Sex: male
Date of Birth: 32/11/20
Age: 59 y/o

- **Initial symptom:** Persistent headache for about 10+ years, focus on left parietal area. He took medicine bought form drug store in the past.But the headache was getting worse in recent few months, so he come to our OPD
- **Personal and past history:**

  smoking(+), drinking(+)

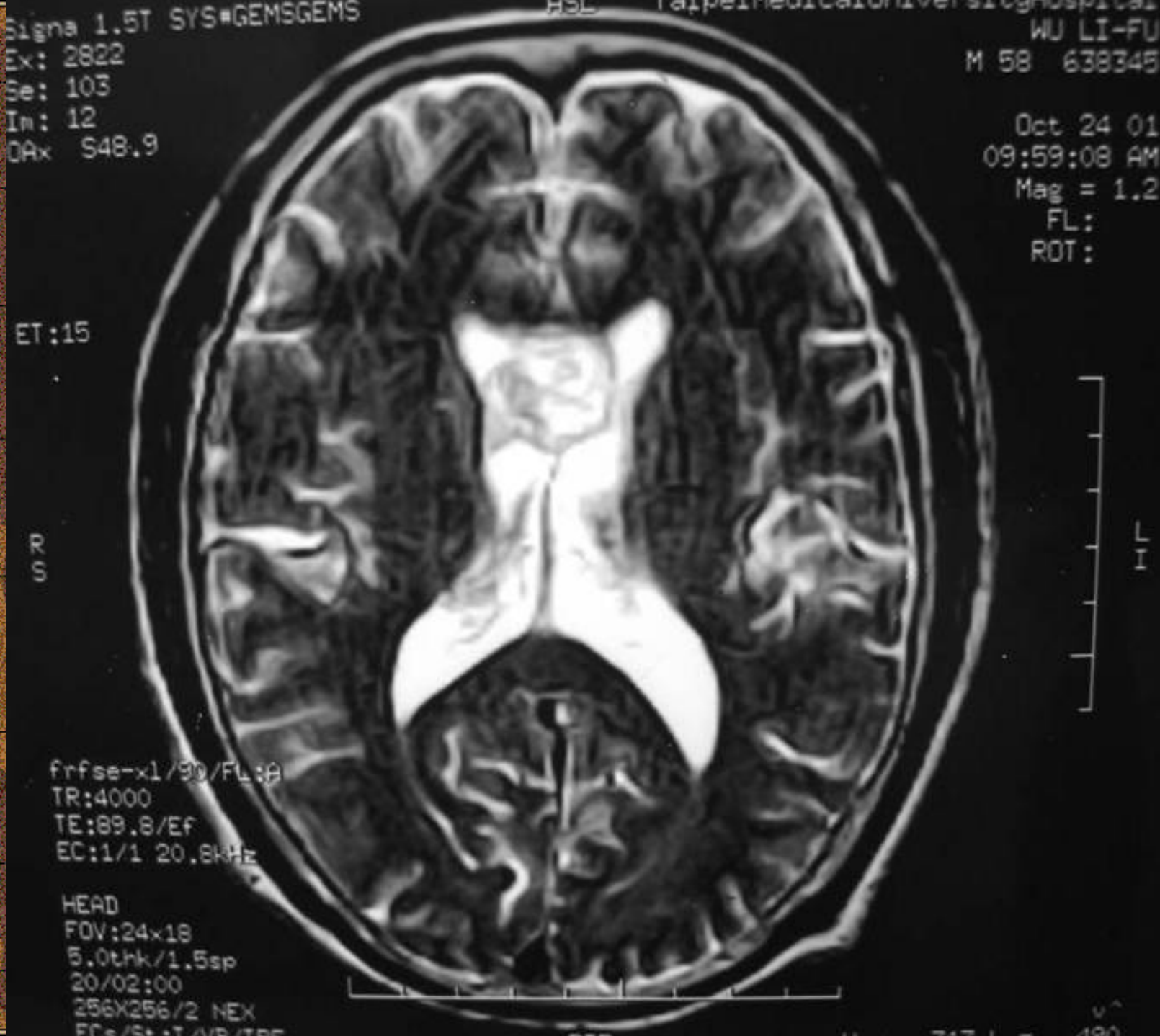
  Head injury S/P op 13 years ago, rectal benign tumor S/P op 4 years ago, Cataract S/P op 10 years ago

- Physical examination and neurological examination has no specific finding
- LAB: (90/10/27)CBC/DC, PT, APTT, Biochemistry all within normal range
- Image:


HiSpeed CT/i SYS=CT01
AS
TAIPEI MED. UNIVERSITY HOSP.
Ex: 18147
Se: 3
IM S51.5
Im: 10
WU LI-FU
58 M 638345
Oct 23 01
512
DFOV 22.2cm
STND/I
3
2
1
R
1
1
1
kV 120
mA 230
Head
10.0 mm
Tilt : 6.5
1: m 32.25,sd 4.07,a 11.81mm2
2: distance 20mm, angle 88
3: distance 21mm, angle 9


Ex: 2822
Se: 111
Im: 11
DA× S42.6+C
WU LI-FU
M 58
Oct 24 01
10:36:02 AM
Mag = 1.2
FL:
ROT:
R
S
L
I
SE/FL:A
TR:516
TE:9/Fr
EC:1/1 15.6kHz
HEAD
FOV:24×18
5.0thk/1.5sp
20/04:14
256X160/2 NEX
St:I/VB/MT
freq offset:1200
W = 434 L = 358


Signa 1.5T SYS#GEMSGEMS
Ex: 2822
Se: 111
Im: 12
OAx S48.9+C
WU LI-FU
M 58 638345
Oct 24 01
10:36:03 AM
Mag = 1.2
FL:
ROT:
R
S
SE/FL:A
TR:516
TE:9/Fr
EC:1/1 15.6kHz
HEAD
FOV:24x18
5.0thk/1.5sp
20/04:14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Im: 12
DAx S48.9
ASL
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Mag = 1.2
FL:
ROT:
ET:15
R
S
L
I
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TR:4000
TE:89.8/Ef
EC:1/1 20.8kHz
HEAD
FOV:24x18
5.0thk/1.5sp
20/02:00
256X256/2 NEX


Se: 103
Im: 11
Oct 24 01
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Mag = 1.2
FL:
ROT:
ET:15
R
S
frfse-xl/90/FL:A
TR:4000
TE:89.8/Ef
EC:1/1 20.8kHz
HEAD
FOV:24x18
5.0thk/1.5sp
20/02:00


Signa 1.5T SYS*GEMSGEMS
Ex: 2822
Se: 104
Im: 10
DAx 536.3
TaipeiMedicalUniversityHospital
WU LI-FU
M 58 638345
Oct 24 01
10:01:37 AM
Mag = 1.2
FL:
ROT:
R
S
L
I
FSEIR/FL:A
TR:9002
TE:142/Ef
EC:1/1 15.6kHz
TI:2200
HEAD
FOV:24x24
5.0thk/1.5sp
20/04:12
256X192/1.00 NEX
FCs/St:I/VB
PIR
W = 370 L = 207


Signa 1.5T SYS#GEMSGEMS
Ex: 2822
Se: 104
Im: 11
OAx S42.6
ASL TaipeiMedicalUniversityHospital
WU LI-FU
M 58 638345
Oct 24 01
10:01:37 AM
Mag = 1.2
FL:
ROT:
109/3
109/4
109/5
109/6
109/7
109/8
109/9
S
I
FSEIR/FL:A
TR:9002
TE:142/Ef
EC:1/1 15.6kHz
TI:2200
HEAD
FOV:24x24
5.0thk/1.5sp
20/04:12
256X192/1.00 NEX


Signa 1.5T SYS*GEMSGEMS
Ex: 2822
Se: 104
Im: 12
OAx S48.9
ASL TaipeiMedicalUniversityHospital
WU LI-FU
M 58 638345
Oct 24 01
10:01:37 AM
Mag = 1.2
FL:
ROT:
R
S
L
I
FSEIR/FL:A
TR:9002
TE:142/Ef
EC:1/1 15.6kHz
TI:2200
HEAD
FOV:24x24
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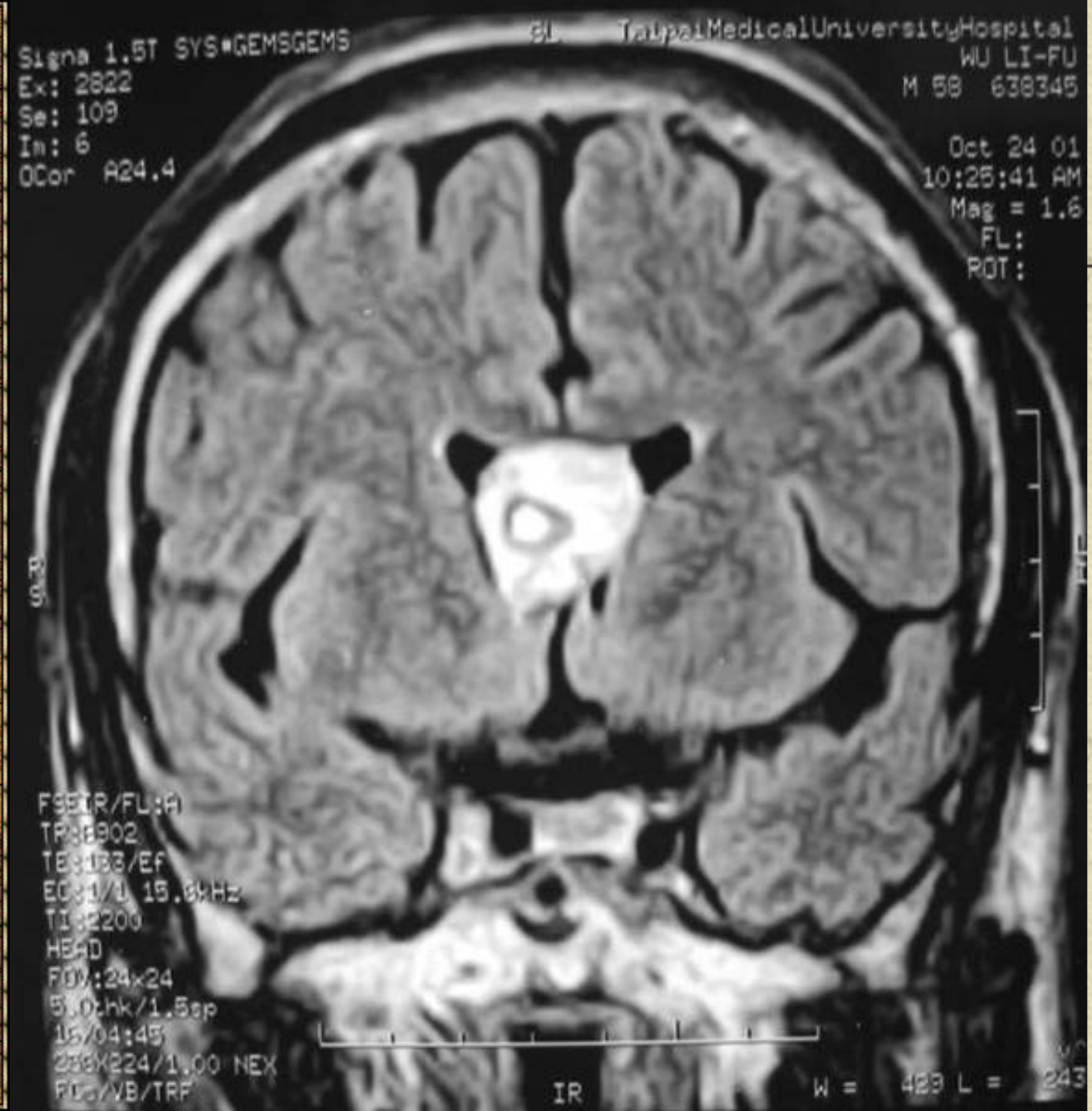
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TaipeiMedicalUniversityHospital
WU LI-FU
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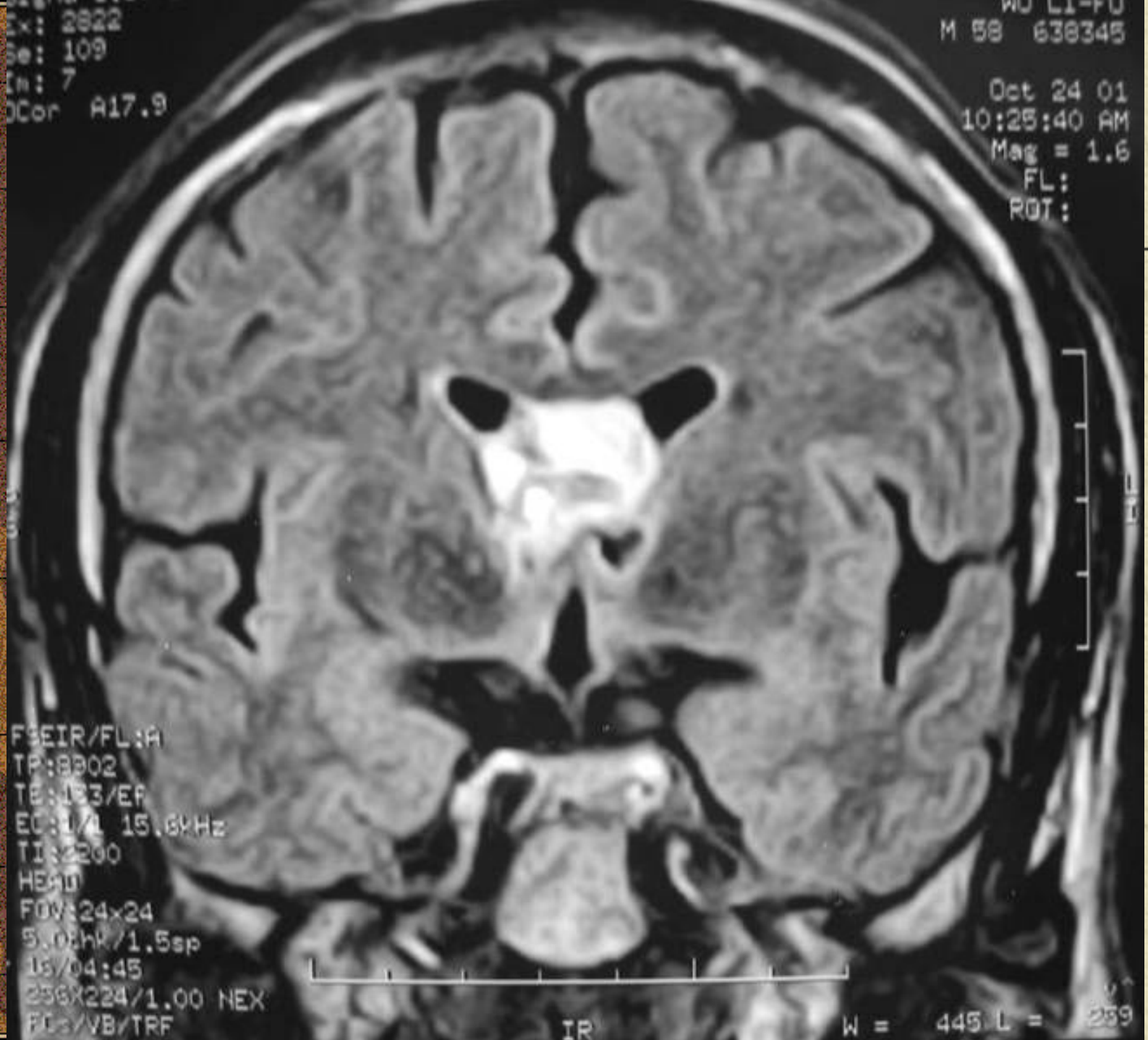
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Se: 109
In: 7
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FL:
ROI:
FSEIR/FL:A
TR:8802
TE:133/EF
EC:1/1 15.6KHz
TI:2200
HBW
FOV:24x24
5.0mm/1.5sp
15/04:45
256X224/1.00 NEX
FC:/VB/TRF
IR
W = 445 L =
259


Ext 2822
Set 986
Int 4
WU LI-FU
M 56 638345
R
L

MRI Report

- Precontrast (T1WI, T2WI, FLAIR) and post-contrast (T1WI) brain MR are performed.
- IMP: An intra-ventricular ependymoma or papilloma occupying the frontal horns of bil. lat. ventricles is more favored.
- But other possibility (such as: low-grade astrocytoma or central neurocytoma or oligodendroglioma or choroid plexus carcinoma) can not be R/O.
- The mass is near the rt foramen of Monro, but no direct compreesion to foramen of Monro. Thus, no evidence of hydrocephalus.

Lateral Ventricle

- **F. Monro**

  Subependymal Giant Cell Astrocytoma

  Subependymoma

- **Body**

  Subependymoma, etc.

- **Trigone**

  Child - CPP (Choroid Plexus Papilloma)

  Adult - Meningioma

- **INTRAVENTRICULAR NEOPLASMS:**
- Ependymoma (and subependymoma)
- Choroid plexus papilloma
- Subependymal giant cell astrocytoma
- Meningioma
- Colloid cyst (3rd)
- Central neurocytoma
- Medulloblastoma (4th)
- Mets, lymphoma, Germ Cell

Ependymoma

- In adult: arise in the trigone of the lateral ventricle or near the foramen of Monro. Can be periventricular or intraventricular
- In children (1st to 2nd decade): common in post. fossa, arising in the 4th ventricle. Extended to the foramen of Luschka into the CP angele
- Common seeding via CSF and hydrocephalus is very common particular if it is in the post. fossa
- Whether supra- or infratentorial—usually calcified and half have cyst change
- MRI-usually bulky, soft tissue masses, low signal (cyst or dense calcification) on T1, high signal on T2 (both cyst and noncyst), and show contrast enhancement

Subependymoma

- solid, sometimes calcified, slow-growing nodules attached to the ventricular lining and protruding into the ventricle. Contain both ependymal and astrocyte cells, occur mainly in elderly males
- Usually asymptomatic and incidental findings at autopsy. most often found in the lateral and 4^{th} ventricles. It is relatively beign and doesn't disseminate
- MRI—similar with ependymoma

Choroid Plexus Papilloma

- Rare, benign , usually occurs in children, originate anywhere that choroid plexus, most often found within either the 4^{th} ventricle or one of the lateral ventricles.
- Often pedunculated, calcification and cystic changes, associated with hydrocephalus—obstruction or overproduction of CSF.
- MRI—high signal in T2 and brain edema is common, and inhomoheneous on T1
- CT—hyperdense mass

Meningioma

Parasagittal	26
Convexity	32
Supersellar	13
Sphenoid ridge	12
CP angle	8
Cerebellar convexity	3
Subfronal	3
Tentorium	2
Intraventricular	1

- Rarely in the lateral ventricules, in 3rd or 4th ventricle is less, usually large and lobulated
- Often symptoms are mild and long standing
- CT—usually homogeneous high density with round well-defined margins, and enhance after contrast, edema tends to be minimal and circumscribed
- MRI—**isointense with adjacent brain on both T1 and T2, contrast enhancement is intense**

- ***Colloid cyst of the third ventricle***—young adults. on the roof of the 3rd ventricle, may obstructing one or both of the foramina of Monro cause hydrocephalus, which may be rapidly fatal.
- Headache, sometimes positional, is an important clinical symptom.
- CT—high density spherical cyst and normally unchanged after contrast
- MRI—high signal on T1, and slight lower than CSF on T2

Primary lymphoma

- Secondary lympoma of brain is vary rare, more usually—lymphoma of the brain without systemic invoment, tend to lie deeply in basal ganglia or paraaventricular regions. The prognosis is poor
- CT—like metastases, hyperdense, enhance homogeneously with contrast, unifocal or multifocal, less or no edema, no central necrosis
- MRI—like gray matter on T1 and high signal on T2, enhance well

Treatment

- Right frontal craniotomy and removal of the tumor was performed on 90/10/29, a soft , non-capsule , cyst fungative type and broad-base connected with anterior, lateral aspect of right lateral ventricle about 2 cm
- Intraoperative frozen section showed low grade glioma
- **Final pathologic report: subependymoma (WHO grade I)**