

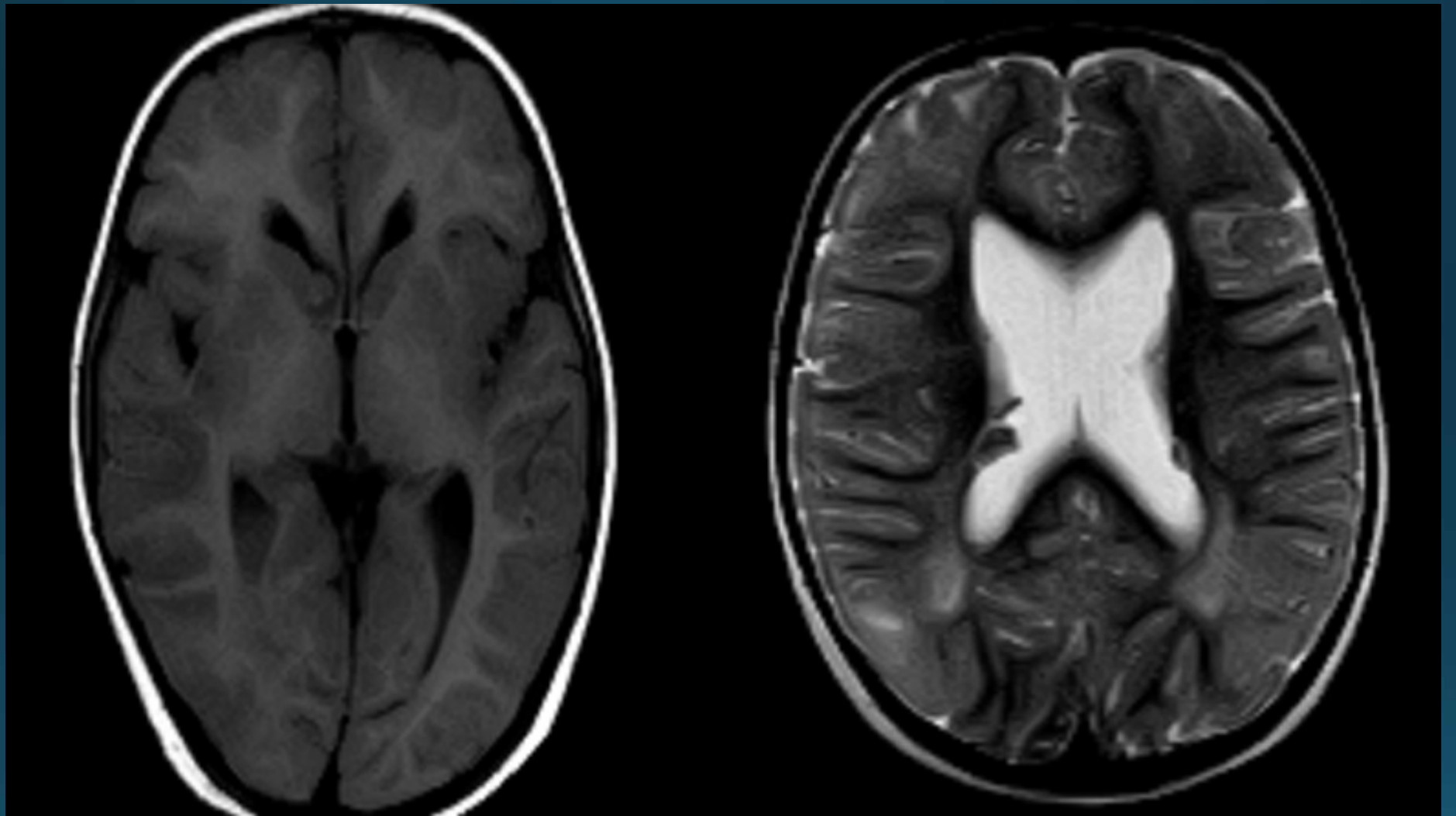
# RADIOLOGICAL CASES

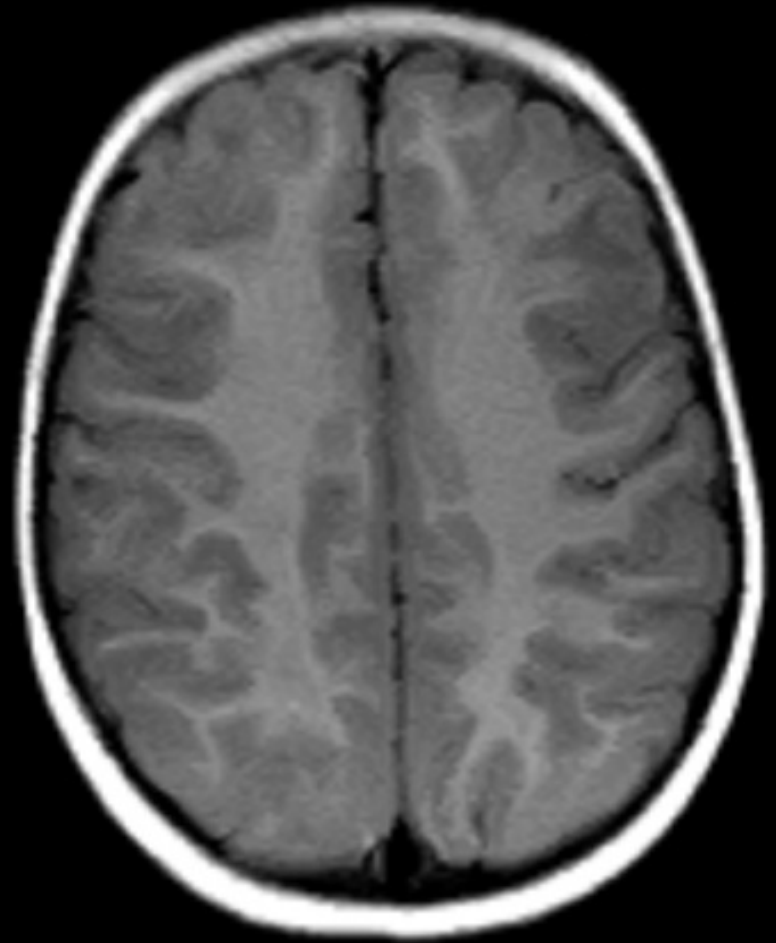
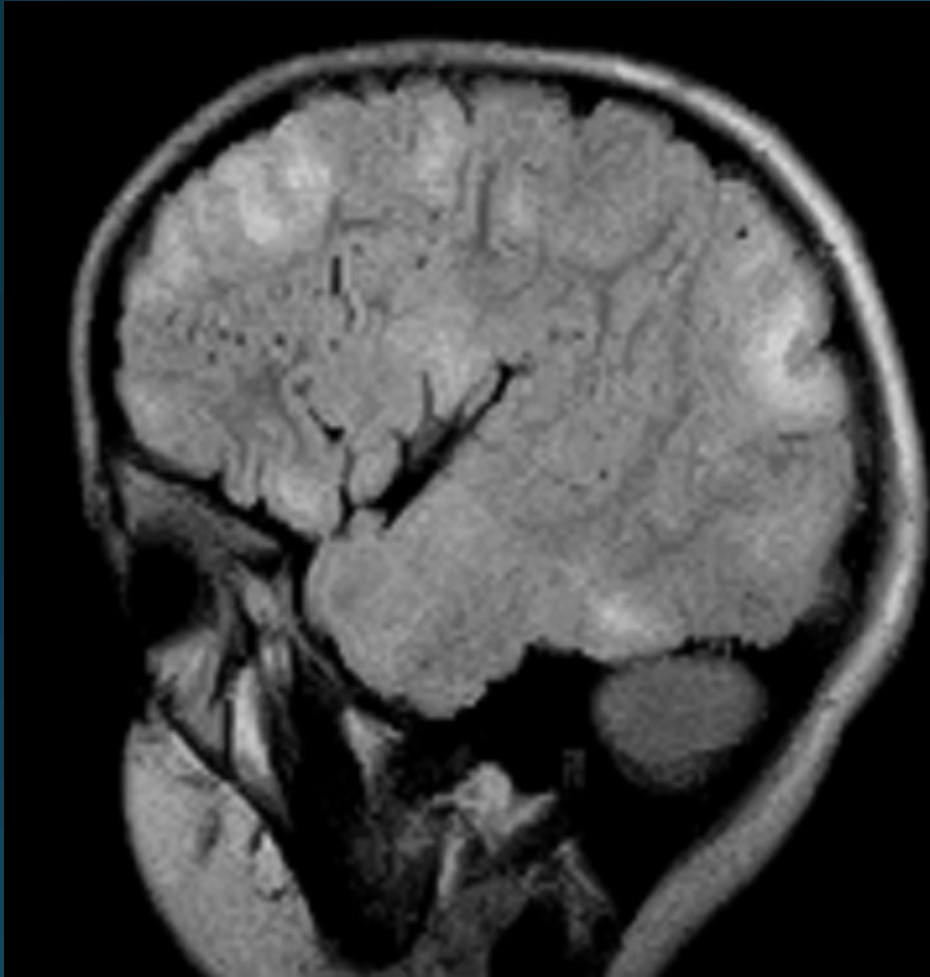
Medical Update Group August 2014

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FRCR

# CASE ONE

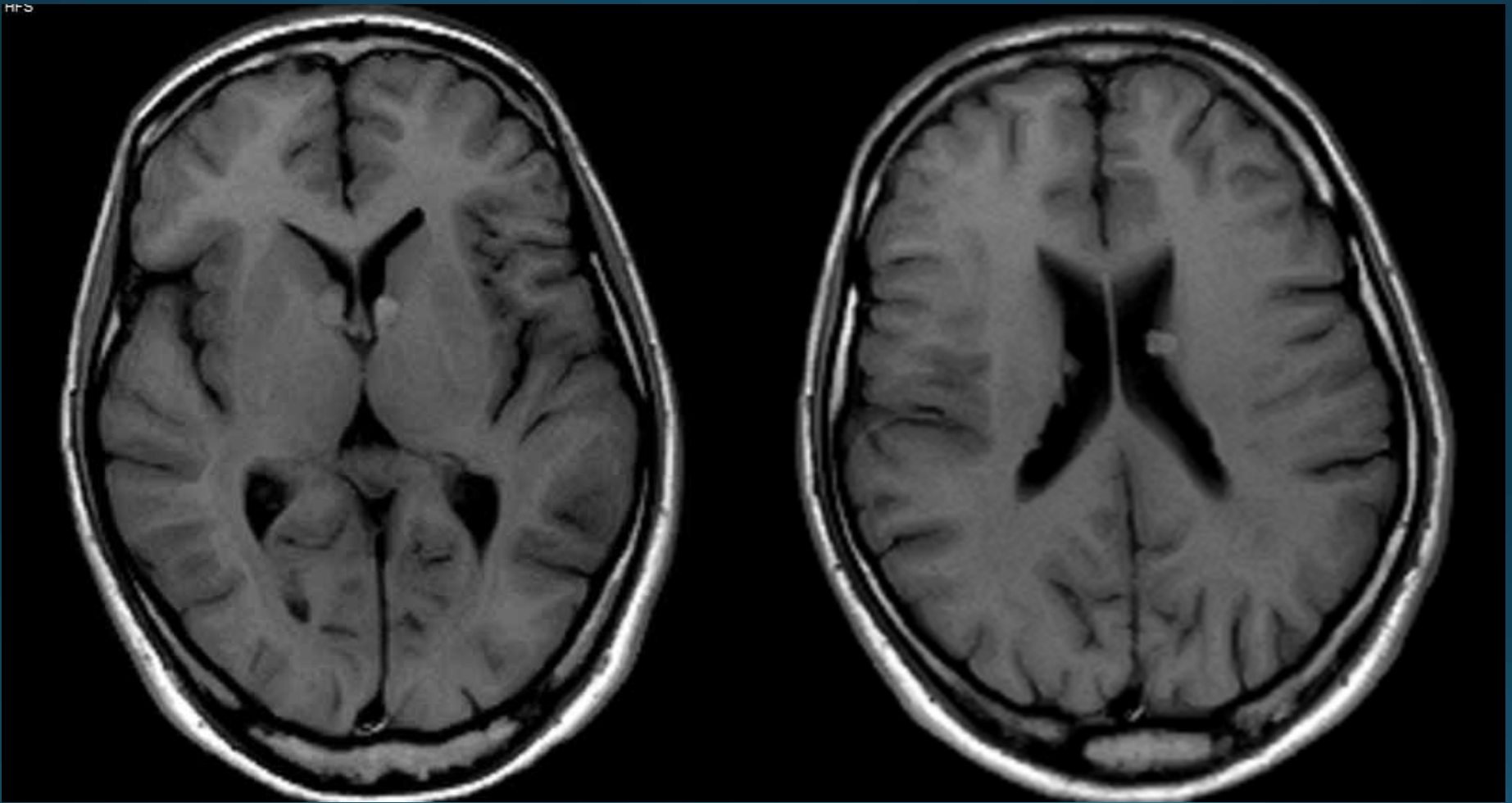
- Two year old male presenting with FITS and MENTAL RETARDATION
- Has a skin lesion.

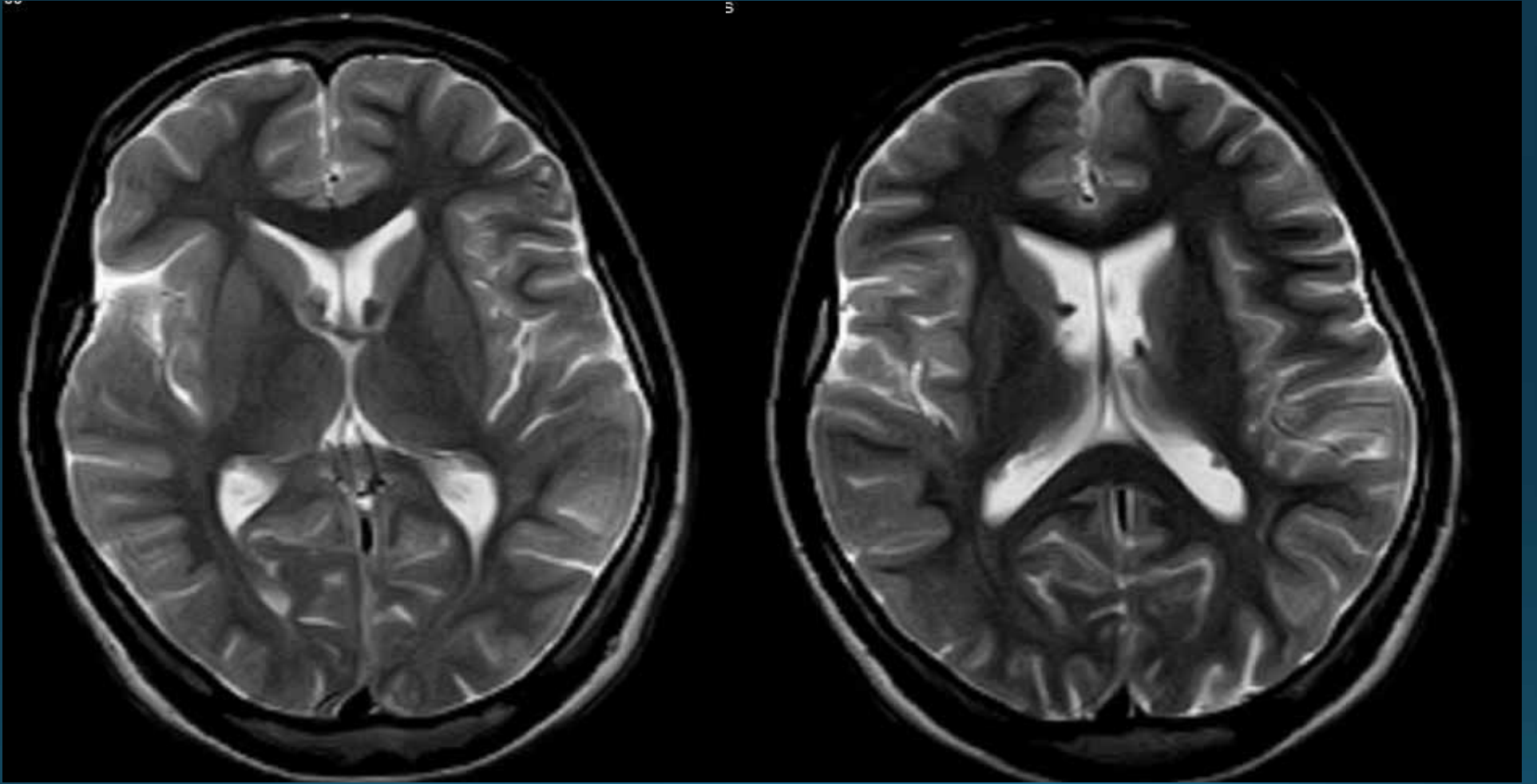




- 18 year old male with fits

HFS

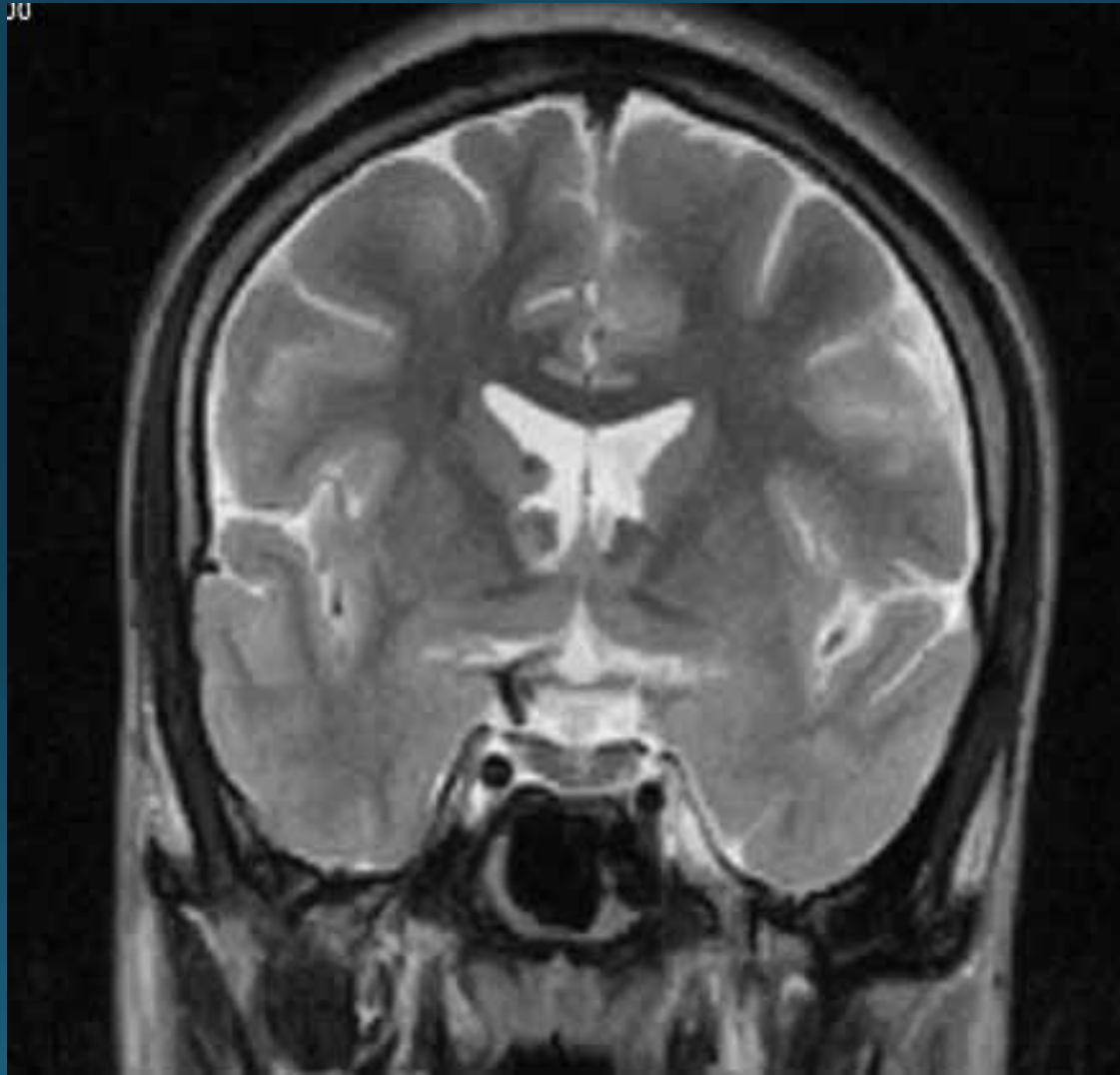




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DIAGNOSIS?

# Tuberous Sclerosis

- A neurocutaneous disorder
- Prevalence 1 per 20 000
- Autosomal dominant in 20 to 50 % of cases.
- Remainder is from spontaneous mutations.

# Tuberous Sclerosis

Classic triad of

1. Mental retardation
2. Seizures
3. Adenoma Sebaceum

Not all patients manifests these features.



# Tuberous Sclerosis

Multisystem organ involvement

- CNS - subependymal and cortical hamartomas
  - White matter lesions
  - Giant cell astrocytomas at the Foramen of Munroe
- Cutaneous lesions eg. Facial angiofibromas, shagreen patches
- Retinal hamartomas
- Renal angiomyolipomas and cysts
- Interstitial lung disease (LAM)
- Cardiac rhabdomyomas

# TS Imaging findings

## Subependymal nodules

- CT – Slightly hyperdense nodules / usually calcified (> 1 yr old)
- MR – Variable signal intensity

Variable enhancement with gadolinium

## Cortical Tubers

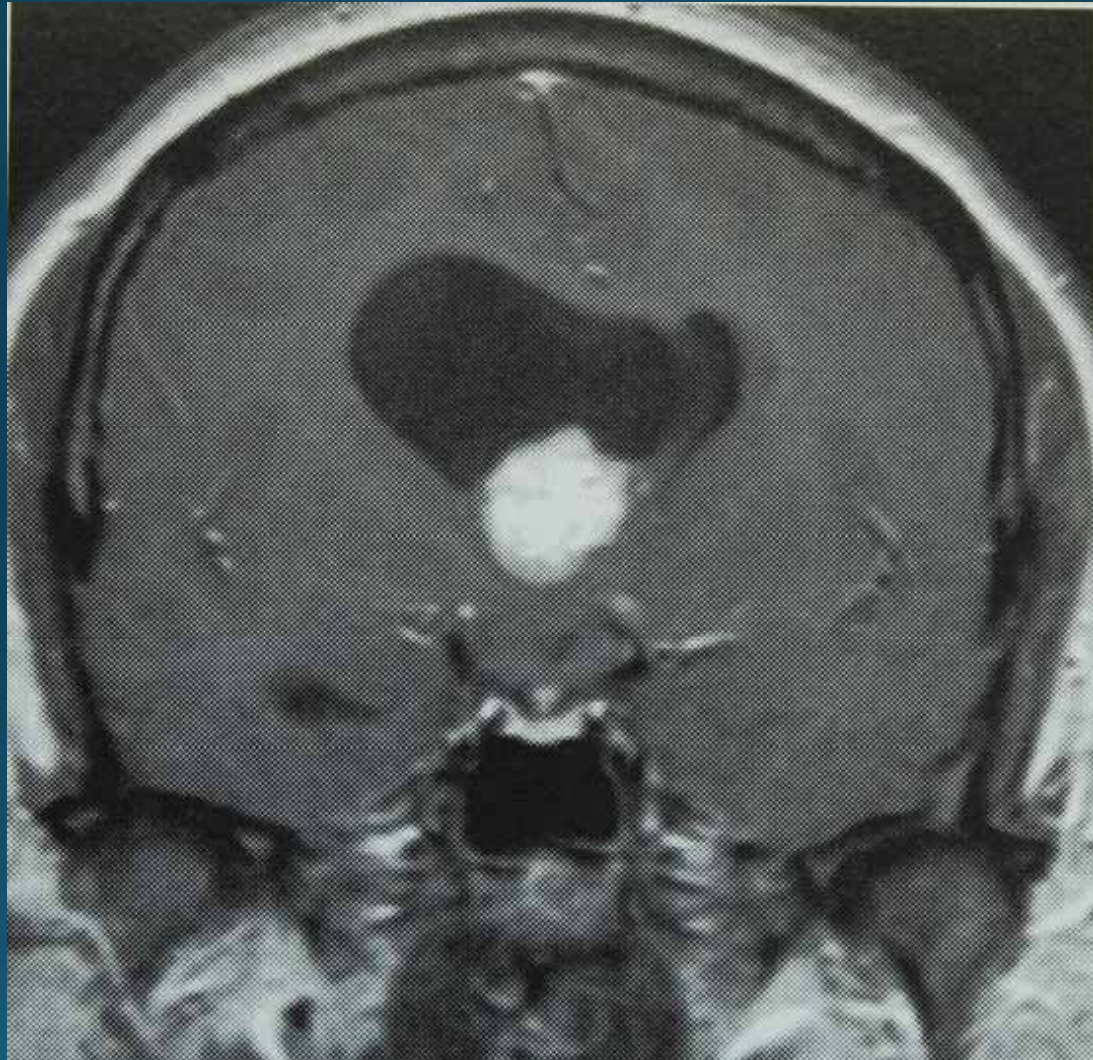
- CT – Low to isodense areas in slightly expanded gyri
- MR – Signal characteristics depends on age as myelination occurs

# TS – Imaging findings

- Giant Cell Astrocytomas
  - Located at or near Foramen of Munroe
  - Exhibit growth on serial studies
  - Intense enhancement with gadolinium is typical







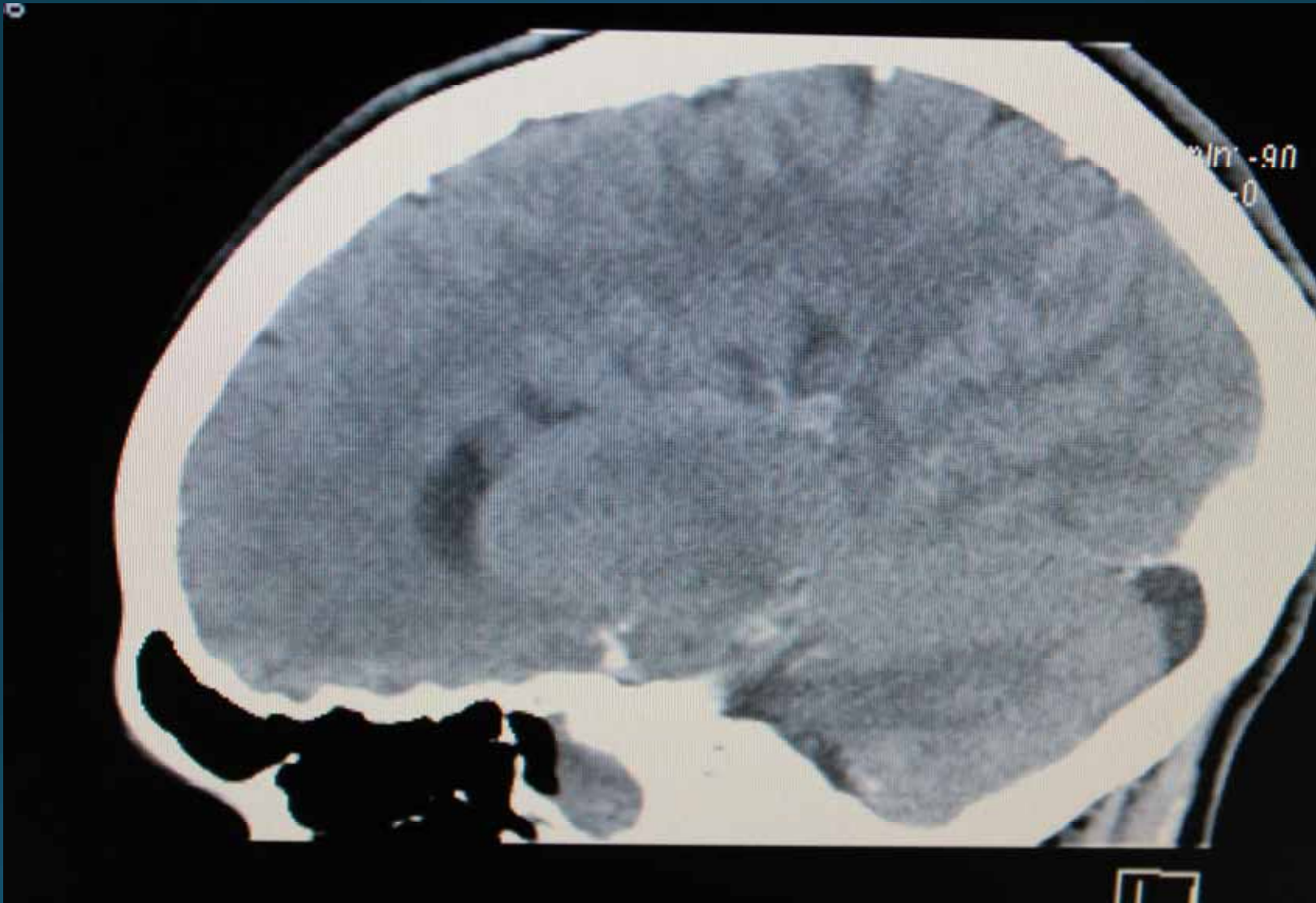
# TS - Treatment

- Medical management of seizure activity.
- Surgical resection of dominant seizure foci in selected cases.
- Surgical resection of giant cell astrocytoma as necessary.
- Screening and appropriate intervention for cardiac and renal tumours

# CASE TWO

18 year old female with absence seizures





0.86



Slice Location: 397.80  
Slice Thickness: 4.00

Diagnosis?

# HETEROTOPIC GREY MATTER

- Grey matter heterotopias are collections of otherwise normal neurons in abnormal locations secondary to arrest of neuronal migration along the radial glial fibers.
- Types: band like, nodular, focal or diffuse.
- Aetiology : Sporadic, Sex linked dominant inheritance on some cases.



# HETEROTOPIC GREY MATTER

- Seizures
- Delayed Motor Function
- Delayed speech development
  
- Treatment
  - Medical management of seizures
  - Genetic counseling of affected females

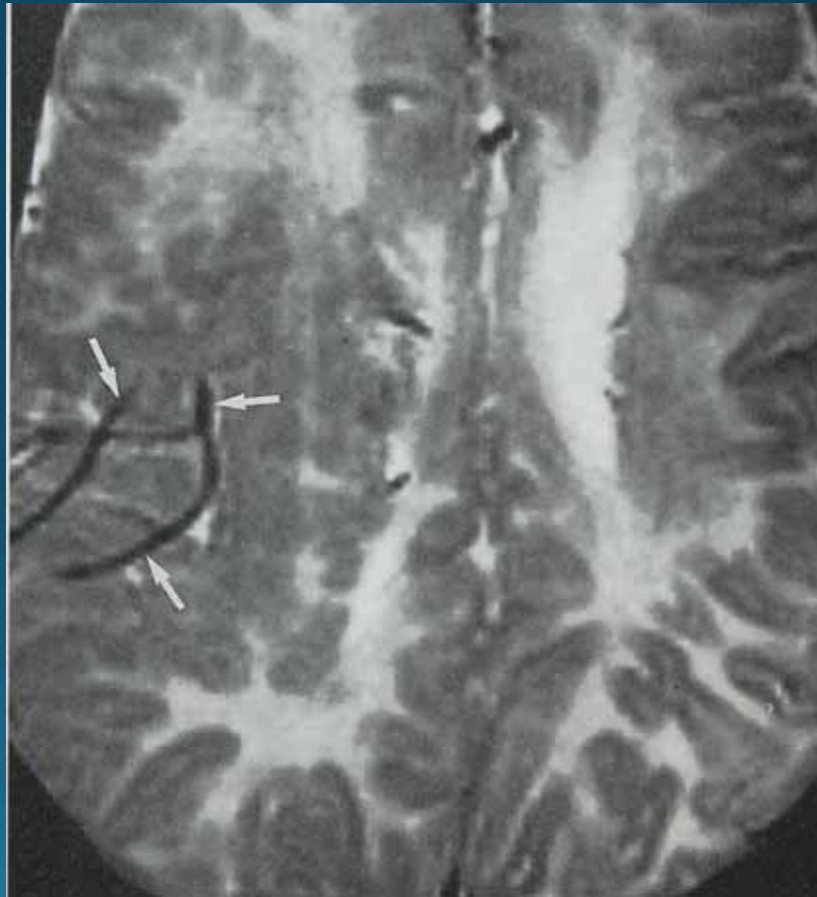
# BAND Heterotopia



## Nodular subependymal heterotopia



# Focal heterotopic grey matter

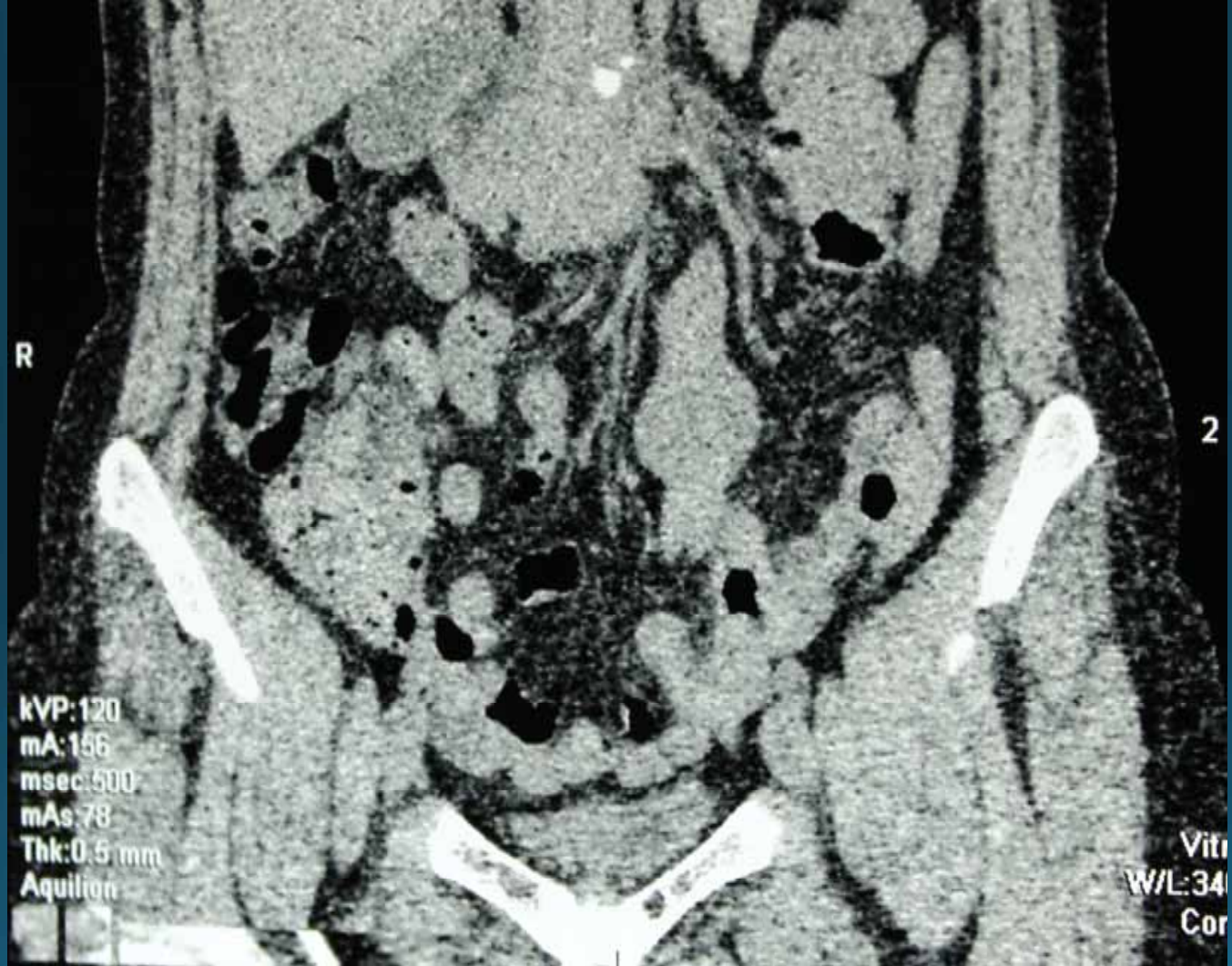


# CASE THREE

- 70 year old lady
- Bleeding PR on 4 occasions over past 3 years.
- Investigated thoroughly in South Africa including colonoscopy.
- Diverticulosis – but not severe enough to be the cause of her symptoms.
- Last episode of bleed happen when she was on holidays in the UK where she fainted. Hospital admission.
- Again thoroughly investigated there but found nothing.
- Came back home and was referred to me by a surgeon.

Figure 1  
F  
24 Mar 2014  
12:28:08





R

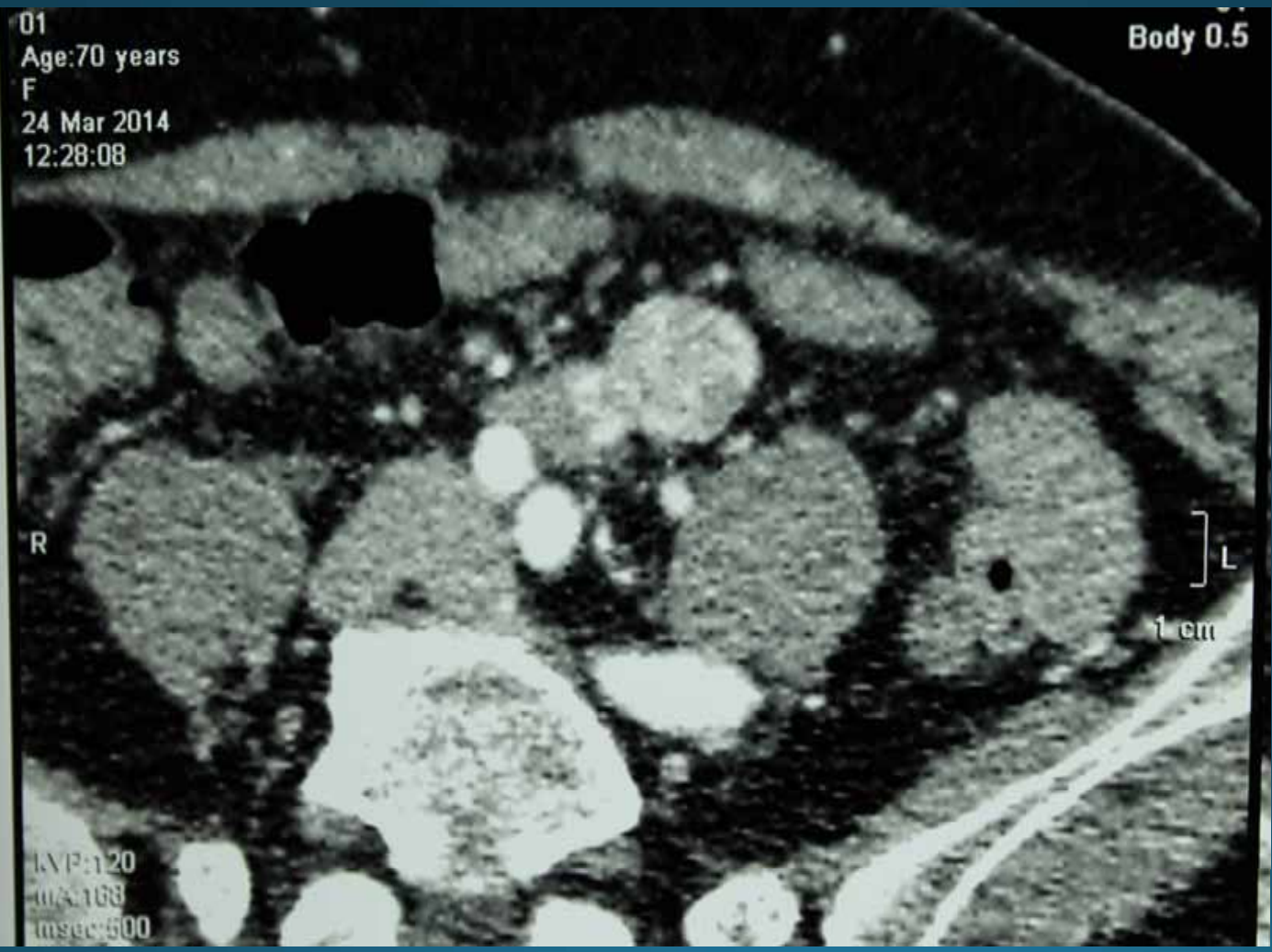
2

kVP: 120  
mA: 156  
msec: 500  
mAs: 78  
Thk: 0.5 mm  
Aquilion

Vitr  
W/L: 34  
Cor

01  
Age:70 years  
F  
24 Mar 2014  
12:28:08

Body 0.5



KVP:120  
mAs:168  
msec:500

1 cm









# Gastrointestinal stromal tumour GIST

- Most common mesenchymal tumours in the GIT.
- Submucosal, subserosal or intraluminal.
- Solitary or multiple.
- Can be hypervascular and cause haemorrhage.
- Can be benign or Malignant – not able to differentiate on imaging.
- Mets to liver.

# THANK YOU

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*CITY CLINIC GROUP*