

Chẩn đoán hình ảnh trong xử trí và tiên lượng BN CTSN

BS Phan Công Chiến

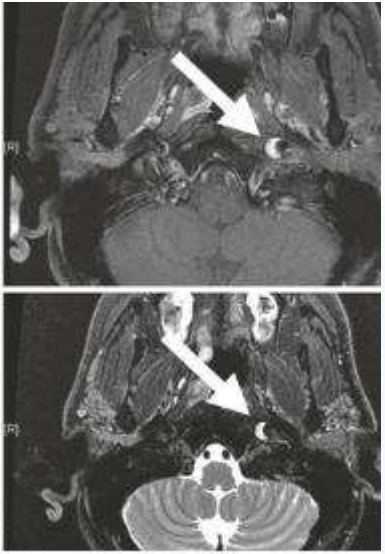
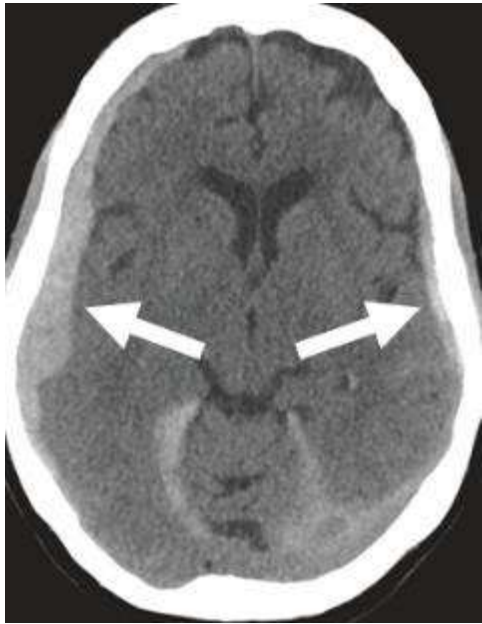
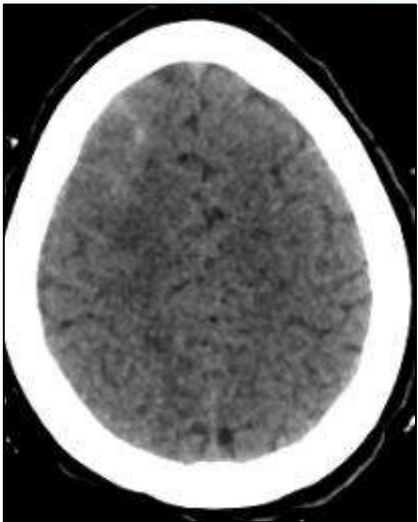
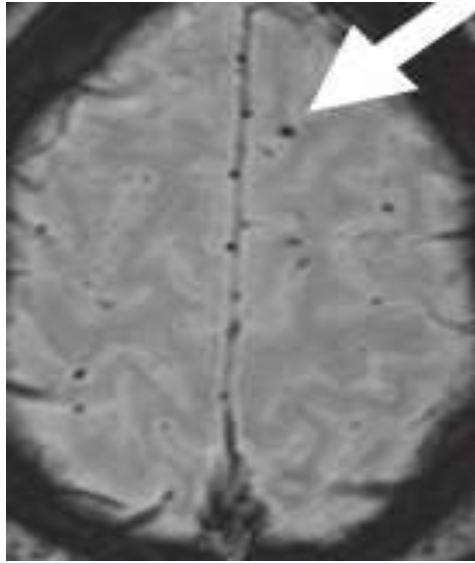
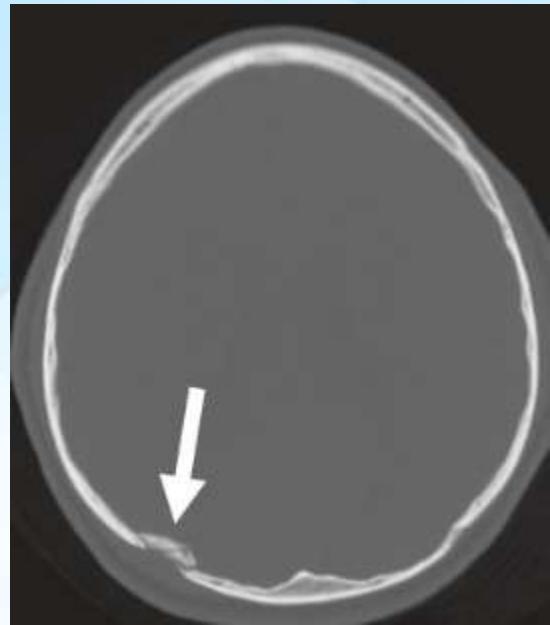
chien.pc@umc.edu.vn

Nội dung

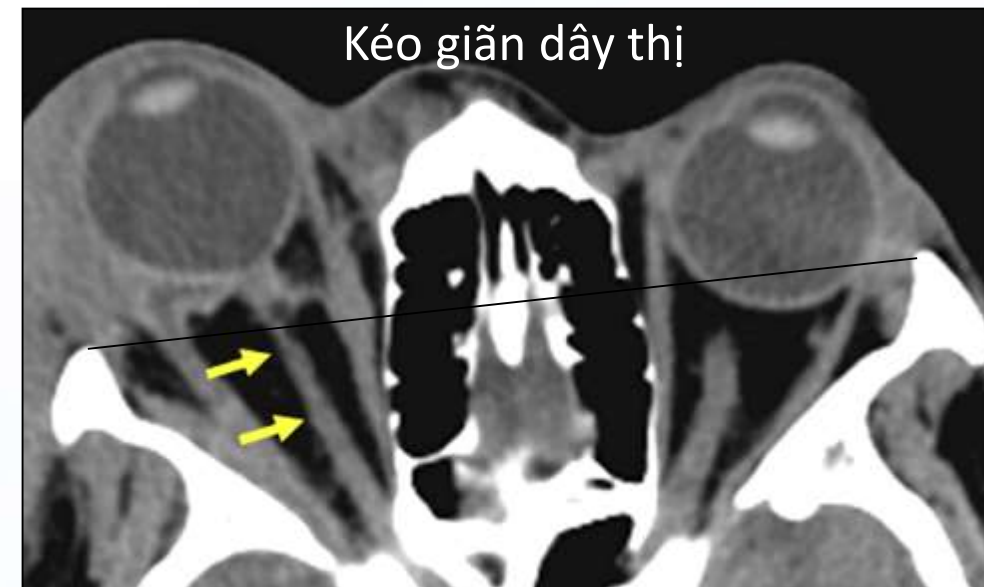
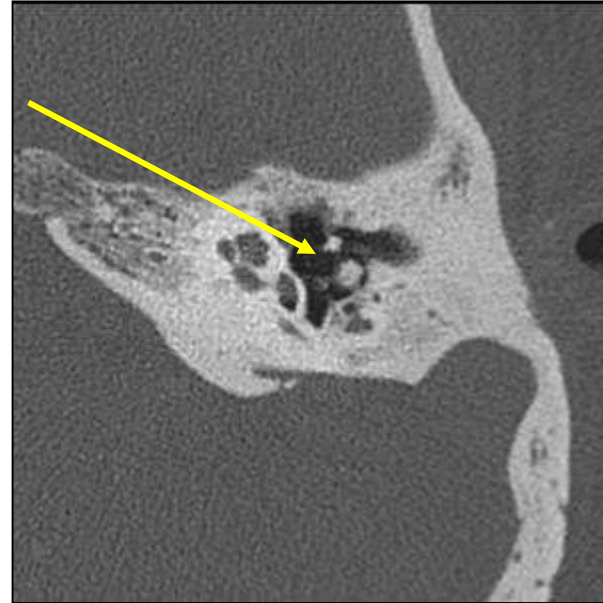
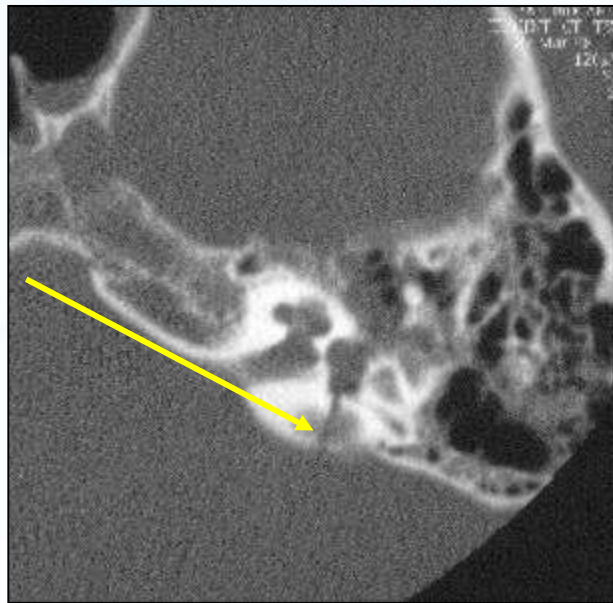
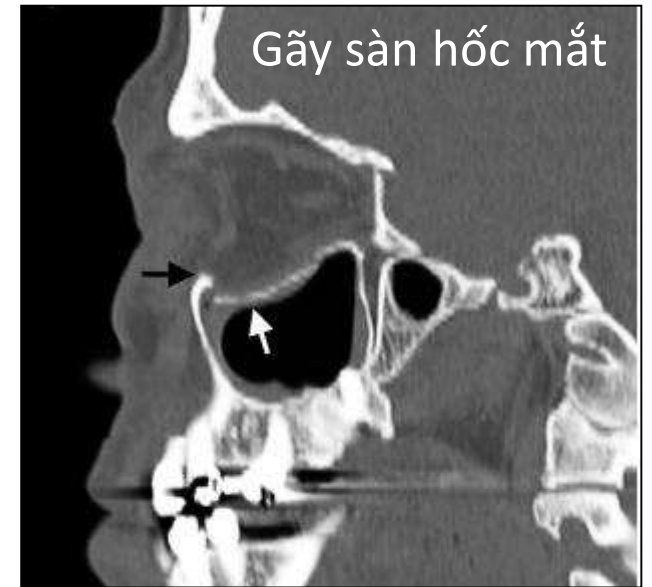
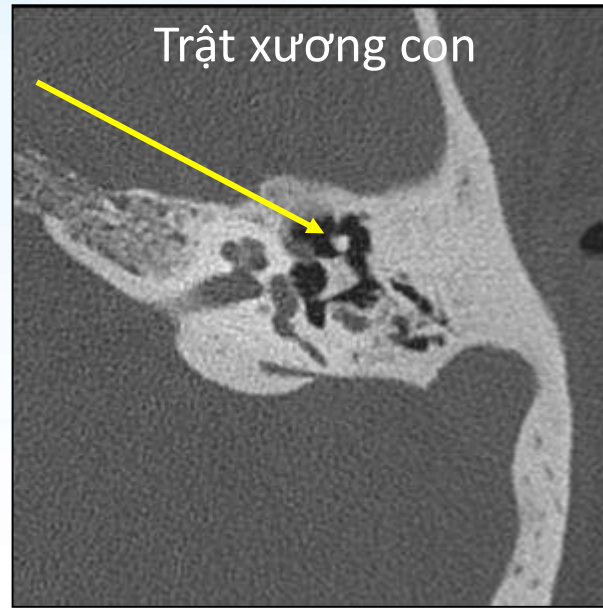
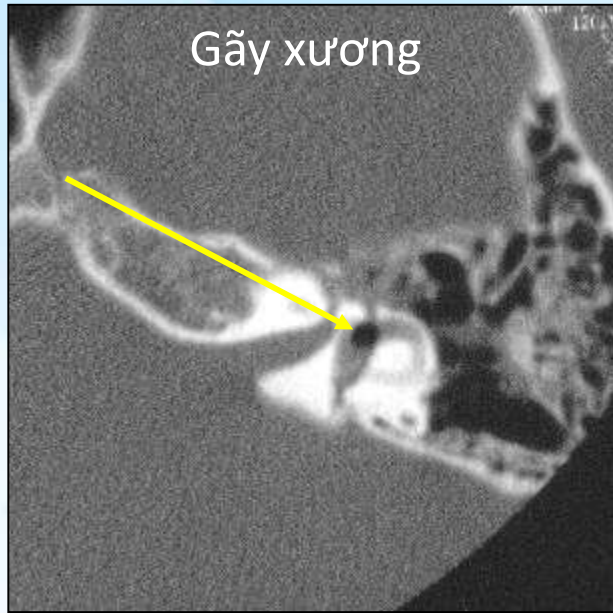
Loại tổn thương CTSN trên hình ảnh CLVT và CHT

Chiến lược lựa chọn protocol và đọc kết quả

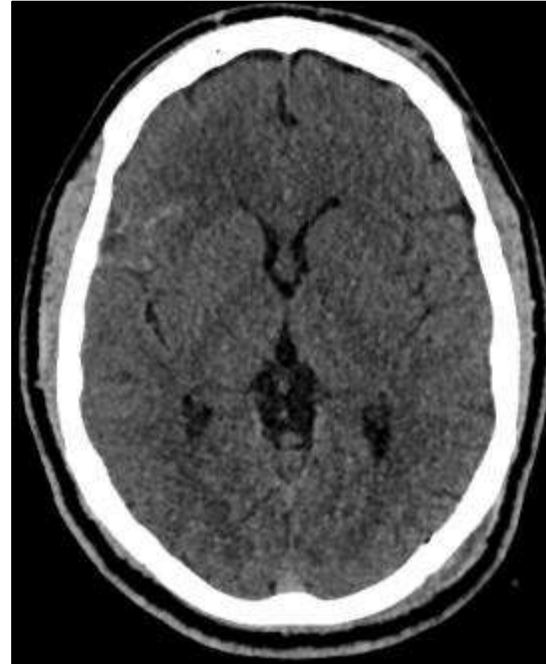
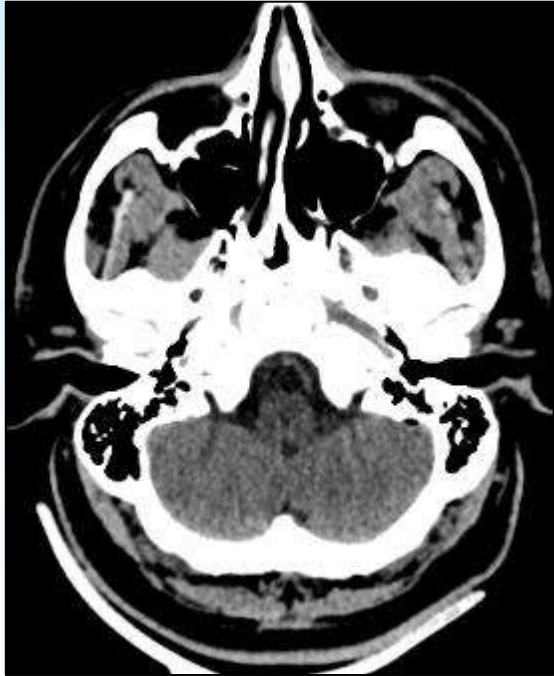
Loại tổn thương thường gặp



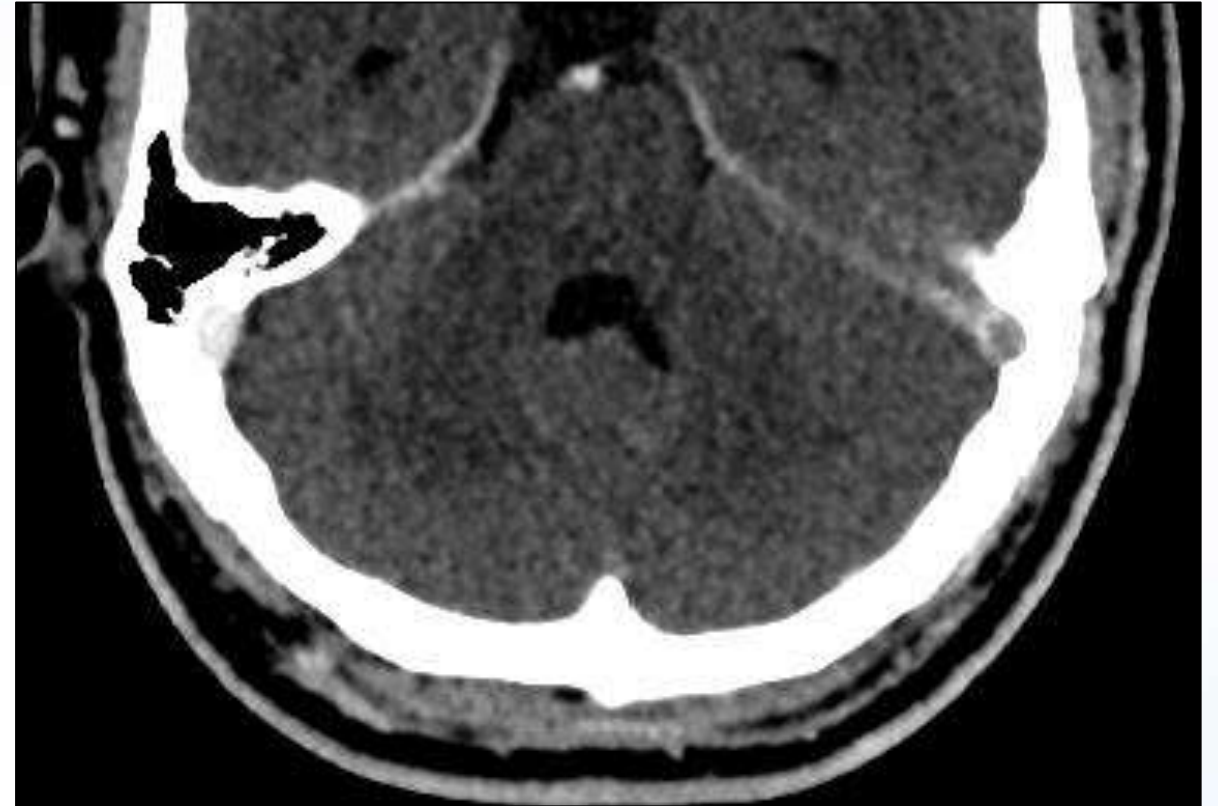
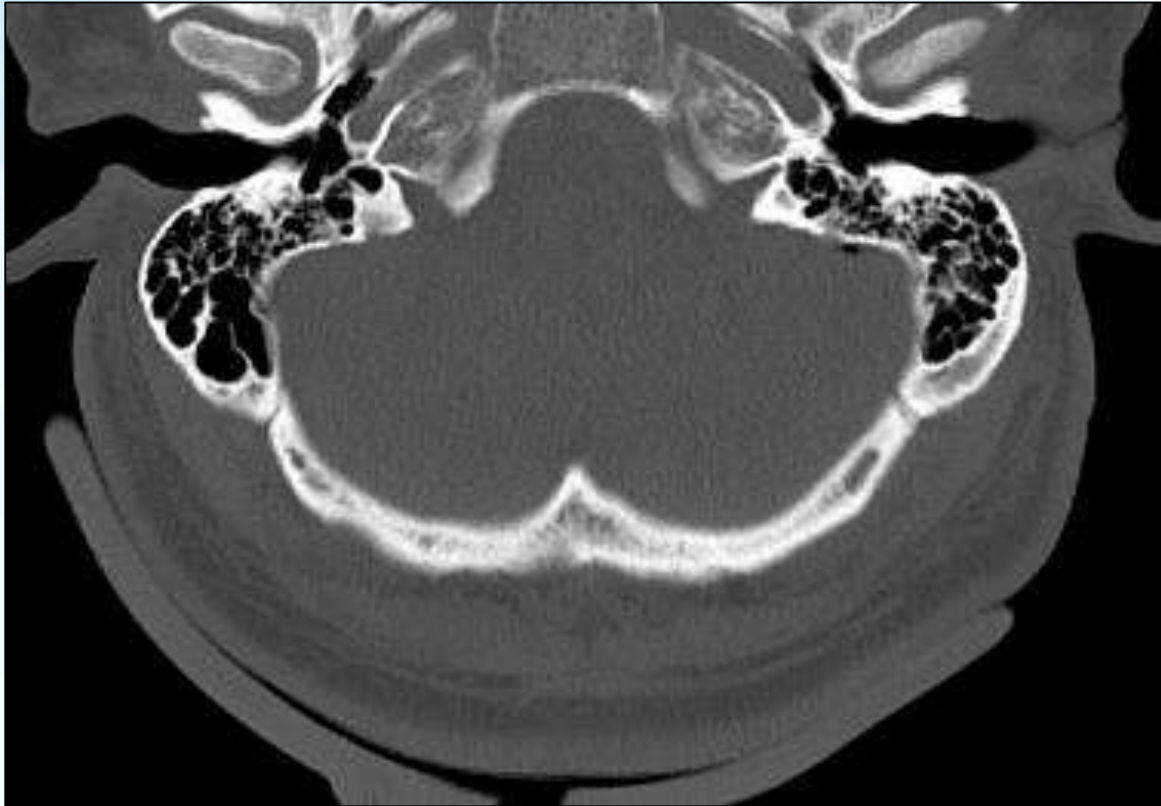
Dễ sót: khảo sát xương đá, hốc mắt, sàn sọ, cột sống cổ, các mạch máu



Case 1. BN CTSN do tai nạn giao thông. Thấy gì không ?

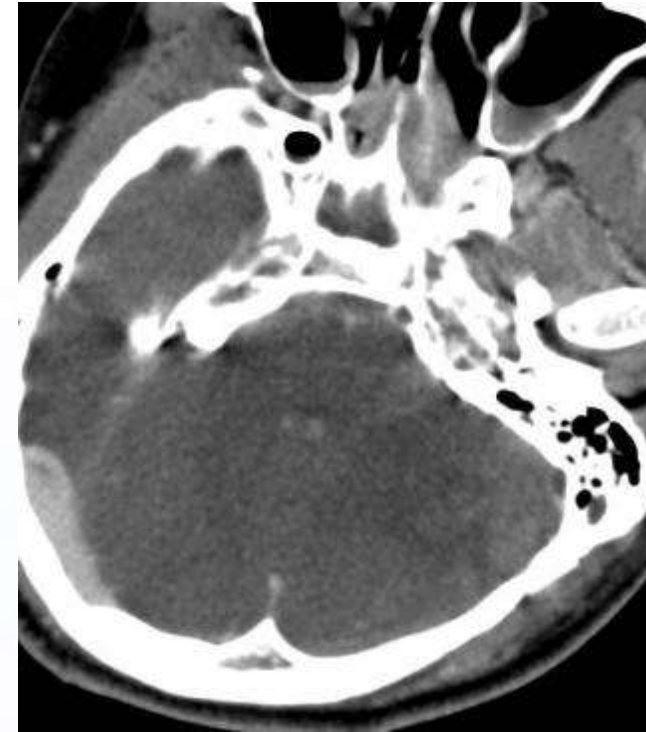


Cửa sổ xương tăng độ nhạy, tiêm thuốc khi nghi tổn thương MM

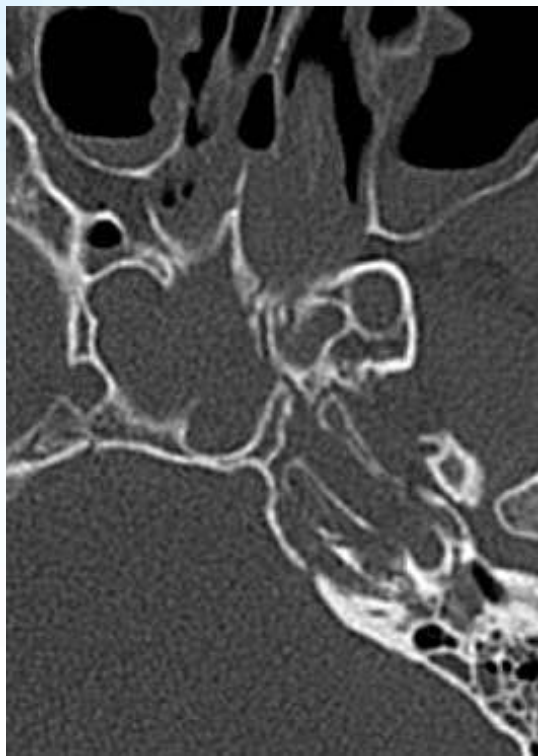


Đốm khí nhỏ (nứt xương ?), huyết khối tm

Case 2. BN CTSN GCS 8đ.
Gồm các tổn thương nào ?



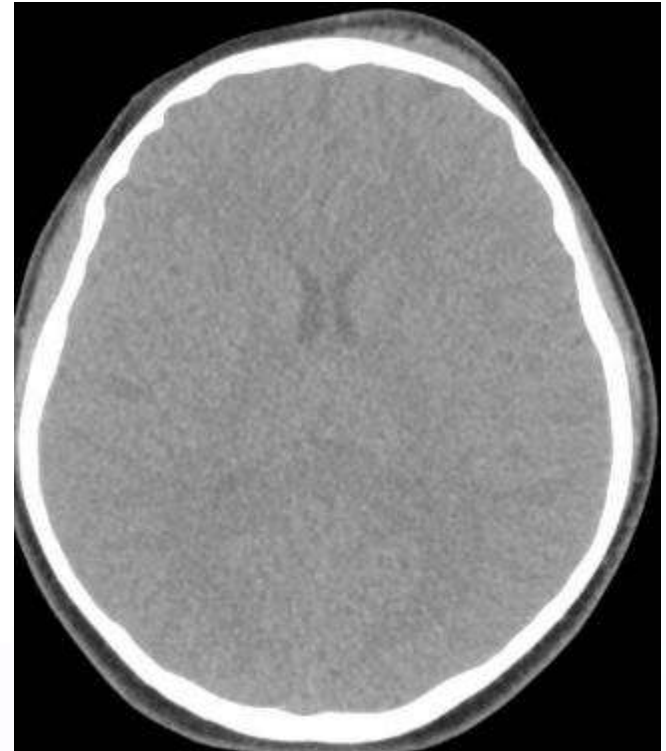
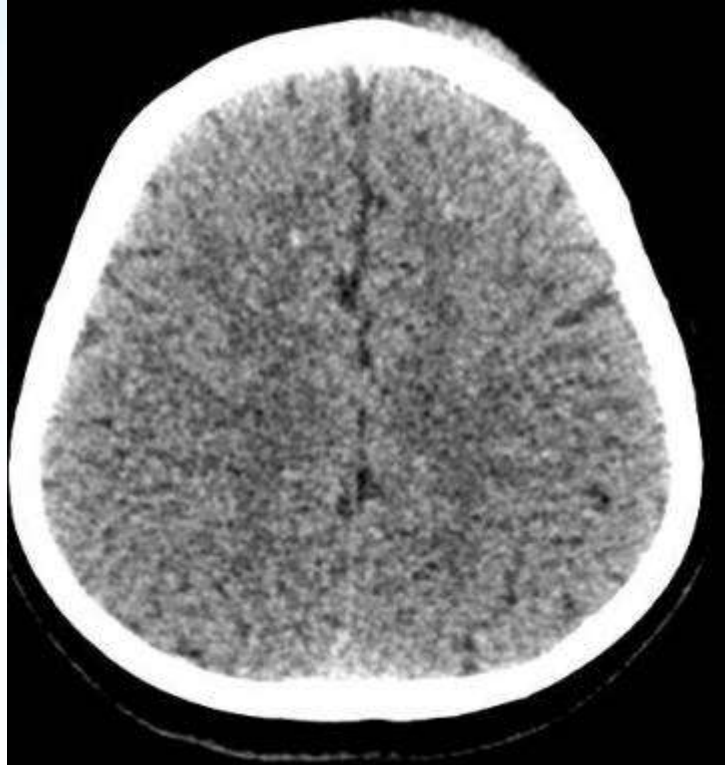
Gồm các tổn thương nào ?



Nhiệm vụ 1

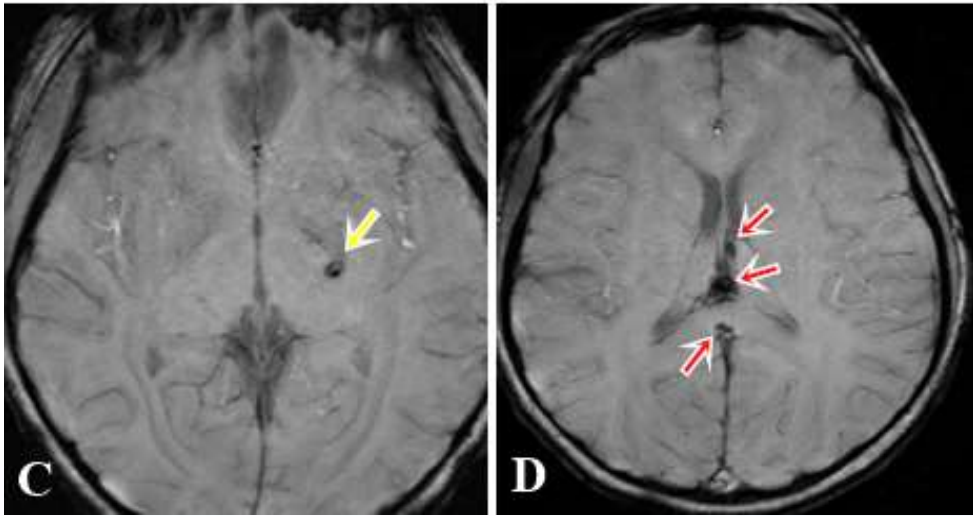
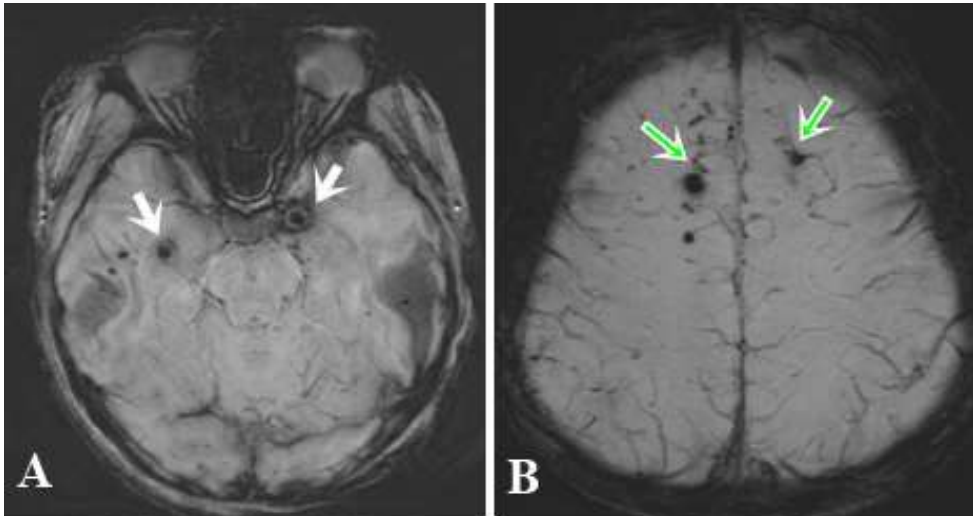
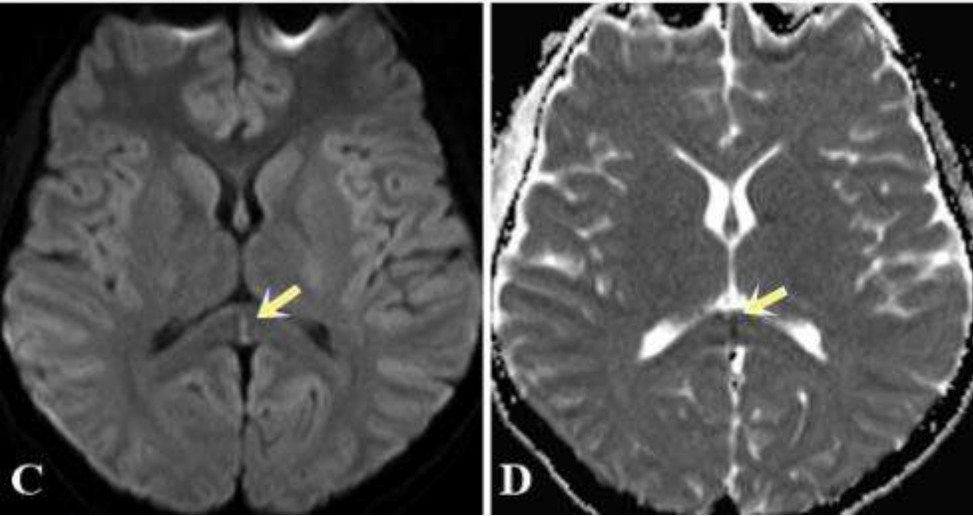
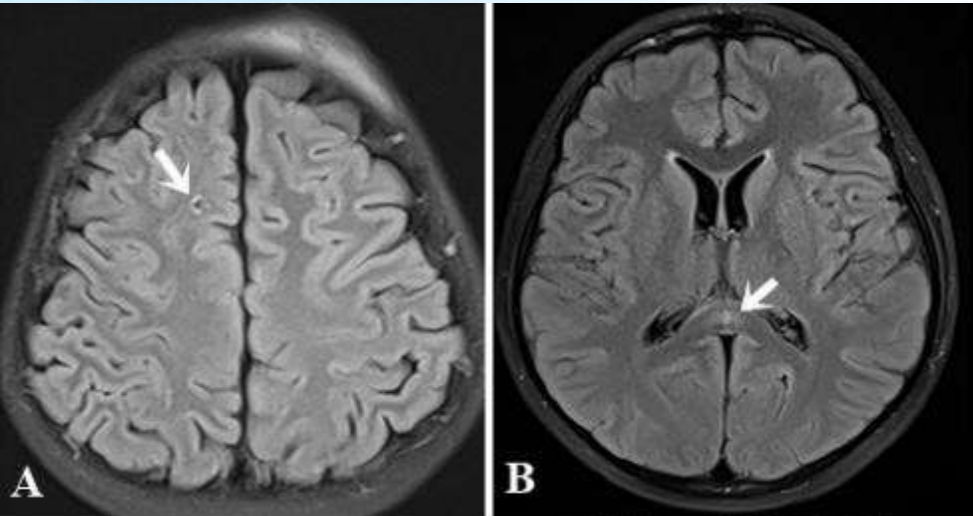
Tổng kê đầy đủ các
tổn thương trên HAH

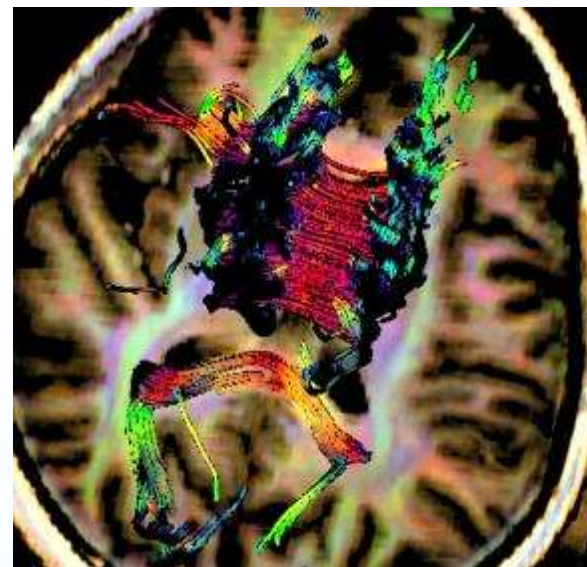
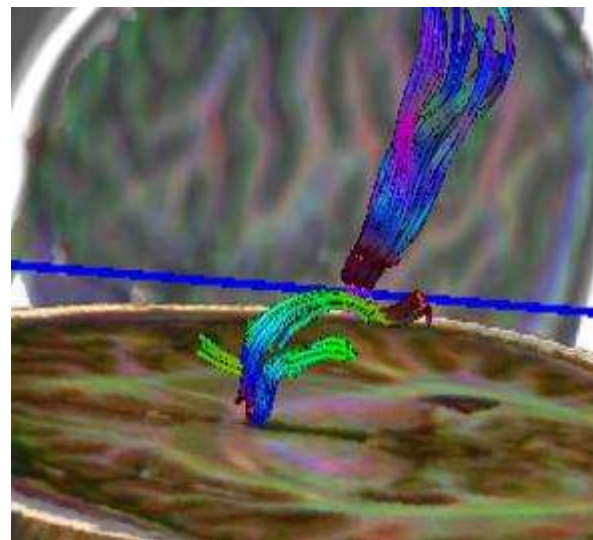
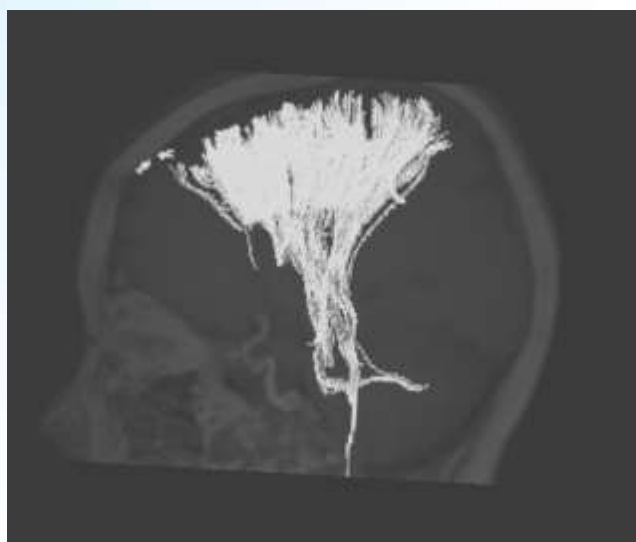
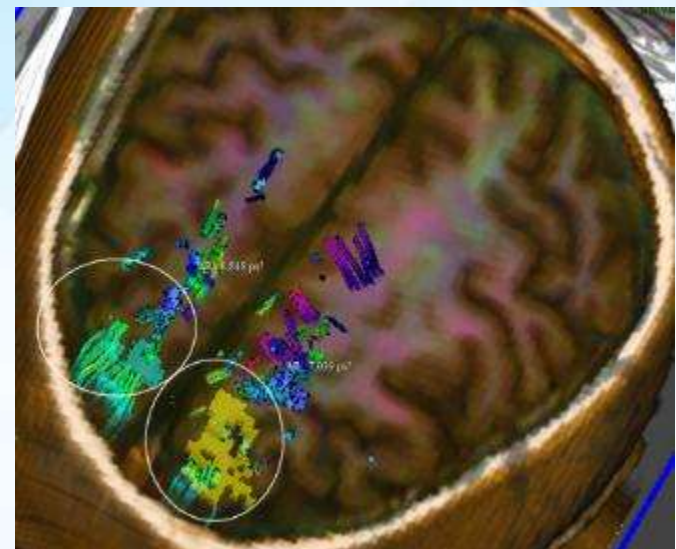
Case 3. Nam 11t, tai nạn giao thông, GCS 9đ



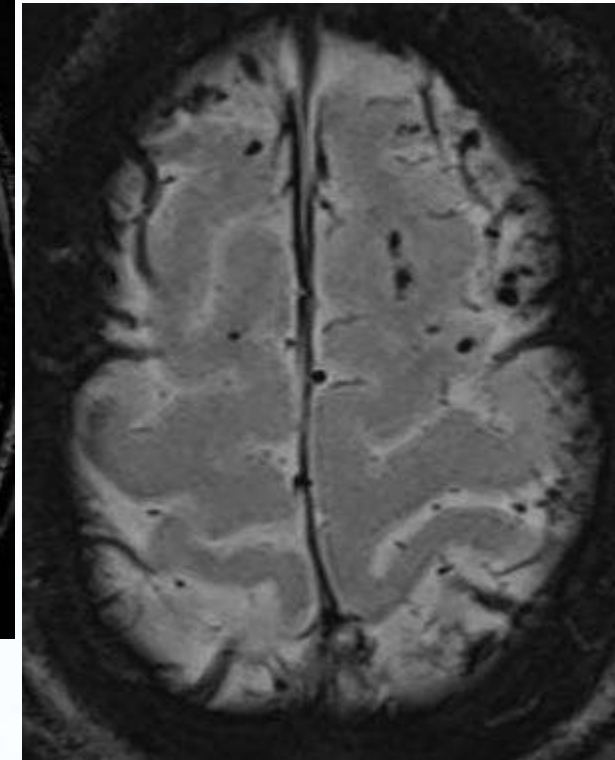
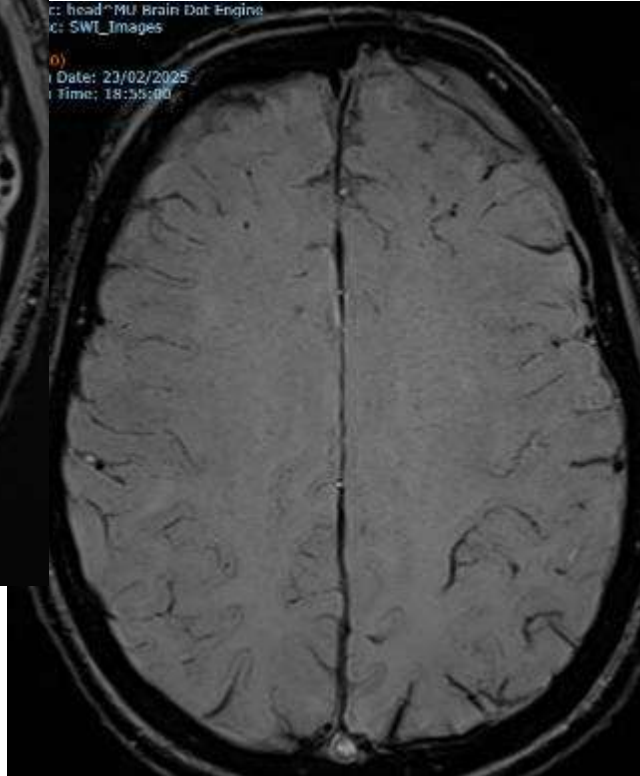
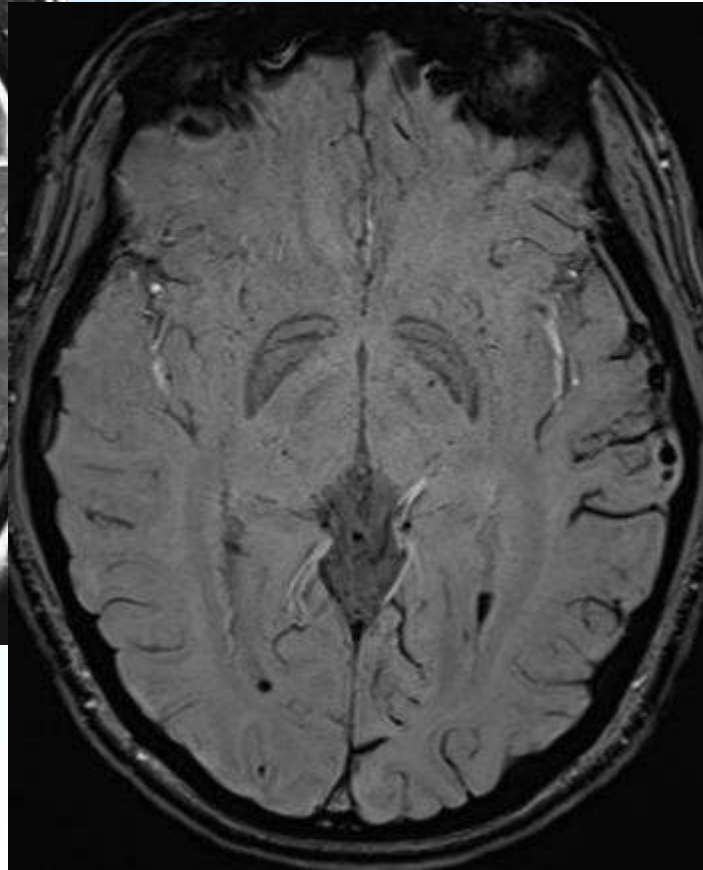
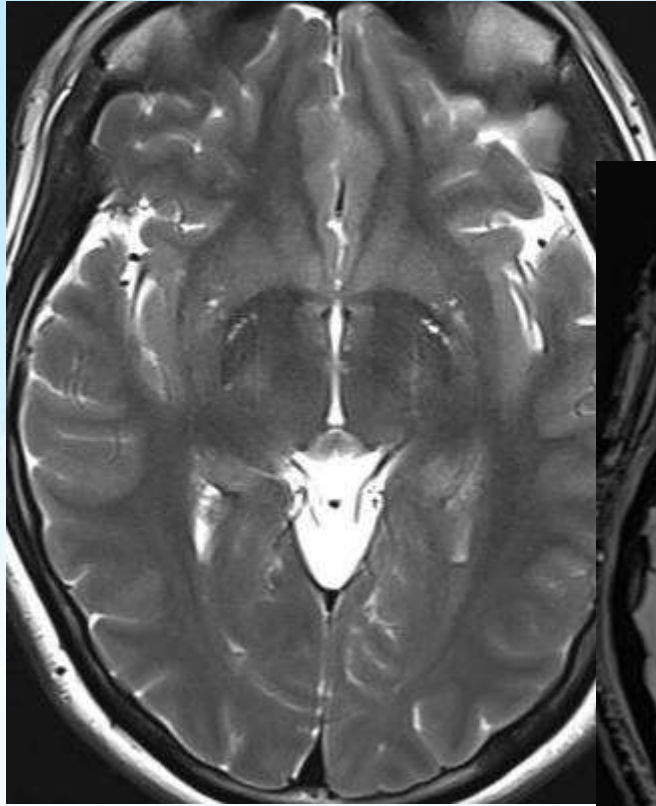
Khi nào MRI hữu ích ?

DAI





Case 4. BN, chấn thương, chúng ta thấy gì ?



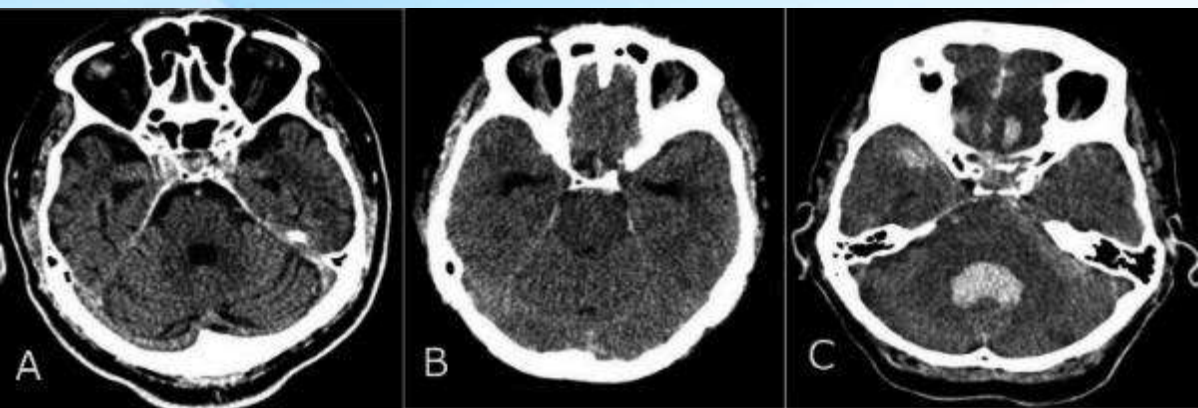
Phân độ CTSN trên HAH

Grade	Description
Diffuse injury I	No visible pathology on CT
Diffuse injury II	Cisterns intact, midline shift ≤ 5 mm, no high/mixed density lesion $> 25 \text{ cm}^3$
Diffuse injury III (swelling)	Cisterns compressed or absent, midline shift ≤ 5 mm, no high/mixed density lesion $> 25 \text{ cm}^3$
Diffuse injury IV (shift)	Midline shift > 5 mm, no high/mixed density lesion $> 25 \text{ cm}^3$
Evacuated mass lesion	Any lesion surgically evacuated
Nonevacuated mass lesion	High/mixed density lesion $> 25 \text{ cm}^3$, not surgically evacuated

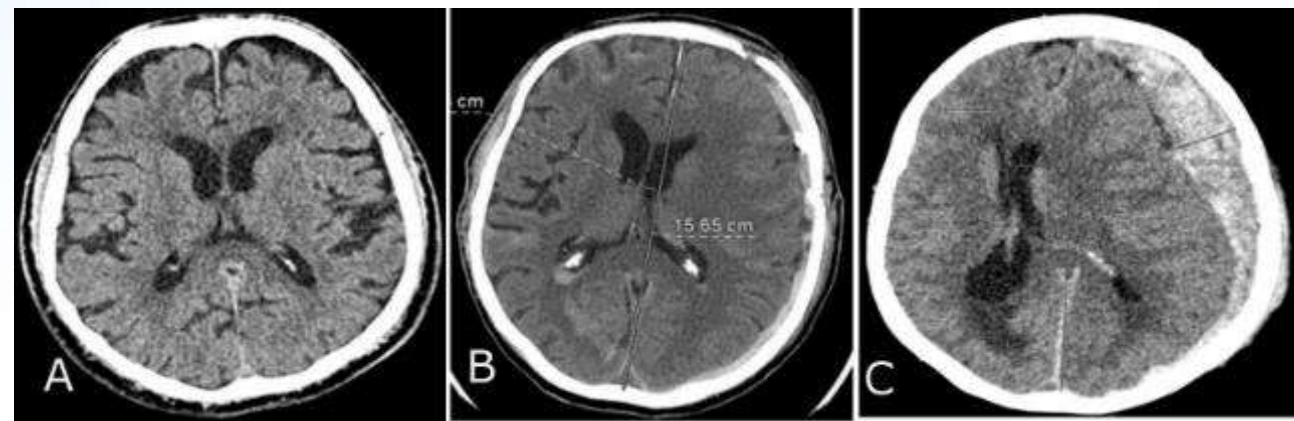
Marshall

Item	Score
Basal cisterns	0 = normal 1 = compressed 2 = absent
Midline shift	0 = ≤ 5 mm 1 = > 5 mm
Epidural mass lesion	0 = present 1 = absent
IVH or tSAH	0 = absent 1 = present
Determining Final Score = Sum of Scoring Items + 1	
Score	Mortality at 6 Months
1	0%
2	7%
3	16%
4	26%
5	53%
6	61%

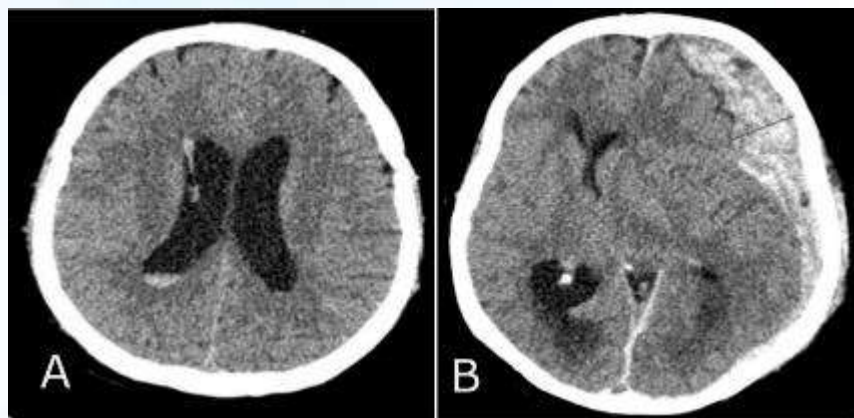
Rotterdam score



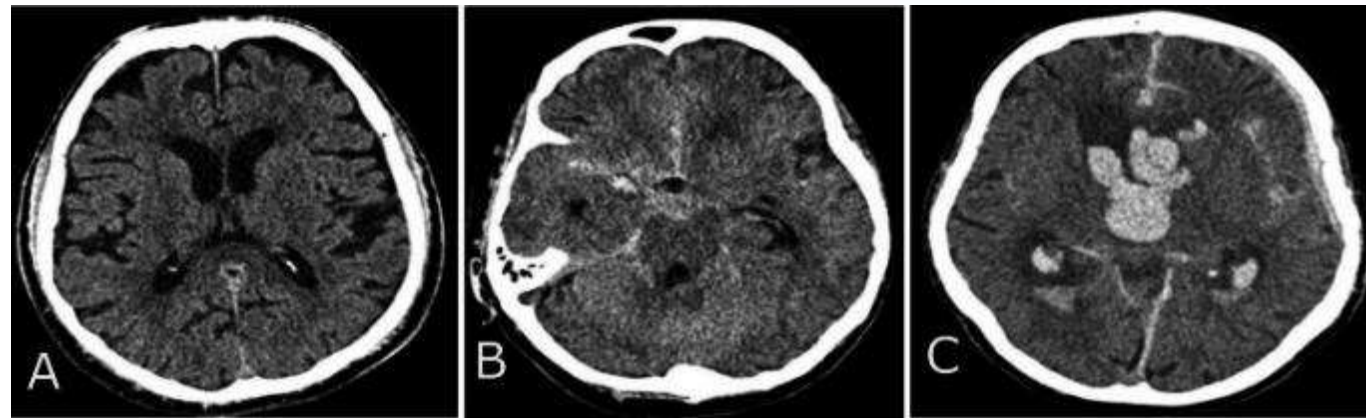
Normal (A); compressed BC (B); absent BC (C)



Normal (A); midline shift ≤ 5 mm (B); midline shift > 5 mm (C)



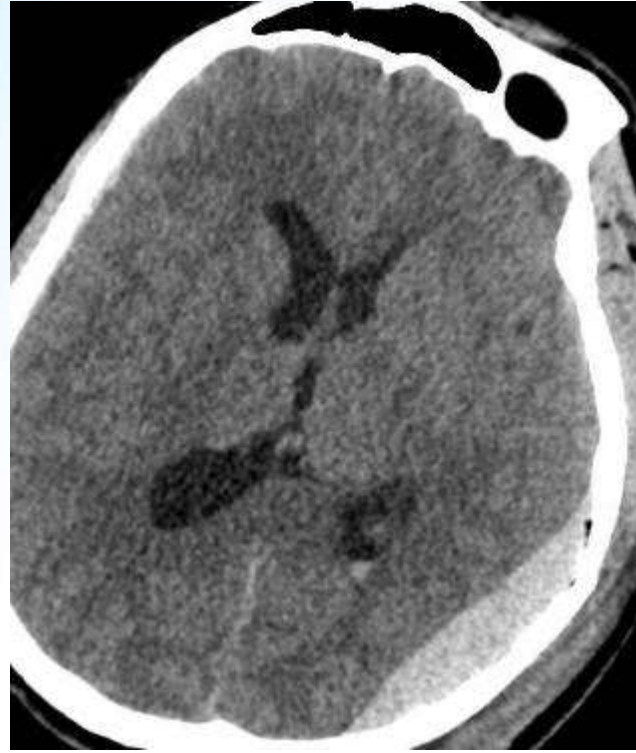
Normal (A); acute epidural hematoma (B)



Normal findings (A); SAH (B); IVH and SAH (C).



1đ



1đ



1đ

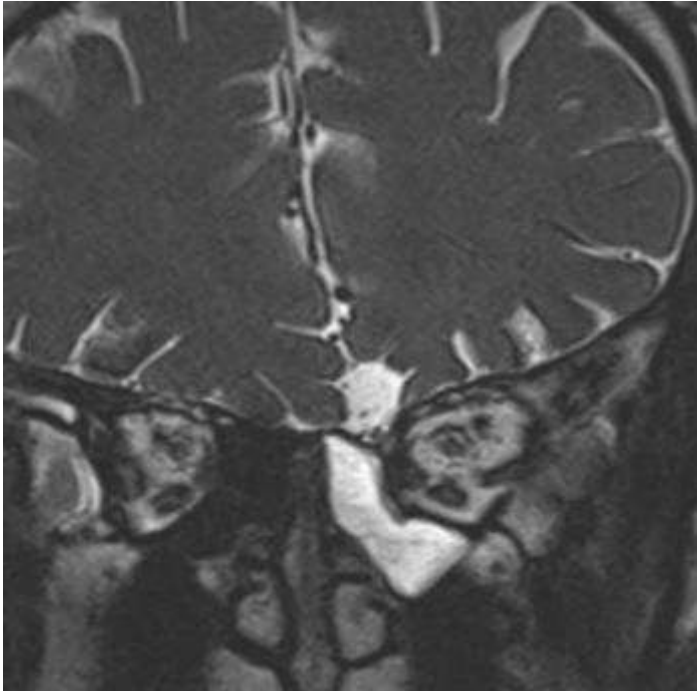
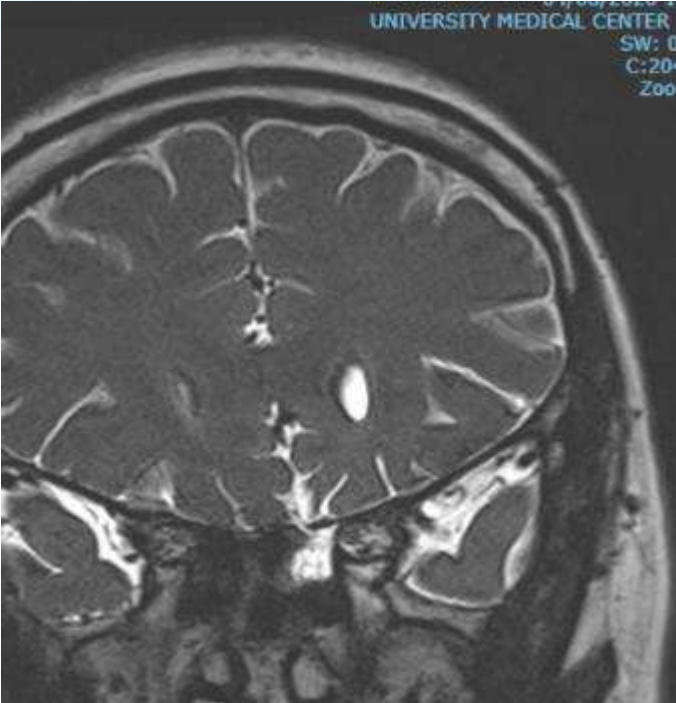
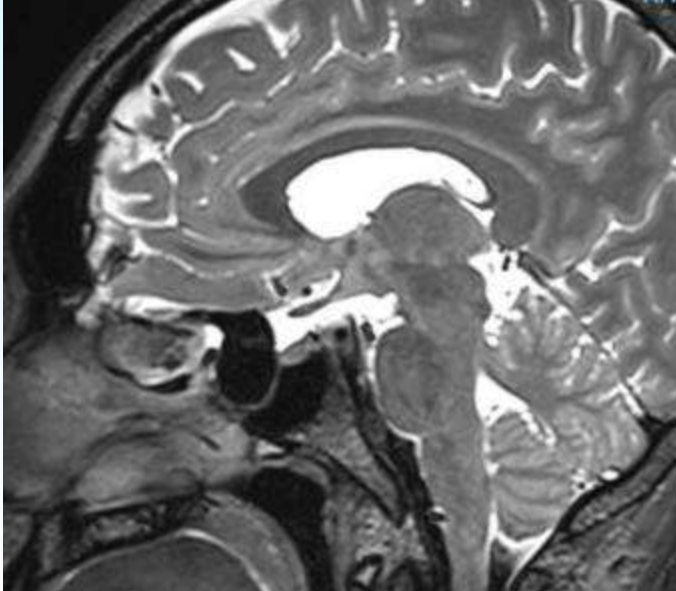
Case 5. BN CTSN GCS 8đ, Rotterdam 4đ → tử vong at 6 months 26%.

Nhiệm vụ 2

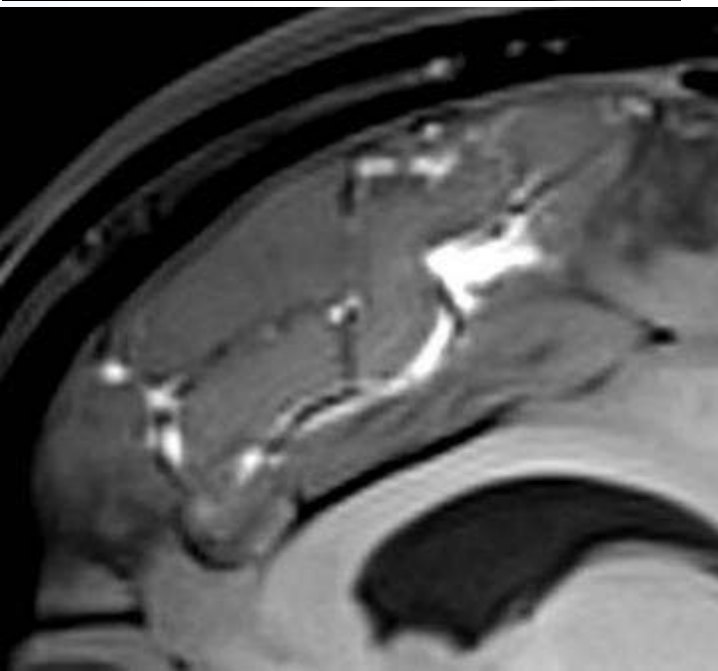
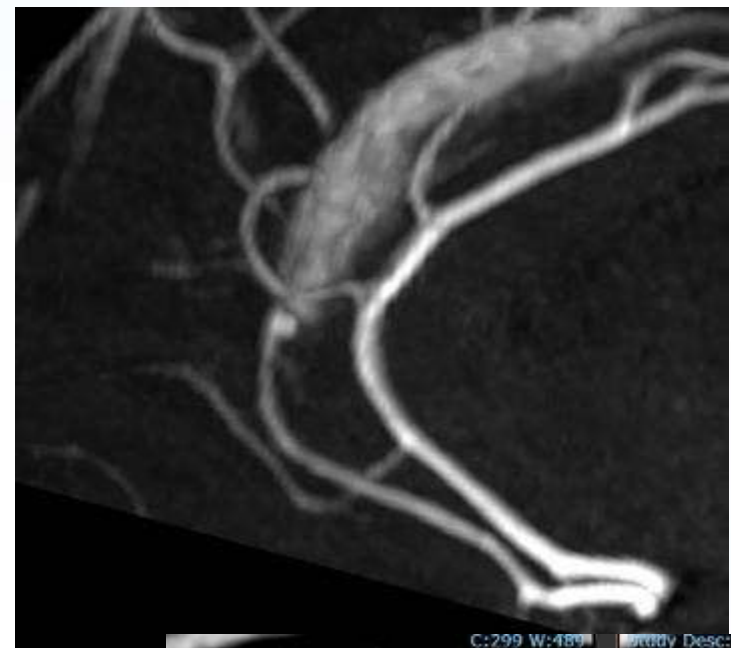
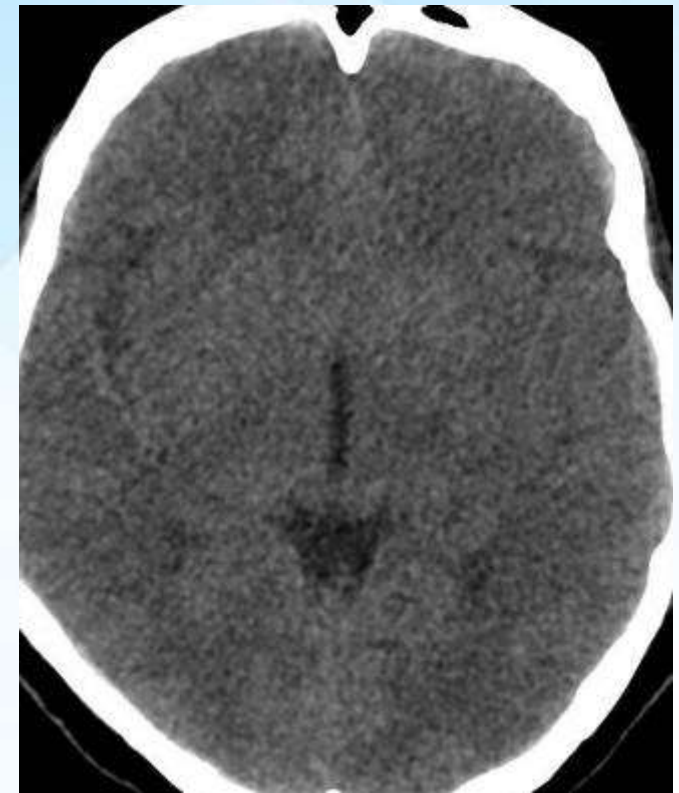
Phân độ tổn thương

Liệt kê các tổn thương quan trọng
cần can thiệp cấp cứu

Case 6. chảy dịch mũi sau chấn thương

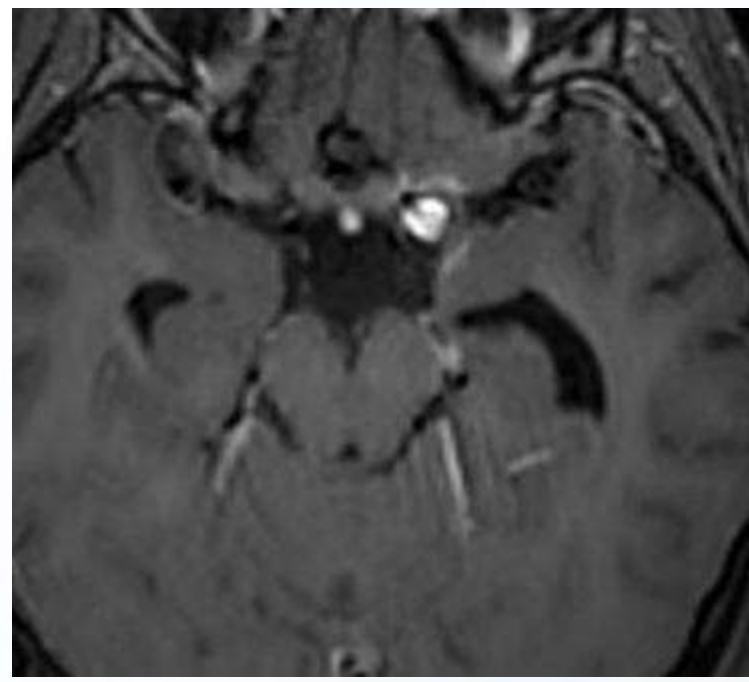
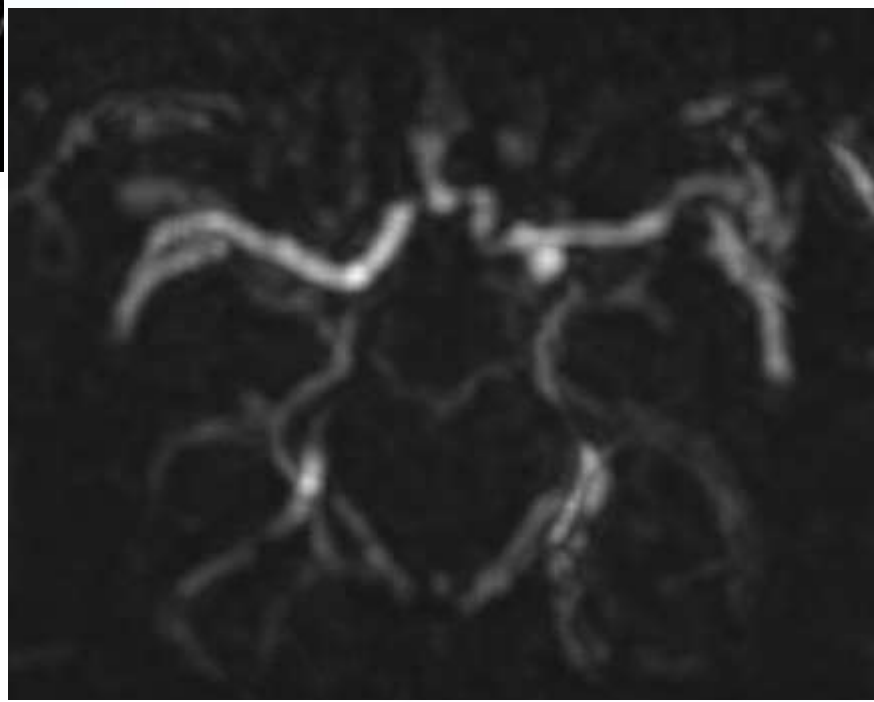


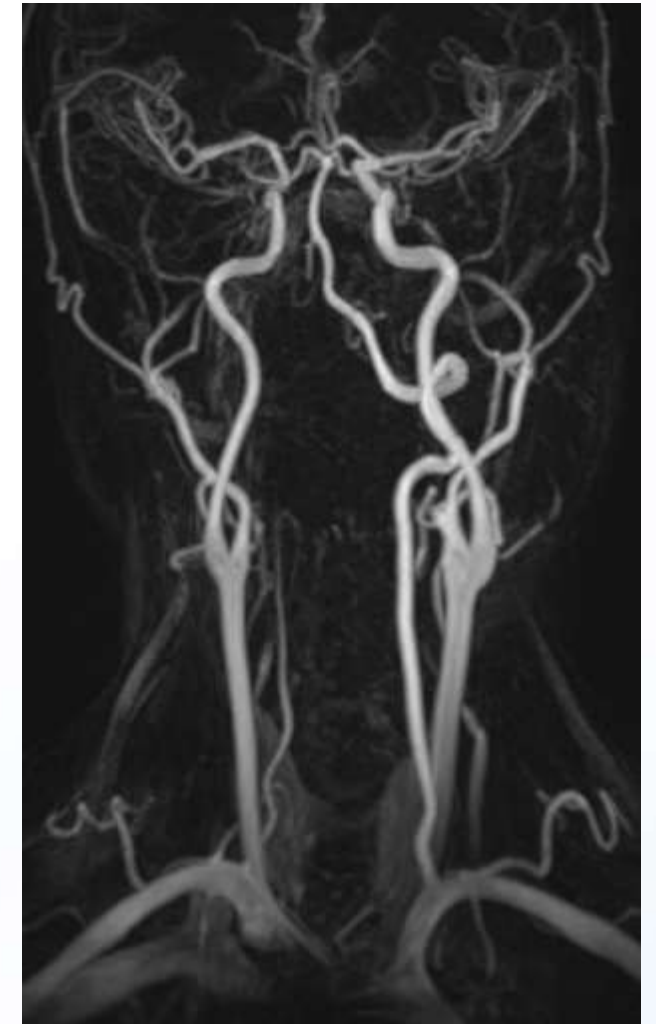
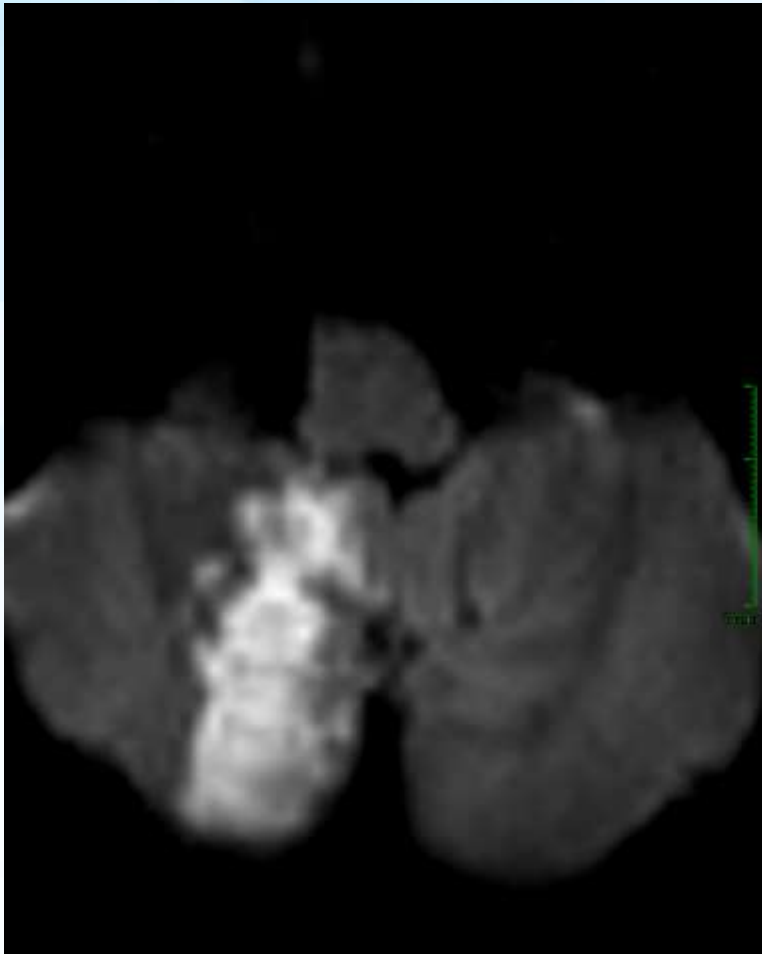
Case 7. Té sau chơi thể thao



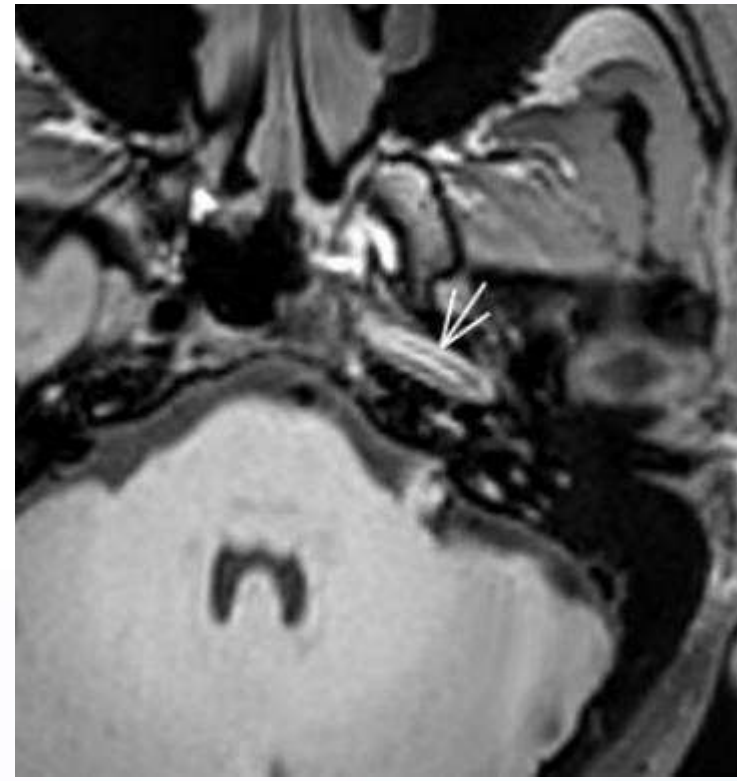
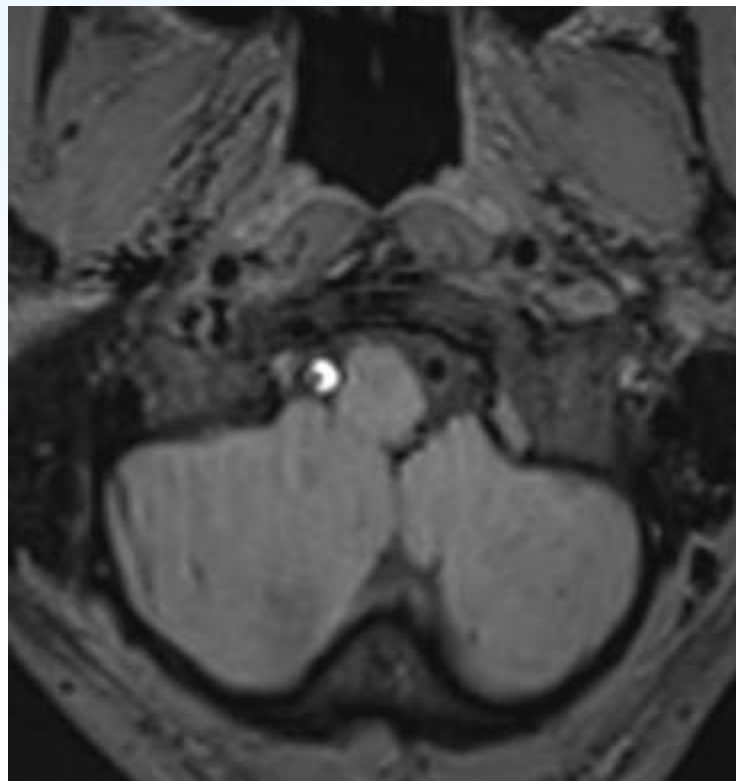


Case 8. đau
đầu sau chấn
thương



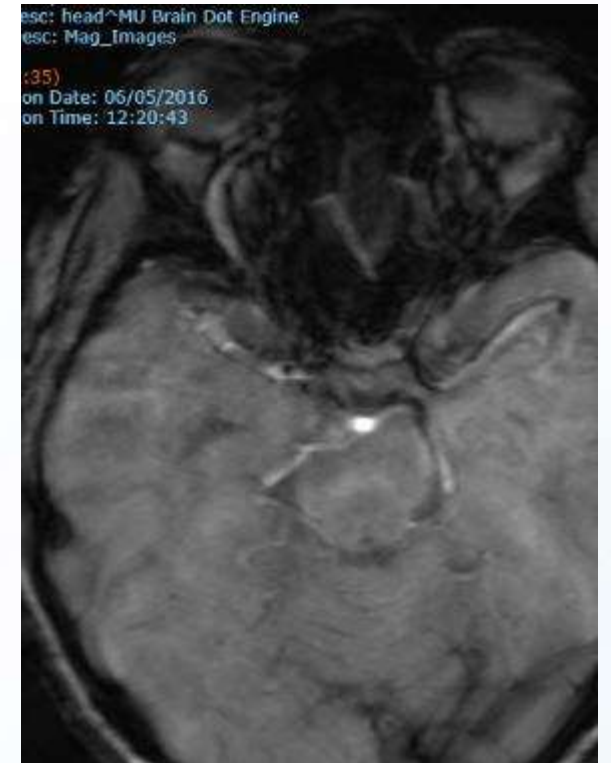
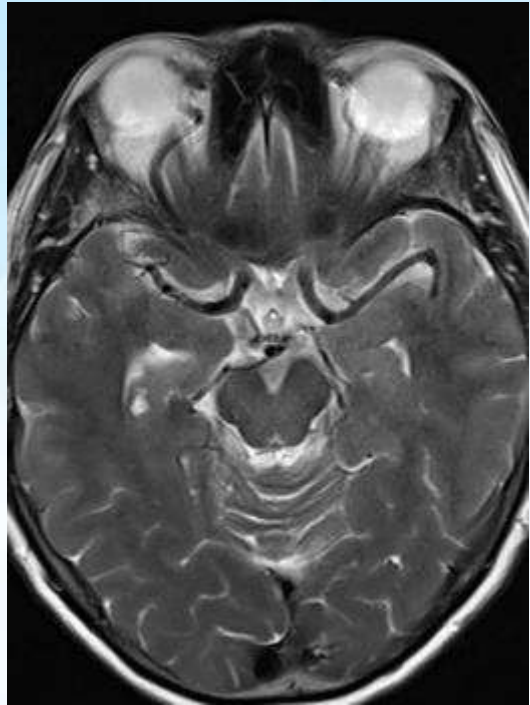


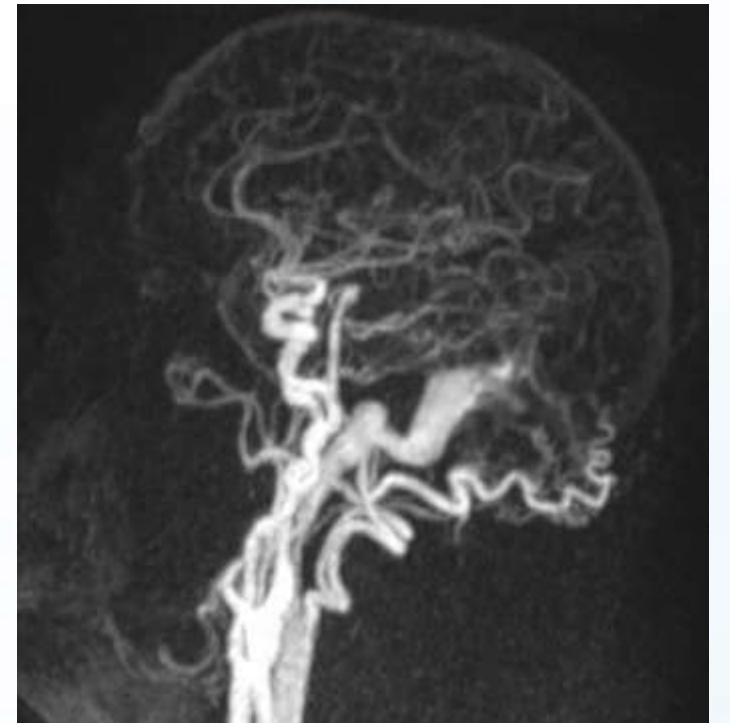
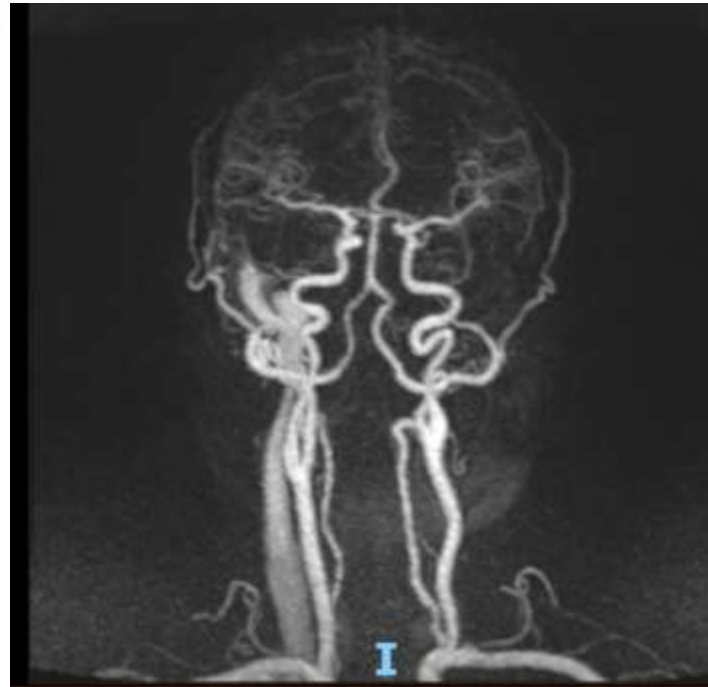
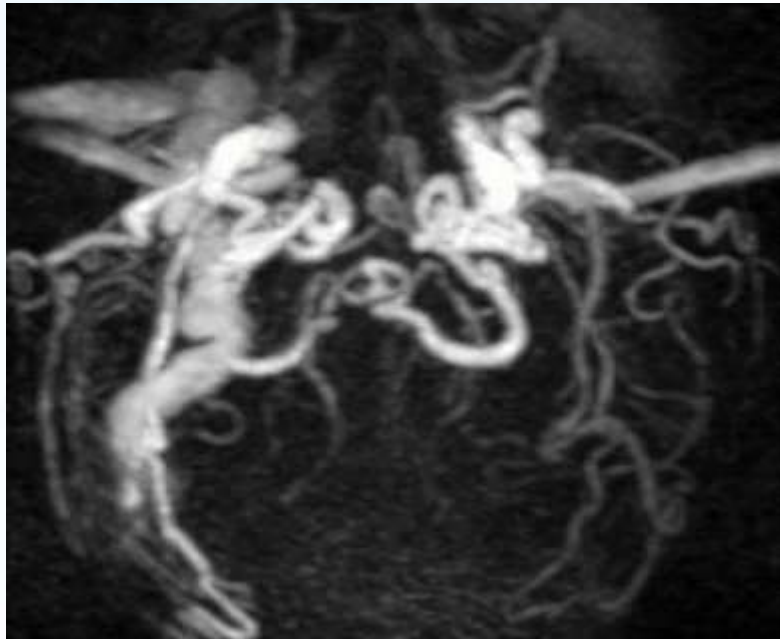
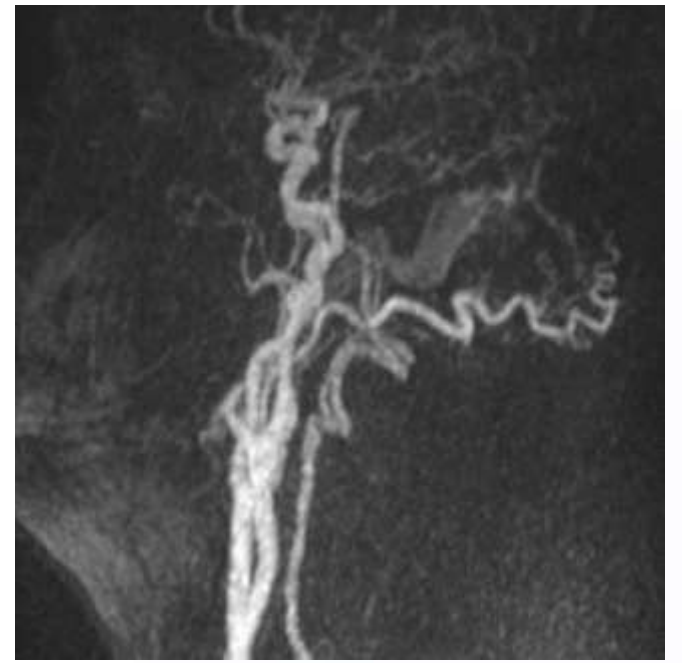
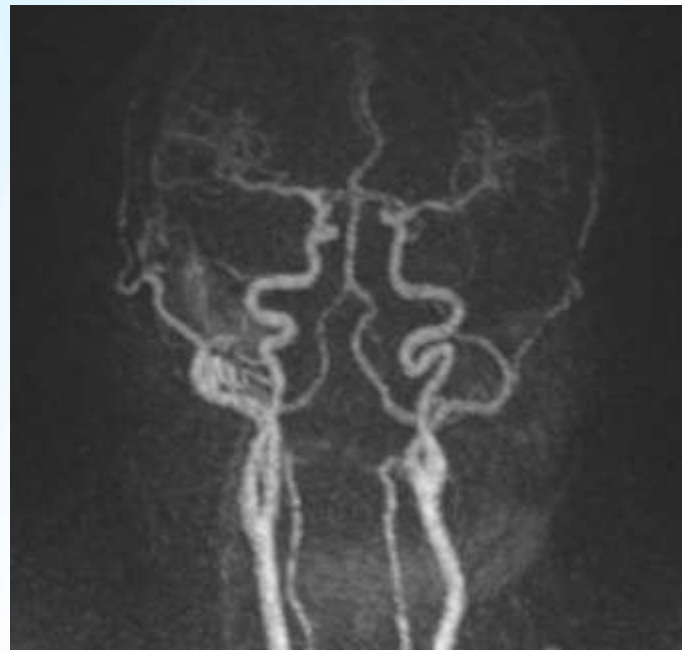
Case 9. Nam 50t, té, chóng mắt



Bóc tách: huyết khối lòng giả, dầu 2 lòng

Case 10. Đổ mắt sau chấn thương

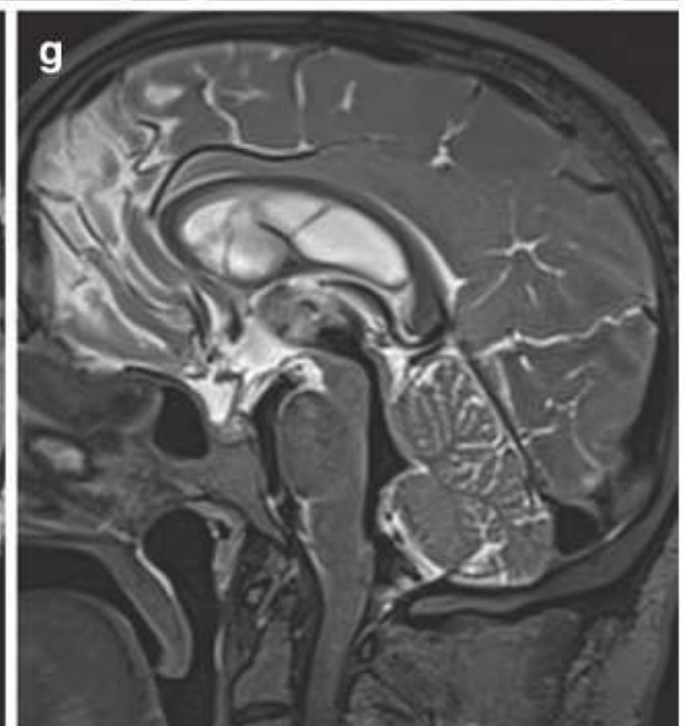
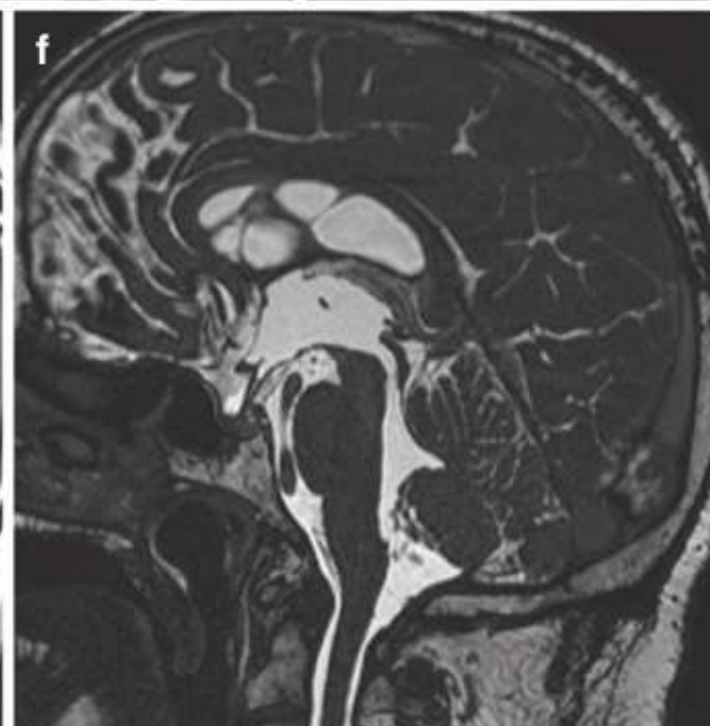
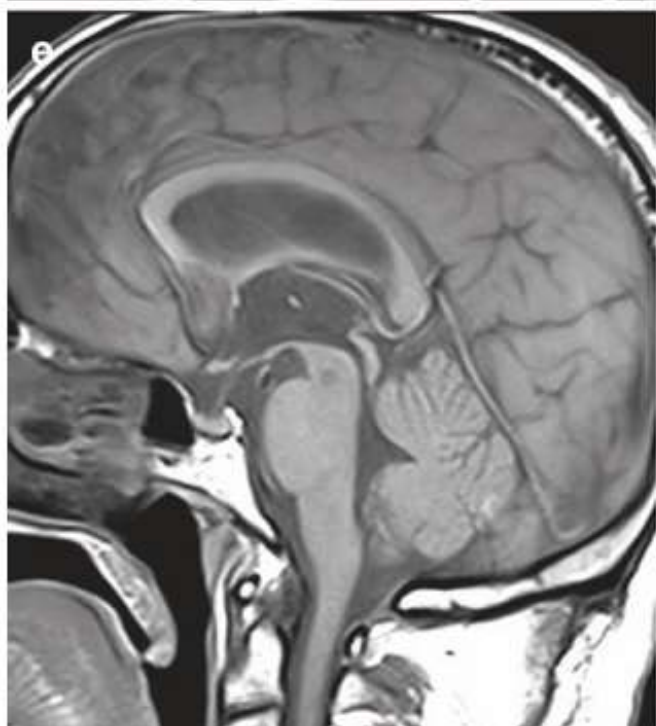
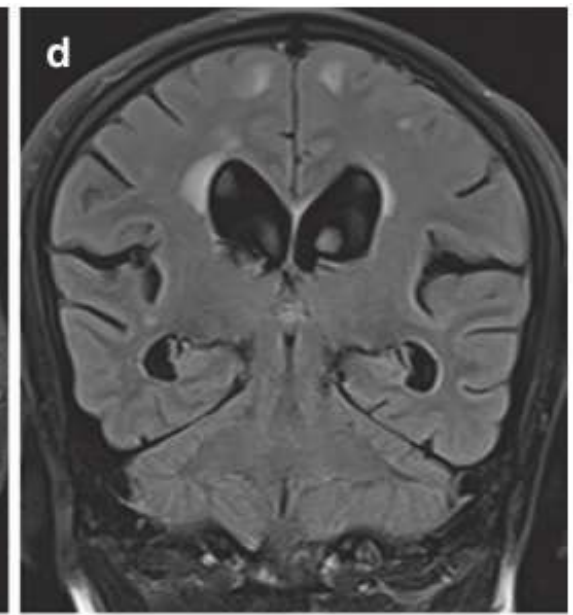
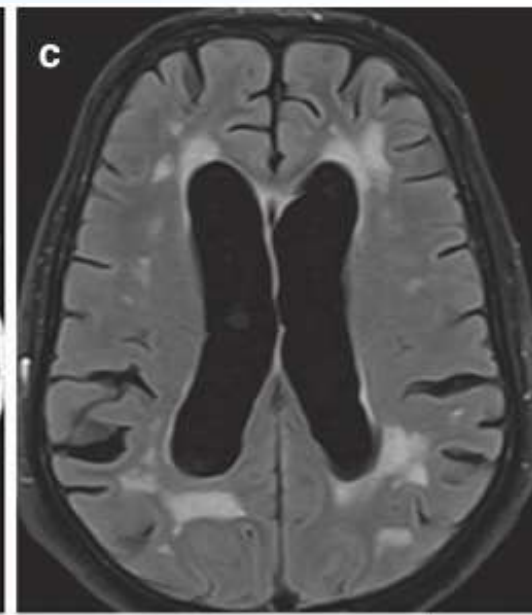
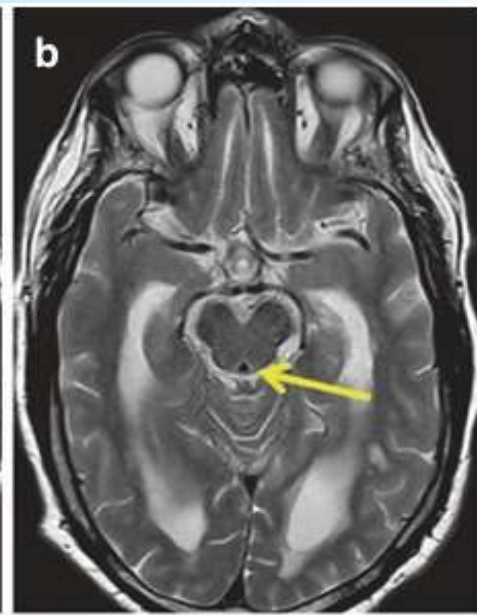
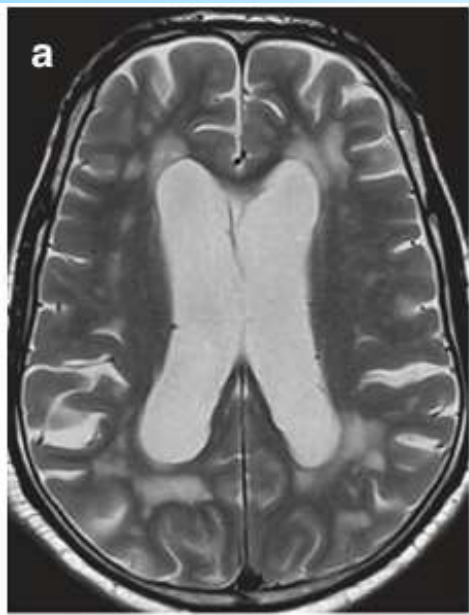


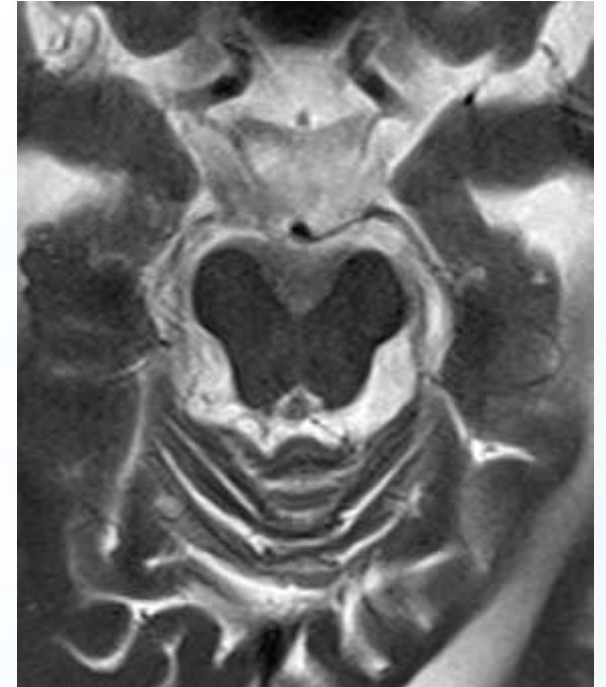
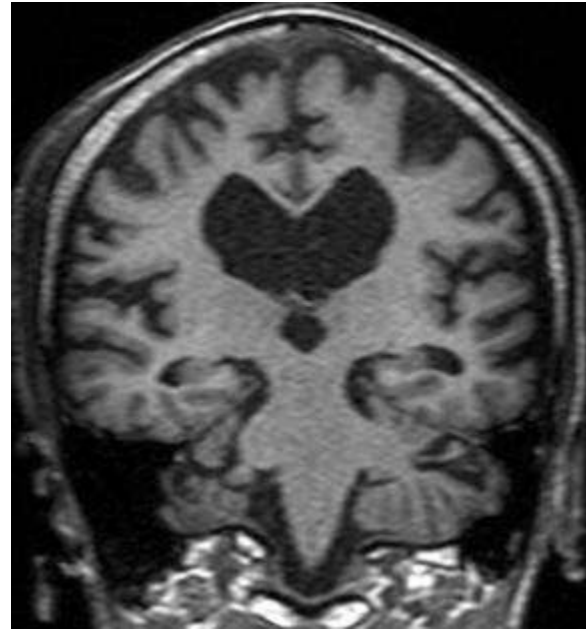
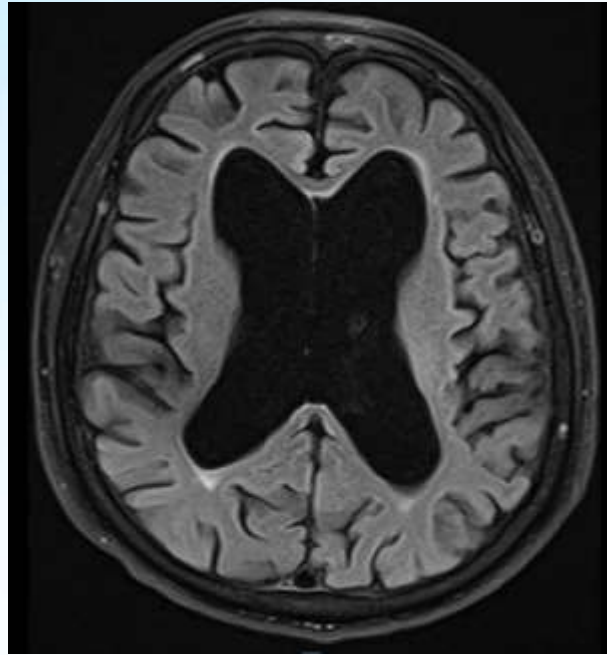


Giãn não thất

- Rối loạn hấp thu các hạt màng nhện
- Hình ảnh học: Evans, DESH, CSF flow

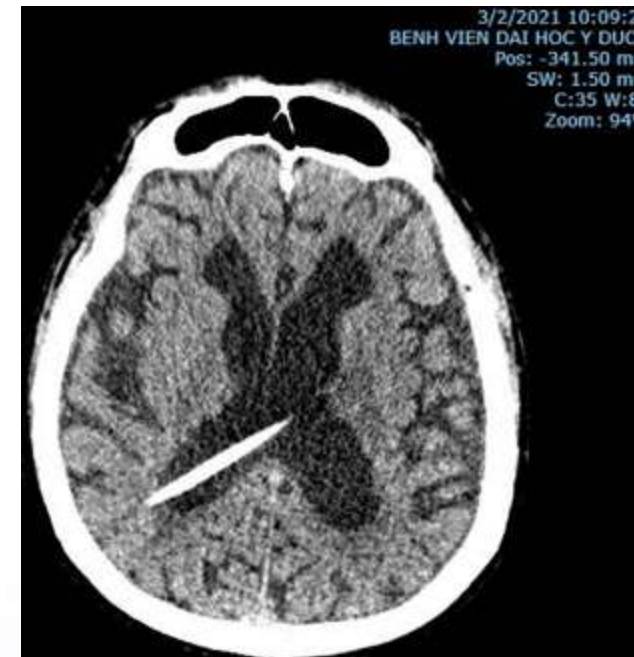
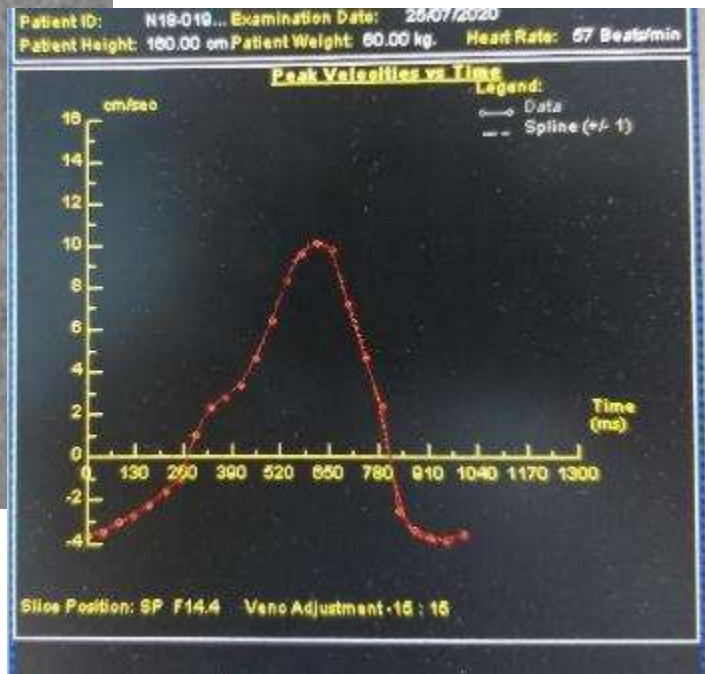
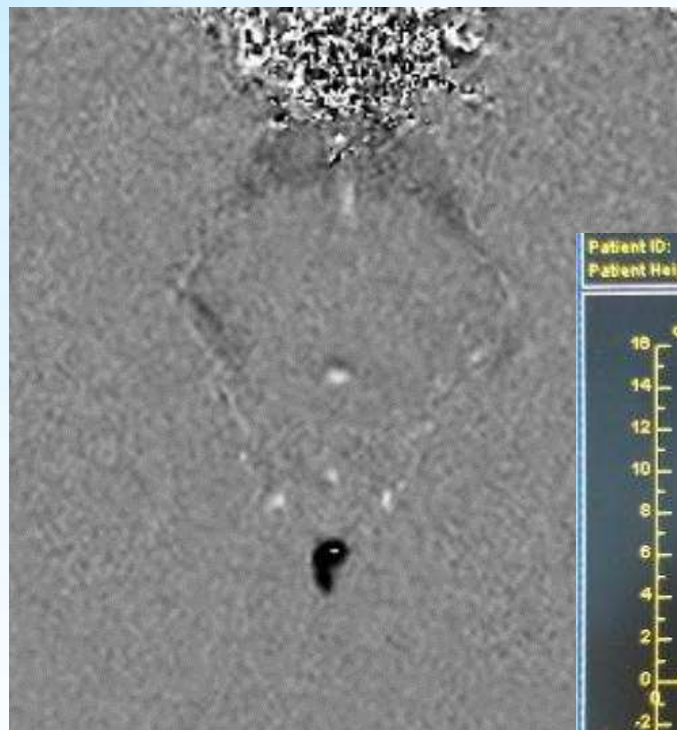
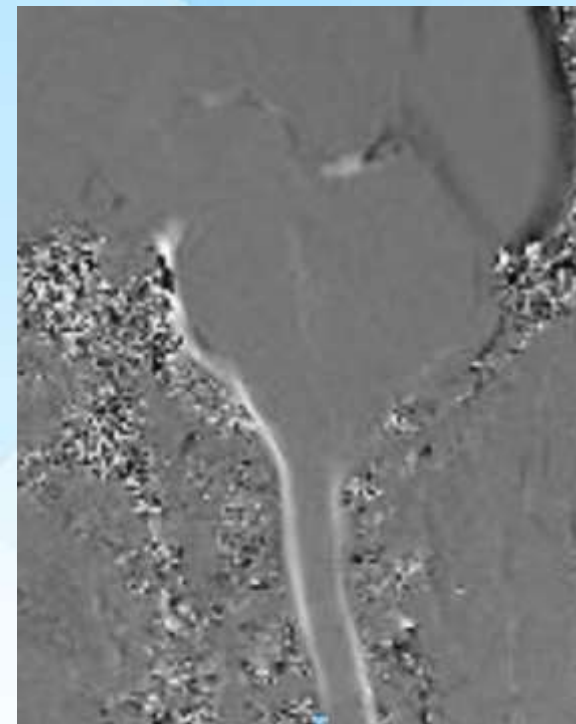






Case 11. Triad of
Hakim-Adams/Nam,
66t

MRI 2 năm sau CTSN

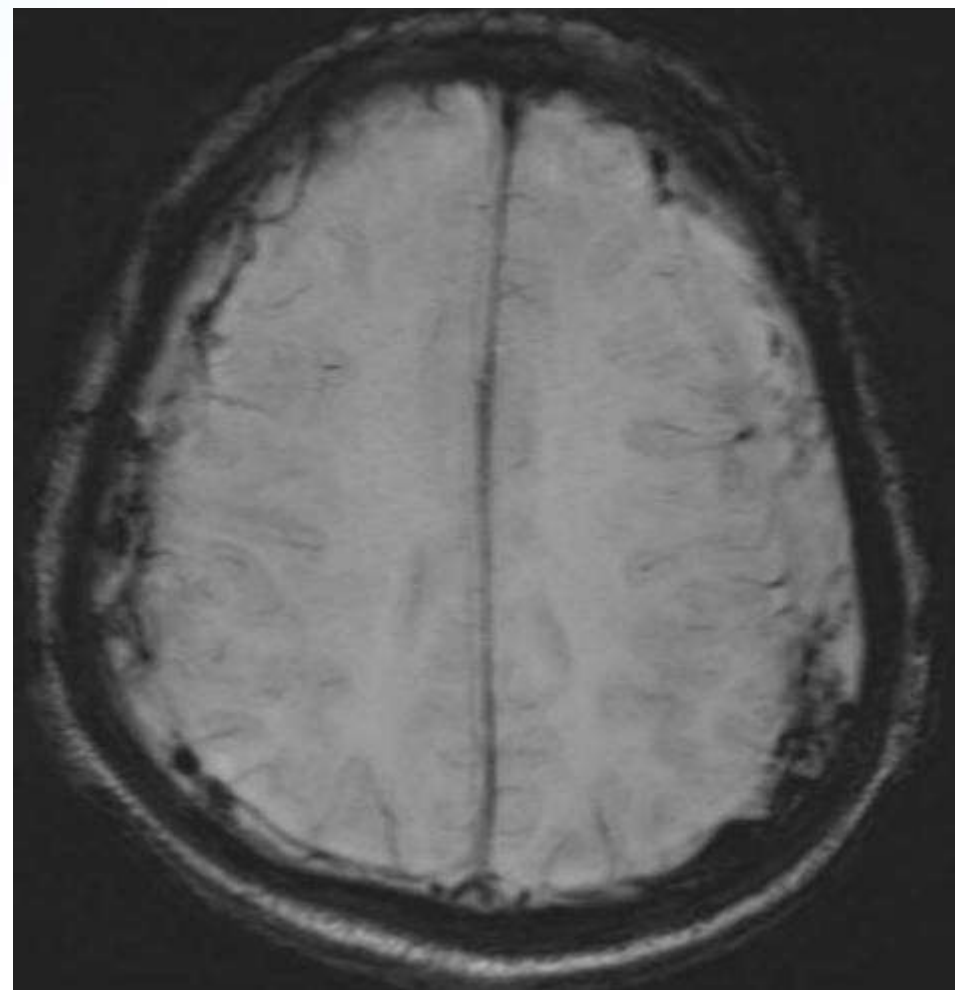
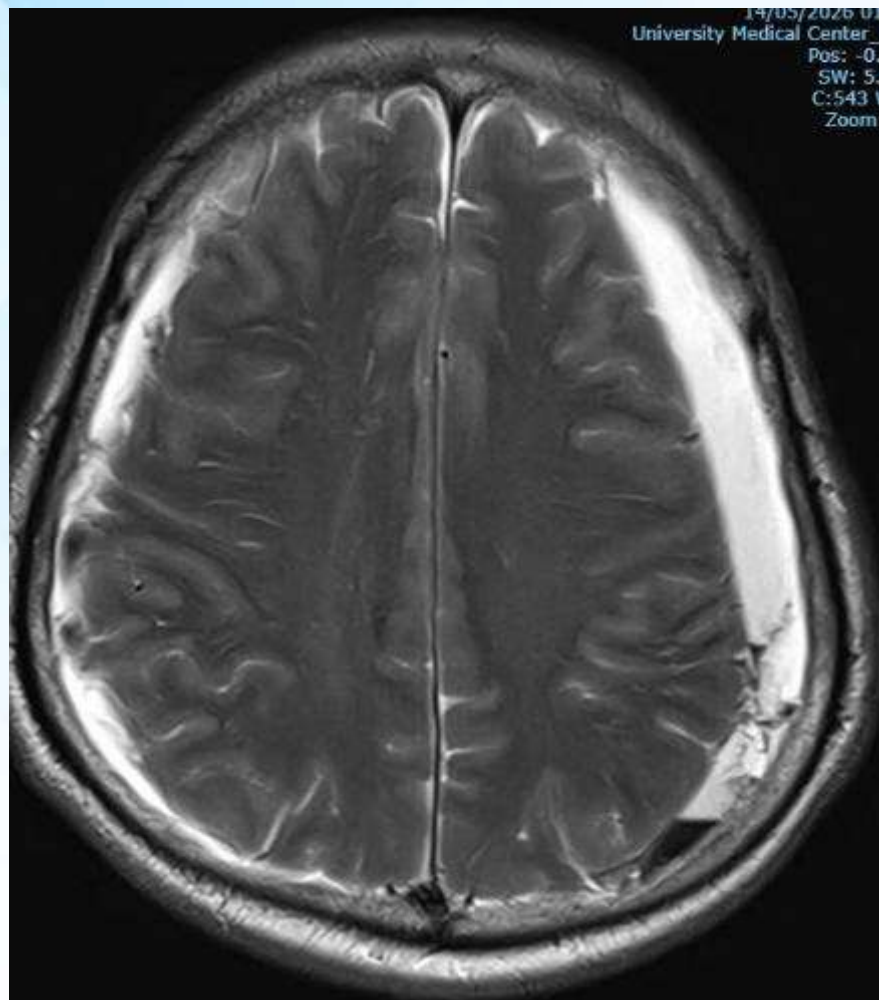


Patient Name:
 Patient ID: Examination Date: 25/07/2020
 Patient Height: 160.00 cm Patient Weight: 60.00 kg Heart Rate: 57 Beats/min

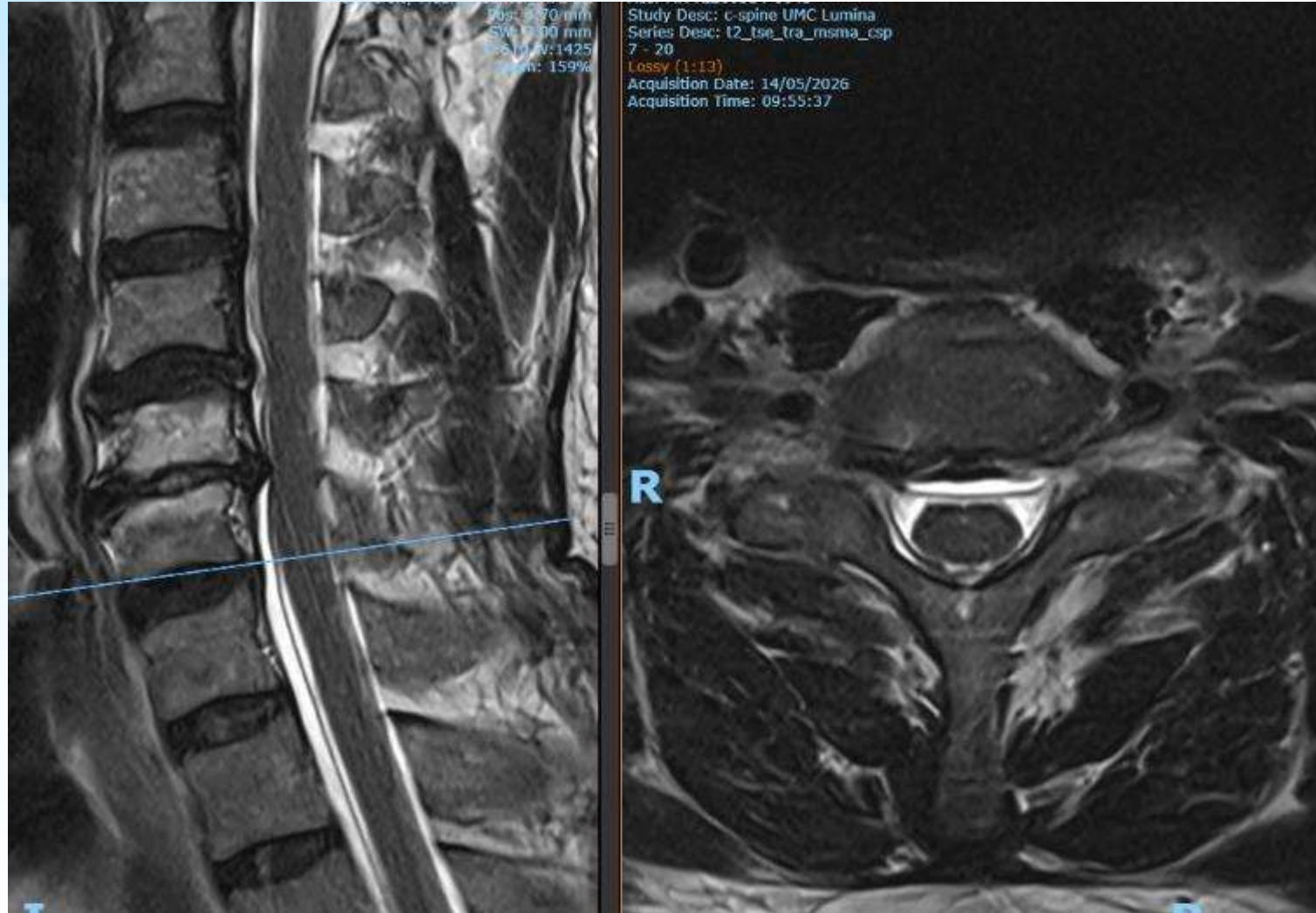
Slice Position: SP F14.4	Region: 1
Range,ms: 0 to 997	Venc Adjustment: -15 cm/sec 15 cm/sec
Body Surface Area (BSA):	1.62 m ²
Velocity	
Peak Velocity:	10.09 cm/sec
Average Velocity:	0.312 cm/sec
Flow	
Average Flow Over Range:	0.049 ml/sec
Average Flow Per Minute:	0.003 l/min
Forward Volume:	0.151 ml
Reverse Volume:	0.103 ml
Net Forward Volume:	0.049 ml
Net Forward Volume / BSA:	0.030 ml/m ²
Area	
Average Area:	0.156 cm ²
Minimum Area:	0.156 cm ²
Maximum Area:	0.156 cm ²

Nhiệm vụ 3

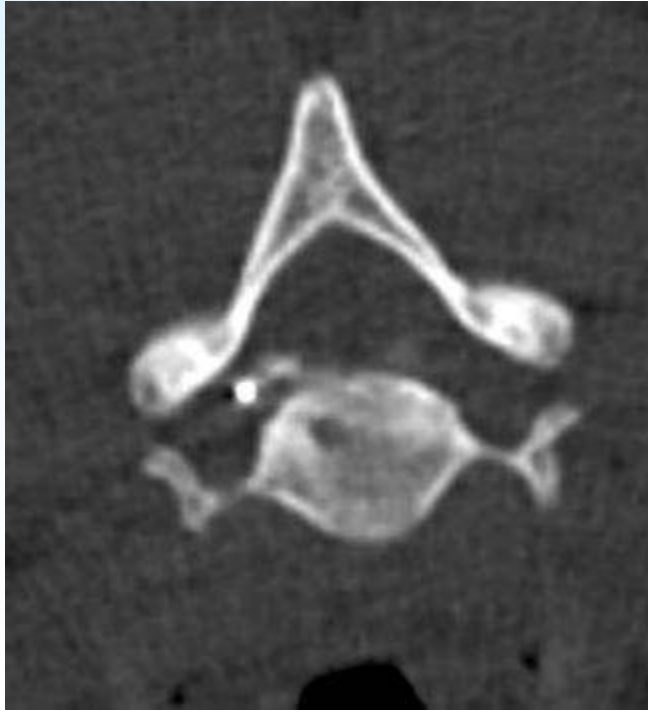
Chẩn đoán các biến chứng/
mạch máu đi kèm

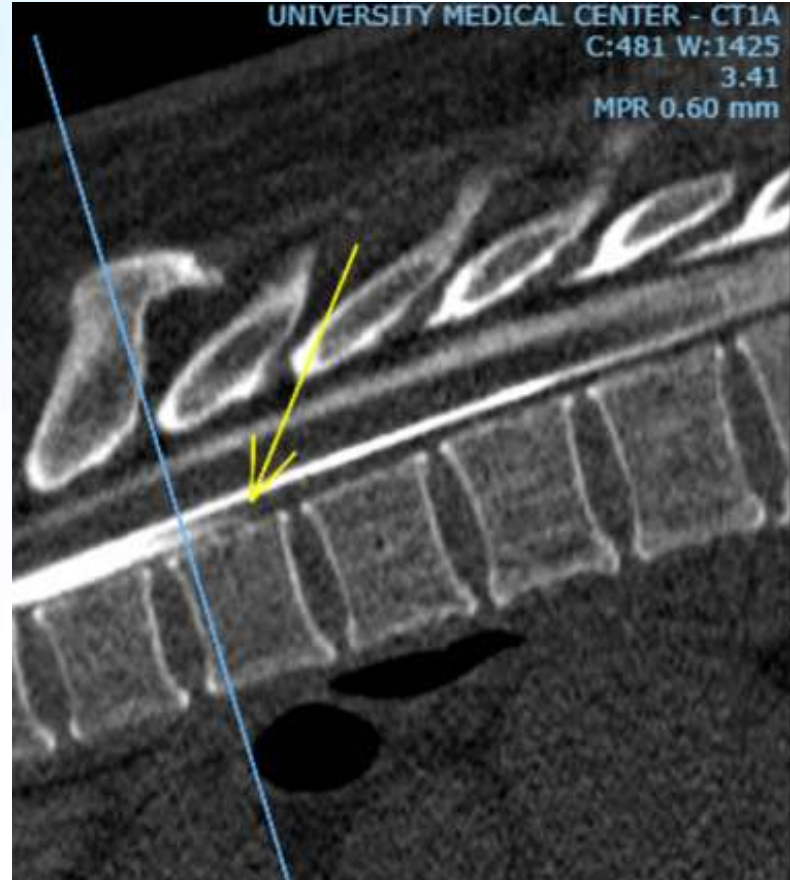


Case 12. Nam 63t chấn thương cách 1 tháng → hướng xử trí ?



Ls là cột lõi định hướng, sẽ chệch đường nếu đọc ảnh mù



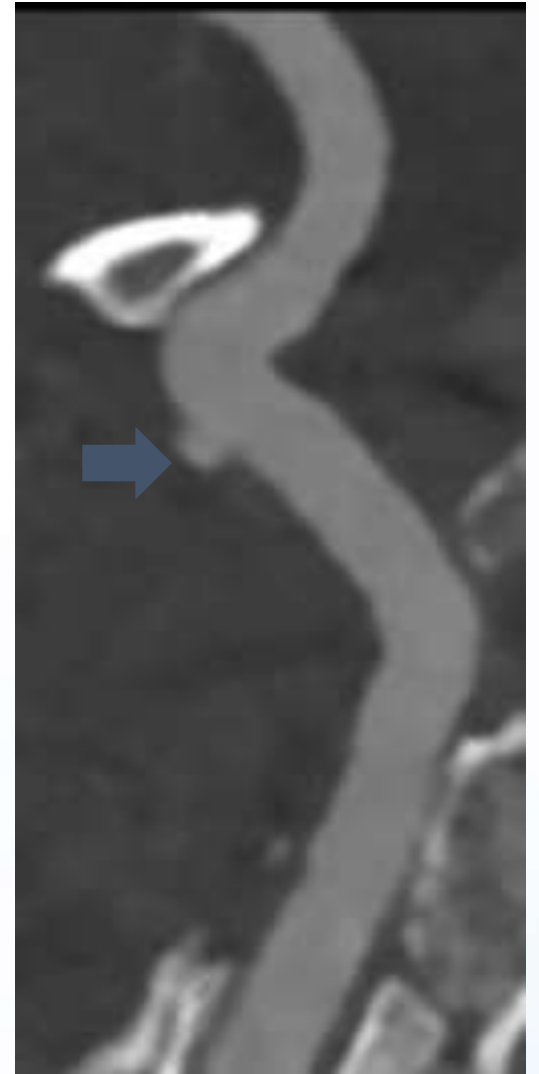


Dynamic giúp giảm liều, tăng khả năng phát hiện, kỹ thuật bơm, lượng thuốc iod, nồng độ...

Case 13. Xuất huyết dưới nhện do phình hay CTSN ?



Results: Conventional DSA detected aneurysms in 94 out of 115 patients; while of these, CTA detected 75 and missed 19. The CTA sensitivity, specificity and accuracy was 80%, 43% and 73%, respectively. The CTA sensitivity for aneurysms **< 3 mm and 3 mm – 5 mm in size was 30% and 81.5%**, respectively ($p = 0.024$). Sensitivity of CTA for posterior communicating artery (PComm) aneurysms was 56% and lower than other major anterior circulation locations (83% – 91%) ($p = 0.045$).



XHDN – co mạch – túi phình có thể nhỏ lại

UHR-PCCT
Túi phình nhỏ

Nhiệm vụ 5

Chẩn đoán phân biệt

Kết luận

- CTSN thường gặp, ảnh hưởng mọi lứa tuổi
- HAH quan trọng trong chẩn đoán và định hướng xử trí
- CLVT là phương tiện ưu tiên, CHT hữu ích trong một số bệnh cảnh