INVESTIGATION OF CNS

PART TWO

DR . HAMDY HASSAN

TO all my love brothers and sisters

* Sorry I don't hold responsibility for any missing information or perhaps – I say perhaps – wrong material. ***I swear the God*** that I tried my best to present this lecture in the best way and I hope that what I wrote in enough to cover the subject .

If you have any question plz contact me at www.ksums.com or send to me at zizo2rad@hotmail.com

* شكر خاص للدكتور حمدي على مراجعته للمذكرة ومساعدته لنا .

* هذه المذكرة إهداء إلى أخي احمد الرشيدي على جهوده في الميدسن وايضا مساعدته لي المعنوية بالراد

💣 هذا الرمز شيء مهم .

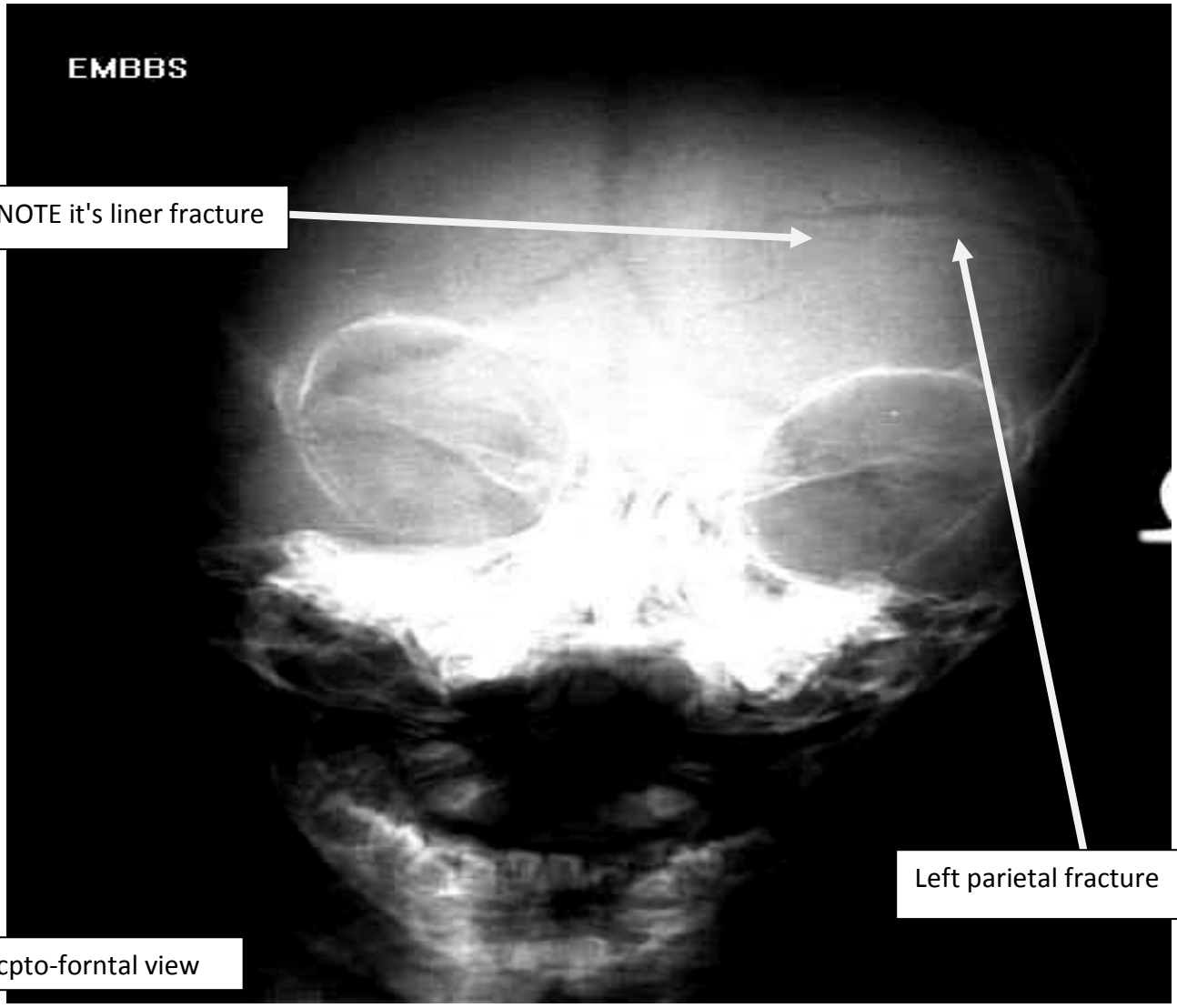
نظرا لانو لايوجد بالسلايدات أي شرح سوا الصور .. فكل ما هو مكتوب عبارة عن نوتات بالمحاضرة

أخوكم عبدالعزيز آل سعد

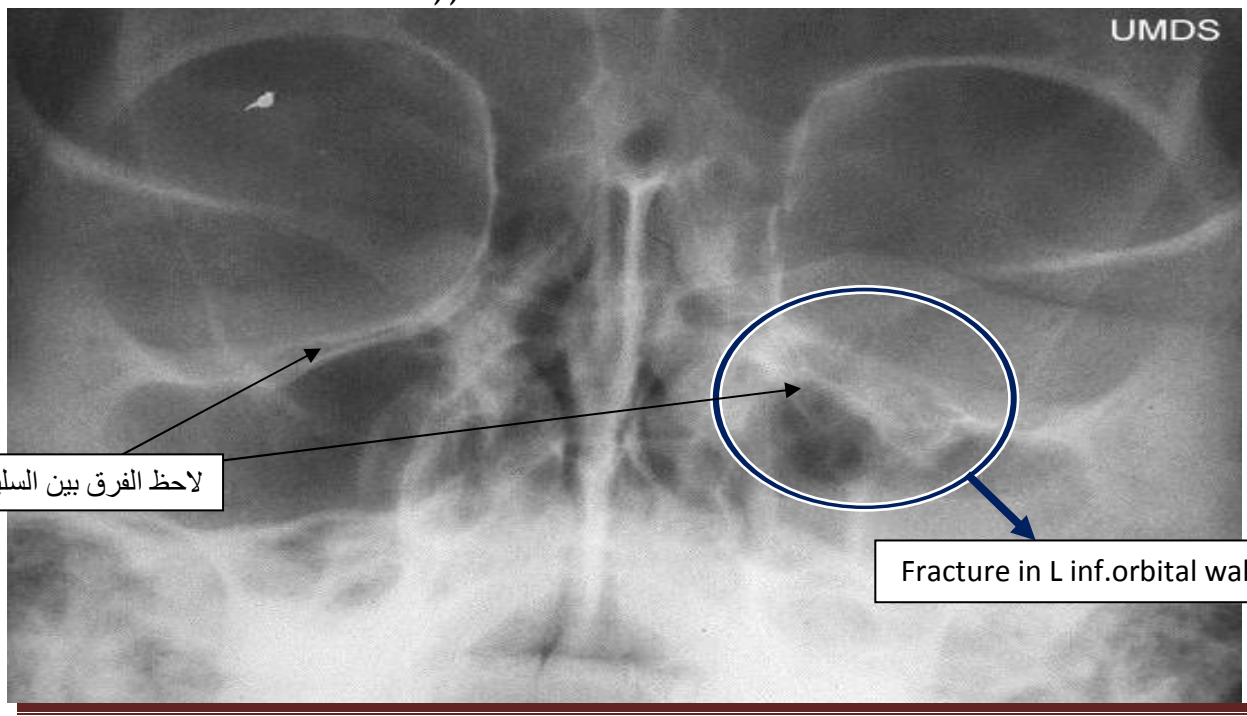
rad Gp

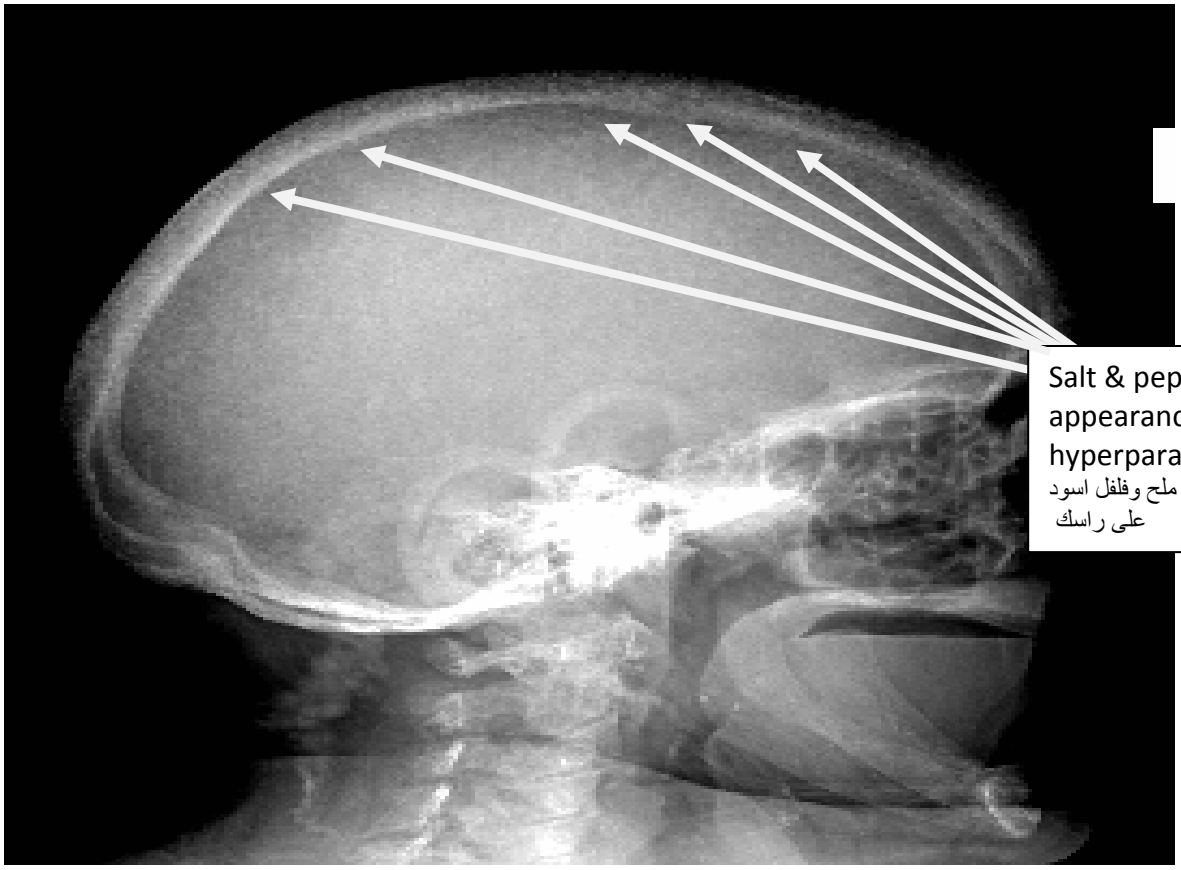
(dr.zeezu ☺)

* Investigation for skull fracture by x-ray

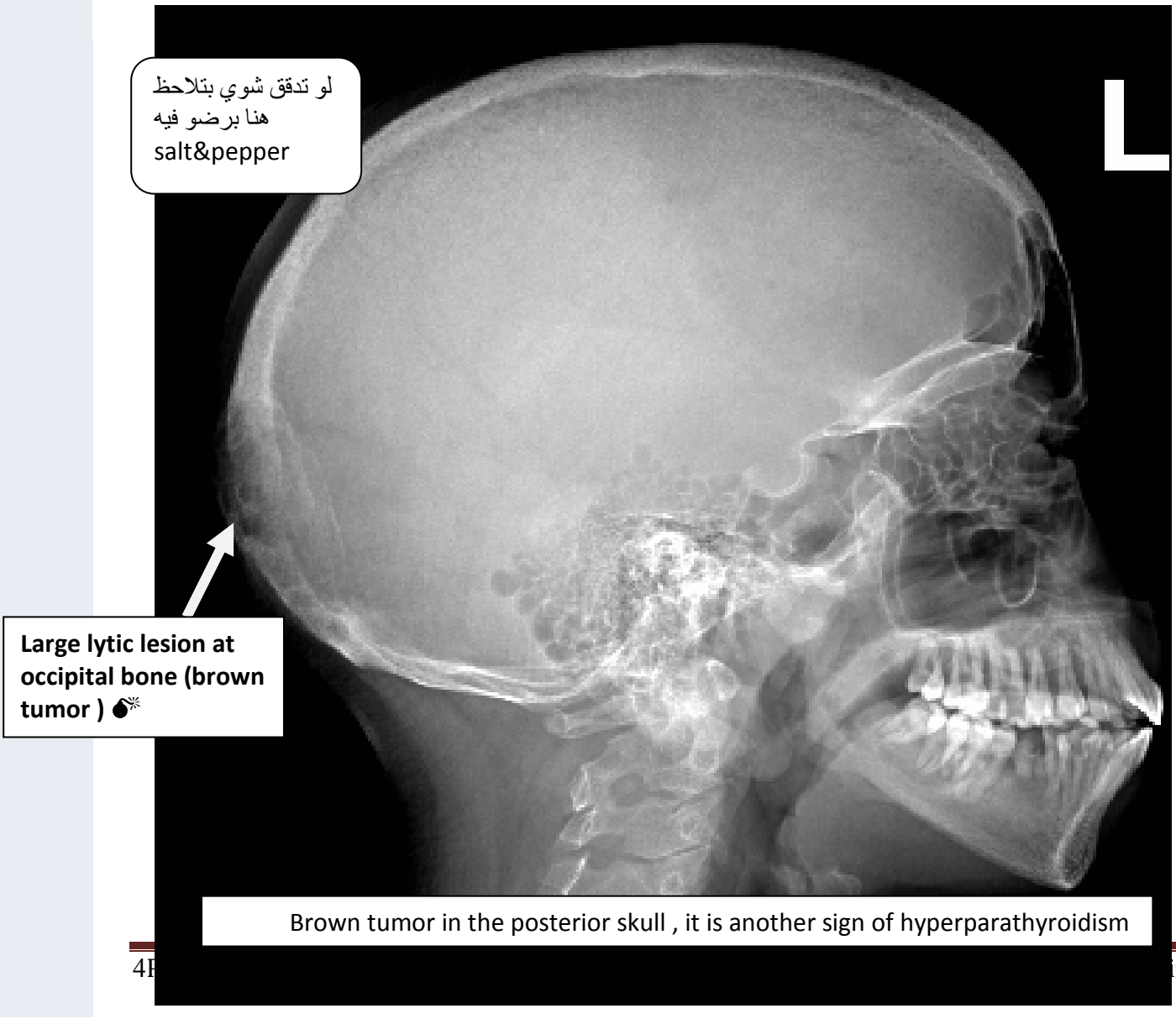


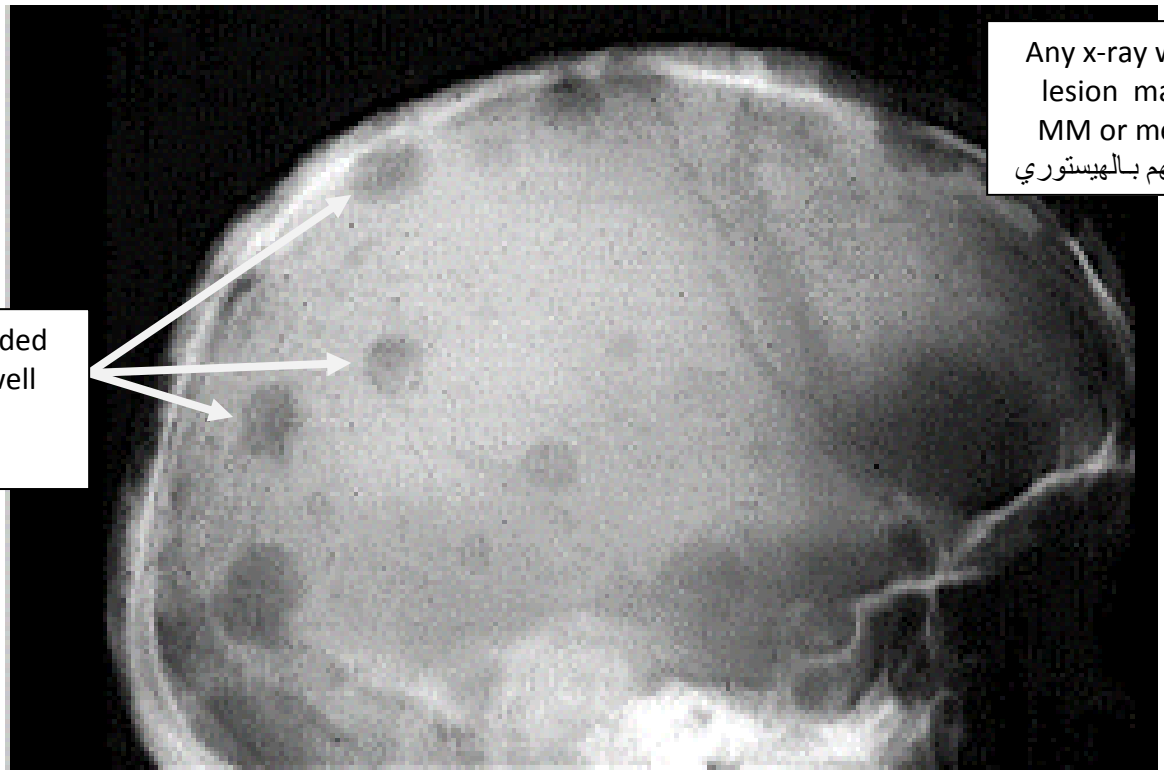
Remember that one of the indications of brain X-ray is trauma ((to chick the fracture)) .



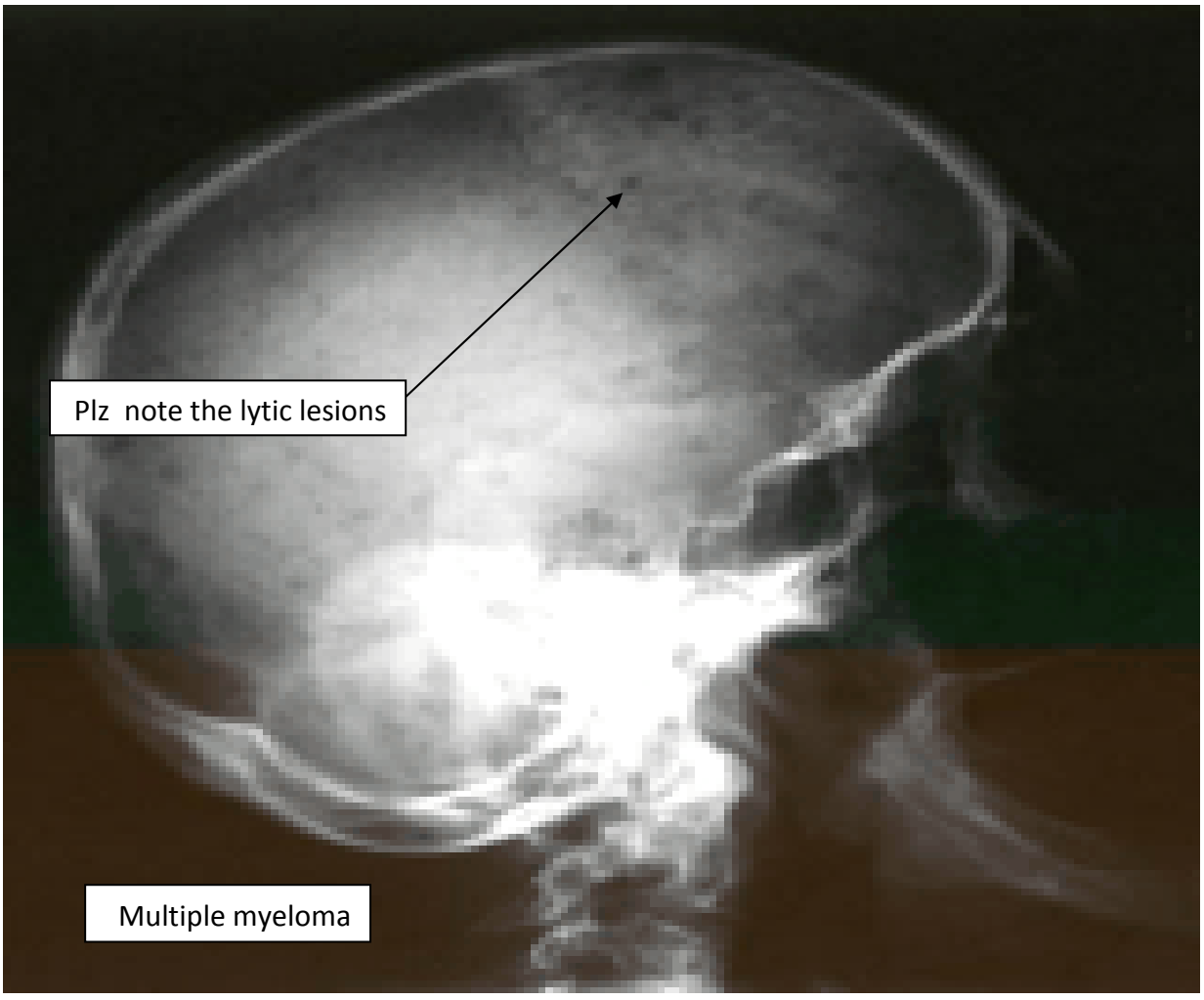


Another indication of skull x-ray is metabolic disorders e.g. hyperparathyroidism which appears like (salt and pepper)💣



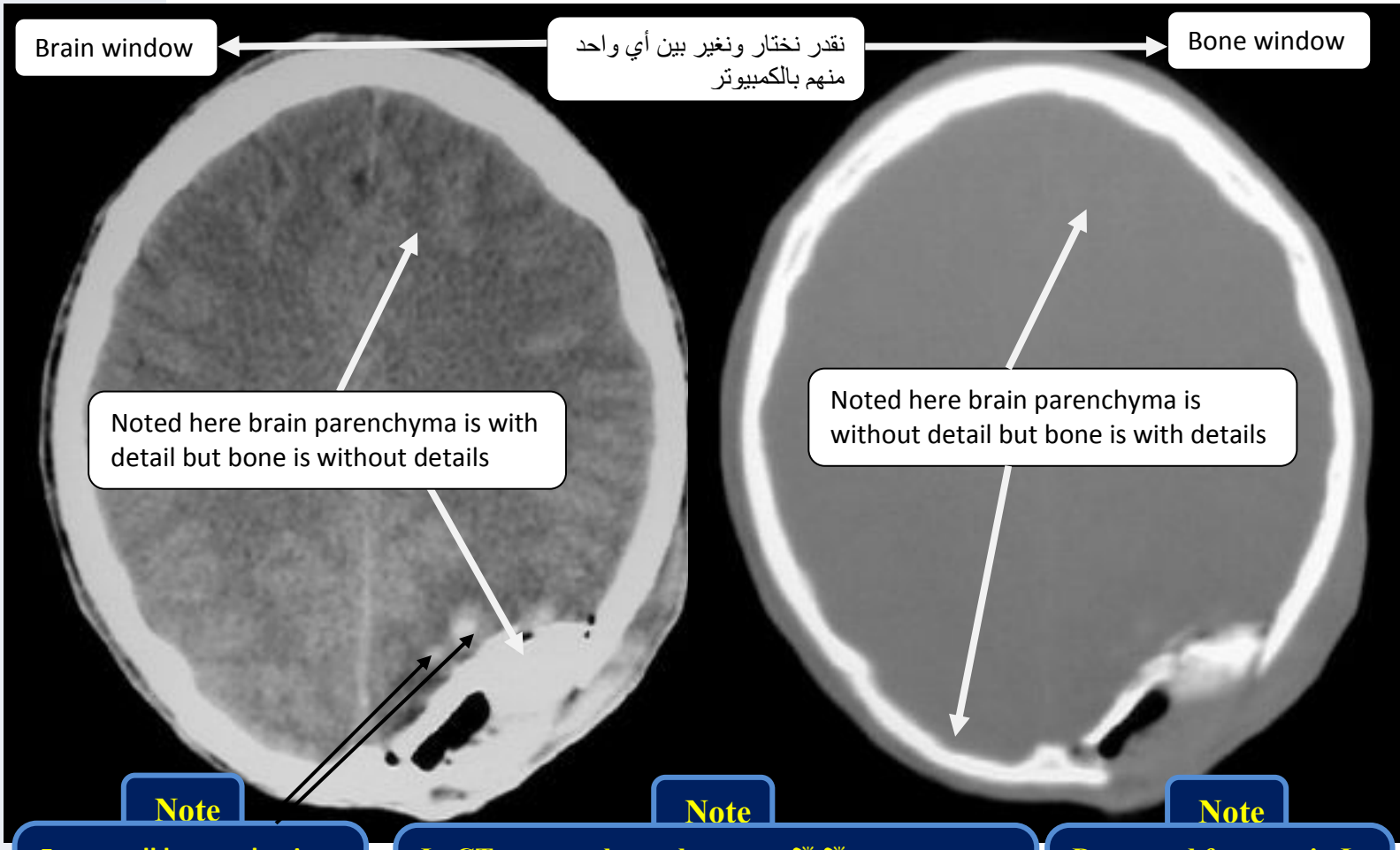


Multiple lytic(destructed)lesions in the skull ➔ multiple myeloma(MM)



Another example of multiple myeloma .

* Investigation 4 skull fracture by CT



Note

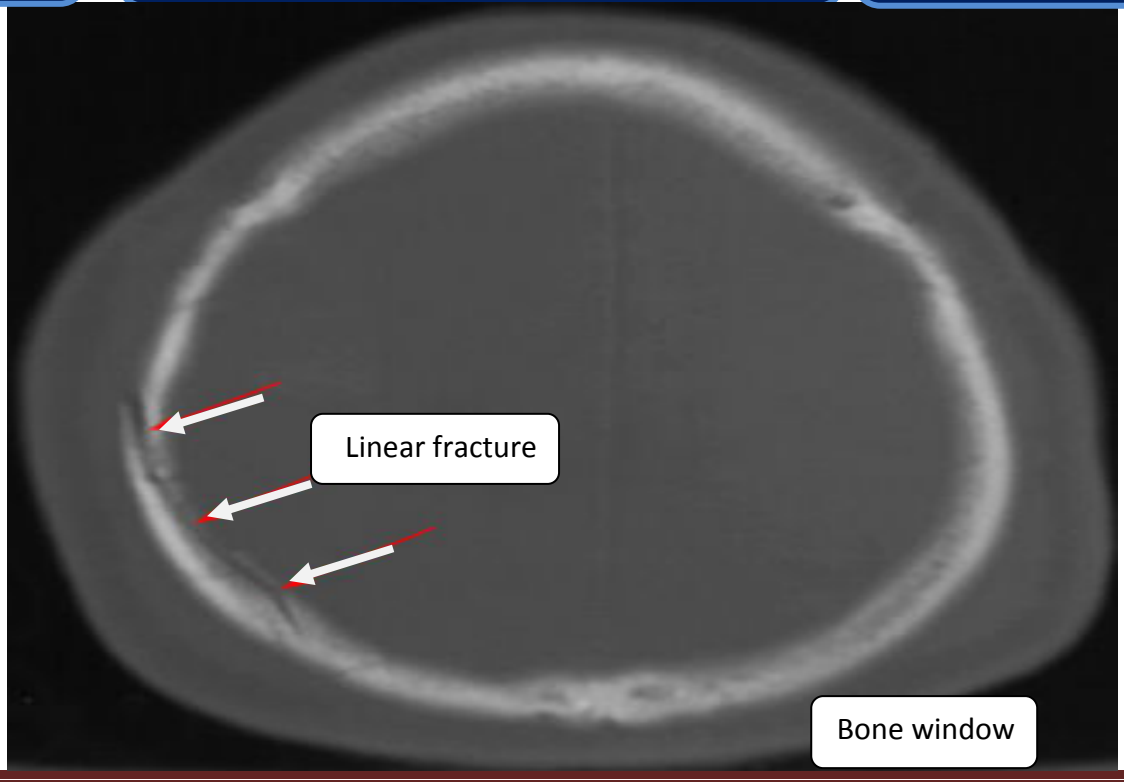
Few small hemorrhagic contusions

Note

In CT we can choose between
Brain window (نستخدمه اذا بغينا نشوف الدماغ اوضح اكثر)
Bone window(نستخدمه اذا بغينا نشوف العظام بالتحديد)

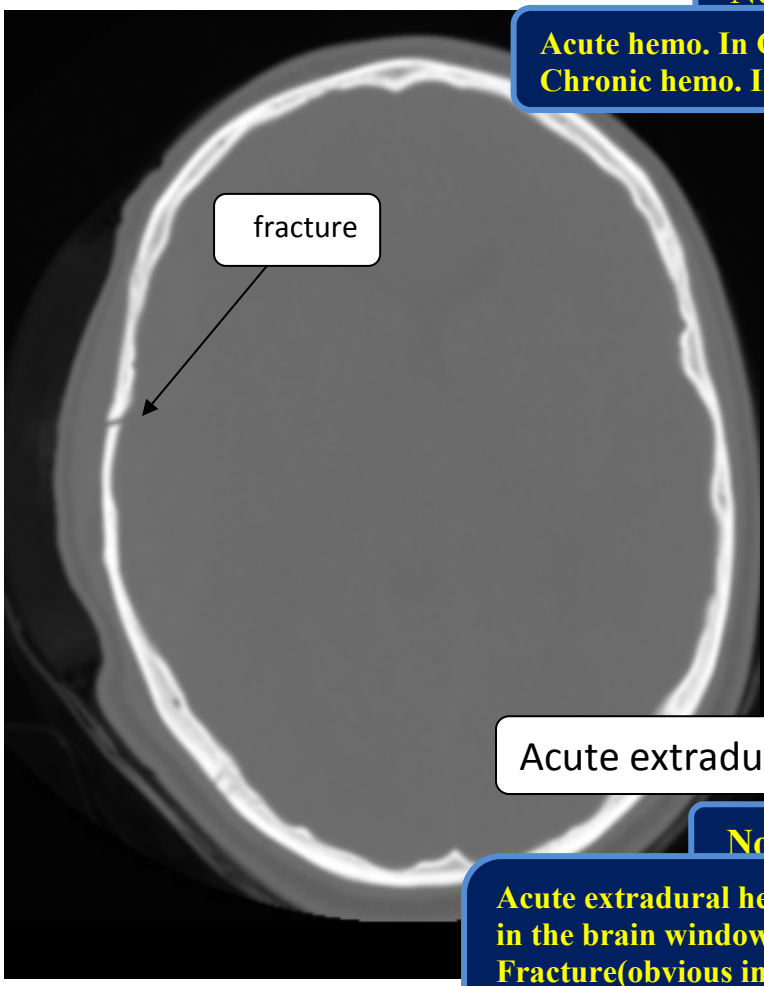
Note

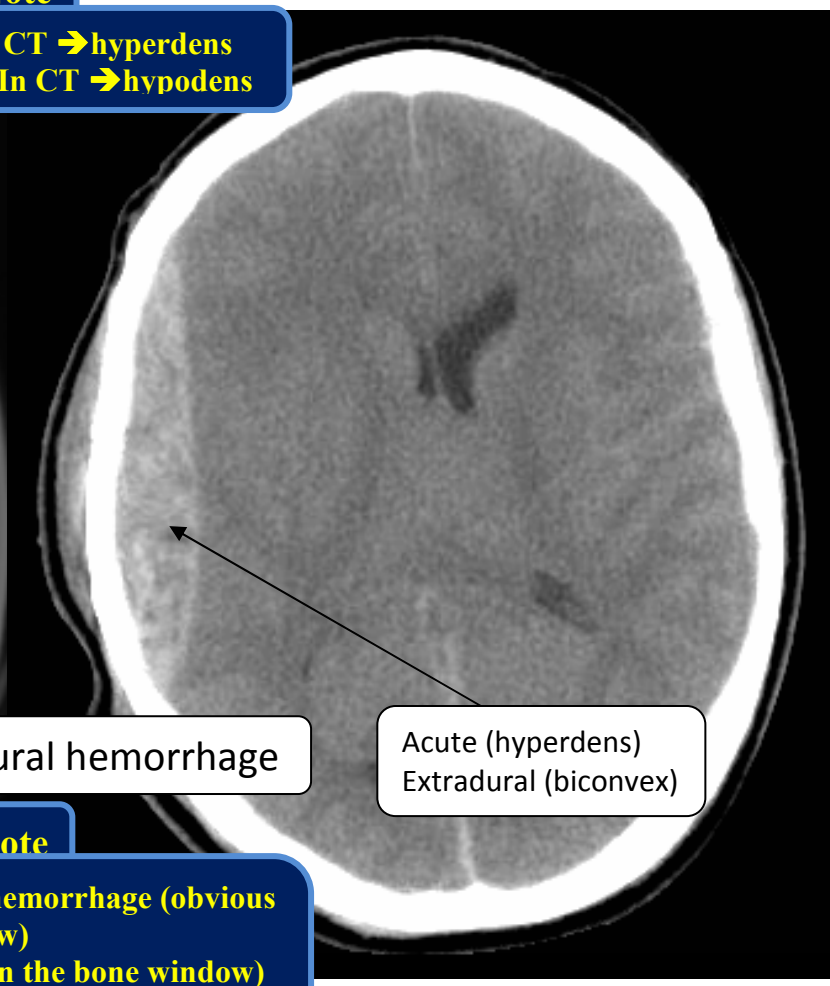
Depressed fracture in L. occipital bone لاحظوا انه واضح باستخدام هذي الوندو



Note

Acute hemo. In CT ➔hyperdens
Chronic hemo. In CT ➔hypodens

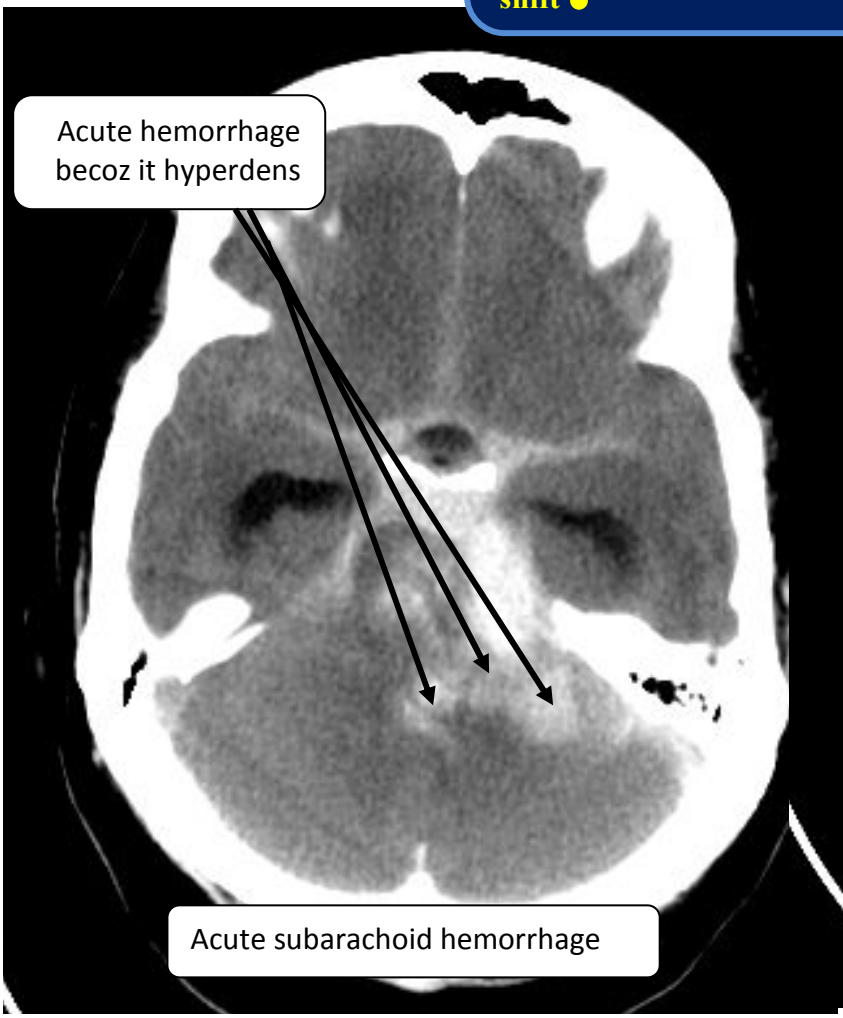




Acute extradural hemorrhage

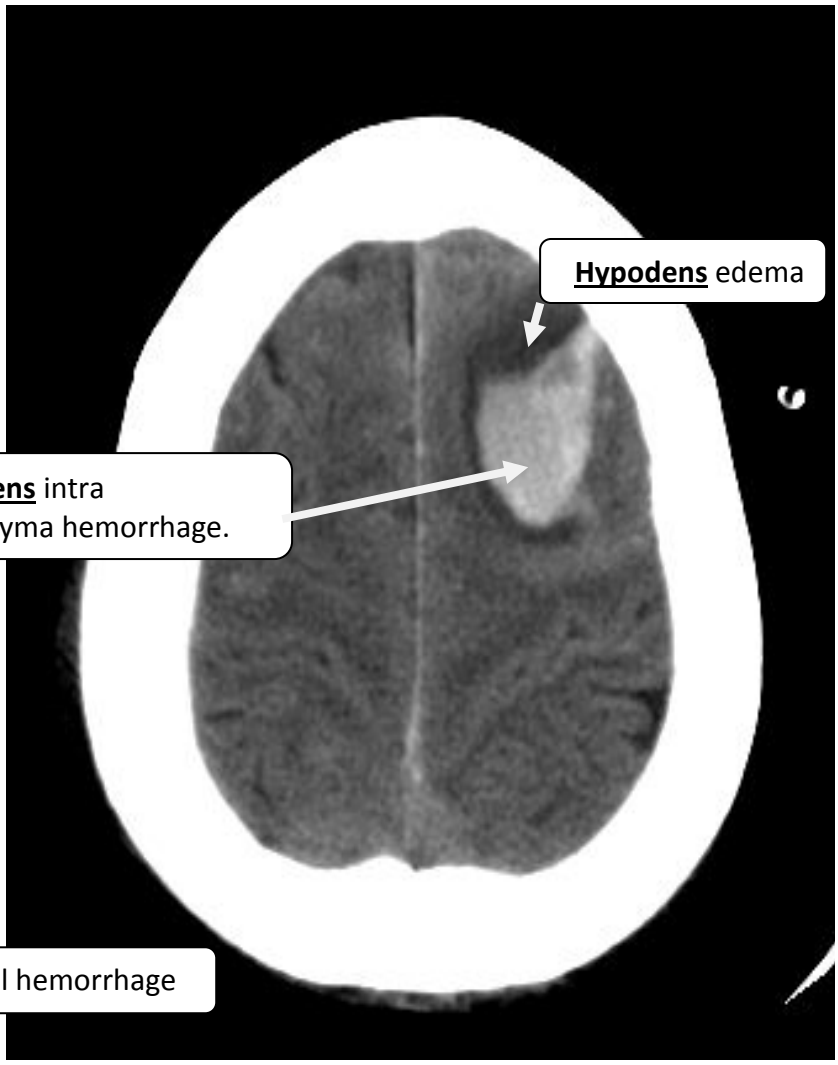
Note

Acute extradural hemorrhage (obvious in the brain window)
Fracture(obvious in the bone window)
Note compressed R ventricle midline shift



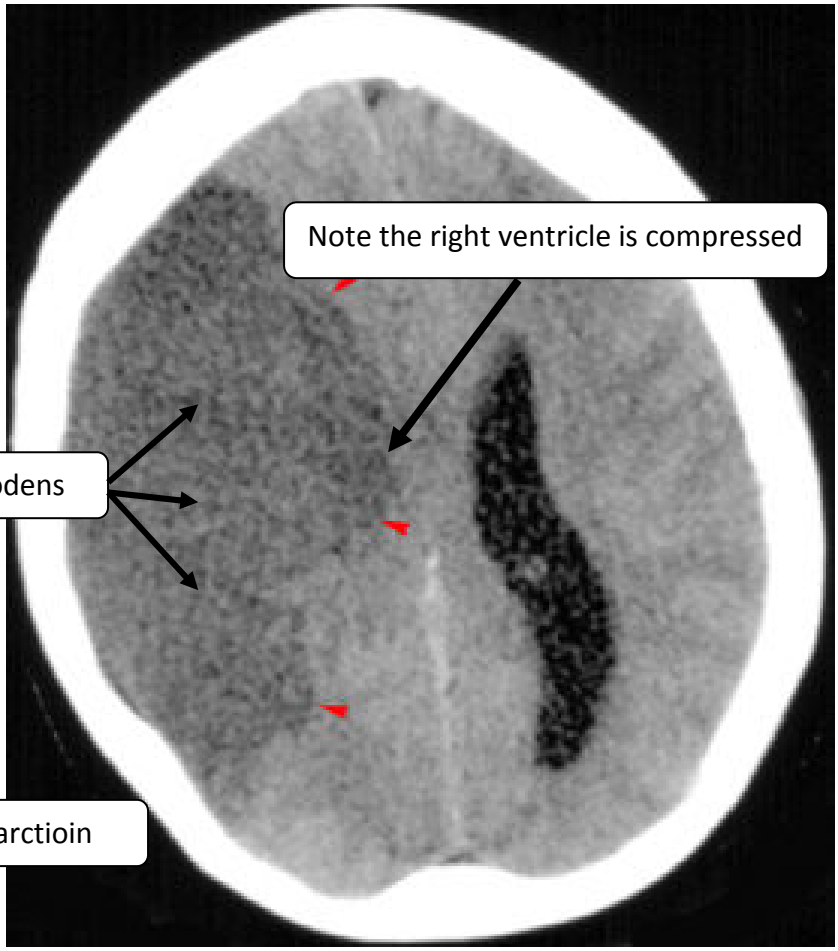
Note

➔Sub acute hemorrhage is difficult to be detected on CT because it is isodense to the surrounding tissue , but it can be suspected by its mass effect (midline shift ,or compressed ventricle)
➔MRI can easily detect subacute hemorrhage .💣

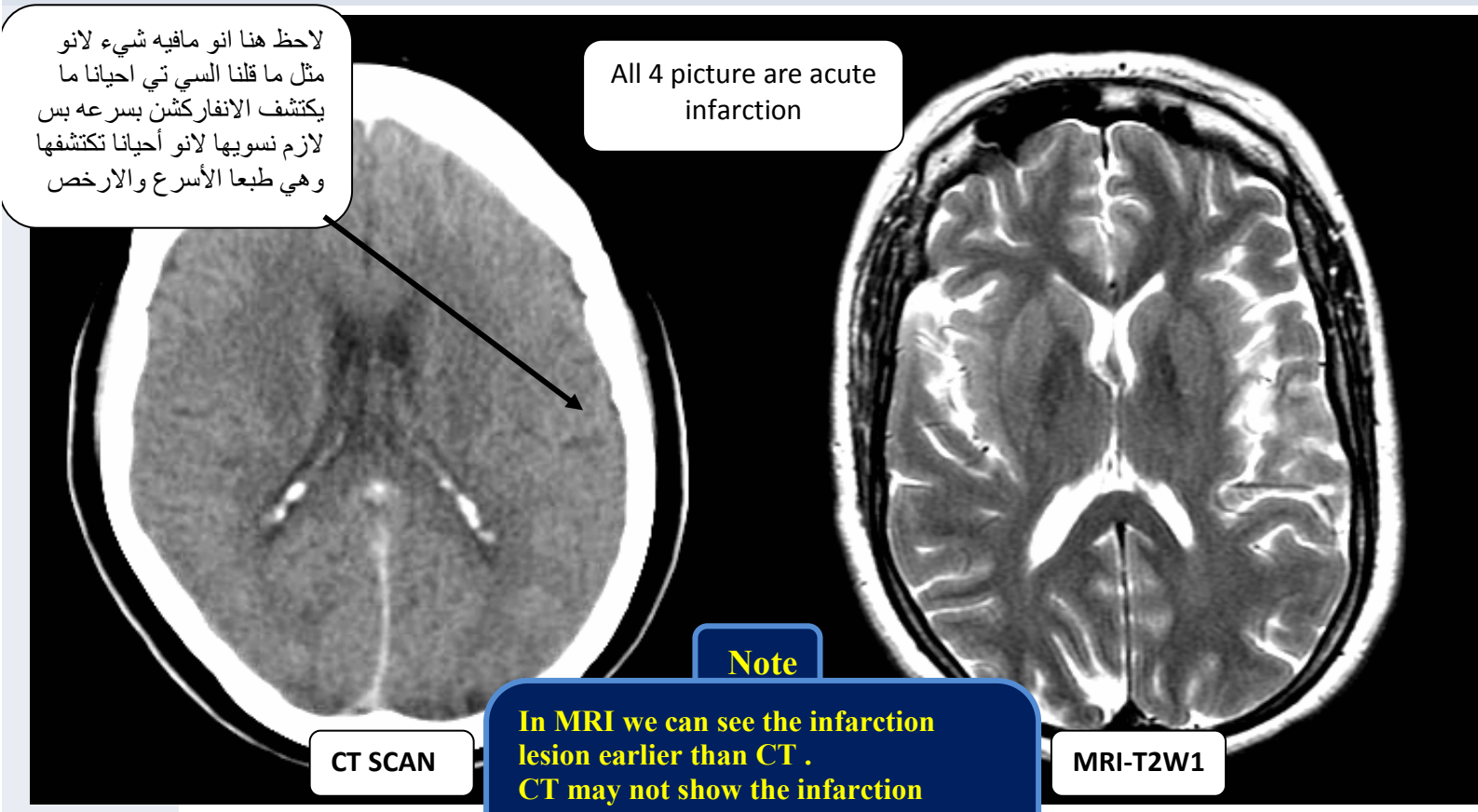


Note

For detect stroke we start 1st by CT although MRI can detect early stroke

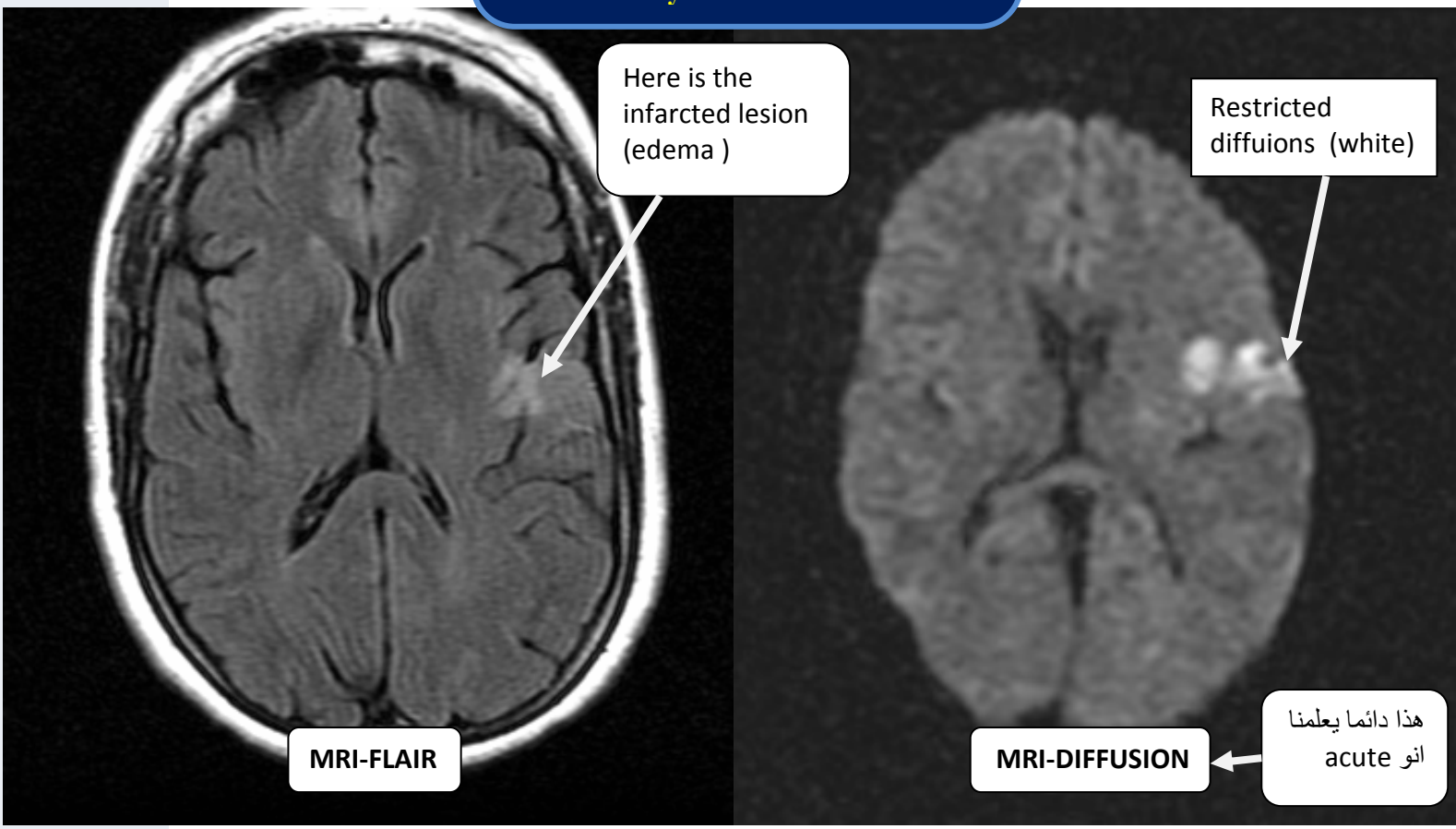


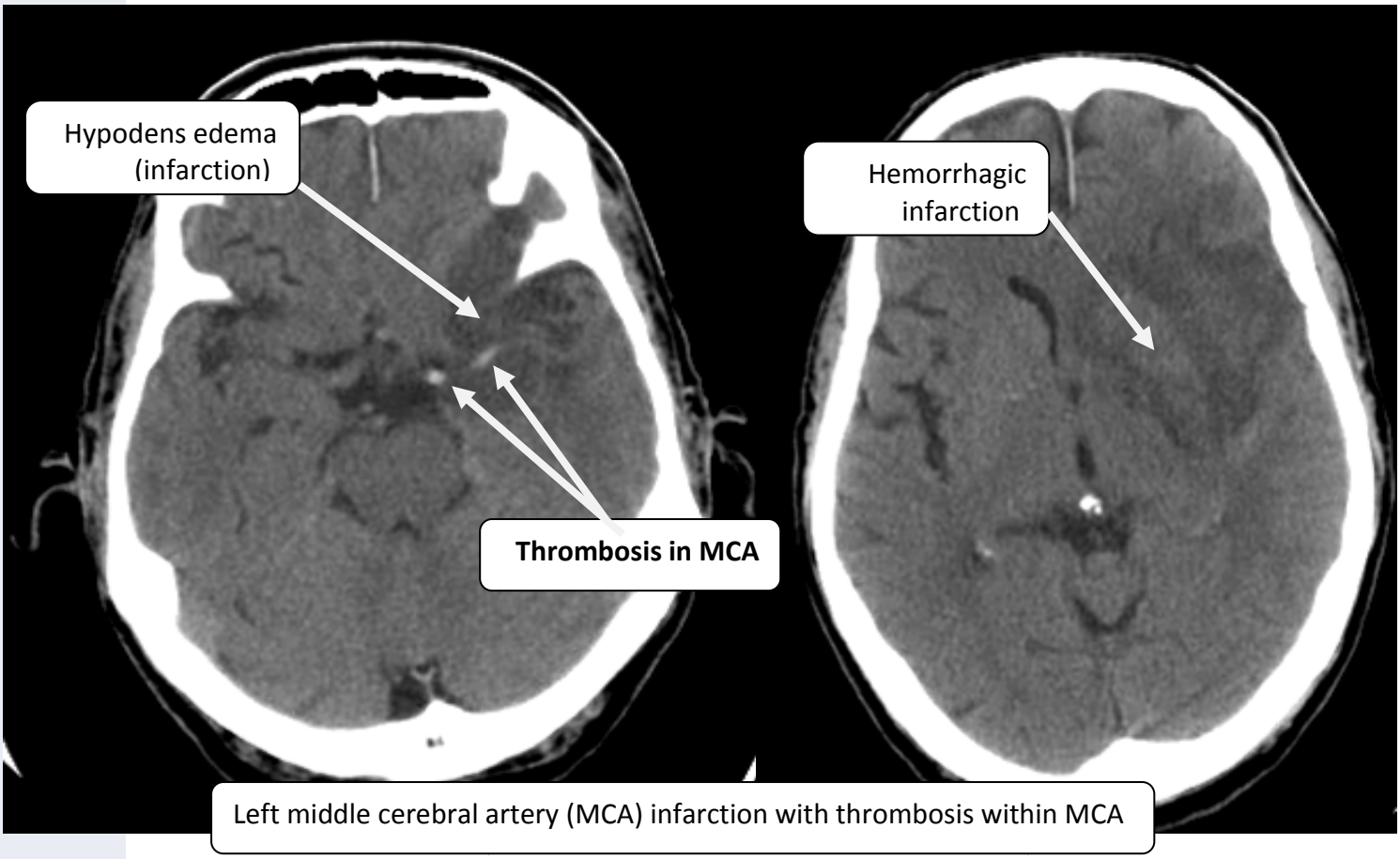
* Acute Infarction by CT and MRI



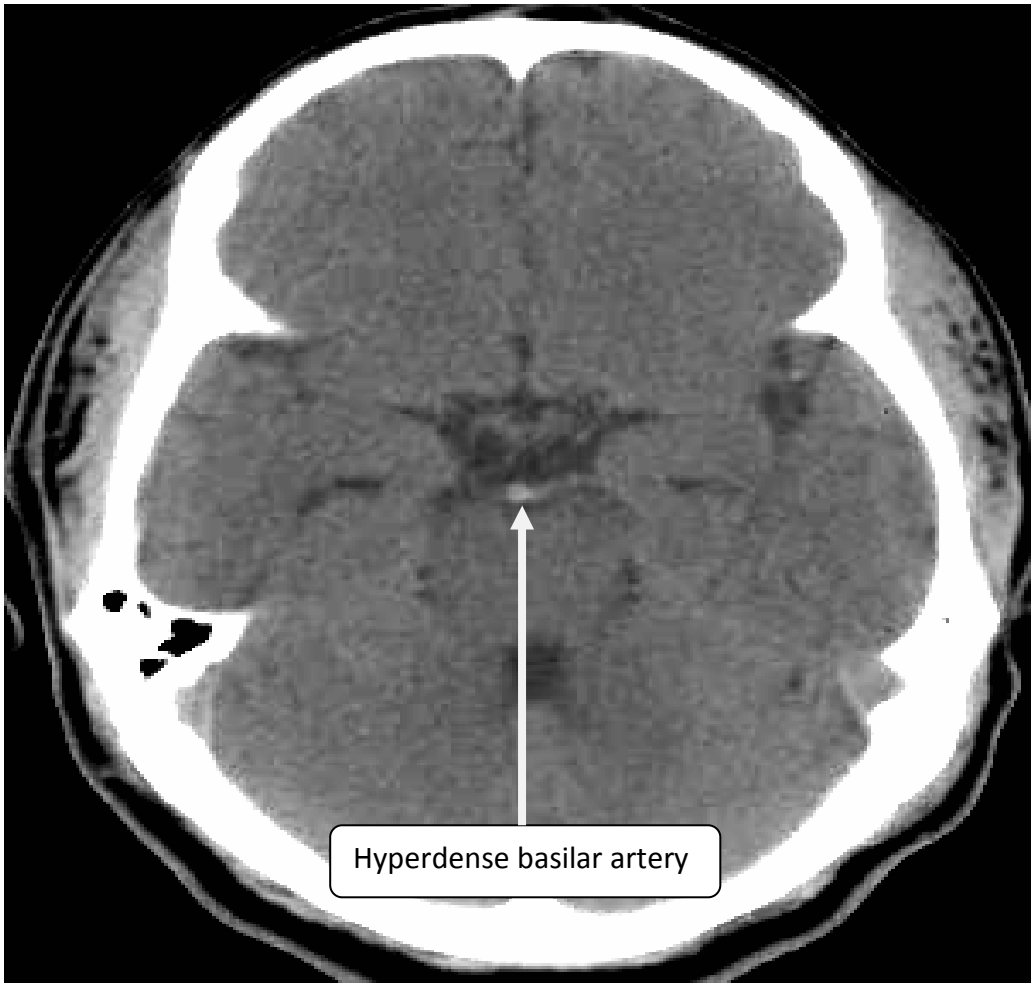
Note

In MRI we can see the infarction lesion earlier than CT .
CT may not show the infarction lesion, sometimes up to 24 hours after it happened but MRI may show it lesion as early as 2 hours.





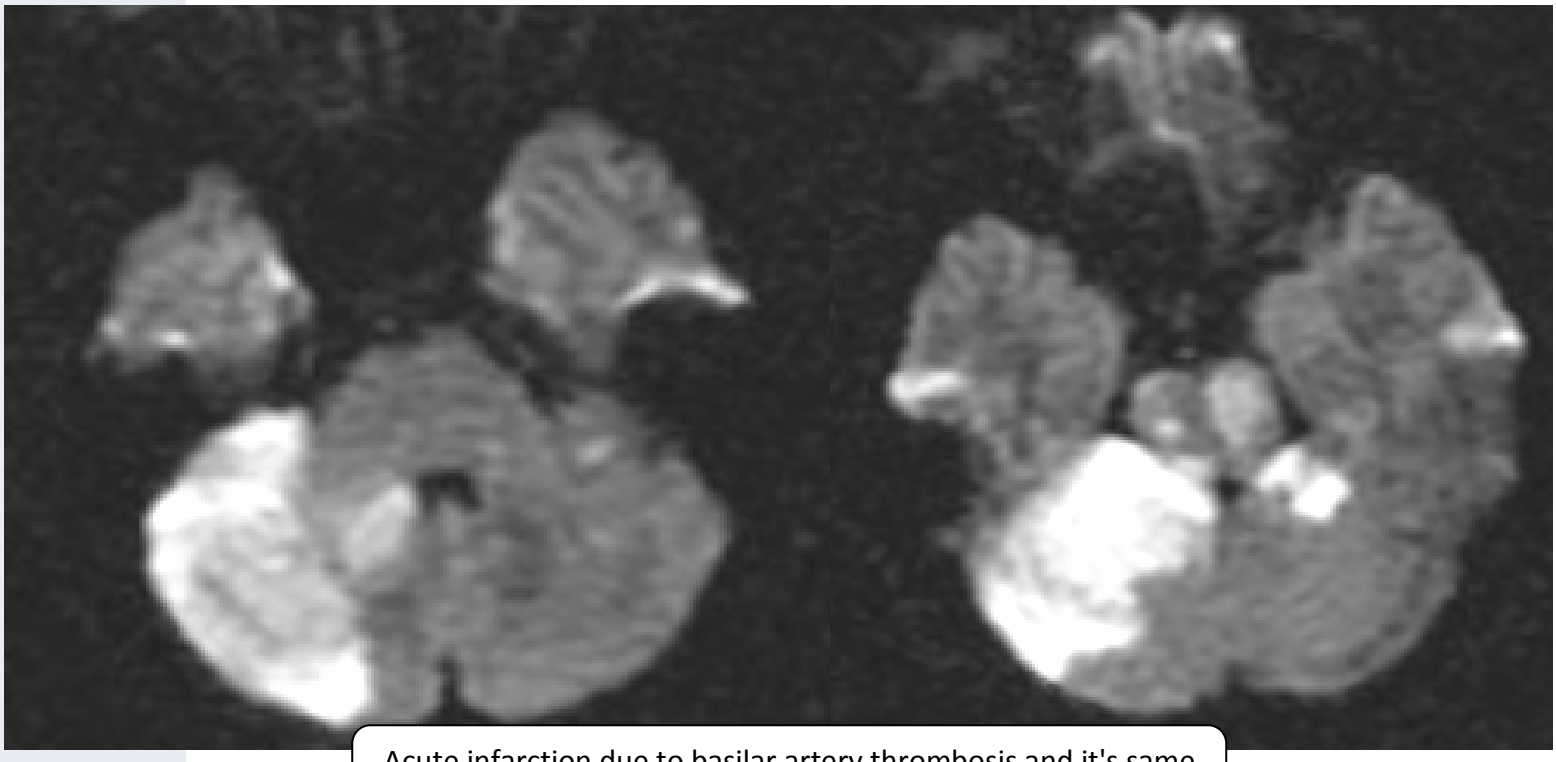
Left middle cerebral artery (MCA) infarction with thrombosis within MCA



Acute infarction due to basilar artery thrombosis

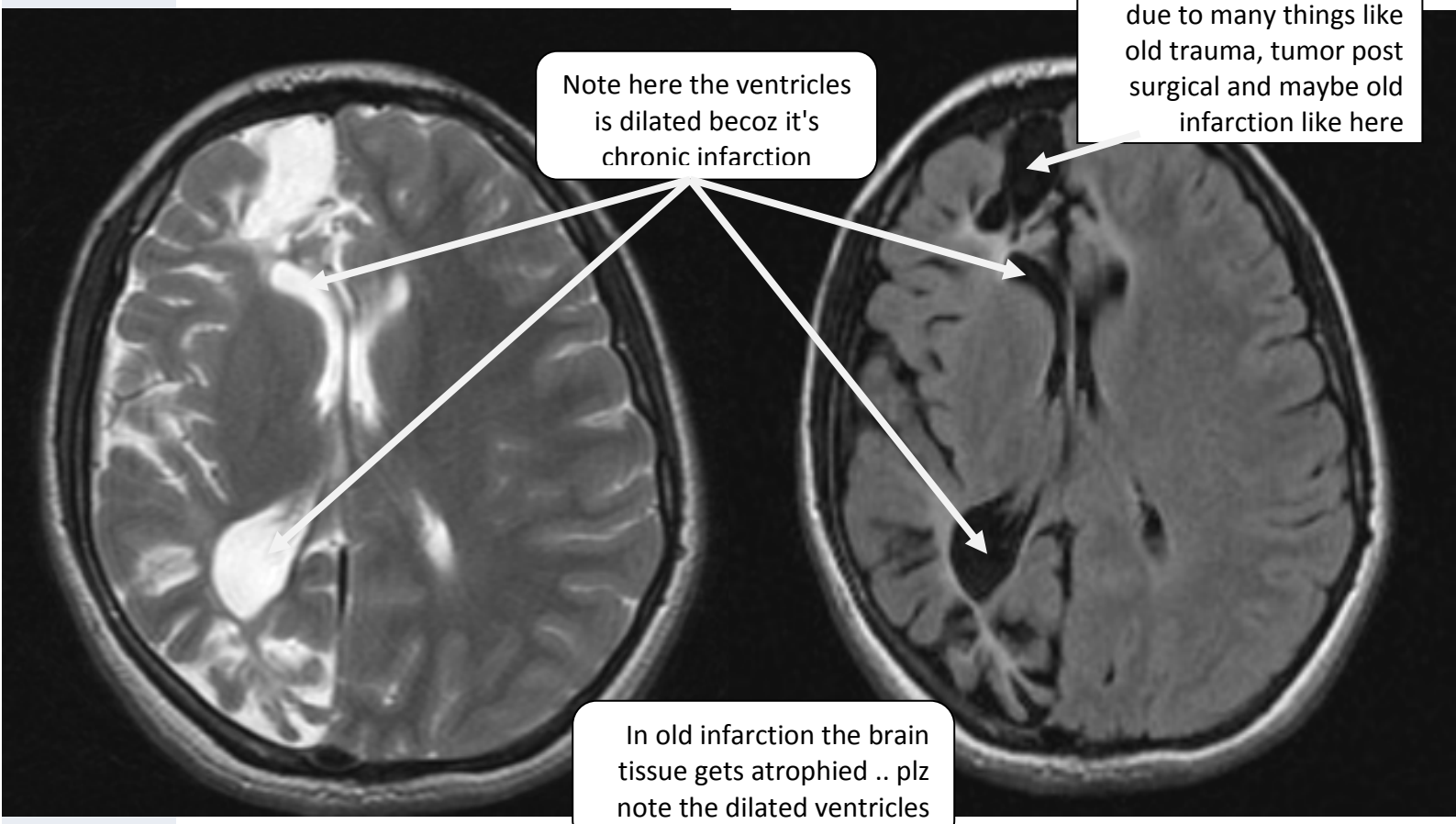
Note

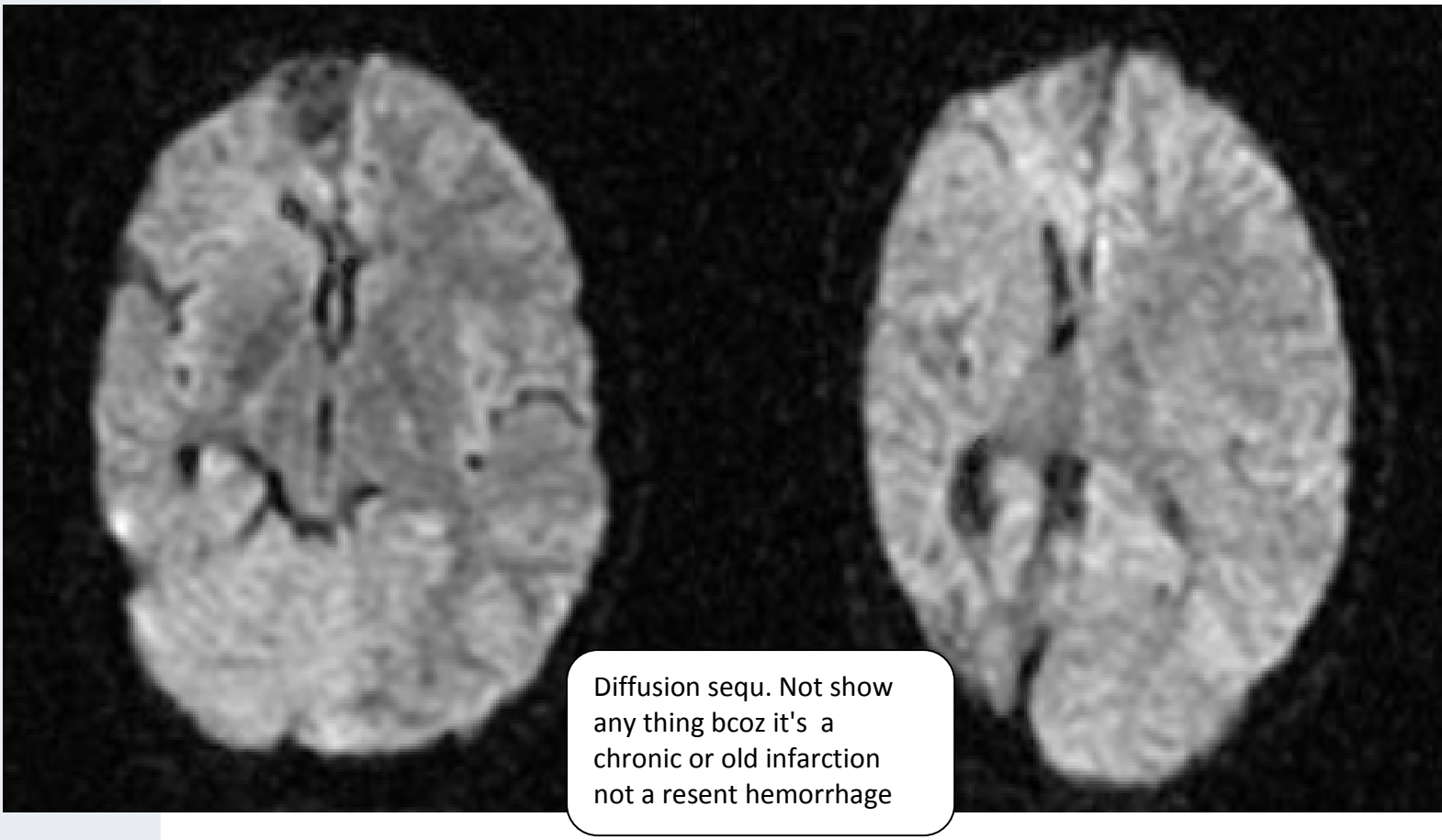
ياشباب لاحظوا اننا يوم سوينا االسي تي سكان طلع عندنا ثرومبوس بس مو متاكدين لان يمكن يكون هذا الشي كلسيفكشن .. مشان كذا سوينا ام ار أي مشان نتاكد انو ثرومبوس وانو انفاركشن



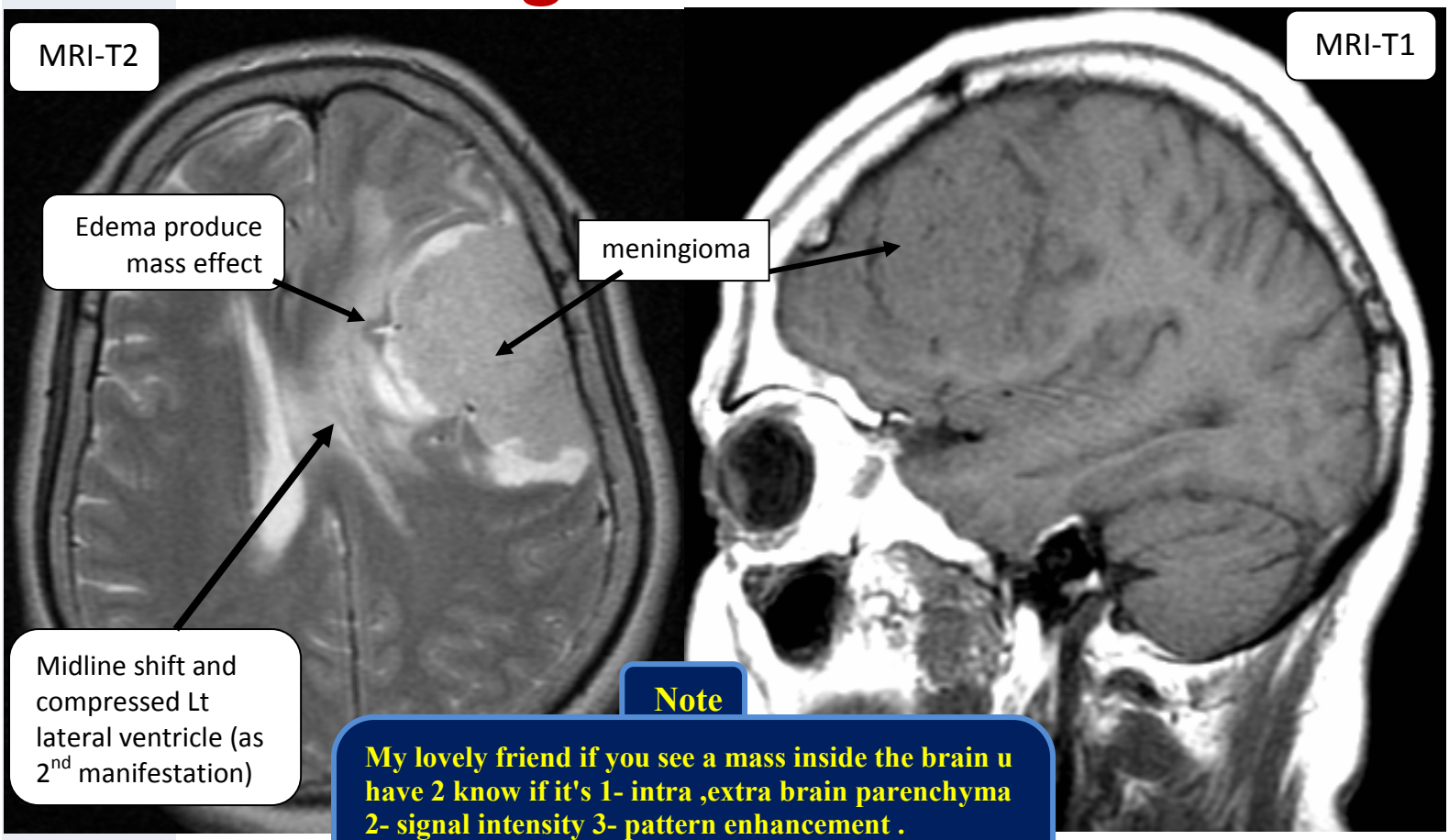
Acute infarction due to basilar artery thrombosis and it's same pt. above but here by using MRI diffusion sequence

* Old infarction by MRI



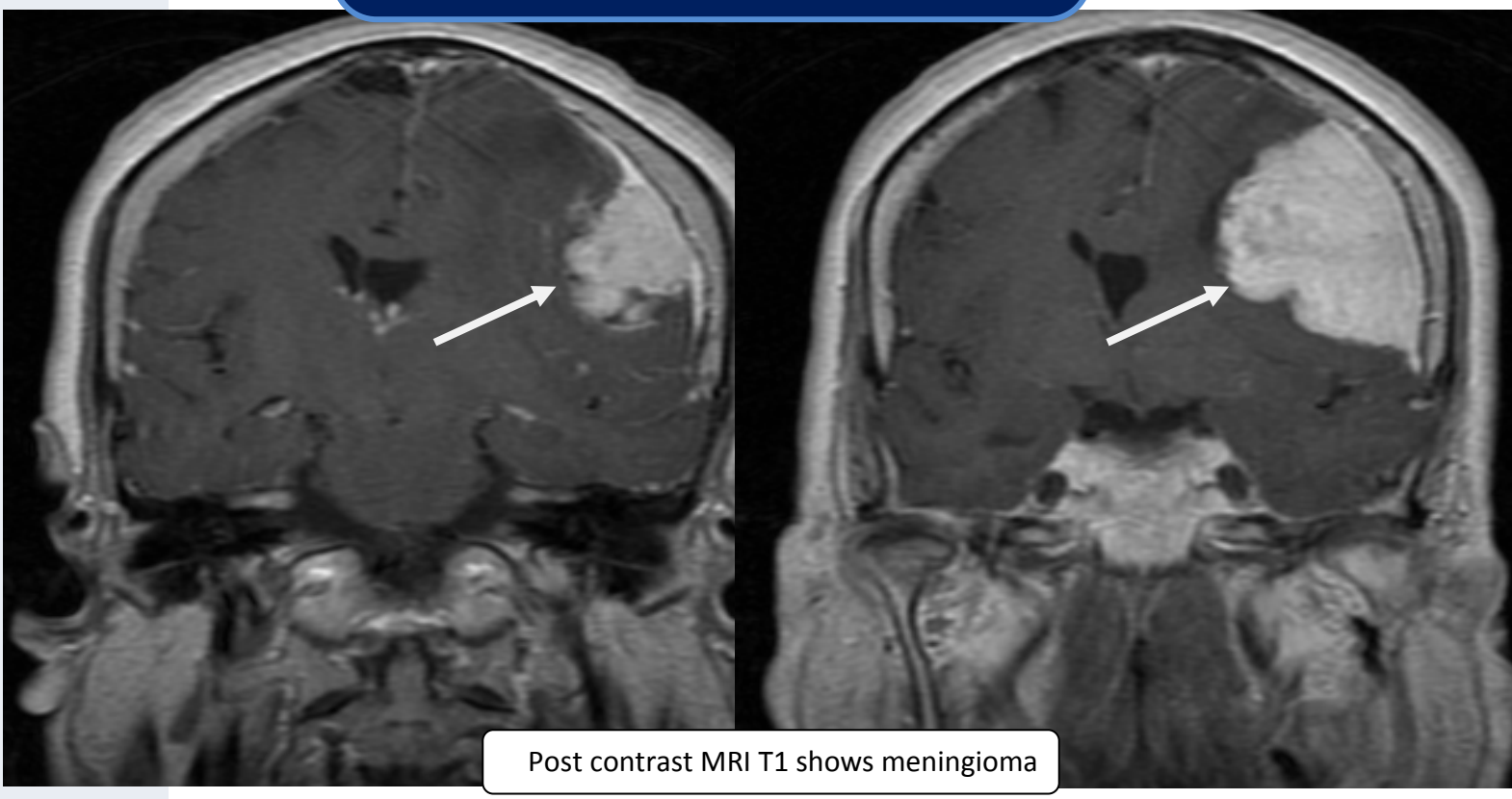


* Meningioma



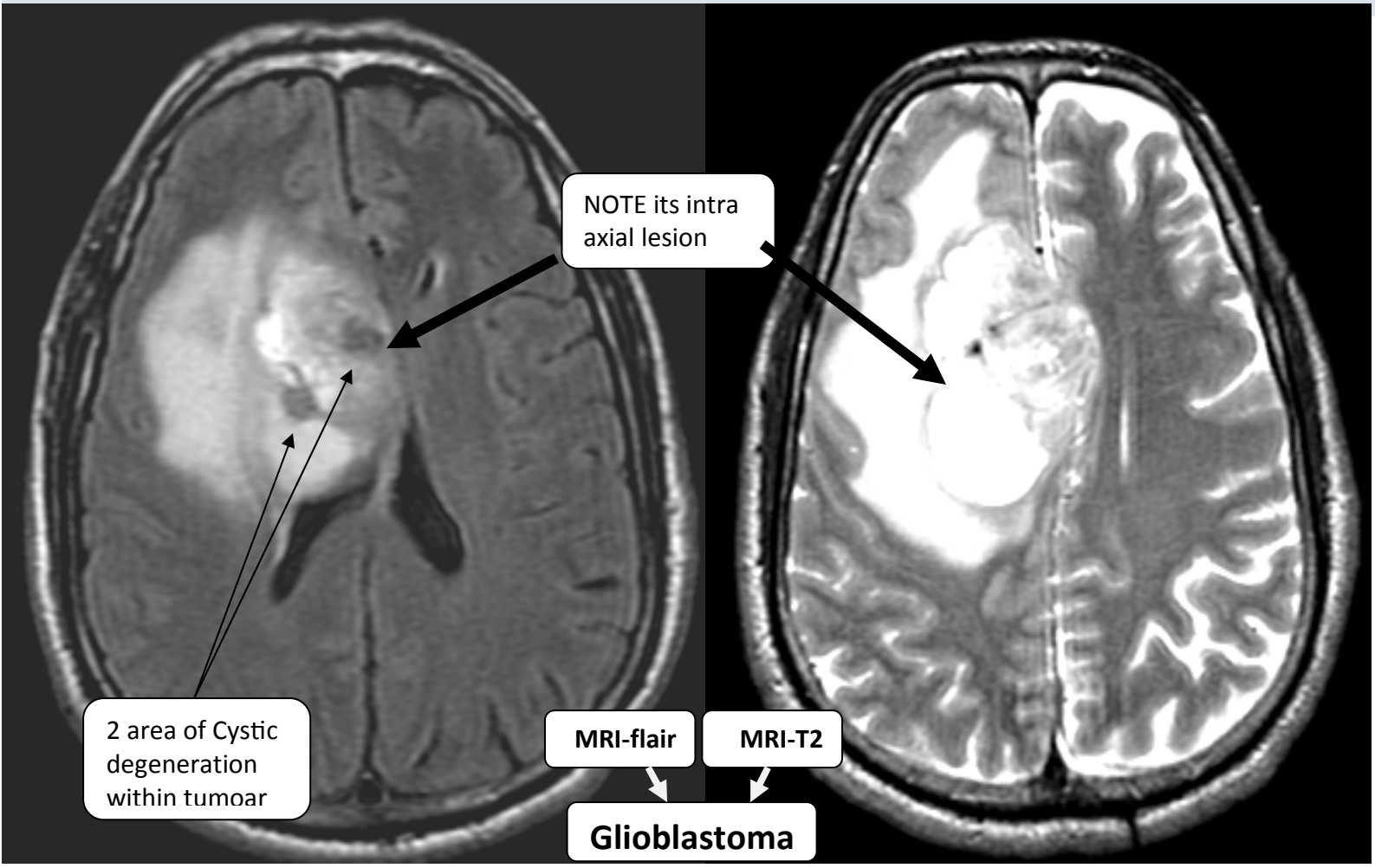
Note

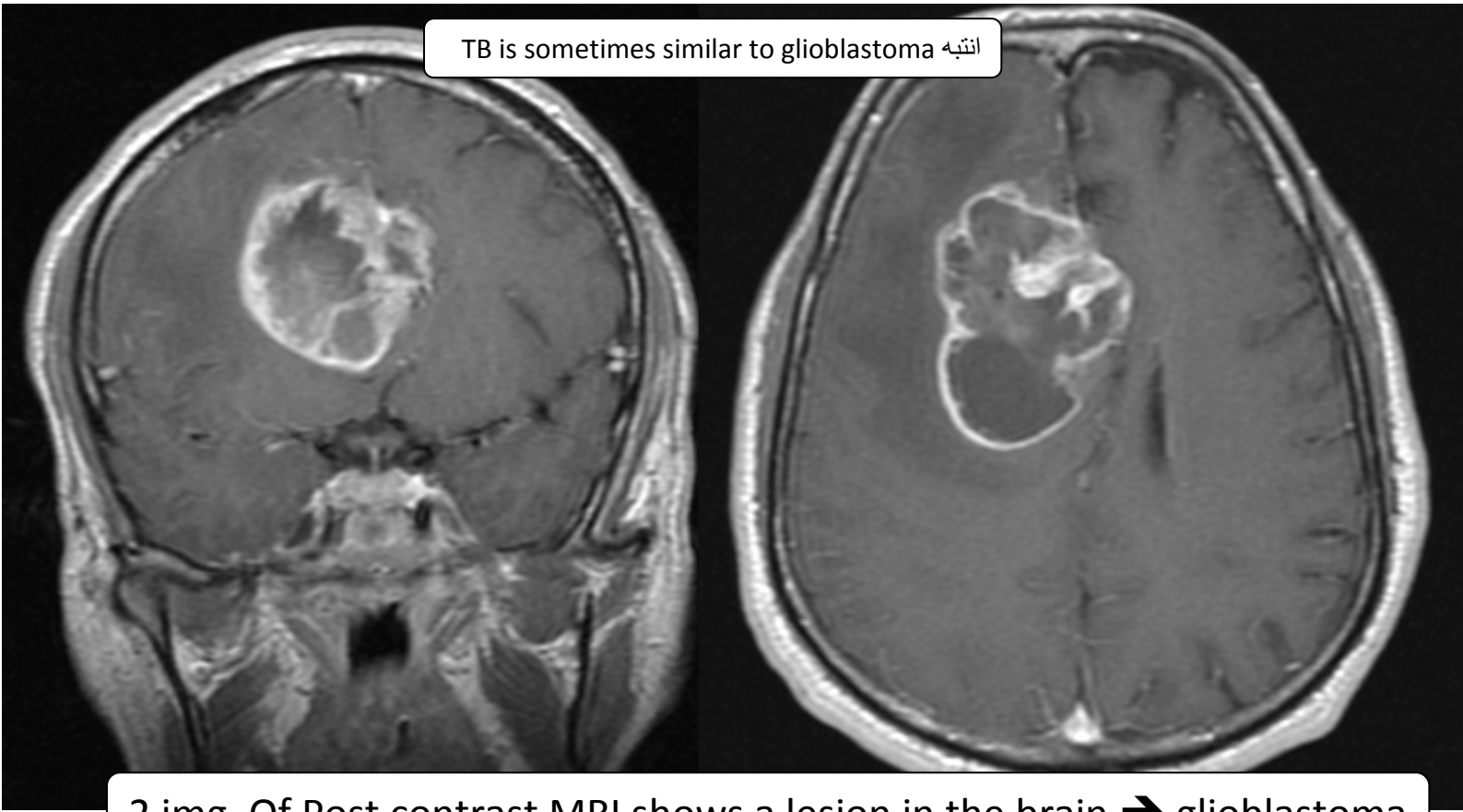
My lovely friend if you see a mass inside the brain u have 2 know if it's 1- intra ,extra brain parenchyma 2- signal intensity 3- pattern enhancement .
So if it's extra axial lesion it well have this feature:
1- CSF cleft 2- brod base attached to the surface of brain 💣



Post contrast MRI T1 shows meningioma

*GLIOBLASTOMA

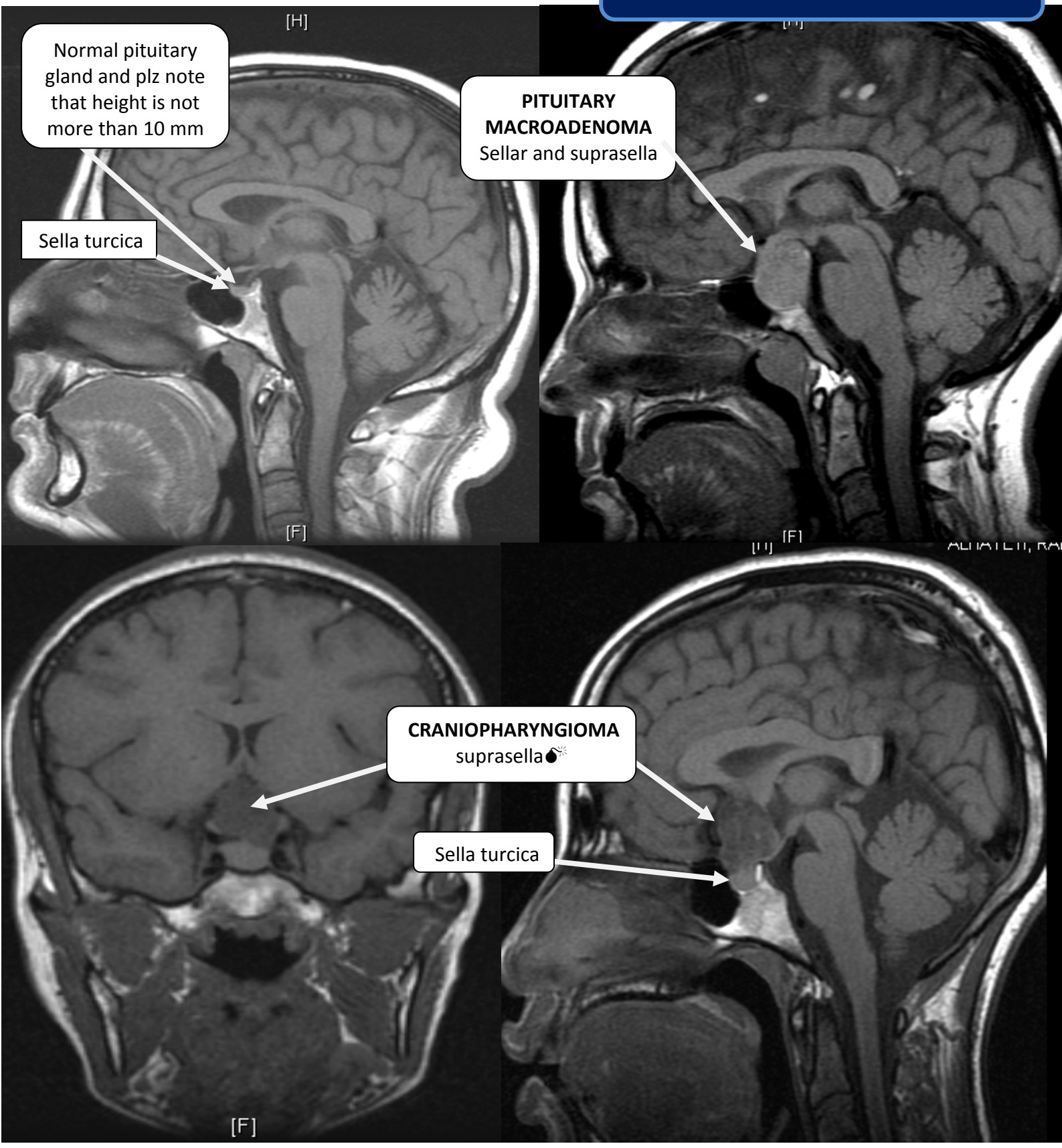


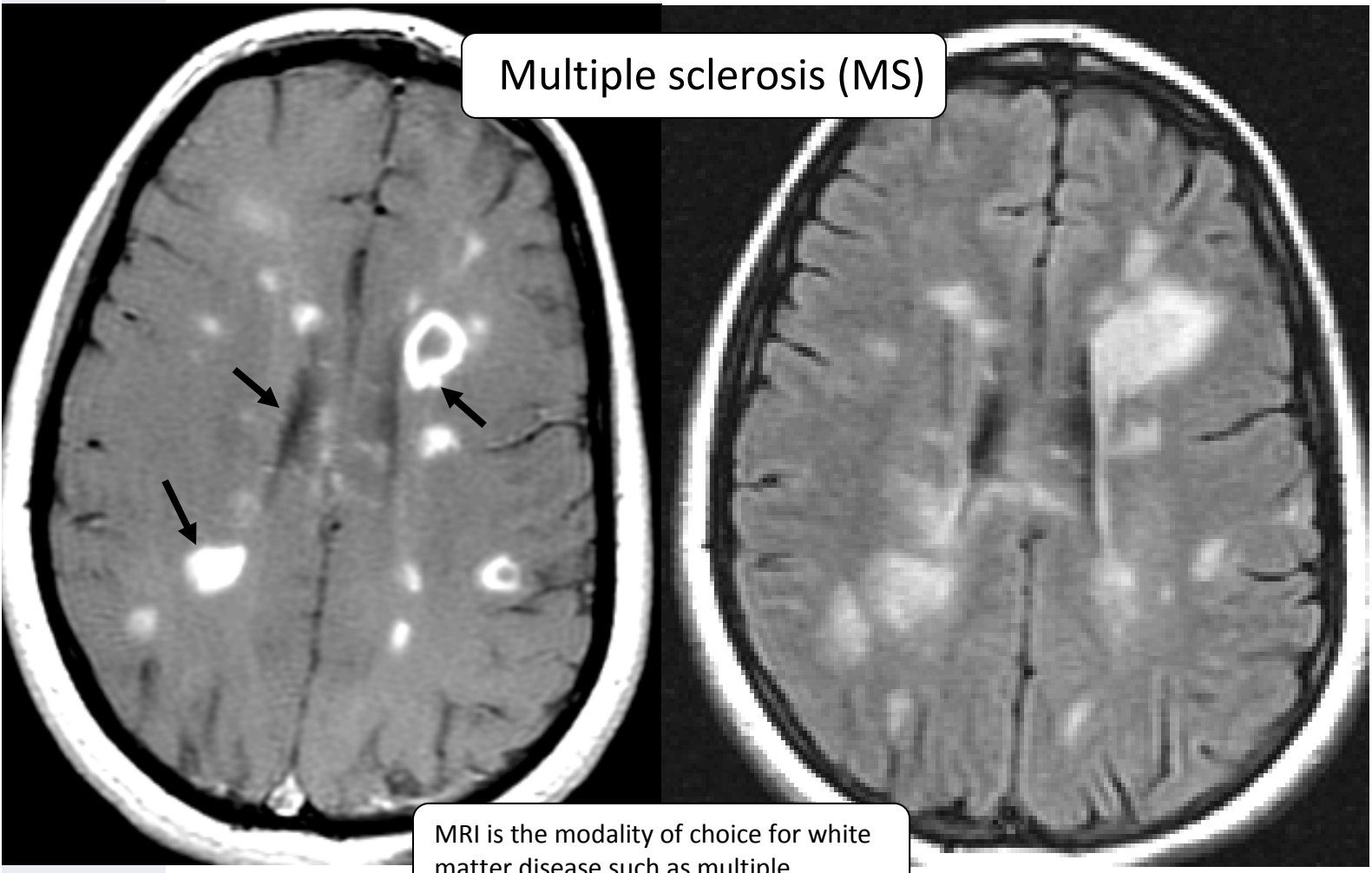


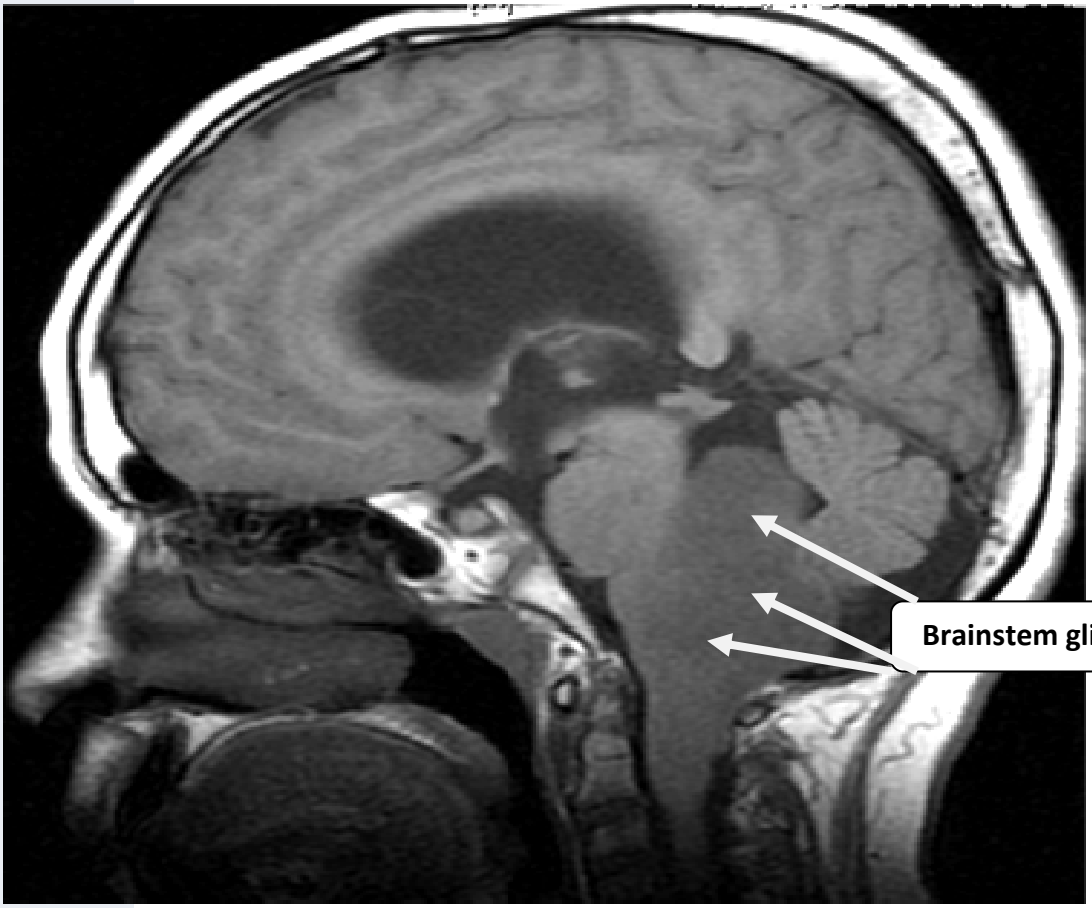
2 img. Of Post contrast MRI shows a lesion in the brain ➔ glioblastoma

* Pituitary gland

MRI is the modality of choices for sella turcica and the pituitary gland inside it . 💣




Multiple sclerosis (MS)
MRI is the modality of choice for white matter disease such as multiple


Brainstem glioma
Advantage of sagittal MRI for evaluation of brain stem lesion

Done

☺