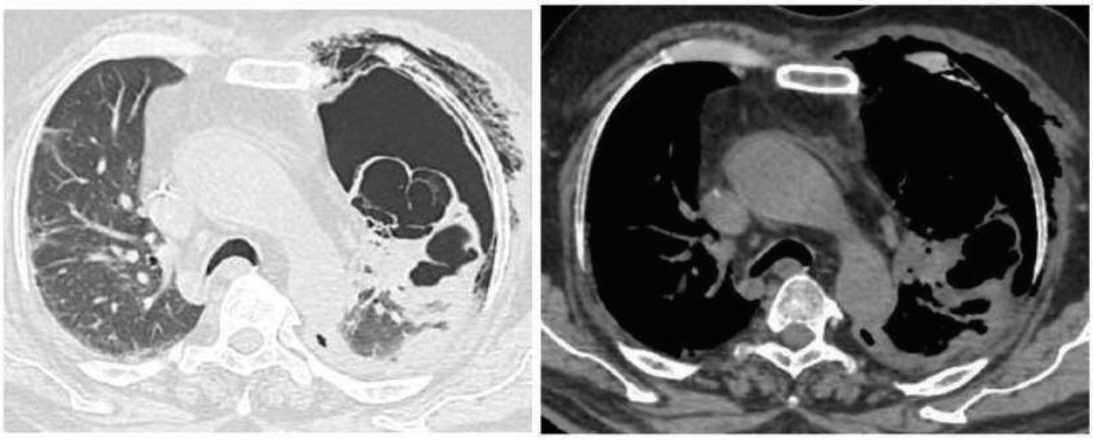
# MESSAGE FROM THE EDITOR'S DESK

The second wave of Covid pandemic is just beginning to dwindle. As the after-shocks, we are still dealing with the long-term complications like post covid organising pneumonias, interstitial fibrosis and more acutely, collaterally and equally damaging mucormycosis that has taken epidemic proportions.

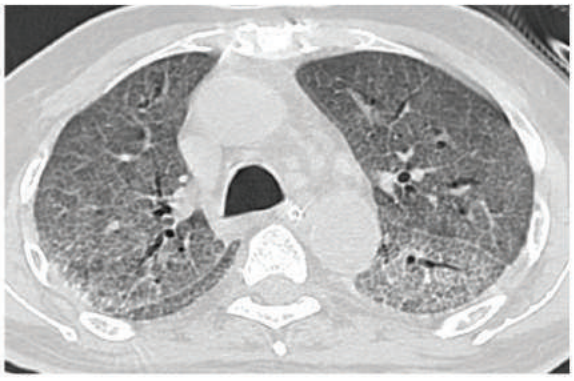
IRIA and ICRI have come up with guidelines for Invasive mucormycosis, Neurological complications and Chest imaging in Covid. These articles have been mailed to all members by central IRIA. We would like to share the pictorial highlights of similar cases here. Due acknowledgment to all the authors who have contributed to the articles. Access link to these complete articles is being provided for Telangana members here.

**The Chest Imaging:** https://bit.ly/chestimaging

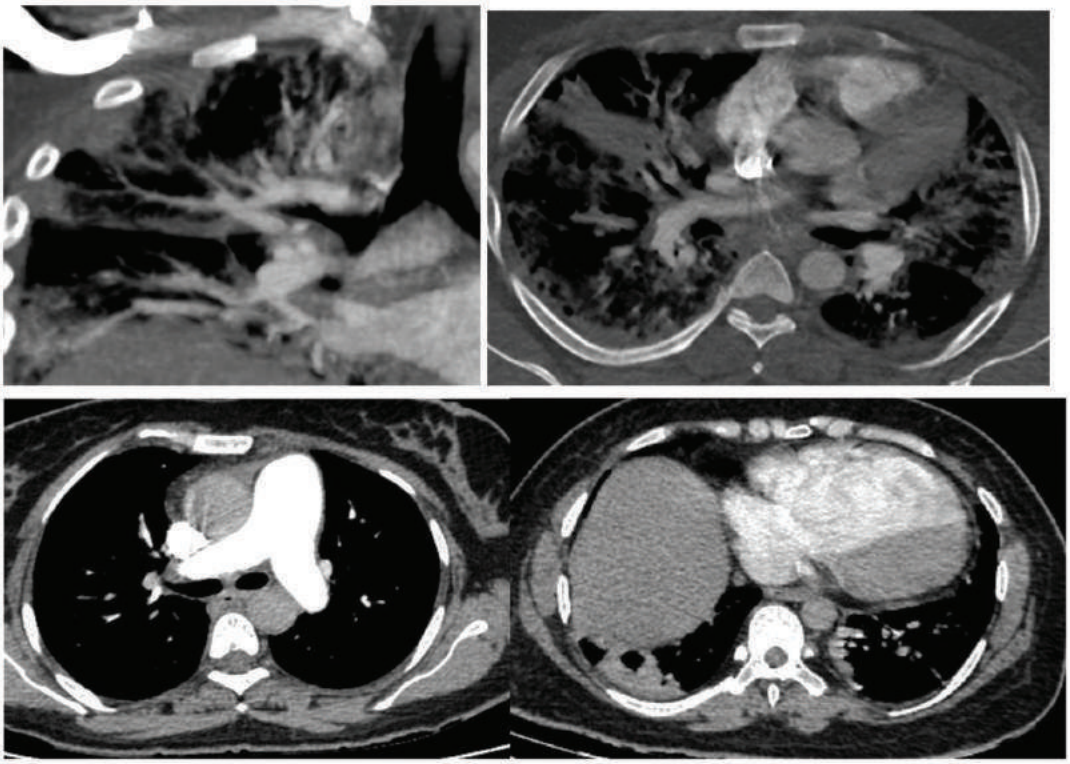
The salient CT imaging findings of Covid-19 are known to all by now. Post covid sequelae and complications are importantly required to be identified. Few examples are as follows:



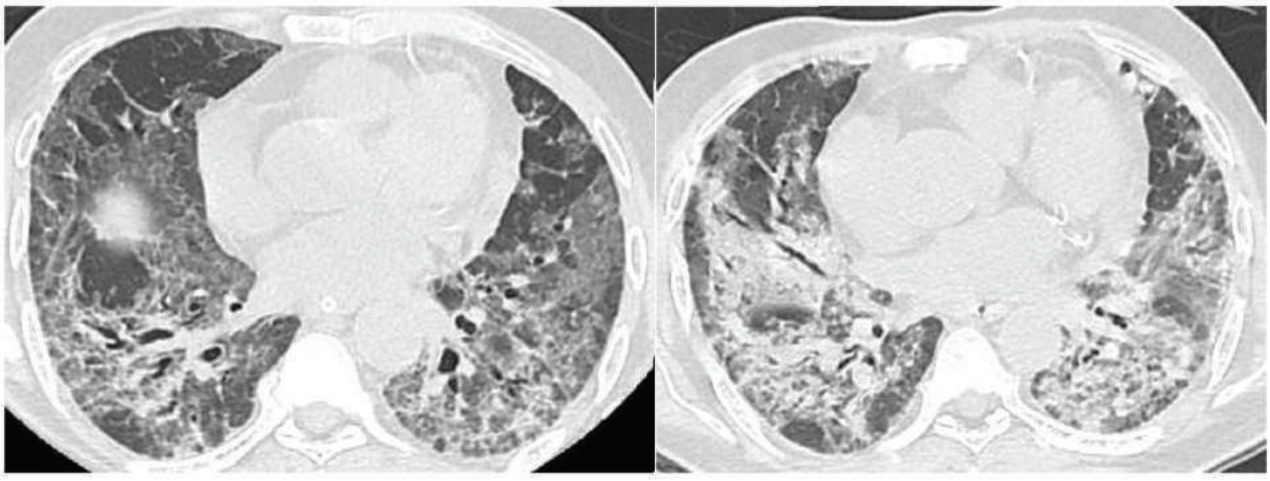
Pulmonary Mucormycosis with pneumothorax and eroding into rib with chest wall



Diffuse ground glass opacities with posterior and basal predominance - ARDS (Subacute phase)



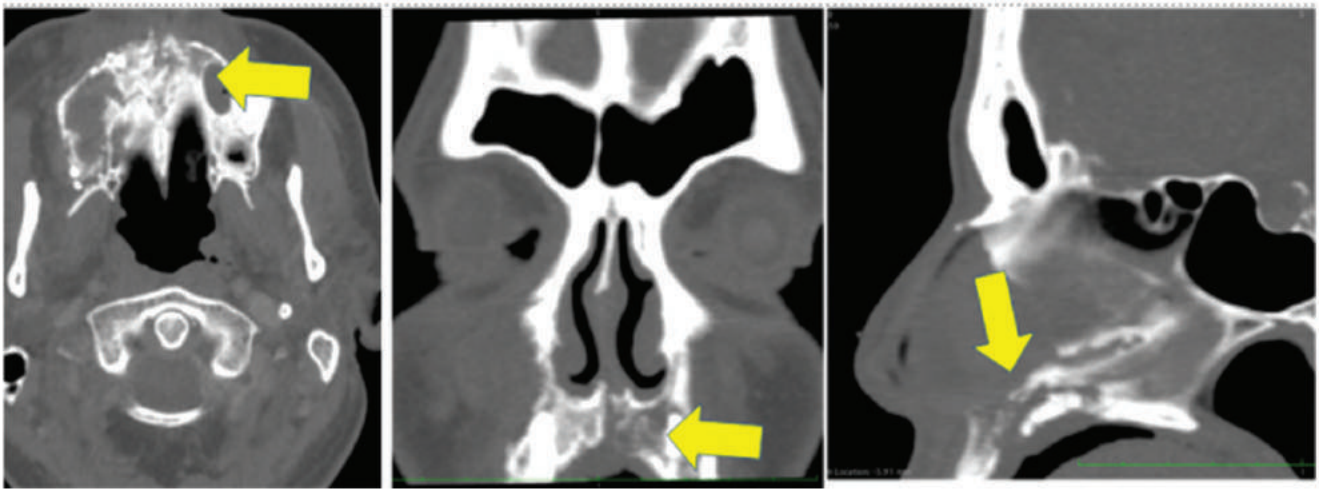
**Pulmonary thromboembolism (a) & (b) shows thrombus in the anterior sub segmental branch of right pulmonary artery, seen as filling defect. Fig (c) shows dilated main pulmonary artery; Fig (d) shows dilated right ventricle; noted the wedge shaped infarct at right lower lobe**



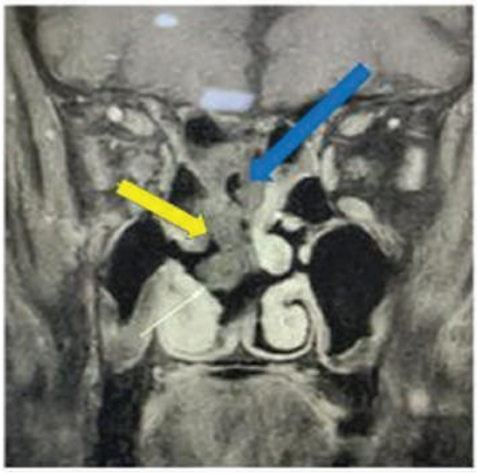
Organising Pneumonia with reticulations, interstitial fibrosis, architectural distortion and bronchiectasis

## Imaging Recommendations in Acute invasive fungal Rhinosinusitis / Mucormycosis

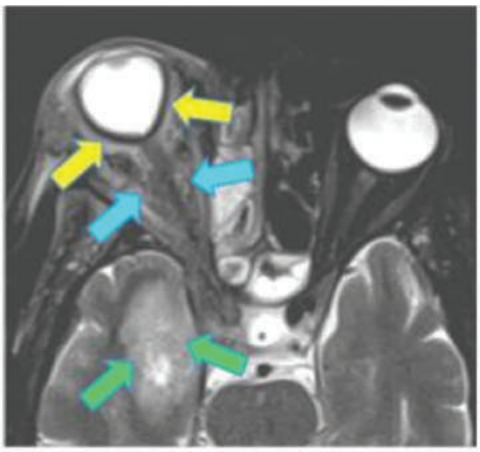
https://bit.ly/invasivefungalimaging



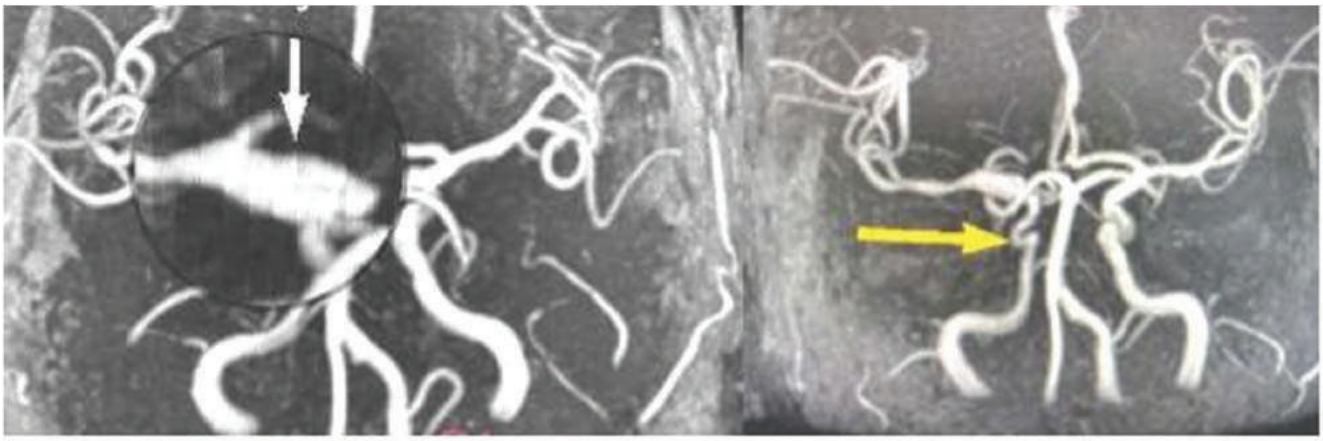
Bone infiltration by Mucormycosis. Axial CT shows erosion of floor of left maxillary sinus with involvement of hard palate; the erosion and destruction of hard palate can be



**Sinonasal disease:** Post contrast T1FS: the right middle turbinate and nasal septum show no significant enhancement – 'black turbinate sign'; note the normal enhancement of mucosa over both inferior and left middle turbinate. Further inflammatory changes with poor enhancement noted at right ethmoid sinus and both maxillary sinuses.



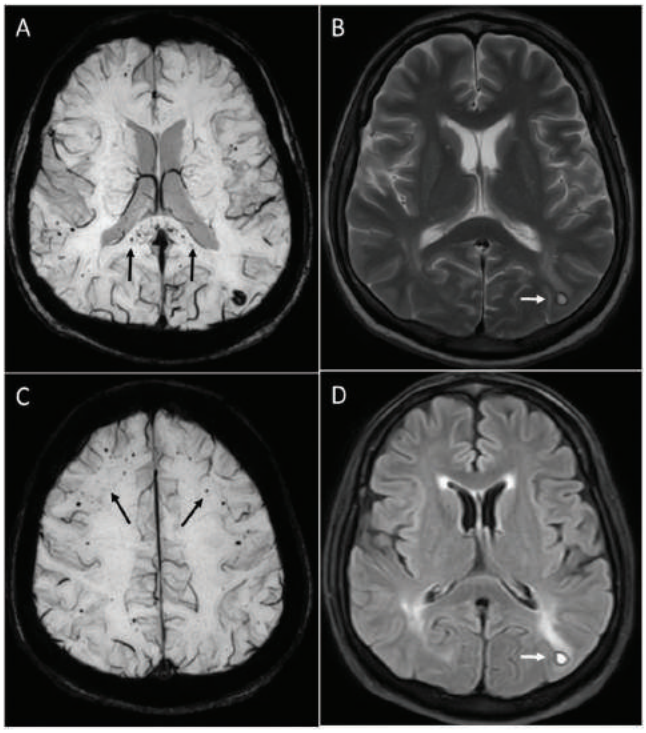
**Orbital, sinonasal and intracranial disease.**
T2 FS Axial Image Extensive fat stranding at intra and extra conal fat planes (blue arrow) with muscle edema resulting in distortion of globe which is shaped like a 'guitar pick' (yellow arrow) with proptosis. Note the cerebritis with possible early abscess formation at right temporal lobe (green arrow). Inflammatory changes at right ethmoid and sphenoid sinuses.



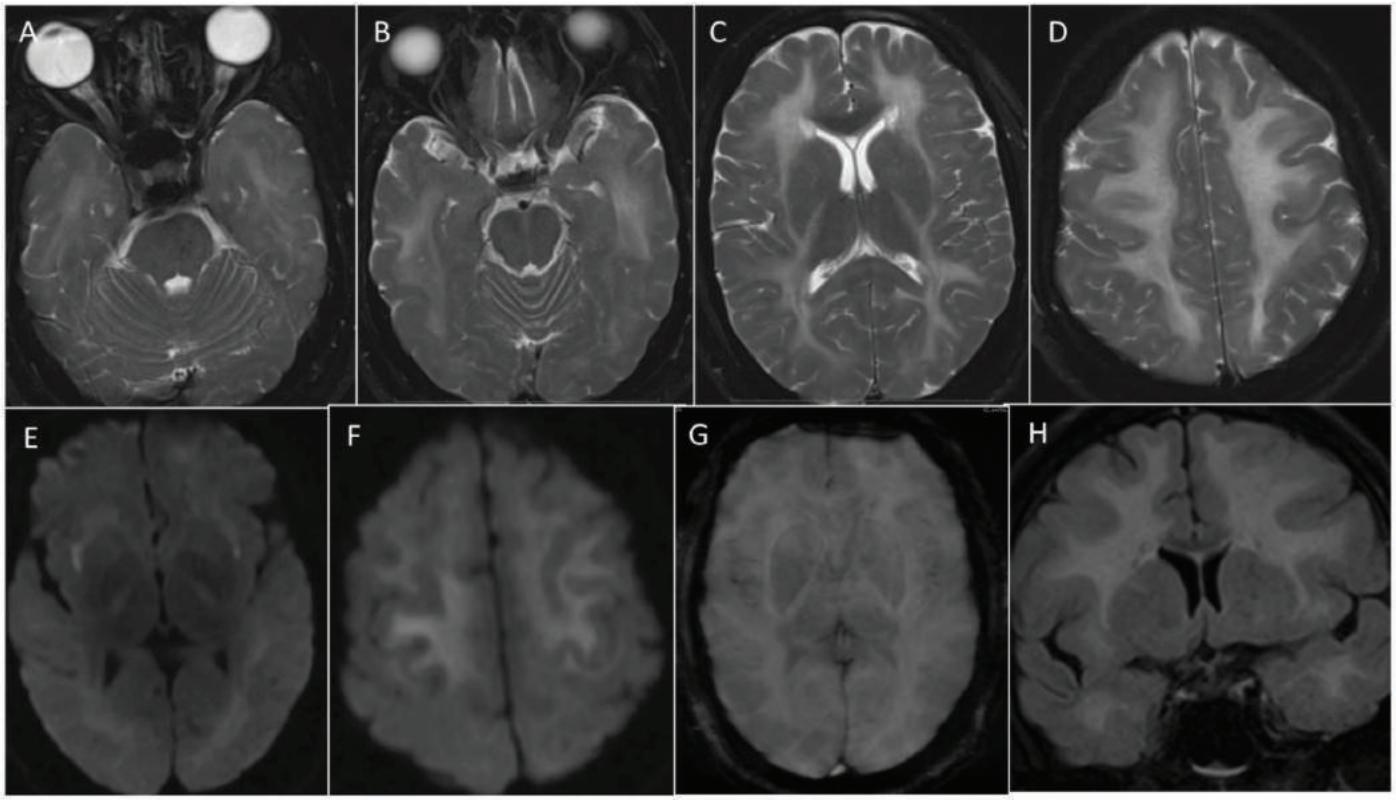
ICA stenosis and Pseudoaneurysm due to mucormycosis invasion. MR angiography of circle of Willis in a patient with angioinvasive mucormycosis showing a dilated segment of right ICA and M1 segemnt of MCA – pseudoaneurysm (white arrow); note the stenosis of cavernous segment of right ICA (yellow arrow) proximal to pseudoaneurysm due to cavernous sinus invasion by the fungus.

**Imaging Recommendations for COVID manifestations in the Central Nervous System**

**https://bit.ly/CentralNervousSystem**




Critical illness induced microbleeds or Virus induced thrombotic microangiopathy MRI Brain of 39 year old male who recovered from COVID 19 pneumonia. Axial SWI(A & C); Axial T2 (B) and Axial FLAIR (D) showed multiple microbleed (black arrow) in bilateral cerebral hemispheres at grey-white matter interface and in the splenium of the corpus callosum with small subacute haemorrhage in left parietal lobe (white arrow).




Leukoencephalopathy. 41year old male with history of COVID 19 infection presented with seizures progressing to altered sensorium. MRI of the brain Axial T2 (A – D), Axial DWI (E & F), Axial GRE (G) and Coronal T1(H) revealed confluent white matter hyperintensity involving bilateral cerebral hemispheres with corresponding areas of diffusion hyperintensity. No hemorrhage or abnormal mineralization noted.

**https://bit.ly/chestimaging**

**https://bit.ly/invasivefungalimaging**

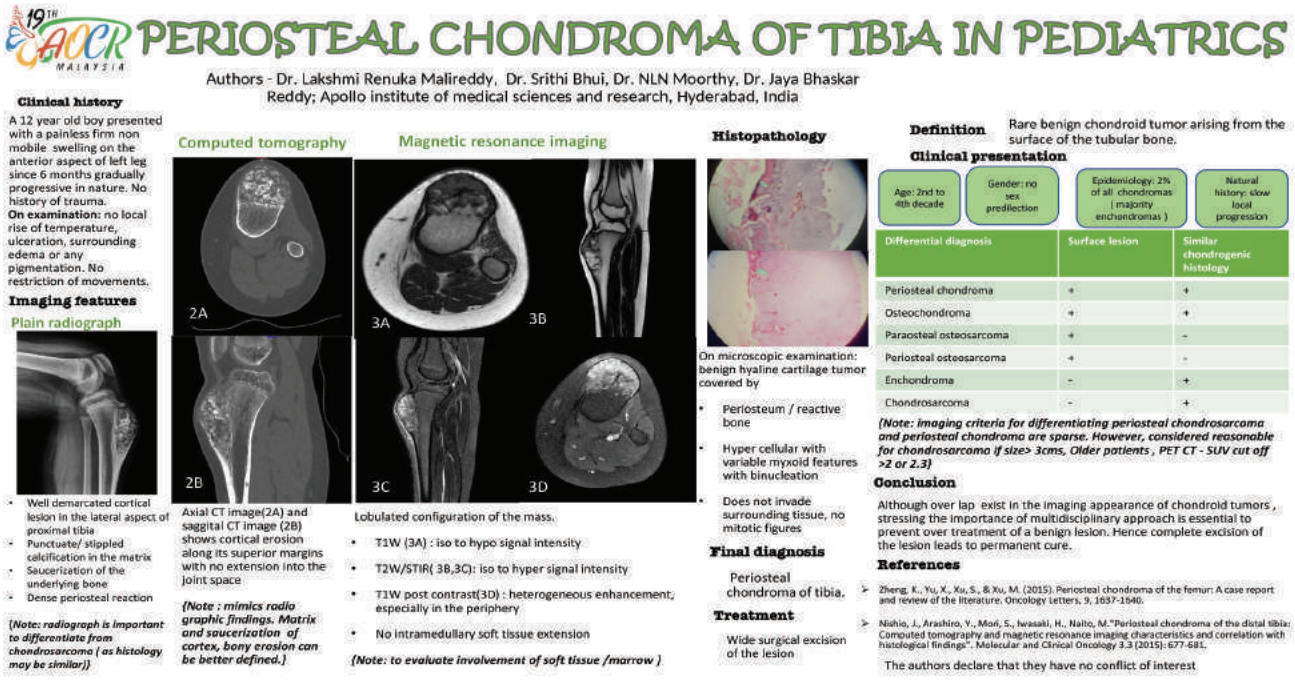
**https://bit.ly/CentralNervousSystem**

# ACHIEVEMENTS OF TS-IRIA MEMBERS

## E - posters presented by post graduate students at AOCR 1st - 4th July 2021

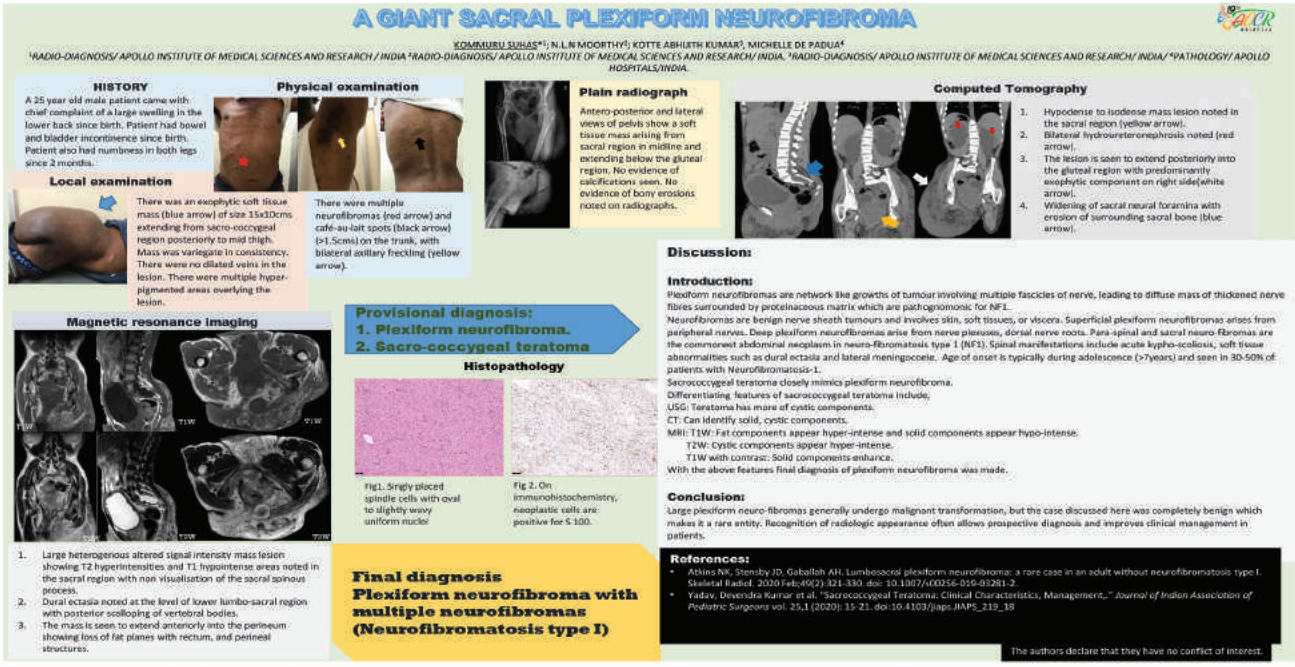
### Dr. Lakshmi Renuka Malireddy

**First year post graduate**
**Apollo Institute of medical sciences and research, Hyderabad**




### Dr. Kommuru Suhas

**First year post graduate**
**Apollo Institute of medical sciences and research, Hyderabad**



**Dr. Nikhita Gaddam**
First year post graduate
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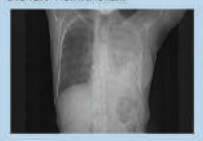
## COMMON COUGH TURNS OUT TO BE A RARE MALIGNANCY - A CASE REPORT

AUTHORS: Dr. NIKHITA GADDAM, JR; Dr. NLN MOORTHY, PROF; Dr. PRAVEEN KUMAR M., ASST PROFESSOR ; Dr. SWARNALATHA, HOD PATHOLOGY
Radio-diagnosis/Apollo institute of medical sciences and research/ INDIA
Pathology/Apollo institute of medical sciences and research/INDIA
The authors declare that they have no conflict of interest

### HISTORY

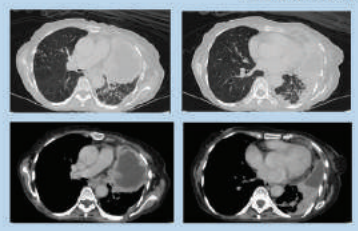
A 60 year old female presented with
1. Left sided chest pain
2. Productive cough with blood stained sputum
3. Shortness of breath since 4 months
4. Weight loss of 6-8 kg within 4 months

Sputum for Acid fast bacilli was tested negative.Ultrasound of chest was done which revealed a left sided pleural effusion and a wedge shaped heterogenously hypoechoic mass with internal vascularity in the left hemithorax.



### IMAGING FINDINGS

CT scout image showing non homogenous opacity in left hemithorax with blunting of left costophrenic angle.

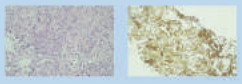


Unenhanced axial sections of CT chest in lung window (above) and contrast enhanced CT (below) in mediastinal window showing a predominant peripherally enhancing soft tissue density lesion in the left lingula with adjacent pneumonitic changes, central non enhancing areas, showing loss of fat planes with chest wall and mediastinum. Nodular thickening of pleura with adjacent pneumonitic changes.

### DIFFERENTIAL DIAGNOSIS

1. Adenocarcinoma of lung
2. Sarcomatoid mesothelioma of lung.
3. Rhabdomyosarcoma
4. Metastasis

### BIOPSY AND IHC



The biopsy findings showed spindle cells arranged in fascicles separated by collagenous stroma, areas of increased cellularity with moderate pleomorphism and scattered mitosis.Immunohistochemistry findings showed diffuse positivity for pancytokeratin and TTF-1.

Patient underwent a PET-CT scan and was found to have metastasis to the left diaphragmatic pleura, few left axillary, left internal mammary nodes, left adrenal gland and also to the medial aspect of left scapula and right frontal lobe.

### FINAL DIAGNOSIS

PRIMARY PULMONARY SARCOMATOID CARCINOMA

### DISCUSSION

1. It is a type of NON SMALL CELL LUNG CARCINOMA
2. Seen in ages above 60years
3. Is an extremely rare biphasic tumor with most cases showing advanced local and distant metastatic disease.
4. Accounts for 0.1% to 0.4% of lung malignancies

5 types:
- Pleomorphic carcinoma
- Spindle cell carcinoma
- Giant cell carcinoma
- Pulmonary blastoma
- Carcinosarcoma

### CONCLUSION

Sarcomatoid carcinomas are unique among lung cancers. On imaging, they appear as heterogenously enhancing peripheral or central lesion involving bronchial tree, pulmonary parenchyma and adjacent structures. Overall 5 year survival rate is 28% after surgery. Overall prognosis with multimodality treatment even in early stages is worse compared to other types of non small cell lung cancer.

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- Saha. Et.al. "Pulmonary sarcomatoid carcinoma: An uncommon entity in a 40 year female." Year:2016
- Ouzine, et.al. "Sercomatoid carcinoma of the lung: A model of resistance of chemotherapy." Year:2014


**Dr. Mannem Roopa**
First year post graduate
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## RHABDOMYOSARCOMA OF THE NASAL CAVITY INITIALLY DIAGNOSED AS CHRONIC SINUSITIS

AUTHORS:Dr.MANNEM ROOPA,RADIOLOGY RESIDENT;Dr.NLN MOORTHY,PROF;Dr.SUDHANSHU TONPE,ASST PROFESSOR;Dr.MEENAKSHI SWAIN ,PROF PATHOLOGY
Radio-diagnosis/Apollo institute of medical sciences and research/INDIA
Pathology/Apollo institute of medical sciences and research/INDIA

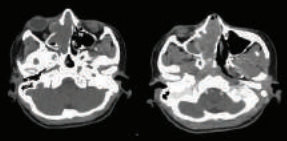
### INTRODUCTION

*Rhabdomyosarcoma* are primarily pediatric malignancies, but contribute to 1% of all adult malignancies. Sarcomas account for only 1% to 2% of all head and neck malignancy. Here we describe a rare case report of non-metastatic rhabdomyosarcoma of the nasal cavity in an adult woman who presented with several months of unilateral sinus and ophthalmic symptoms.

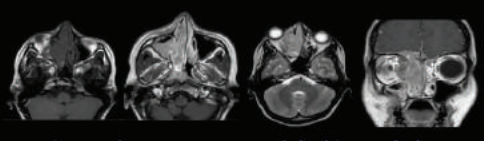
### HISTORY

A 47 year old female presented with right unilateral nasal obstruction, headache, proptosis of right eye and orbital pain for 6 months. Naso-endoscopy revealed a fleshy, irregular mass occupying the right nasal cavity. The patient was further evaluated on contrast enhanced CT scan and CE MRI of the paranasal sinuses.

### IMAGING FINDINGS

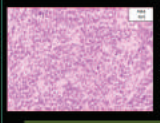


Contrast enhanced CT of paranasal sinuses depicts a large hypodense mass in the right nasal cavity with its epicenter in the posterior ethmoid and extending into ipsilateral maxillary antrum and ethmoid sinus and infiltrating into the extraconal compartment of the right orbit.

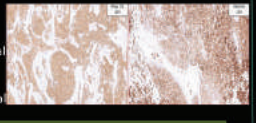


Contrast enhanced MRI of the paranasal sinuses depicts, a heterogenously enhancing hypo-isointense soft tissue mass in right nasal cavity with intracranial extension into right frontal lobe.

Patient underwent surgery and the histopathology samples revealed



Biopsy showed primarily undifferentiated tumor cells and scattered round and strap-shaped rhabdomyoblasts arranged in nests or cards separated by connective tissue trabeculae with focal areas of alveolar architecture. On immunohistochemistry,tumour cells were stained positive for desmin and myogen,markers for skeletal muscle differentiation.



**A DIAGNOSIS OF ALVEOLAR RHABDOMYOSARCOMA OF NASAL CAVITY**

References
S. Rajinder, J. Rohaizam, M. Irfan,Alveolar-type rhabdomyosarcoma of nasal cavity and paranasal sinus in adult with pulmonary metastasis: A case report,Egyptian Journal of Ear, Nose, Throat and Allied Sciences.
P.K. Mondal, I. Pal, S. Misra, S. Biswas, S.P. Bera - Rhabdomyosarcoma of nose, nasopharynx and paranasal sinuses.Ind J Otolaryngol Head Neck Surg, 61 (4) (2009)

### DISCUSSION

The rhabdomyosarcoma (RMS) subtype is rare in adults, most common site is the the head and neck region. Occurence in the paranasal sinuses and nasal cavity is exceedingly rare,commonest variant being the alveolar type.RMS of head and neck usually presents with non specific symptoms including headache,nasal congestion ,otorrhea,all of which mimics benign disease such as acute /chronic sinusitis.

### CONCLUSION

Our case is a rare case of Rhabdomyosarcoma of nasal cavity and paranasal sinuses in adults.Although alveolar rhabdmyosarcoma is a rare cause of unilateral sinus opacification in adults, neoplasm in general should be considered in the setting of unilateral symptoms or radiologic findings.

The authors declare they have no conflict of interest.

19TH CAOR MALAYSIA

# THIRD VENTRICULAR NEUROCYTOMA

PRESENTING AUTHOR- Dr Sohini Gandham
CO-AUTHORS- Dr Sindhura Manne, Dr NLN Moorthy & Dr Meenakshi Swain
Apollo Institute of Medical Sciences and Research, Hyderabad, Telangana , India, 500095

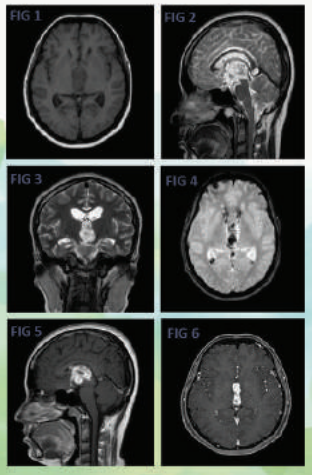
## INTRODUCTION

Central neurocytomas are very rare WHO Grade II tumours constituting 0.25-0.5% of intracranial tumours with mean age presentation at 29 years and a wide range of presentation from 8 days to 67 years; While most cases are reported in the third decade of life (75% present between 20-40 years of age.).they show no gender predeliction. They are normally benign intraventricular brain tumours that are characteristically located in the supratentorial ventricular system and form typically from neuronal cells of the septum pellucidum. Half of these cases involve lateral ventricles near the foramen of Munroe. 15% are located in both lateral ventricles and IIIrd ventricle. 13% of central neurocytomas are bilateral. Only 3% occur in third ventricle as an isolated location. Typically they appear gray and friable on gross inspection with areas of calcification or haemorrhage.

## CLINICAL HISTORY

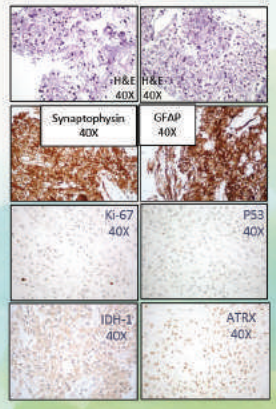
A 28 year old pregnant female of 23 weeks gestation presented with signs of raised intracranial tension of 5 months duration which were progressively worsening and accompanied by a headache of 4 months duration. There was no history of seizures.

## IMAGING FEATURES




On MRI T1W axial sequences (FIG 1) there was a heterogenous hypointense lesion with multiple hyperintense foci within it occupying and causing expansion of the third ventricle . On T2W sagittal and coronal sections (FIG 2 & 3) the heterogenously hyperintense lesion with multiple hypointense foci within it was seen inferiorly abutting the midbrain. Axial GRE sequences (FIG 4) showed foci of blooming which appeared T2 hypointense suggestive of calcific foci. Post contrast the sagittal (FIG 5) and axial (FIG 6) MR images demonstrated significant homogenous enhancement.

## HISTOPATHOLOGY




Endoscopic Biopsy of the third ventricular lesion was performed , sections showed thin tissue bits showing cellular , round to oval cells in fibrillary matrix. These cells showed scanty eosinophilic cytoplasm with round nuclei showing fine chromatin with no evidence of mitosis , necrosis or microvascular hyperplasia.

Immunohistochemistry : synaptophysin -strong and diffuse positivity; GFAP-diffuse positivity; MIB – 1 was about 1% ; IDH- 1 , ATRX and p53 were negative.

## DIFFERENTIAL DIAGNOSIS

Based on location and histomorphology, the other differential diagnosis of masses located in ventricular system

- **Oligodendroglioma**- show cystic degenerative changes; 4-5th decades ; male predeliction;
- **Ependymoma** -mean age 6 years; more commonly in the IV th ventricle with parenchymal extension.

## CONCLUSION

Central neurocytomas are slow growing, rare, benign intraventricular tumors of neuronal origin. The diagnosis is established by location of tumor with histology and immunohistochemistry playing a key role in ruling out the other differentials. Prompt imaging and diagnosis of central neurocytomas have a good prognosis.

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- Chinnikatti Shravan Kumar, D.N. Sharma , Youngest case of third ventricular anaplastic Neurocytoma, IJMPO, 2010.
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- Kelly K. Koeller - Cerebral Intraventricular neoplasms:Radiographic-Pathologic correlation1; Vol 22 , no.6


* The authors declare that they have no conflict of interest.

**Dr Nikhila Reddy Gunna**
**Selected into AIIMS New Delhi for DM Neuro-imaging and Interventional neuroradiology**

# ACHIEVEMENTS OF TS-IRIA MEMBERS

## Dr. Pravin kumar

**3rd Year Radiology PG**
**KAKATIYA MEDICAL COLLEGE,**
**Mahatma Gandhi Memorial Hospital**
**Warangal.**

**AOCR 2021: YES Scholarship Result**
1 message

**19th AOCR** <do_not_reply@aocr2021.com> Tue, 16 Mar 2021 at 1:47 pm
To: stubborngray@gmail.com


## Dr. Sikandar Shaikh

**Secretary, ICRI**

- **Promoted to Adjunct Professor, Department of Biomedical Engineering. IIT. Hyderabad**
- **Appointed as British Institute of Radiology Annual Conference 2021 Review Editor**
- **Reviewer for abstracts of European Society of Magnetic Resonance in Molecular Biology ESMRMB 2021 Conference**

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## Patterns of spinal cord malformation in cloacal exstrophy

Neetu Kumar FRCS[1], Chinky Chatur MD[2], Ankit Balani MD[2], May Bisharat FRCS[1], Zubair Tahir FRCS[3], Navroop Johal FRCS[1], Sniya Sudhakar FRCR[2], Peter Cuckow FRCS[1], Dominic N. P. Thompson FRCS[3], and Kshitij Mankad FRCR[2]

View Less —

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**Primary Intrahepatic Mixed Neuroendocrine–Non neuroendocrine Neoplasm** (MiNEN)-Rare Solid Cystic Neoplasm of Liver

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# Programmes Conducted by TS IRIA

## EXECUTIVE COMMITTEE MEETING

We had our first executive committee meeting on 07/4/21 held at the IRIA Office and discussed the 'Academic activities that had to be done throughout the year, like monthly meetings, webinars, TS IRIA Flagship programs like HARP RAC, KARE & state conference of TS chapter.

Lot of deliberations and discussion has been undergone regarding the conduct of the above, finally it's Decided to conduct 6 to 7 monthly meetings, four webinars and with the flagship programmes as 'Above. The four webinars were on Women imaging, Musculoskeletal, Conventional radiology and Interventional Radiology.

As the pandemic is still active and conditions are not conducive for real time meetings it was decided to Conduct all on virtual platforms.

The coordinators were given the opportunity of coordinating and conducting above programmes in a 'Systematic manner by involving all the executive committee members as and when needed and Desirable.

## MONTHLY MEETINGS

### Report on First monthly meeting on Tuesday 14/04/2021 at 7-9pm.

Interesting cases were presented by students, guest lecture was by Dr.Mrs Sunitha Linga Reddy Managing director/ Chief consultant Radiologist, Focus Medical Diagnostics and the topic was "IMAGING OF ORBITS" Which was well received by the students and faculty. The presentation was of high quality with beautiful CT & MRI images covering almost all the disease entities but the attendance was not satisfactory.

### Report on 2nd monthly meeting Tuesday 11/05/2021 at 7-9 pm.

Guest lecture by Dr.K.Sudheer Senior consultant radiologist, Continental hospital and the TOPIC "IMAGING EVALUATION OF CAVERNOUS SINUS LESIONS "which was of good quality, and images of CT & MRI were very informative. But that attendance wasn't encouraging. The student speakers presented Their cases well and the programme was well over within the stipulated time.

As so many webinars were happening at the same time on various platforms and IRIA & ICRI webinars Too taking place at the same time, keeping in view of the dwindling number of audience to monthly meetings, it was decided to change from 2nd Tuesday to 3rd Sunday of June with the same timings.

# Programmes Conducted by TS IRIA

## Report on 3rd monthly meeting — 20th June 2021 at 7-9 pm.

Keeping in view of the prevailing COVID pandemic and there was lot of uproar about black fungus across the length and breadth of the country as a complication of COVID-19, It was decided to have a guest lecture on **"RHINO ORBITAL- CEREBRAL MUCORMYCOSIS ' (ROCM)** by Dr.krishna Mohan Senior Consultant radiologist/ Vijaya diagnostic center, Which was well attended and received by the students and faculty as well. The students participated in a good number and presented the cases which were of high quality.

There is a quantum jump in attendance which is the most welcoming and refreshing, change of the day in monthly meetings which has brought about the desired results.Hence it was decided the monthly meetings will be conducted regularly on the 3rd Sunday of the month. For all the monthly meetings DR Krishna Mohan & DR Vikas Reddy Were coordinators and conducted the monthly meetings in an orderly manner.

## PHOTOS OF CONFERENCE

# Programmes Conducted by TS IRIA

## WEBINARS

The first webinar was conducted on **" FETAL & GYNEC IMAGING " LEARN FROM THE MASTERS** on 03/06/2021 from 7-12 pm

The speakers were of international repute starting from Dr. Ashok Khurana , Dr. Mohit Shah, Dr.Aniruddha Kulkarni, Dr.Sudheer Gokhale, Dr.B.S.Rama Murthy & Dr.Bimal Sahani,and the webinar was a grand success with a large scale of attendance of nearly 200 delegates. The programme went on til midnight, with most of the delegates present till the last minute.

This webinar was moderated by distinguished faculty Dr.T.L.N.Praveen , by sheer presence of his, has made all the difference and the Webinar was a grand success in terms of quality of the content and quantity in terms of attendance. Madam Dr.T.Surekha Coordinated so well the webinar in a manner befitting to its TITLE "LEARN FROM MASTERS"

## REMEMBERING DR.KAKARLA

### REMEMBERING DR.KAKARLA - " A TRIBUTE TO KAKARLA "

A special programme **"TRIBUTE TO DR.KAKARLA "Was** conducted jointly by AP & TS IRIA CHAPTERS on a common platform by virtual means on 25th April 2021. Many speakers shared their experiences and emotionally charged incidents of them with Kakarla sir which was very poignant and heart touching. About 13 speakers from TS IRIA CHAPTER spoke on that day and shared their experiences with DR.KAKARLA SIR and paid their tributes solemnly.

# Interesting Cases

## Case - 1


**Author**

**Dr. J. Jagan Mohan Reddy**
Prof and HOD Radiology,
Maheswara Medical College


**History**

**Five year female baby presented with delayed developmental milestones and features of severe mental retardation. She is bedridden and could not sit without support. Examination revealed microcephaly. Hematological investigations were normal.**

**MRI of the brain done Fig: 1, 2**

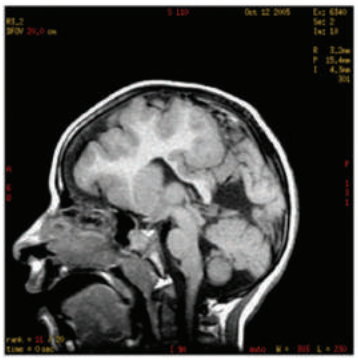

Fig: 1

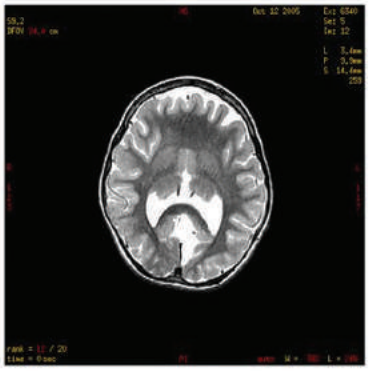

Fig: 2

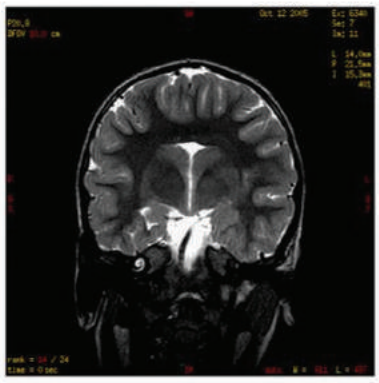

Fig: 3

**Radiological diagnosis:**

Semi Lobar Holoprosencephaly

MRI of the brain shows absence of genu and body of corpus callosum. The splenium of the corpus callosum is present (Fig: 1).

There is no cleavage of the cerebral hemispheres in the anterior part of the brain. A small partially formed third ventricle is noted. ( Fig: 2)

Separation of cerebral hemispheres is noted posteriorly with presence of falx and interhemispheric fissure. A single brain is seen anteriorly with crossing of white matter ( Fig: 3).

Holoprosencephaly (HPE) is characterized by the incomplete cleavage of the forebrain (prosencephalon) into right and left hemispheres, into diencephalons and telencephalon, and into olfactory and optic bulbs. The incidence of holoprosencephaly is estimated to be 1 in 16000 live births. Most of the cases of HPE present antenatally or at birth.(1).

## Case - 1

Some cases of holoprosencephaly are sporadic but it can be familial. Several genes have been implicated in causing this condition, and the wild type alleles at these foci are hypothesized to be crucial for normal fore brain development (2).

Several teratogens can cause holoprosencephaly, one of them being the alkaloids of the plant veratum californicum and another being ethanol. In both instances, it is thought that these drugs affect the prechordal mesoderm during gastrulation and/or the neural plate during early neurulation (3).

Holoprosencephalies represent a spectrum that is artificially subdivided into three types. alobar, semilobar and lobar (4)

Alobar HPE is the most sever type. No significant separation into hemispheres is noted. The ventricular system usually has appearance of horseshoe- shaped monoventricle. Inter hemispheric fissure is absent, thalami are fused. Absent falx, agenesis of corpus callosum, an absent septum pellucidum and absent olfactory bulbs are other features A dorsal cyst, which often communicates with the monoventricle is frequently noted. Clinically , these patients are often noted to have more significant midline craniofacial defects, including cases of cyclopia.

Semi lobar HPE is characterized by less development of anterior brain structures. The splenium of the corpus callosum is present but more anterior portions are usually absent.

Separation of the hemispheres is often noted posteriorly with presence of falx cerebri and interhemispheric fissure. A small, partially formed third ventricle is often noted. Fusion of anterior brain structures (cortex, basal ganglia, thalamus ) is noted. Our patient has typical features of semilobar HPE. A dorsal cyst may be seen. Subtle facial abnormalities are noted.

Lobar HPE is the least severe type. The cerebral hemispheres are reasonably well separated with some frontal horn development. Septum pellucidum is absent. Posterior half of the corpus callosum is formed. Third ventricle is usually well formed. Varying degree of basal ganglia and thalamic fusion is seen. Midline defects include cleft lip and palate.

Neuro imaging evaluation of HPE is best accomplished by MRI. MR imaging can accurately distinguish holoprosencephaly subtypes in utero, which may affect counseling of parents.(5). The core of the anomaly in semi lobar form of HPE is a rostro-caudally aligned midline gray matter 'seam' that extends from the telencephalic-suprachiasmatic junctional region to abut the posterior aspect of the callosal commissure. The seam forms the ventricular roof throughout its extent (6)

Type of holoprosencephaly was correlated with presence or absence of specific brainstem white matter tracts. Brainstem white matter tract abnormalities in patients with holoprosencephaly can be achieved by performing diffusion tensor MR imaging.(7)

By combining the basic-science knowledge with observations of brain morphology, we can better understand the embryology and genetic factors that influence brain development and, ultimately, form more accurate classification systems and stratification measures for predicting patient outcome.(8)

**References:**

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# Interesting Cases

## Case - 2


Author

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**DNB,**
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Author

**Dr Priya Nathan**
**M.D ,D.M.R.E**
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**Introduction:**

Rhinocerebral mucormycosis is an acute, fulminant, and often lethal opportunistic infection. In the current scenario Corona virus pandemic, abrupt increase of mucor -mycosis cases is seen due to weakened immune system, in post covid pateints especially those suffering from diabetes mellitus and concomitant use of steroids. We present a review of pertinent imaging findings in histopathologically proven post covid mucor- mycosis cases at our institute.

**Clinical features:**

Patients presented with varied symptoms including nasal congestion, bloody, black nasal discharge, facial swelling/ and pain, diplopia , worsening headache, altered mental status.

**Imaging Findings and Discussion:**

Non Contrast CT Scan Findings: Most common sites are middle turbinate, maxillary, ethmoid and sphenoid sinuses. usually starts unilaterally ,bilateral disease may also be seen. Early disease shows mucosal thickening at nasal cavity and sinuses with orwithout fluid level – these changes occur in all types of sinusitis. When hyperdense contents are observed it is more indicative mucor infections.Periantral( pre and retromaxillary ) and orbital soft tissue involvement can be seen with or without evidence of bony erosions/sclerosis or permeation as the disease can spread through perivascular channels.

Pre and post contrast MRI provides better evaluation of soft tissue involvement , intracranial and perineural spread which if present carry poor prognosis .Important sequences for evaluation are the T2 FS,STIR ,post contrast T1 in axial and coronal planes. Common findings include -T2W hyperintense mucosal thickening with hyointense striations and fluid levels with diffusion restriction of contents seen in some cases. Necrotic turbinates (Fig 1)and nasal septum, Periantral fat stranding. Maxillary alveolus and palate bony involvement/ Osteomyelitis(Fig 2). Orbital cellulitis (Fig 3),Involvement of optic nerve,Intra orbital abscess,Proptosis. Meningitis, Focal encephalitis (Fig 4), ICA occlusion, Cavernus sinus thrombosis (Fig 5),Perineural spread(Fig 6)

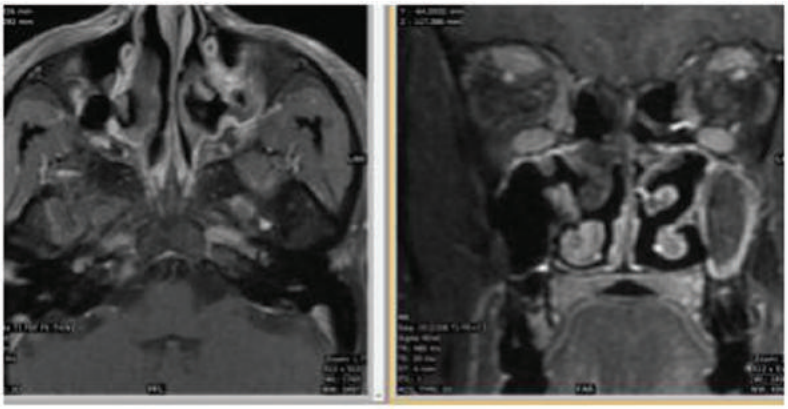


Figure 1: "Black turbinate sign" AXIAL andCORONAL post contrast T1-FS shows Non enhancing/necrotic right middle turbinate in a proven invasive mucor sinusitis.

## Case - 2

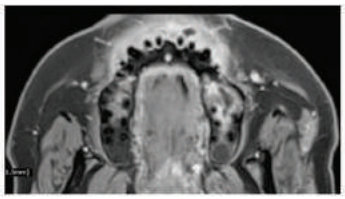


**Figure 2:** Post contrast AXIAL T1W image shows osteomyelitis of maxillary alveolus from adjacent maxillary sinusitis.Patient presented with loosening of maxillary teeth post PNS

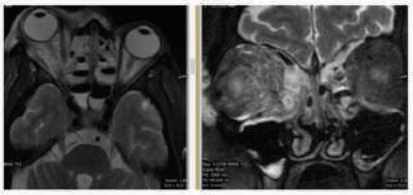


**Figure 3:** AXIAL T2W, CORONAL T2FS: Right orbital cellulitis with proptosis and distorted shape(guitar pick sign), in a patient with invasive sinusitis,

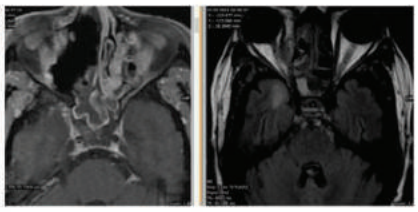


**Figure 4:** AXIAL post contrast TWFS and AXIAL FLAIR images show Focal dural enhancement and right anterior temporal lobe involvement in a proven case of mucormycosis-

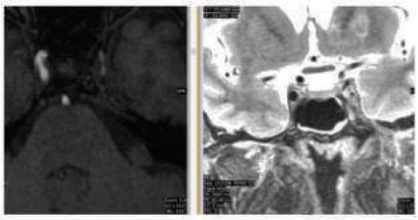


**Figure 5:**TOF- MRA and T2W coronal :shows Bulky and heterogeneous Left cavernous sinus compared to right and significant narrowing/thrombosis of left ICA.

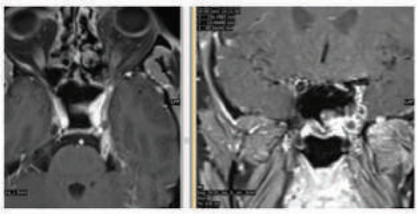


**Figure 6:** Perineural spread: post contrast T1W axial an coronal sections show thickened enhancing left V th cranial nerve Along its course upto cisternal segment.

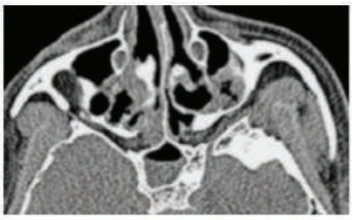


**Figure 7:** AXIAL plain CT shows fluid levels in sphenoid sinus and soft tissue component at right sphenopalatine foramen(arrow)

**CONCLUSION**:

Rhinocerebral mucormycosis is an acute, fulminant, and often lethal opportunistic infection typically affecting diabetic or immunocompromised patients .Extensive angioinvasion is the main cause leading to vascular thrombosis and tissue necrosis. Multimodality Imaging approach is helpful in diagnosis, planning of treatment and prognostication of disease process. MRI provides better soft

tissue resolution, early inflammatory changes,intracranial and preperineural spread. CT is a rapid ,cost effective,andcan provide most of the information needed when disease is confined to extracranial sites Multiplanar MRI and CT images are helpful in planning the debridement surgery to remove non vitalized tissue and prevent the further spread of the disease at early stages

# Interesting Cases

## Case - 3

Author

Dr.Sura.Sravanthi

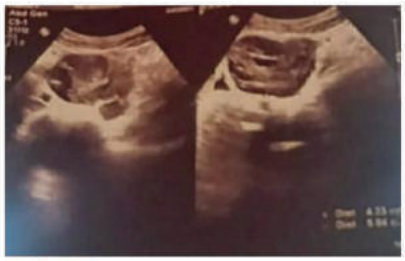
**TITLE:** A rare case of desmoplastic small round cell tumor of peritoneum

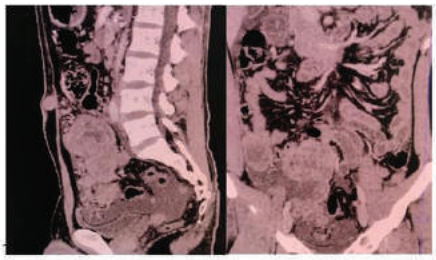
**AUTHOR:** Dr.Sura.Sravanthi

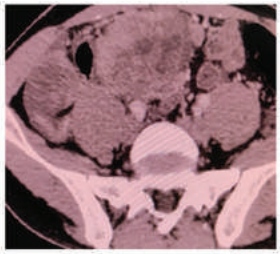
**CO AUTHOR:**Dr.Ch.Vikas rao

**CLINICAL PROFILE:** 20 year old male patient presented with history of vague abdominal pain and gradually progressing lump in abdomen since 1 month

**IMAGING FINDINGS:**ULTRASOUND







**On ultrasound:**

Multiple well defined solid lesions with cystic areas with in it arising from peritoneum showing internal vascularity with in them

**CECT**

Multiple well defined lobulated isodense solid soft tissue lesions showing necrotic areas noted in pelvis and subhepatic regions
Lesions are showing heterogenous enhancement in solid areas on post contrast administration
Multiple peritoneal seedlings seen in abdomen

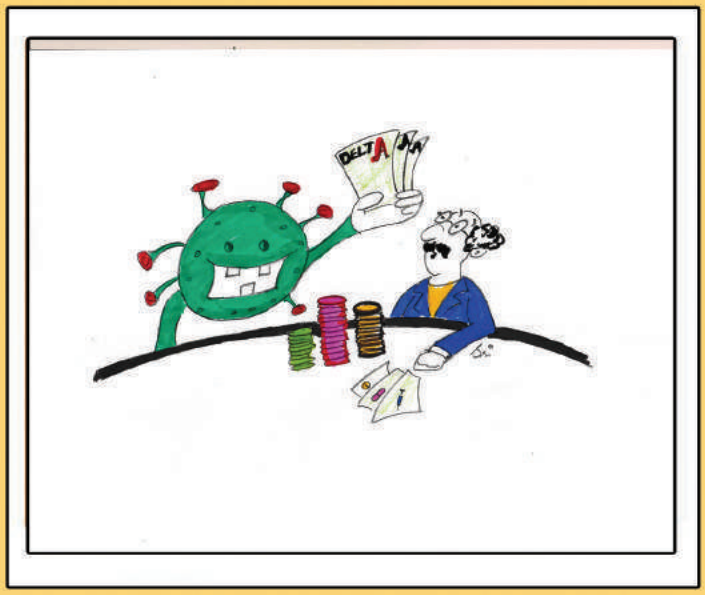
**HISTOPATHOLOGY**

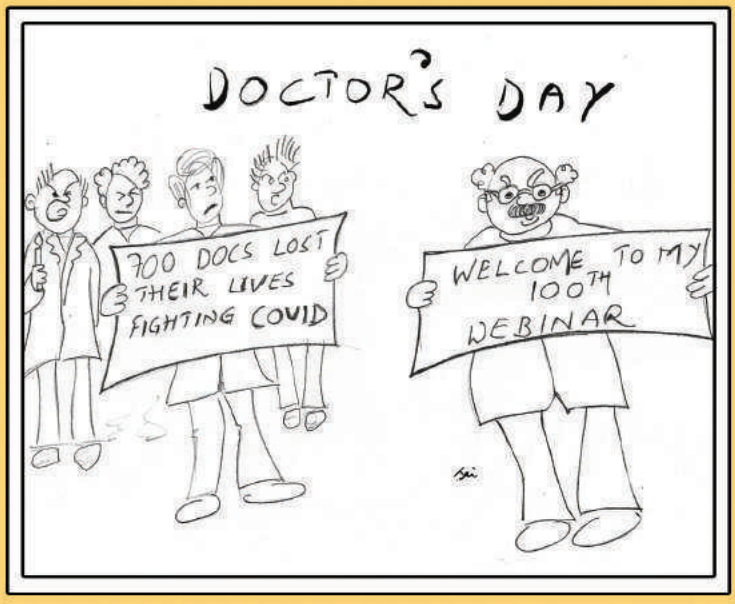
Infiltrating nests of tumor cells surrounded by desmoplastic cellular stroma
f/s/o Small blue round cell tumor/ Desmoplastic Small blue round cell tumor
Based on history and imaging findings diagnosed as desmoplastic small round cell tumor of peritoneum ,furthur supported by histopathology

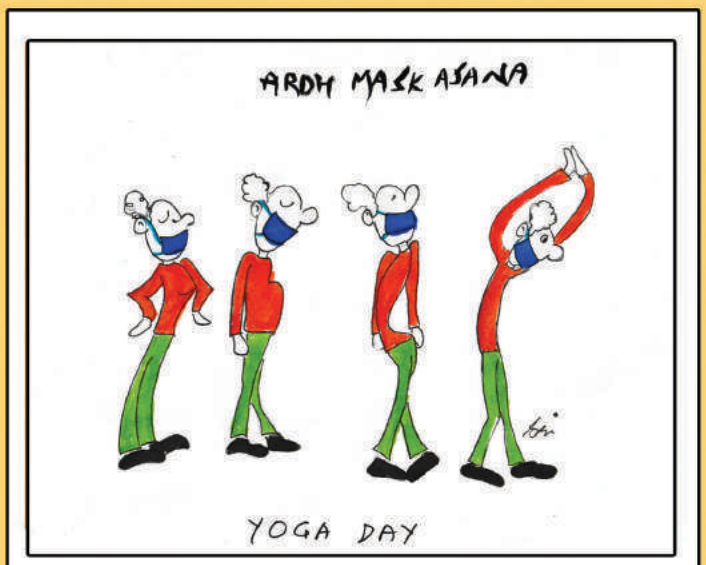
**DISCUSSION**

DSRCT is a member of the family of small round blue cell tumors
It is a rare, very aggressive, and highly malignant mesenchymal neoplasm that grows along the peritoneal surfaces in most patients
It occurs primarily in young men with a mean age of 19 years.
The characteristic imaging feature of DSRCT is multiple soft-tissue masses involving the peritoneal cavity in the omentum or mesentery without a definite organ of origin
The differential diagnosis for DSRCT includes malignancies producing peritoneal or mesenteric masses (e.g., rhabdomyosarcoma or sarcomatosis, lymphoma, neuroblastoma, primitive neuroectodermal tumor, mesothelioma, and intraabdominal desmoid tumor)

Tuberculosis with omental caking
Early diagnosis with tumor location ,size and metastasis improve the survival rate of the patients with multimodality treatment approach to patients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