



**INDIAN RADIOLOGICAL &
IMAGING ASSOCIATION**

TELANGANA STATE CHAPTER

IRIA TELANGANA e-Newsletter, Issue -11

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Issue 11 : January 2022

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FROM THE PRESIDENT'S DESK



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

Wish you all happy and safe new year (2022).

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

The news letter provides the 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, presentations and special programmes of IRIA TS chapter in colourful presentation.

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

I thank and congratulate Dr. Jagan Mohan Reddy sir, Dr. Aruna Karnawat and all other members of the editorial board for their hardwork and coordination to bring the news letters.

Wishing you all the best.

DR. VENKATA NAGESHWAR GOUD
President TS Chapter IRIA

FROM THE GENERAL SECRETARY DESK



Dear Esteemed members of TSIRIA,

Wish you a Happy and prosperous new year 2022. Wish everyone is safe and healthy during this 3rd wave of covid pandemic. Hope that we will resume our monthly meetings in offline mode from April month. TSIRIA is known for organizing many academic activities for the benefit of post graduate students and consultants and I request everyone to actively participate in all the sessions and make them grand success.

HARP, RAC and KARE programs specifically cater to the needs of post graduate students. We plan to conduct webinars with subspecialty focused approach to enhance the knowledge of practicing Radiologists.

Lastly I want to express sincere gratitude to all the members for electing me as general secretary. I congratulate Dr E. Rajesh, elected as vice president of central IRIA and Dr Sikander, secretary of ICRI

Long live IRIA

Regards,
Dr Krishna Mohan Pottala
GENERAL SECRETARY IRIA TS CHAPTER

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Vijaya Diagnostic Centre

A concise overview of the PC-PNDT act

I take this opportunity to highlight the brief and succinct overview of the PC-PNDT act with special emphasis on the basic requirements of the act and its impact on the radiology community. The PC-PNDT act was enacted in 1994 ,

amended and effectively implemented in 2003 and strictly amended in 2011. The Government concerned with a fall in female sex ratio , increased female feticide and male child preference in the society , has created this stringent act to curb the practice of prenatal determination of sex which promoted social evil of female feticide.

The few basic requirements of the Act are:1) Registration under Section (18) of the PC-PNDT Act.

2) Written consent of the pregnant woman and prohibition of communicating the sex of fetus under Section 5 of the Act. 3) Maintenance of records as provided under Section 29 of the Act. 4) Creating awareness among the public at large by placing the board of prohibition on sex determination. The act penalises all the errants, either involved in sex determination or non-maintenance of records . Criminal prosecution will also bring in suspension and cancellation of registration granted by the State Medical Council.

The most effective precautionary measures to prevent penalisation under this act are to maintain records scrupulously, fill the form-F as provided in the Act, accurately and correctly , submit the records to the appropriate authority within the stipulated time frame. No doubt the bare perusal of the act indicates that it is draconic and does not offer any escape to the erring radiologist /sonologist.

There are many shortcomings of this act which places radiologists / sonologists under unusual pressure and also bring the career of an individual to a standstill if penalised. These shortcomings must be addressed and the prosecution has to take the responsibility of taking the burden of proof. Form F needs modifications as prenatal invasive diagnostic procedures are not carried out in simple ultrasound clinics and imaging centers.

There has been recent increase in sex ratio of female child. PC-PNDT act is being implemented with care and religiously in all the ultrasonological centres and diagnostic setups. The Government should amend few of stringent rules of the existing act like sealing of ultrasound machine, suspension from state medical council e even for minor lapses. Save the girl child campaign ,educating the general public and other such remedies are needed to completely wipe out this deep-rooted socio-economic evil of female feticide .

SAVE THE GIRL CHILD

ACHIEVEMENTS OF TS-IRIA MEMBERS



Dr. Rajesh kumar Enagala Elected & Inducted as Vice President of National IRIA at National IRIA conference, Bangalore.



Dr. Sikandar Shiekh received President appreciation award for honorary and meritorious services rendered to IRIA



Dr. K. Prabhakar Reddy

Dr. K. Prabhakar Reddy elected for "Lifetime Achievement Award"
It will be awarded at the next National IRIA conference, Amritsar, 2023



Dr. Sikandar Shaikh
Secretary, ICRI

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Journal of Magnetic Resonance Imaging / Early View

Editorial

Editorial for "Abbreviated Gadoteric Acid-Enhanced MRI for the Detection of Liver Metastases in Patients With Potentially Resectable Pancreatic Ductal Adenocarcinoma"

Dr. Sikandar Shiekh was Invited by ISMRM to deliver a lecture entitled "MRI of the Pancreas:basics" to be held in ISMRM Annual meeting 07-12 May 2022 in London, Engalnd,United Kingdom

Academic Activities of IRIA TS chapter

Flagship Program of TS IRIA Chapter (7th State Conference)

7th State Conference on 23rd and 24th Oct 2021 was conducted on virtual platform which is a patent program of the chapter was well received and attended by more than 225 delegates across the country in spite of duplication of the contents by ICRI Weekly physics webinars.

Dr. P. Vikas Reddy Conference Co-ordinators Dr. P. Krishna Mohan and Dr. Ankit Balani Proffered papers Co-ordinators course and spared their valuable time on two consecutive Sundays and the course was conducted in a befitting way by them.



IREP - 2021

IREP 2021 organised by IRIA & ICRI and hosted by TS CHAPTER OF IRIA was held on 27th ,28th November 2021 at S V S MEDICAL COLLEGE , MAHABUBNAGAR.

This was much awaited on-site Radiology resident programme held after a period of nearly 2 years during which the academic activities of the chapter were held on virtual platform due to COVID restrictions.

It was very well attended with an attendance of 261 residents and 31 faculty members , dignitaries from National IRIA , TELANGANA CHAPTER & S V S Medical College Mahabubnagar.

Academic Activities of IRIA TS chapter

The scientific programme was an academic feast comprised of very useful comprehensive sessions on Resident oriented topics including lectures, case based discussions and spotter sessions taken by renowned faculty across the nation and from the leading Institutes of Telangana. The scientific programme was a great success and highly appreciated by the residents and the practising Radiologists as well.

The venue arrangements are flawless and meticulously planned by TS IRIA Chapter and with wholehearted co-operation from the administrators of S V S Medical College and HOD of Dept of Radiology Dr. VENKATRAM REDDY and faculty

The IREP will be etched in the annals of the Chapter for it's level of success and for the way it was planned and conducted .

Lastly big thanks for the dignitaries from the National IRIA and the co-ordinators of IREP for their invaluable presence , co-operation and guidance which have culminated to the grand success of IREP.



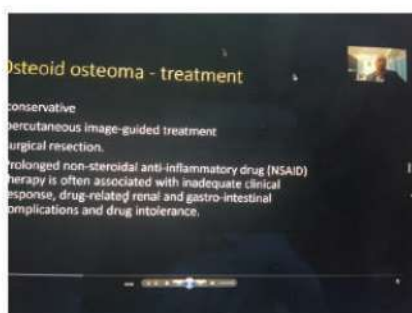
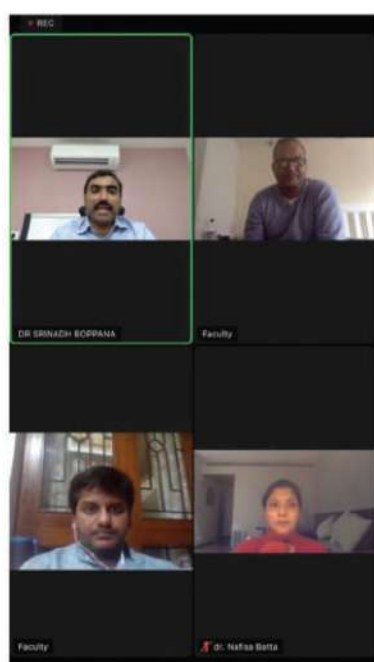
Academic Activities of IRIA TS chapter

WEBINAR - MSK IMAGING

The webinar on MSK imaging was successfully conducted on 19th December 2021 under the able guidance of Dr. SRINADH as the co-ordinator. This event was conducted in the memory of late Dr. V S V RAMMOHAN as a token of respect for the services rendered by him to the TS IRIA CHAPTER.

This was well attended and appreciated by one and all. Dr. SRINADH was ably assisted by Dr. VIKAS REDDY in conducting this event in a praiseworthy manner as it was the last academic event of the chapter in this calendar year.

The faculty composed of International & National speakers made this event memorable for their excellent contributions in the form of well sketched topics relevant to the present scenario and status of MSK Radiology.



IREP - QUIZ WINNERS



1st Prize

**Dr. Ravi Teja Tammisetty
Kurnool Medical College**



2nd Prize

**Dr. Arockia Xavier R
Kurnool Medical College**



3rd Prize

**Dr. Mohd Moshin Khan
SVS Medical College**

“OMICRON - So far”

Author



Dr Jwala srikala

Senior consultant radiologist
Lead consultant-Breast imaging
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Hyderabad

A new SARS COV2 variant (B.1.1.529) was discovered in the Gauteng Province of South Africa on November 9, 2021. It was first reported to the World Health Organization (WHO) on November 26, 2021, and is now known as ‘OMICRON,’ and is classified as a ‘Variant of Concern.’ Since the heavily mutated variant was first detected in November, WHO data shows it has spread quickly and emerged in at least 128 countries. It spreads seven times faster than the Delta variant. According to preliminary evidence, the Omicron strain may also increase the risk of reinfection.

The variant has many mutations, some of which have concerned scientists. The Omicron variant has a total of 60 mutations compared to the reference / ancestral variant: 50 nonsynonymous mutations, 8 synonymous mutations, and 2 non-coding mutations. Thirty-two mutations affect the spike protein, the main antigenic target of antibodies generated by infections and of many vaccines widely administered. Many of those mutations had not been observed in other strains. The variant is characterised by 30 amino acid changes, three small deletions, and one small insertion in the spike protein compared with the original virus, of which 15 are located in the receptor-binding domain. It also carries a number of changes and deletions in other genomic regions. Additionally, the variant has three mutations at the furin cleavage site which increases the SARS-CoV-2 infectivity.

A link with HIV infection may explain a large number of mutations in the sequence of the Omicron variant. Indeed, in order to be affected by such a high number of mutations, the virus must have been able to evolve a long time without killing its host, nor being eliminated. One such situation occurs in people with a weakened immune system but receiving enough medical care to survive. This is the case in HIV patients in South Africa, who represent more than 20% of the population. Due to lack of access to clinics, fear of stigmatisation and disrupted healthcare, millions living with HIV in the region are not on effective HIV therapy. HIV prevention could be key to reducing the risk of uncontrolled HIV driving the emergence of Covid variants. Because the spike protein is the target of most available vaccines, scientists around the world are concerned about vaccine efficacy against this strain. A number of studies are currently underway to determine the potential impact of this variant on current countermeasures.

SARS CoV2 diagnostic tests that are currently available continue to detect new variants such as Delta. There is currently no evidence that these tests will produce more false negative results when detecting the Omicron variant. B.1.1.529, according to the South African NICD, has a deletion in the S gene that allows for rapid identification of the variant without genome sequencing.

When infected with the new mutant variant, the individual experiences the same symptoms as witnessed when infected with the original strain or the previously mutated virus. The first few symptoms of Omicron are mild fever, fatigue, scratchy throat and body pain. Loss of smell and taste, which was a common ailment during the infection with Delta variant is not associated with omicron. A unique reported symptom of the omicron variant is night sweats. As far as, post-infection complication of the new variant of concern goes, no information on this matter is available till now.

Omicron is believed to be far more contagious (spreading much quicker), to spread around 70 times faster than any previous variants in the bronchi (lung airways), but to be less able to penetrate deep lung tissue, leading scientists to consider this reason as the cause of reduction in the risk of severe disease requiring hospitalisation, when compared to previously identified variants of concern. Early data indicates that the variant’s risk of hospitalisation is around 29 percent less than previous variants. However, the extremely high rate of spread, combined with its ability to evade both double vaccination and the body’s immune system, means the total number of patients requiring hospital care at any given time is still of great concern.

“OMICRON - So far”

The Centers for Disease Control and Prevention highlighted in one of its reports that the reproduction number or R0 of the Delta variant was somewhere between 5-9, compared to 2-3 for the original virus and 4-5 of the Alpha variants. Information about the Omicron variant is still emerging and while it cannot compare 1-to-1 with the Delta variant due to a variety of external factors, scientists have estimated through preliminary findings that the Omicron variant is almost 4x as transmissible as the Delta variant. While it took several months for the Delta variant to spread over the world and cause the resurgence of a new wave of the pandemic, the Omicron variant has managed to do the same within weeks. The R0 number of the new heavily mutated variant is estimated to be as high as 10.

Even as cases of Omicron variant of COVID-19 are on the rise across the globe, a new strain of coronavirus that combines Delta and Omicron has been detected in Cyprus. The

As the article is going for print, India has reported over 1,79,000 of which only 4033 were of the omicron .This shows that majority of the infections are still being caused by either the delta variant or the earlier alpha variant .Its high time we raise our guard and stringently follow COVID appropriate behaviour of masking up ,regular hand washing and social distancing .If there was a time when these practices were most relevant , it is NOW .

STAY SAFE. STAY HEALTHY

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Interesting Cases

Case - 1

Author



Dr. Sarah Aishwarya E
Final year Radiology Resident
Prathima Institute of
Medical Sciences,
Karimnagar

TITLE: A RARE CASE OF CHOROID PLEXUS CARCINOMA

AUTHOR: Dr. Sarah Aishwarya E

CO-AUTHOR: Dr. Ch. Vikas Rao, Dr. P. Sushmita Rao

INSTITUTE: Prathima Institute of Medical Sciences, Karimnagar

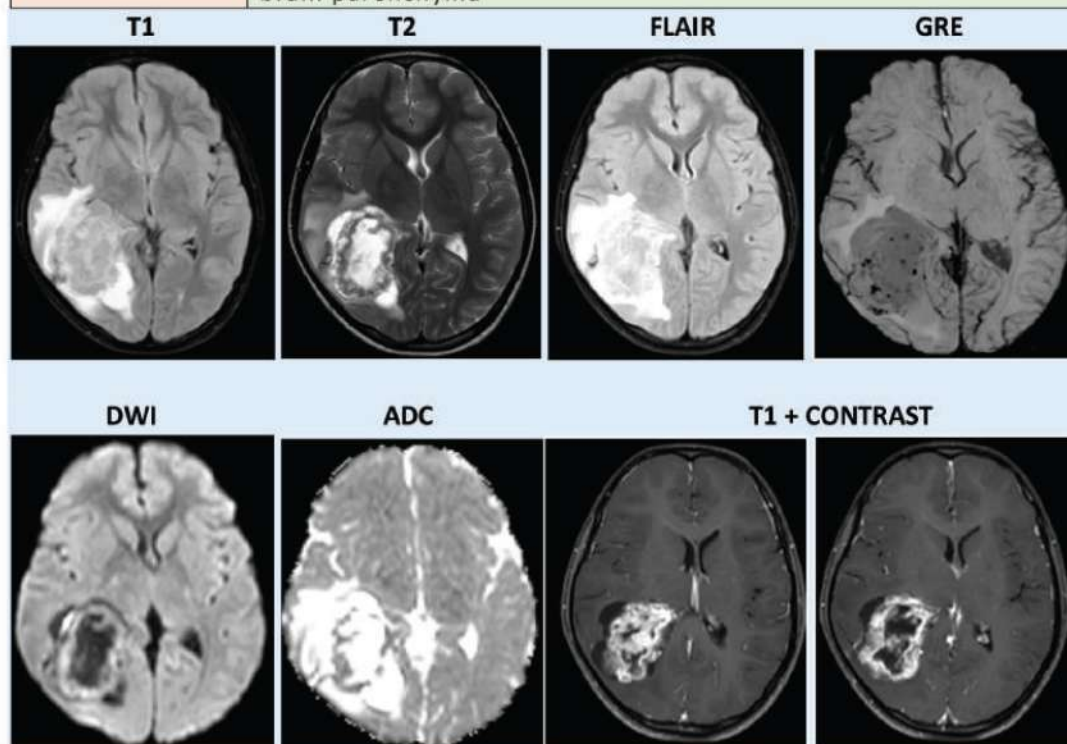
HISTORY: 13year old boy with complaints of headache since 1month, nausea and vomiting for 10 days.

IMAGING FINDINGS:

CT BRAIN: Large heterogenous iso-hypo-hyperdense lesion noted arising from occipital horn of right lateral ventricle causing dilatation of it.

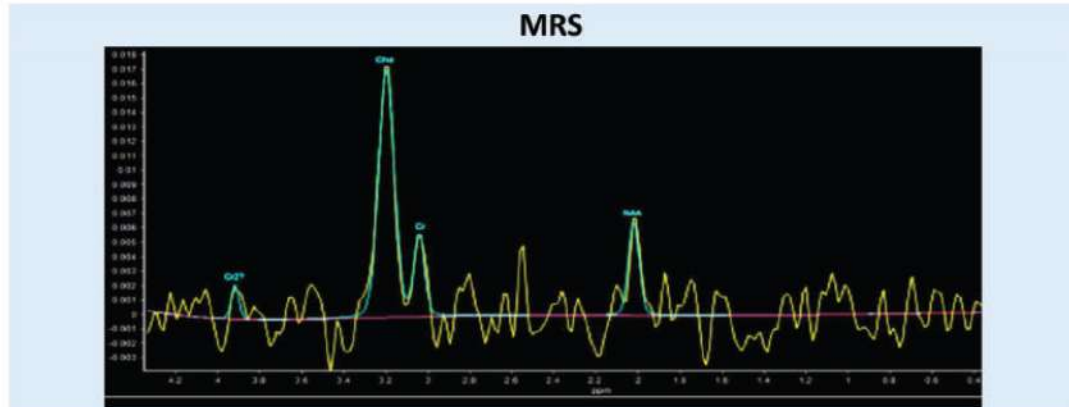
MRI BRAIN: Large lobulated lesion arising from dilated occipital horn of right lateral ventricle

T1	Iso to hypointense (hypo areas: necrosis)
T2/FLAIR	heterogeneously iso and hyperintense (hyper area: necrosis)
DWI/ADC	True restriction
GRE	Multiple areas of blooming corresponding to hemorrhagic foci
POST CONTRAST	Heterogenous enhancement
MRS	Choline peak
PERIPHERAL	Edema (T2/ FLAIR hyperintensity)
MASS EFFECT	Midline shift 2.6mm towards left, compression over adjacent brain parenchyma



Interesting Cases

Case - 1



HISTOPATHOLOGY: Tumor cells arranged in solid sheets and papillary pattern. Increased cellularity, nuclear atypia in form of hyperchromasia and pleomorphism, 5mitoses/10 hpf, necrosis and foci of hemorrhage, invasion of brain tissue seen.

DISCUSSION: Choroid plexus carcinoma is a malignant WHO Grade III neoplasm arising from the epithelial cells of choroid plexus, almost always arises in lateral ventricle.

They are typically seen in less than 5years of age and are associated with Simian-40 virus DNA in about 50% of patients, Li-Fraumeni and Aicardi syndromes.

Grossly it appears as a lobulated mass with cystic and necrotic areas.

They may have CSF-seedling.

Differentials: Choroid Plexus Papilloma, Atypical choroid plexus papilloma (homogeneous, absent necrosis, absent brain parenchymal invasion), intraventricular meningioma (homogenous and intense contrast enhancement).

They grow rapidly with a 40% 5-year survival. Complete surgical resection improves 5-year survival to maximum of 86%. TP53 mutation, brain invasion and CSF seeding pose poor prognosis.

Interesting Cases

Case - 2

Author



Dr Roopa
Resident
Apollo Hospitals
Hyderabad

Imaging features in foot osteoarthritis- A pictorial assay

Authors: Dr. Mannem Roopa, Dr. NLN Moorthy, Dr. Ramesh Goud
Apollo institute of medical sciences and research, Hyderabad, India

Learning objectives

The main objective of this present study is to describe the various radiographic features of foot osteoarthritis.

Introduction

Osteoarthritis seems to be a significant cause of foot pain in older people in whom painful foot disorders are major contributors to restricted activity, poor balance and risk of falling. The most commonly affected joint is the first metatarsophalangeal joint followed by the second cuneometatarsal, talonavicular joints.

Imaging

Weightbearing dorso-plantar and lateral foot radiographs are required in better demonstration of foot osteoarthritis. For the superior depiction of soft tissues, ultrasound and MRI are indicated.

MRI can also detect bone marrow changes and cartilage loss and effusion-synovitis, which are early osteoarthritic changes and are not visible on radiographs and also detect any underlying etiologies including ligament and tendon injuries.



Weight-bearing mortise (A), and lateral (B) radiographic views of the ankle demonstrate severe ankle joint (tibiotalar) arthritis. There is joint space obliteration, subchondral sclerosis, and osteophyte formation.



Midfoot osteoarthritis. Arrows indicate first cuneometatarsal and second cuneometatarsal joint space narrowing and subchondral sclerosis.



Obliteration of joint space with subchondral sclerosis noted-Subtalar arthritis

Interesting Cases

Case - 2



Mortise view shows moderate degeneration with loss of joint space in both the medial and lateral gutters-mid foot arthritis

Conclusion

With the more recent advances in imaging, it is possible to diagnose early and provide symptomatic treatment to the patient. Plain radiograph being the most widely available can be advised for follow up.

References

Demographic and clinical factors associated with radiographic severity of first metatarsophalangeal joint osteoarthritis: cross-sectional findings from the Clinical Assessment Study of the Foot-H.B. Menz.



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