

***WORLD LIVE NEUROVASCULAR CONFERENCE
Los Angeles, 15-17 MAY 2017***

LIVE CASEs ANGIOGRAPHIC FOLLOW-UPs

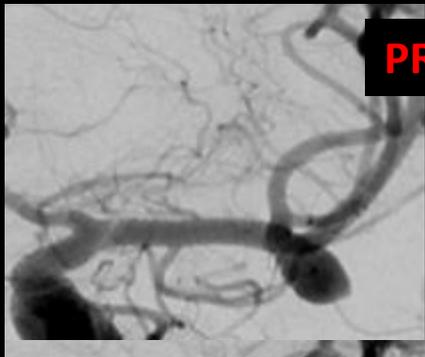
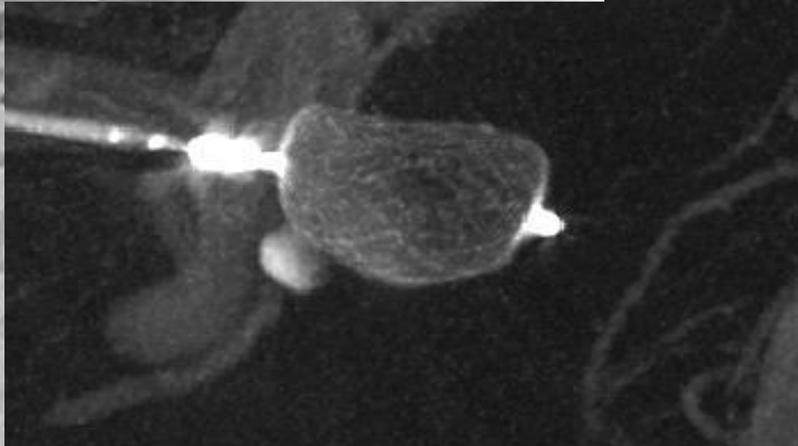
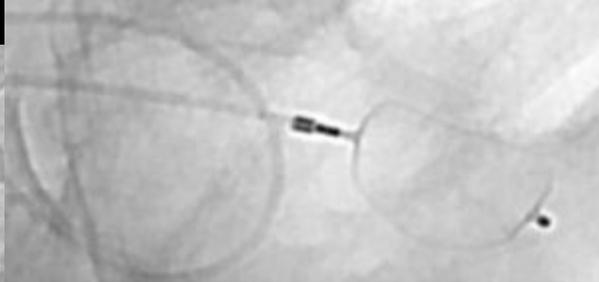
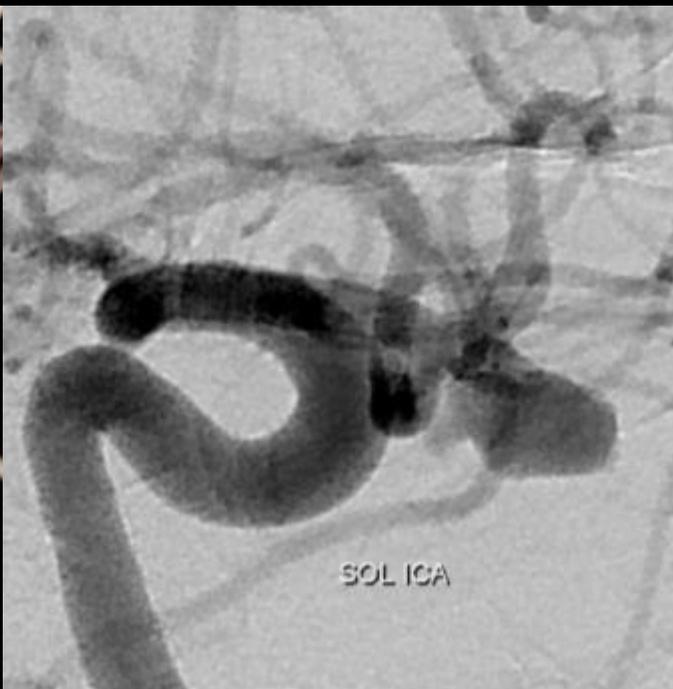


WLNC 2017
ANKARA CASES F-U/BY PROF SAATCI

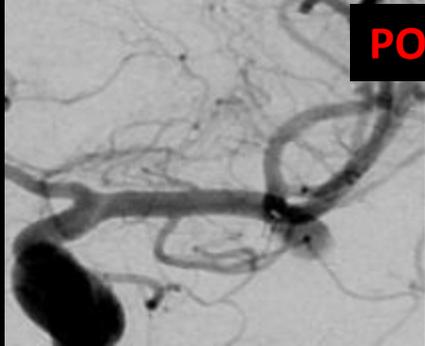


35y, M

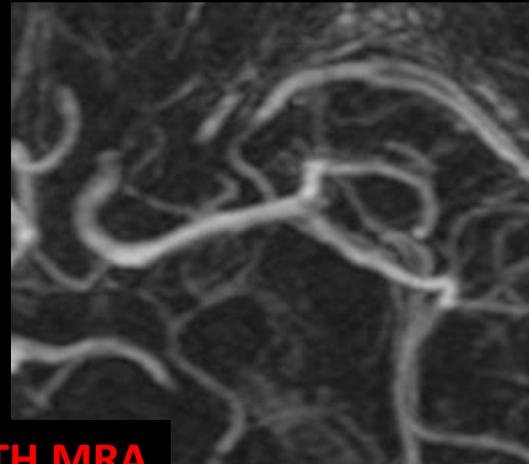
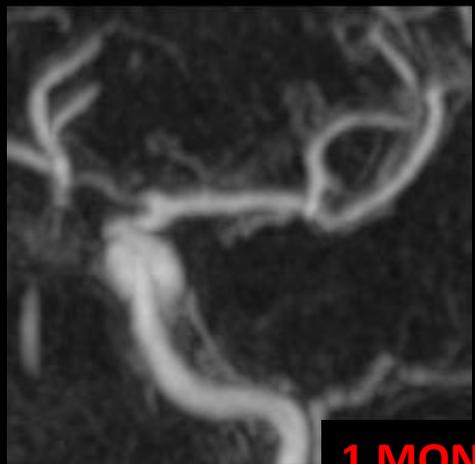
- Very intense headache (SAH ?) 2 weeks ago.
- Multiple aneurysms (R MCA, rM1, ICA term)
- Has ankylosing spondylitis as his two siblings and his father : not on medication at the moment
- Had previous surgery for umbilical hernia and nephrolithiasis



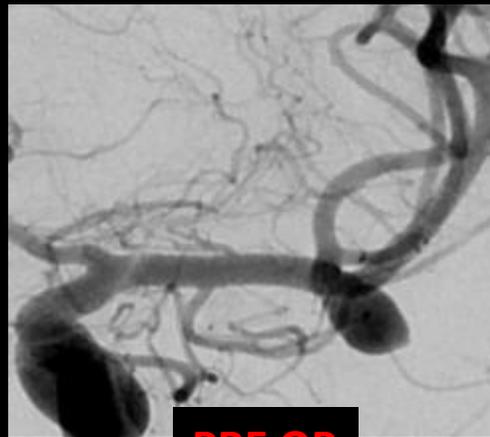
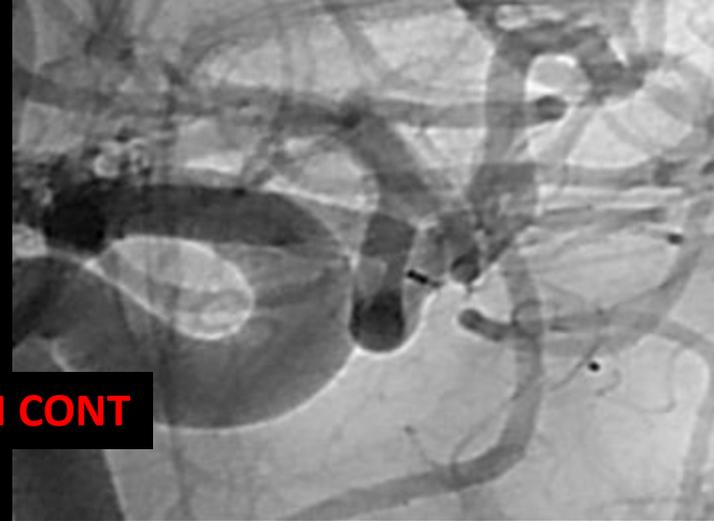
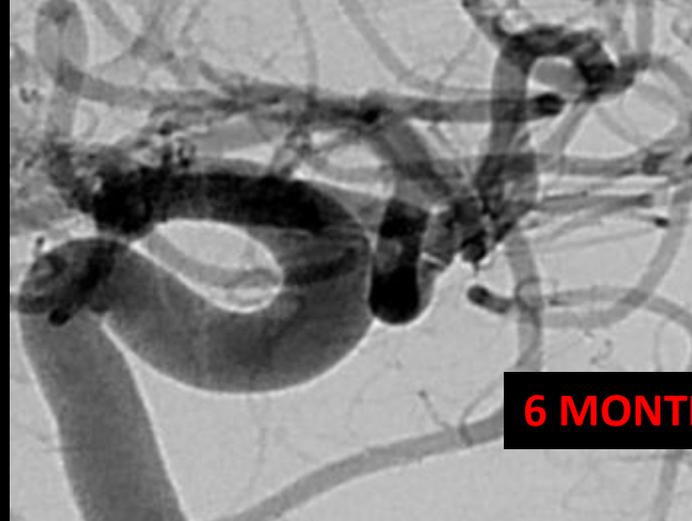
PRE OP



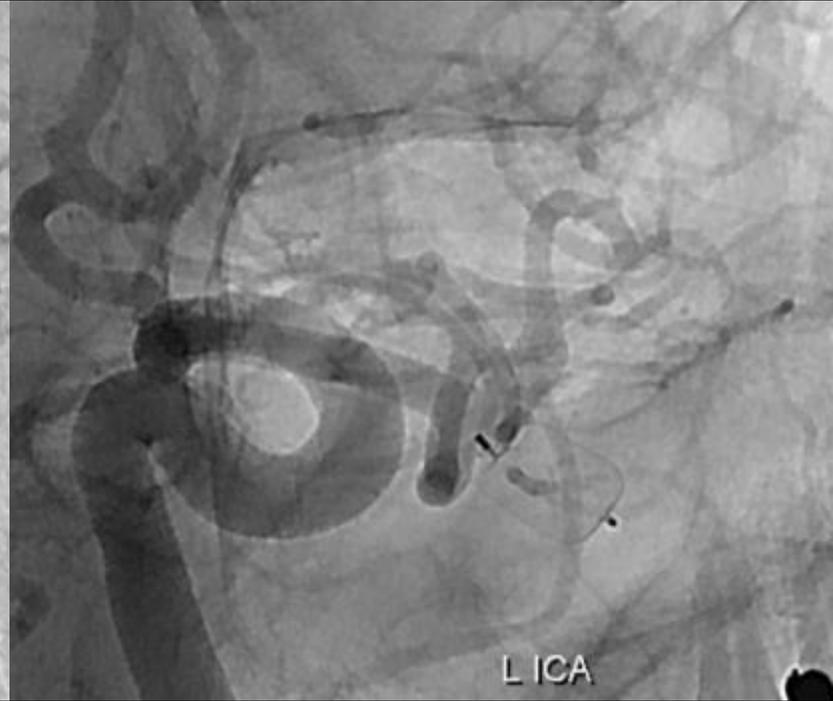
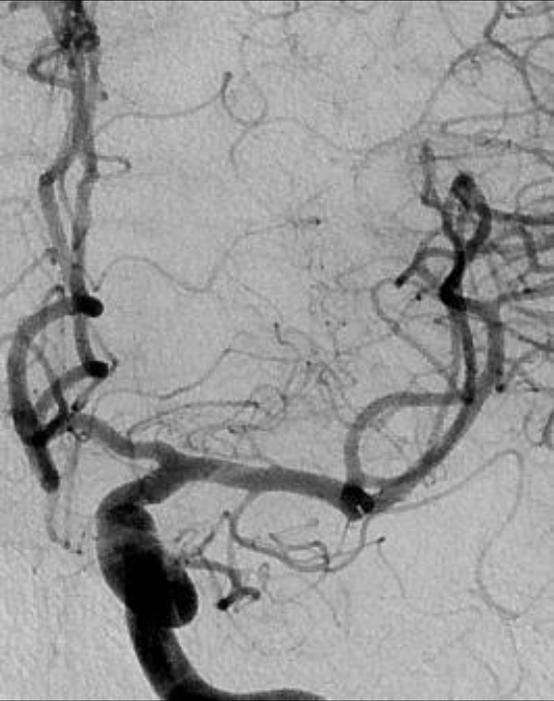
POST OP



1 MONTH MRA



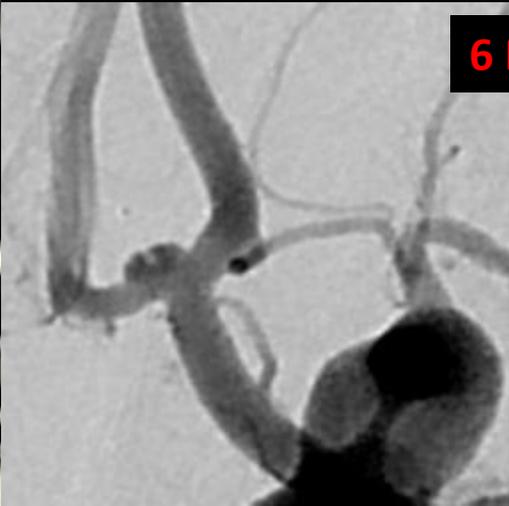
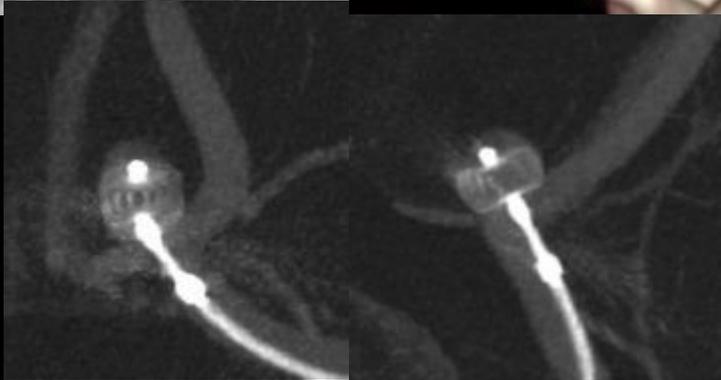
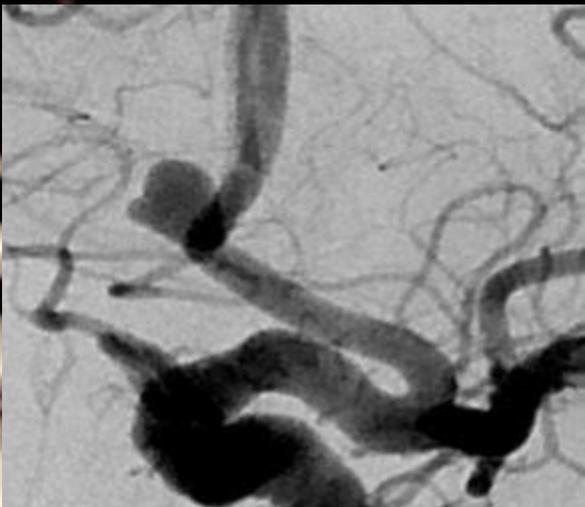
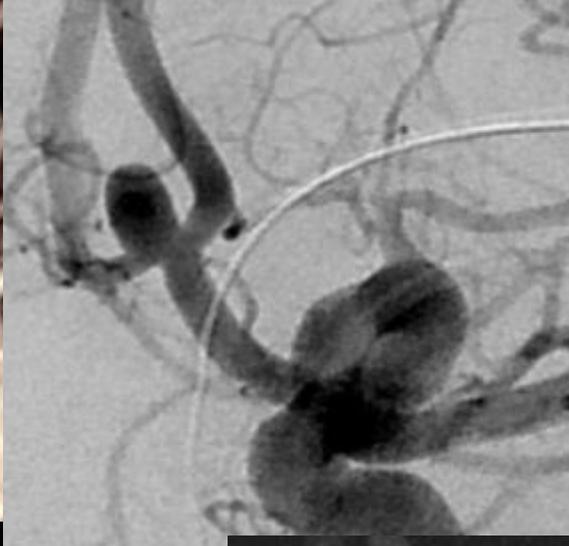
1 YEAR CONT



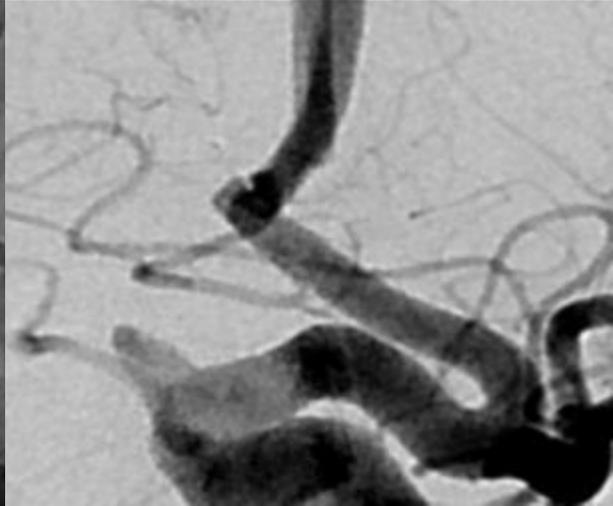
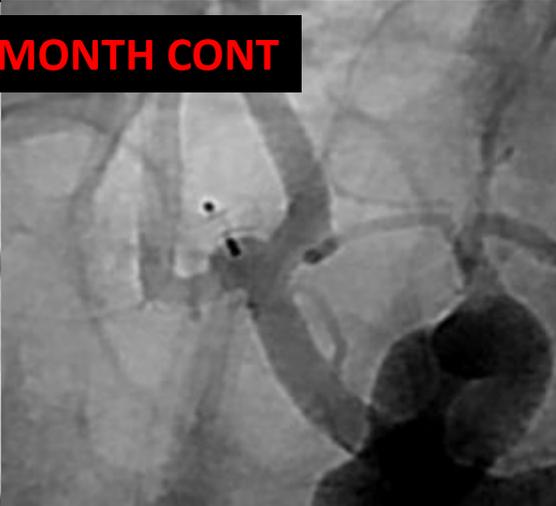
68 y, M

RICA stenosis- UR wide neck small Acom aneurysm

- Headache
- Coronary artery disease: 3 times MI, coronary stenting/AP for several times
- Heavy smoker
- RICA moderate stenosis w a dissected plaque: treated this week
- Had a chronic subdural hematoma (L>Rt ~1,5cm); resolved itself.
- Coversyl 1x1, beloc 50 1x1; Ecoprin 1x100
- Thrombocyte aggregation testing: 63%

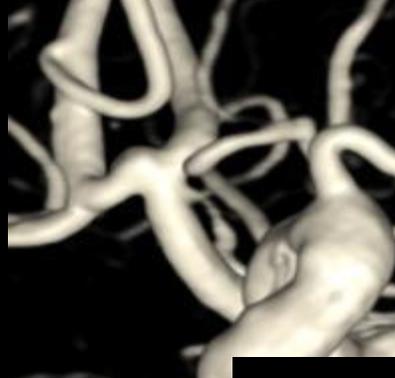


6 MONTH CONT

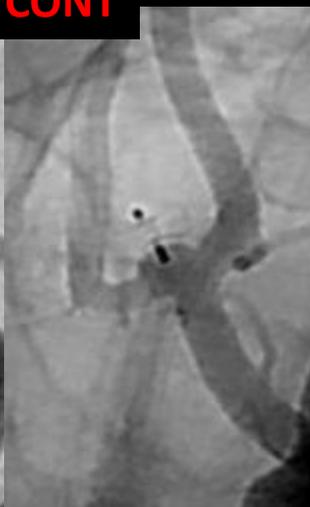
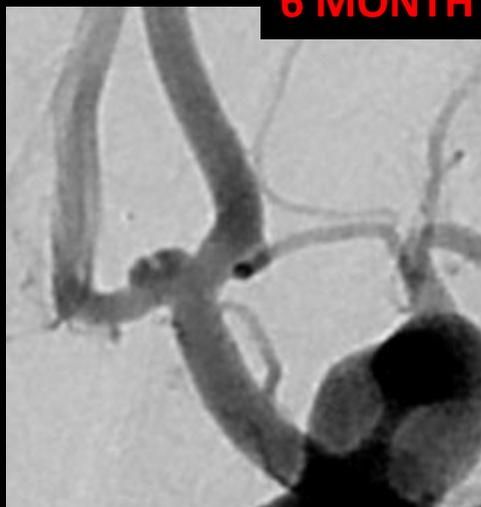




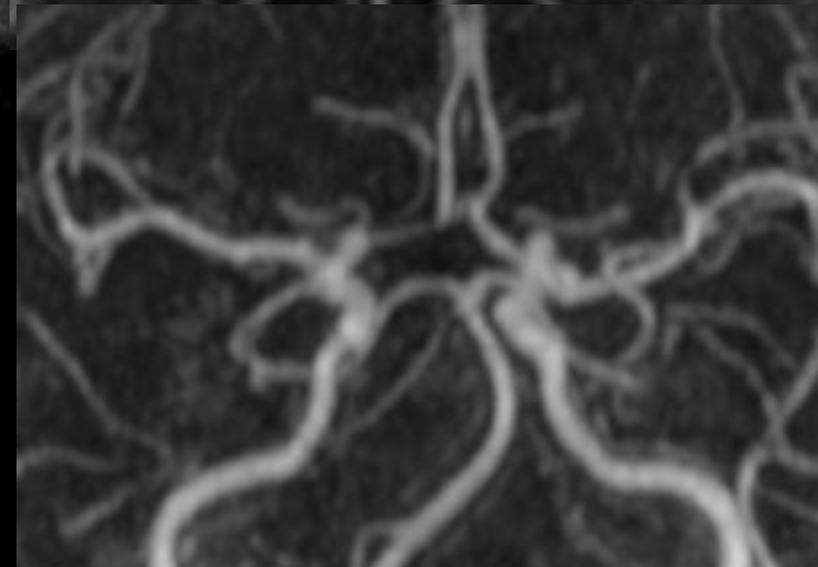
PRE TX



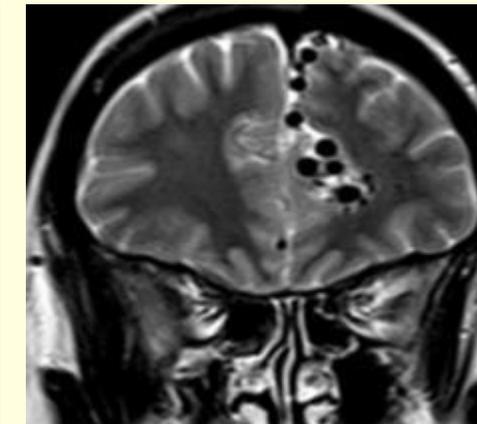
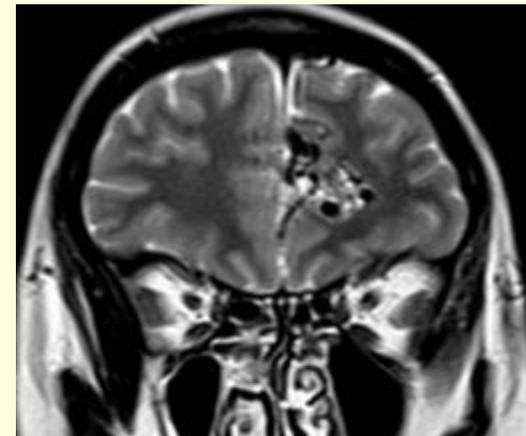
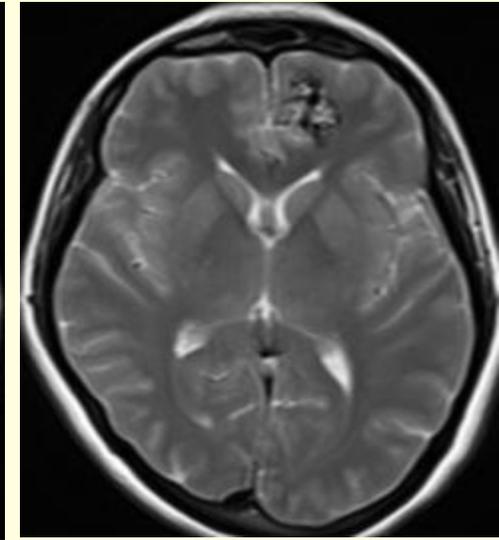
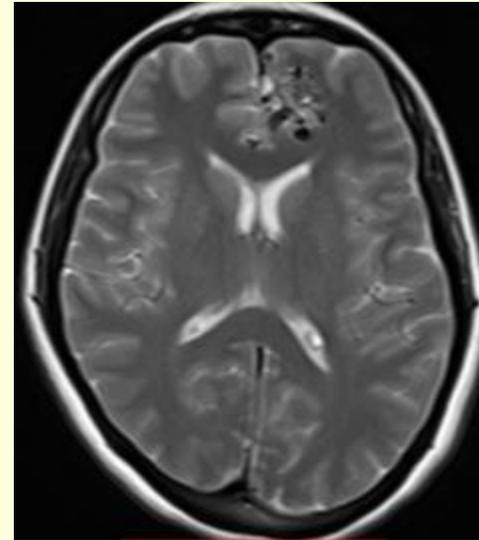
6 MONTH CONT

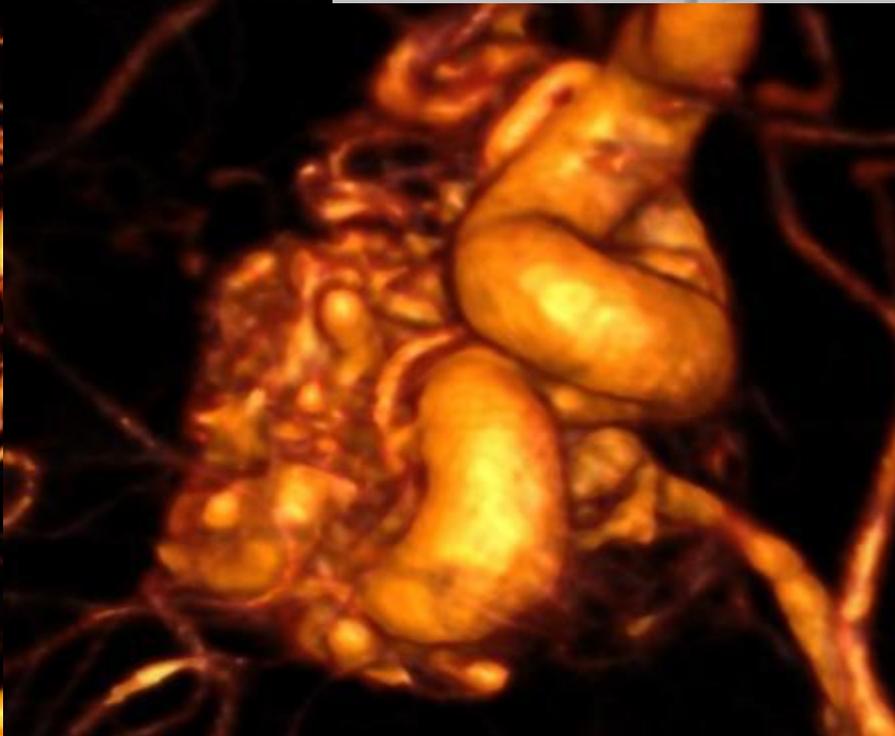
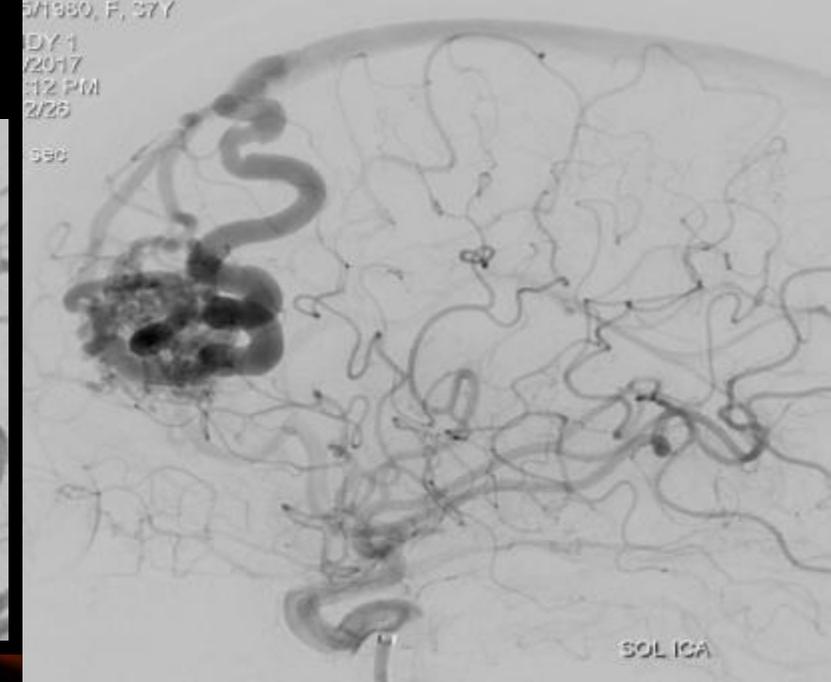
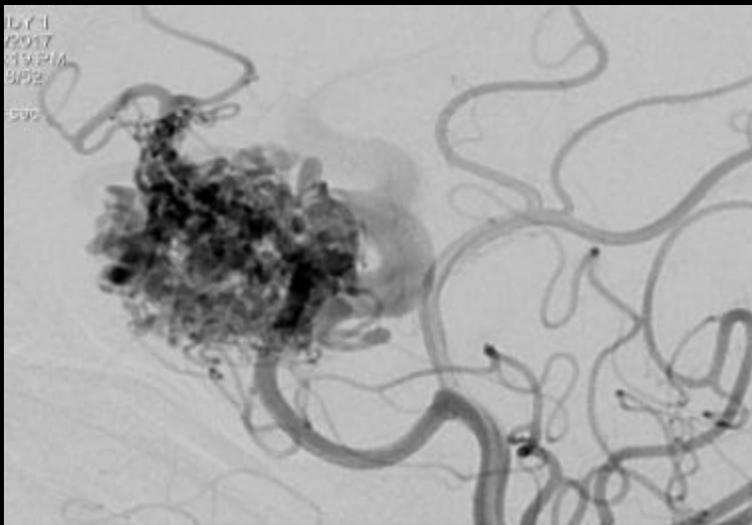
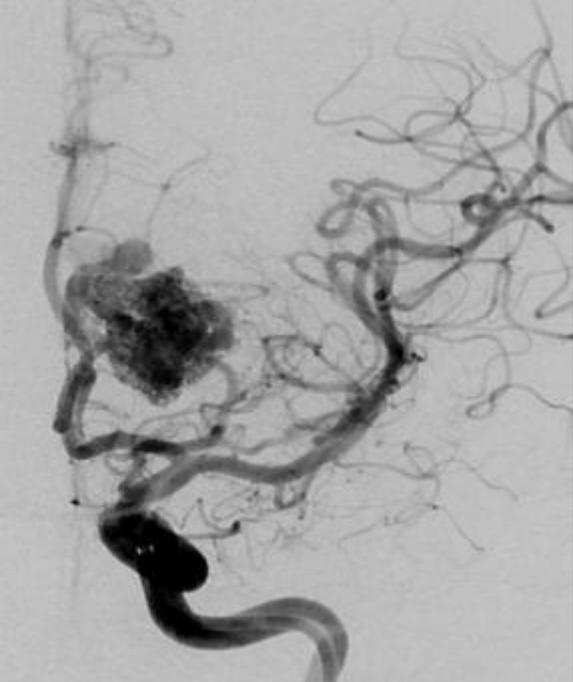


1 YEAR CONT



- *32-year-old female with headache*
- *Left frontal, grade I AVM with single draining vein and venous severe stricture*
- *En-passage feeders from frontopolar branch of left ACA, intranidal aneurysm(s)*
- *Transvenous tx seems very difficult due to stenosis/severe tortuosity*
- *Prox flow controlled Scepter XC assisted ONYX injection after distal coil occlusion of frontopolar artery for distal flow control to facilitate intranidal penetration..*





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Sub4D Full HU Auto [AX3...
*5/15/1980
XA
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6:22:12 PM
3 IMA 34

AXIOM-Artis
VD11B 161026
HFS

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5/15/2017
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AXIOM-Artis
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HFS

LPH



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MIP Thin
RAO 168 / CRAN 7

W 5295
C 1959

ALF



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LPH

Koru Hastanesi Ankara
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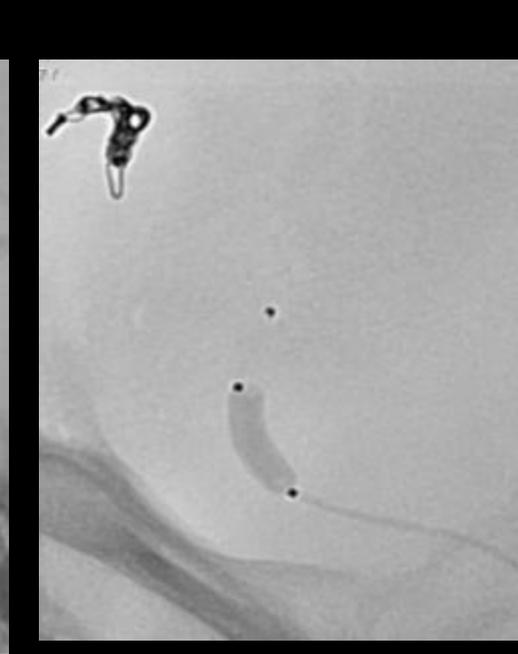
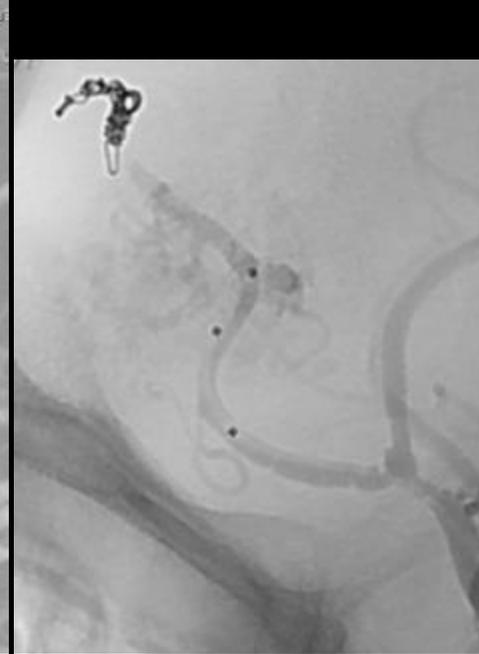
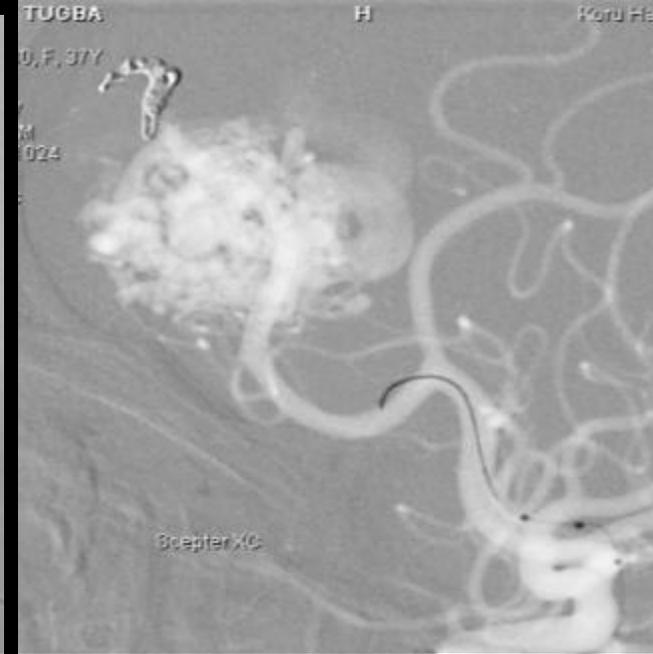
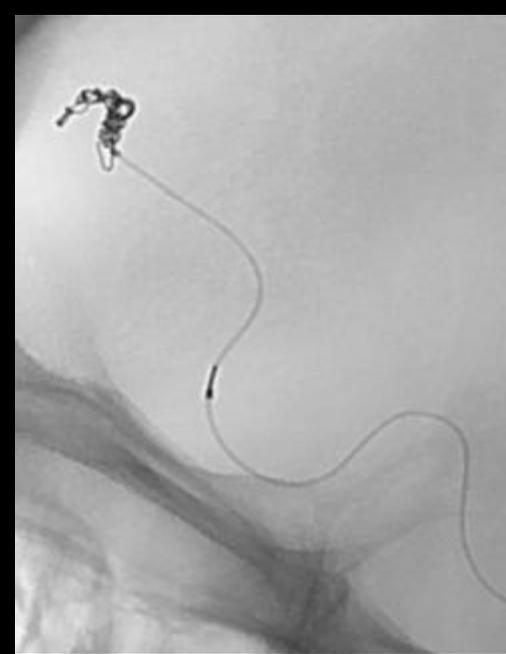
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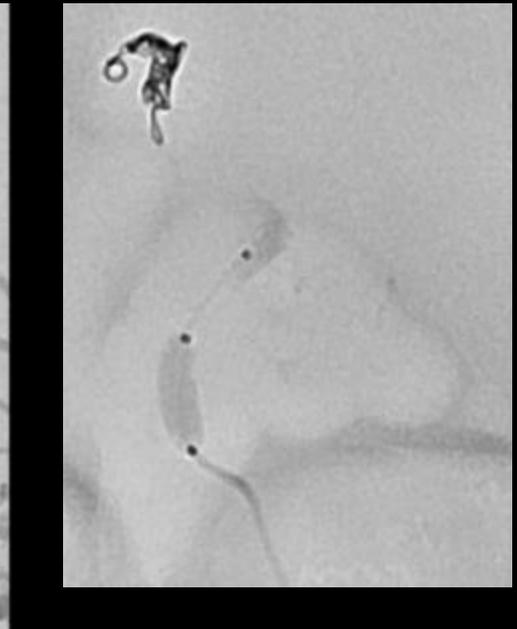
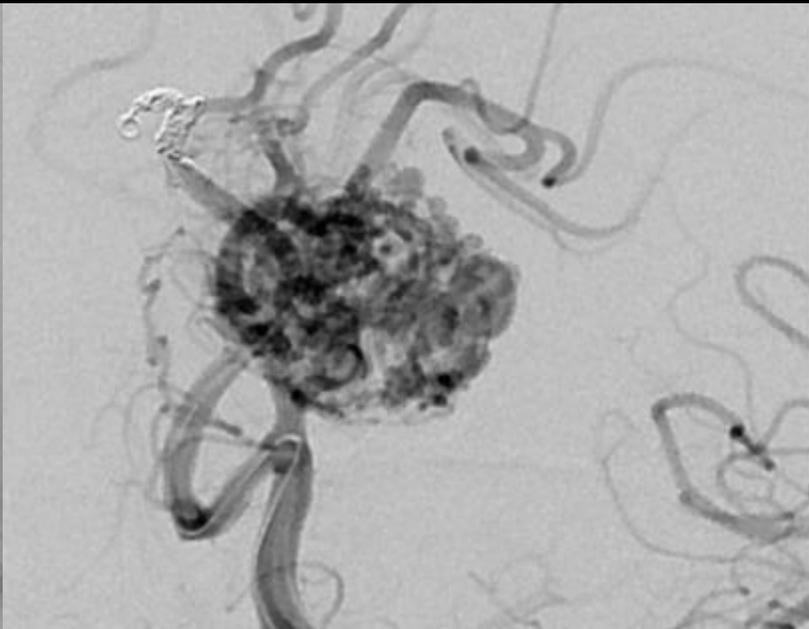
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RAO 55 / CAUD 6

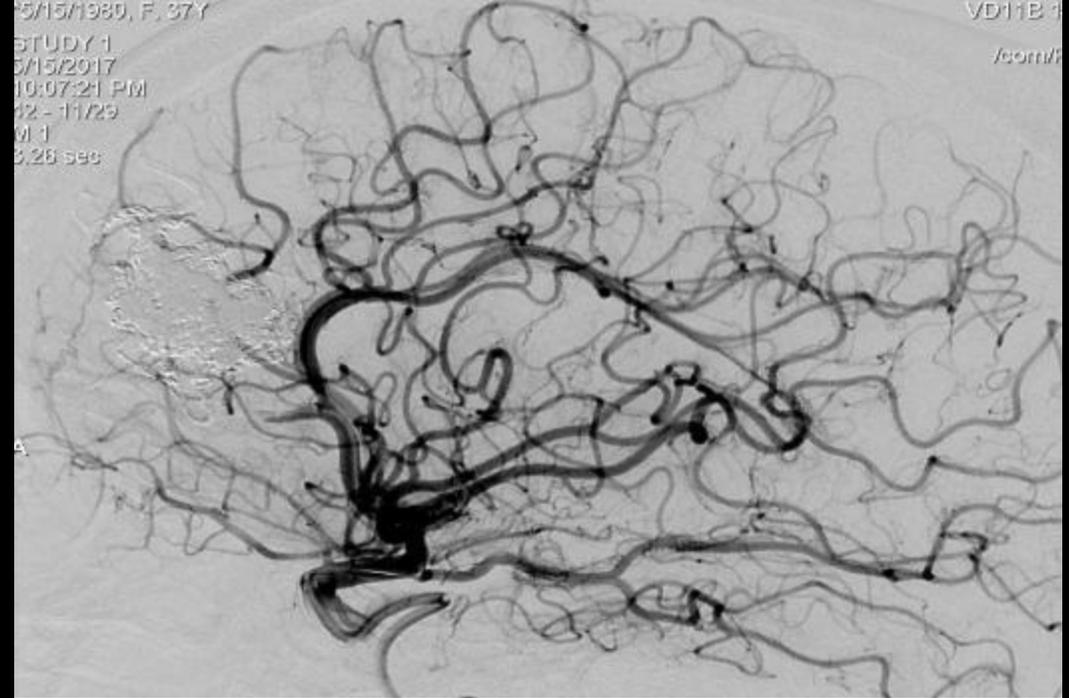
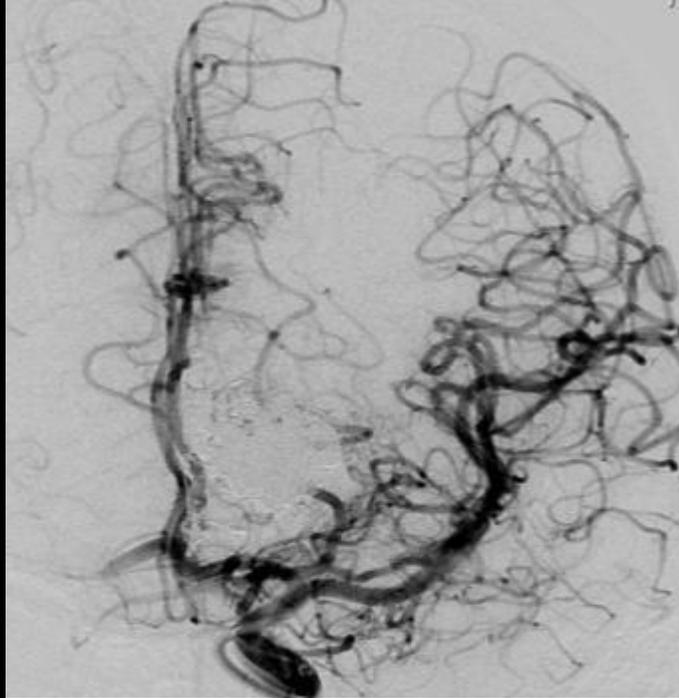
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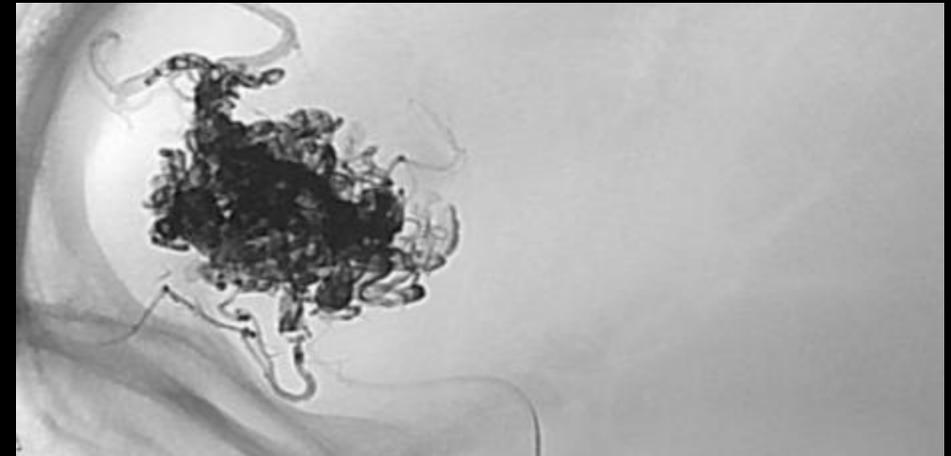
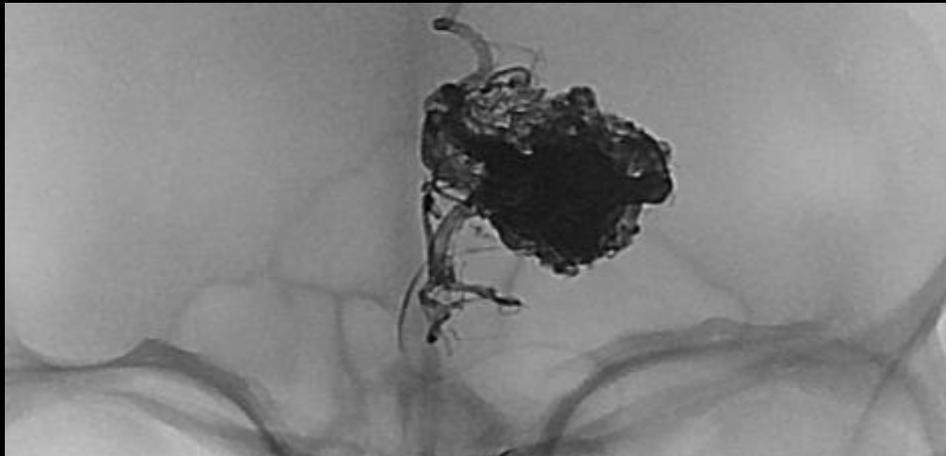


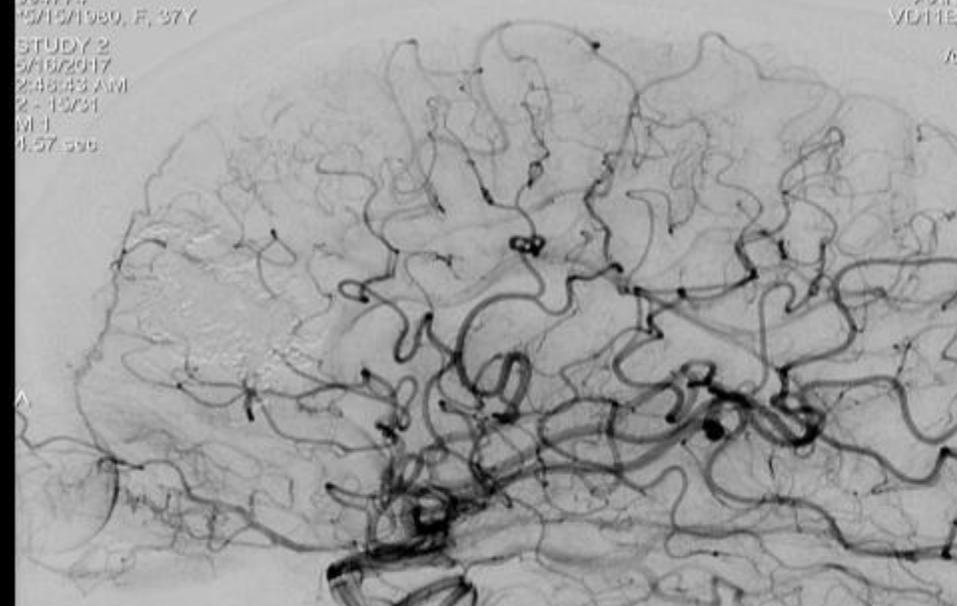
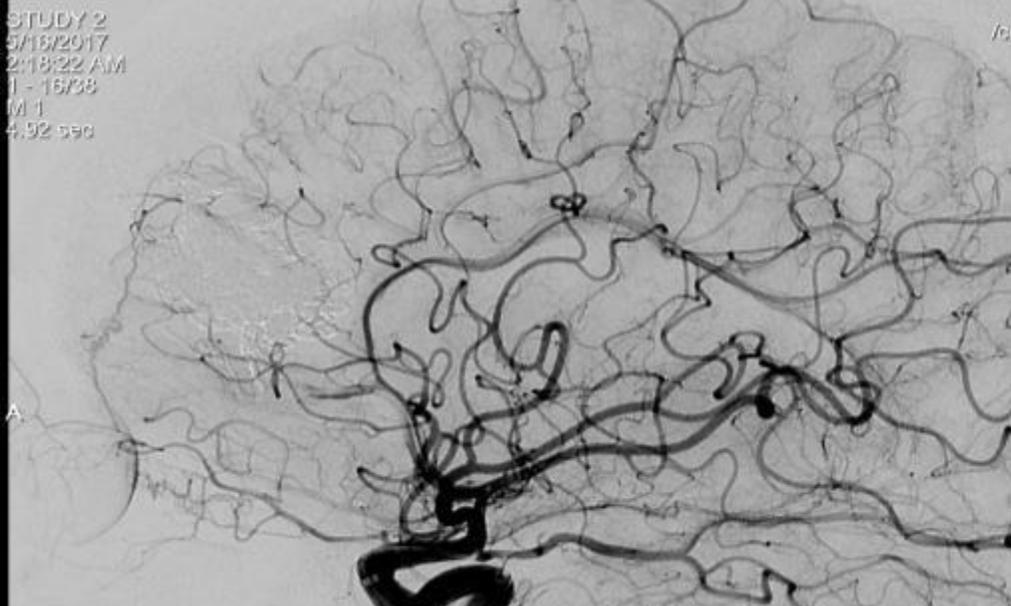
AFTER COIL OCC OF FEEDING ARTERY DISTALLY, A SCEPTER XC BALLOON WAS PLACED JUST PROXIMAL TO THE STARTING POINT OF EN-PASSAGE FEEDERS..



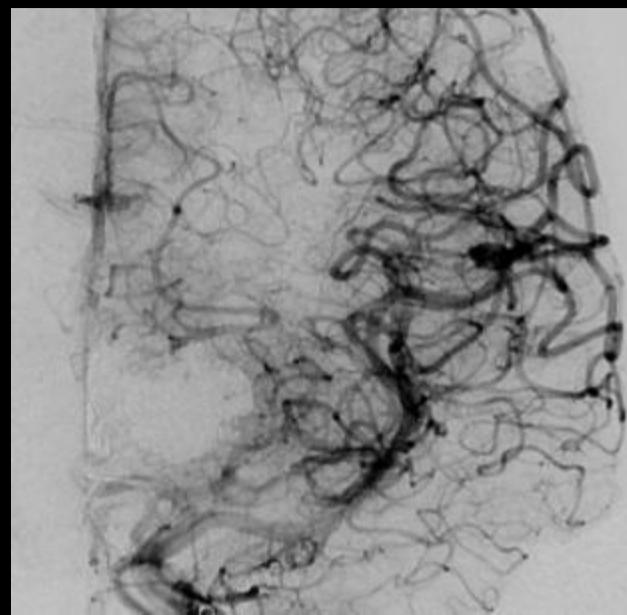
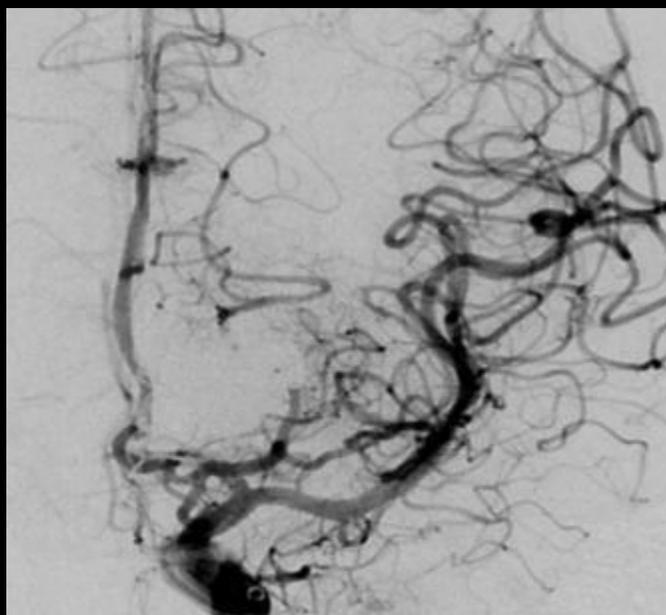


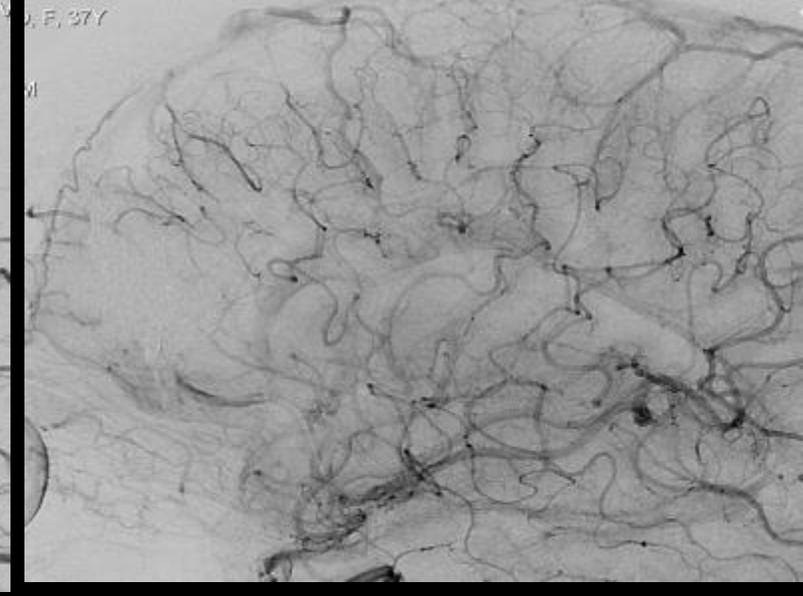
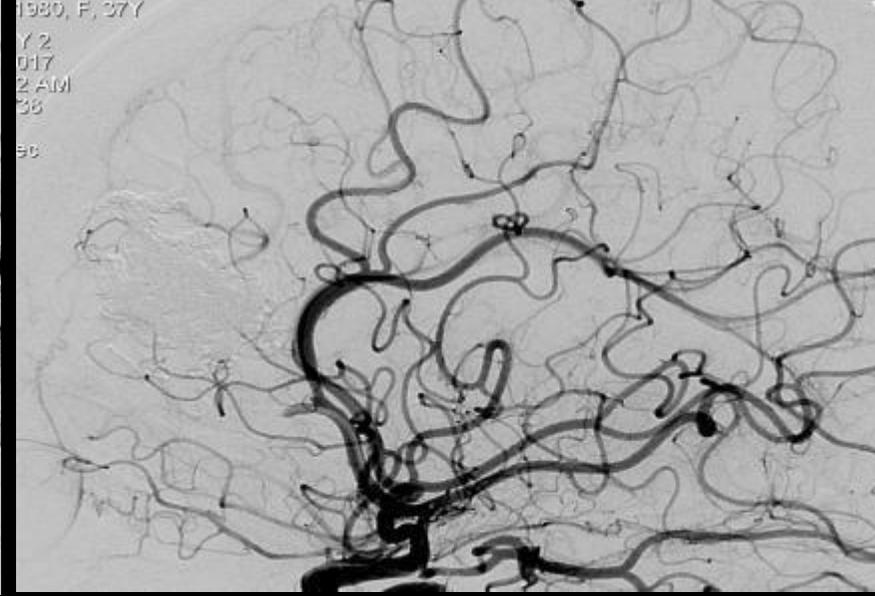
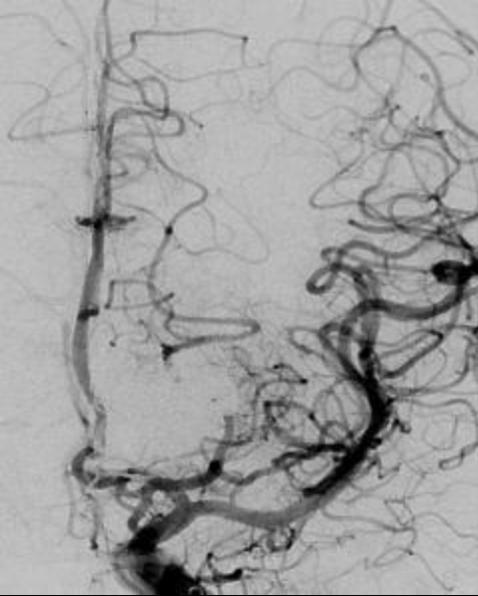
A VERY FAST AND EFFECTIVE INTRANIDAL PENETRATION OF ONYX WAS OBTAINED RESULTING IN COMPLETE OCCLUSION OF THE AVM WITH SCEPTER XC. HOWEVER, SCEPTER CANNOT BE REMOVED ALTHOUGH THERE WAS A REFLUX JUST AT THE NOSE OF THE BALLOON..THIS TECHNICAL COMPLICATION WAS DISCUSSED AND OPERATOR DECIDED TO LEAVE THE BALLOON CATHETER IN PLACE ...



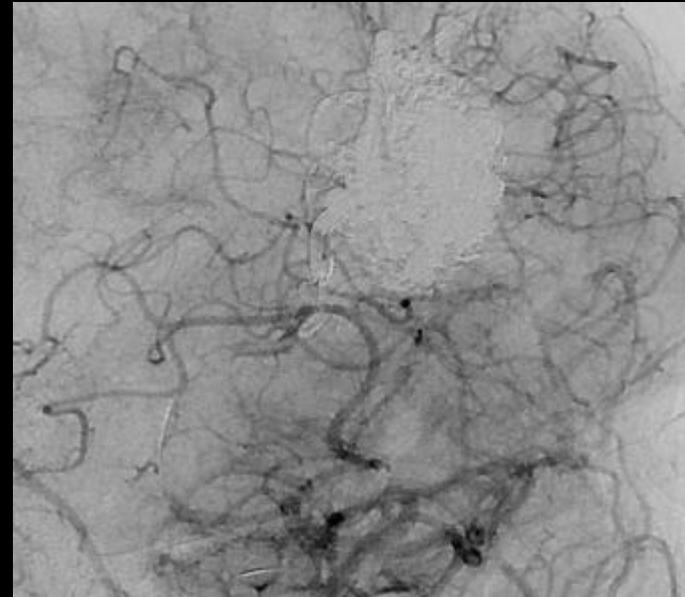
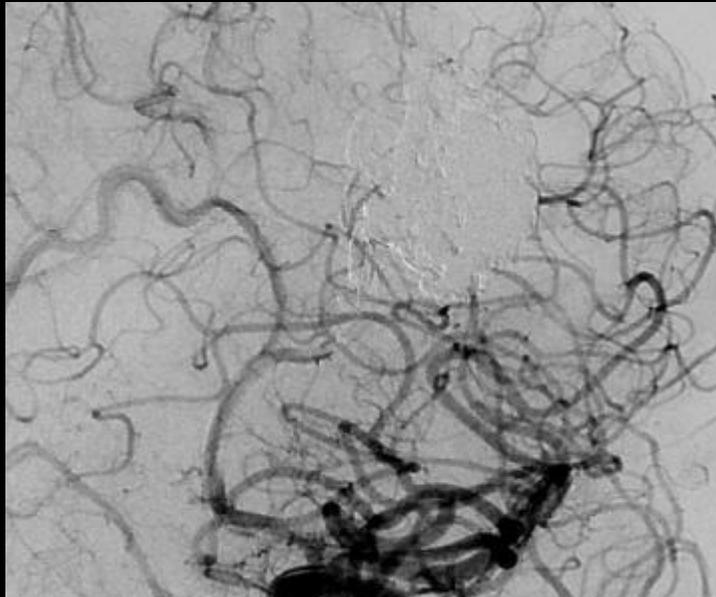


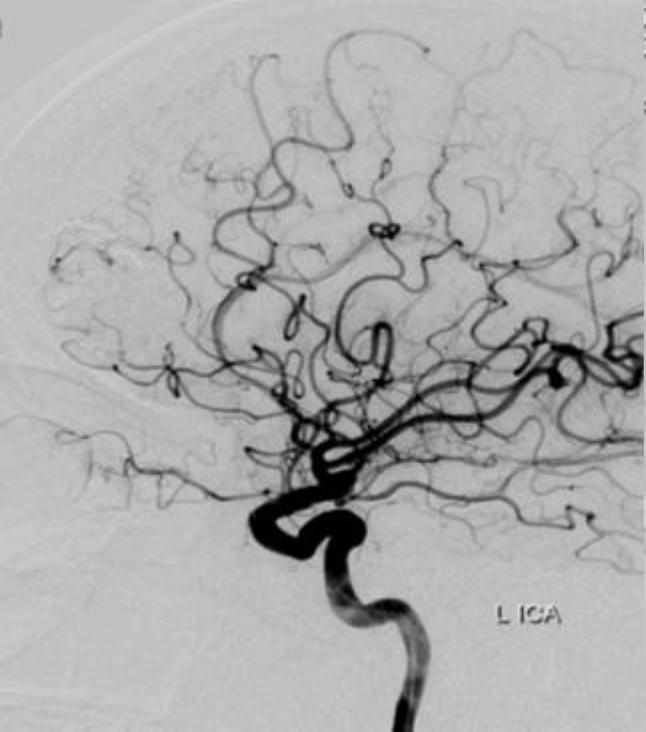
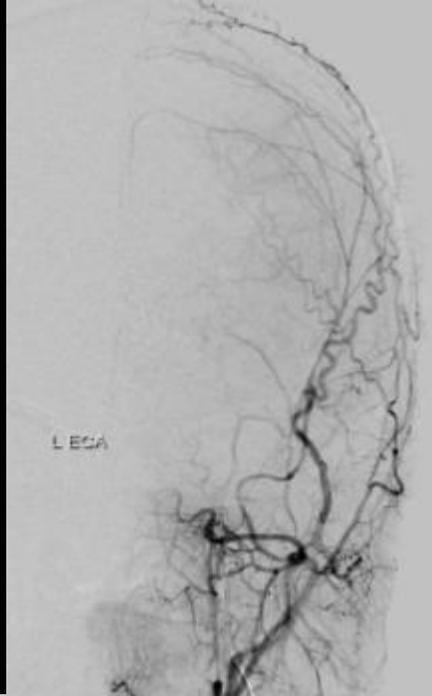
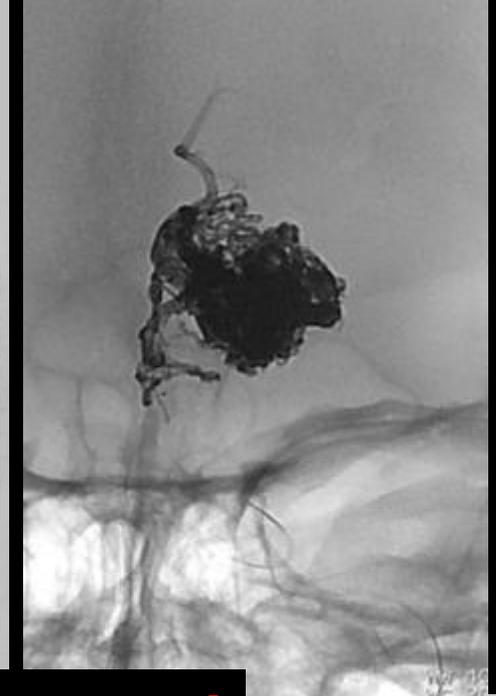
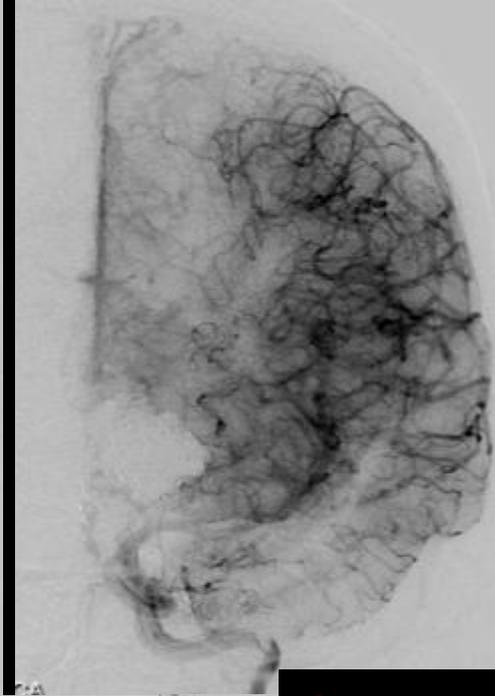
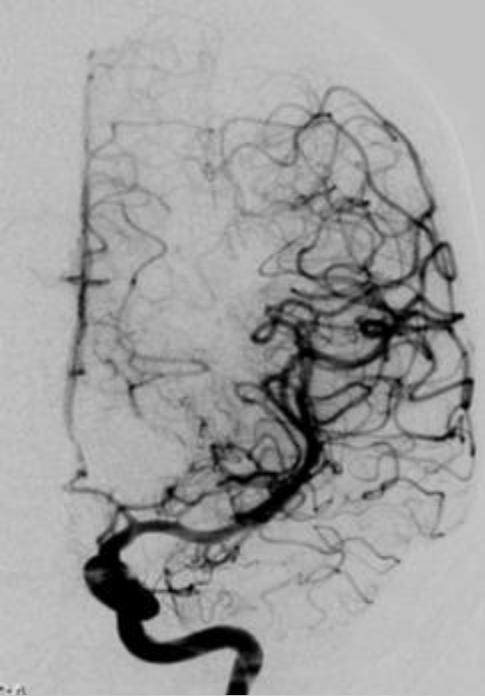
POST OP 5TH HOUR ANGIOGRAPHY AFTER SECOND FAILED REMOVAL ATTEMPT FOR SCEPTER BALLOON...EVENTUALLY, PATIENT WOKE UP FINE WITH NO DEFICIT. SHE WAS PUT ON 2X0.6 CLEXANE AND PRASUGREL 1X10 MG



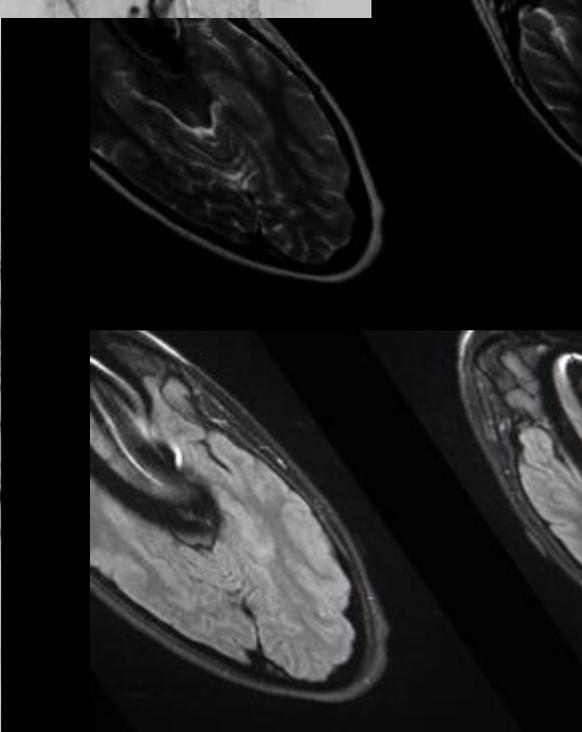


AFTER GOOD THROMBOCYTE INHIBITION LEVEL WAS CONFIRMED WITH LT AGGRAGOMETRY , CLEXANE WAS DISCONTINUED. THE PATIENT LEFT HOSPITAL WITH NO NEUROLOGICAL DEFICIT AT POST OP 3RD DAY WITH 10 MG PRASUGREL DAILY. REPEAT FU ANGIOGRAPHY RE-CONFIRMED NORMAL FILLING OF THE LEFT ACA AND OCCLUSION OF THE AVM..





1 year control

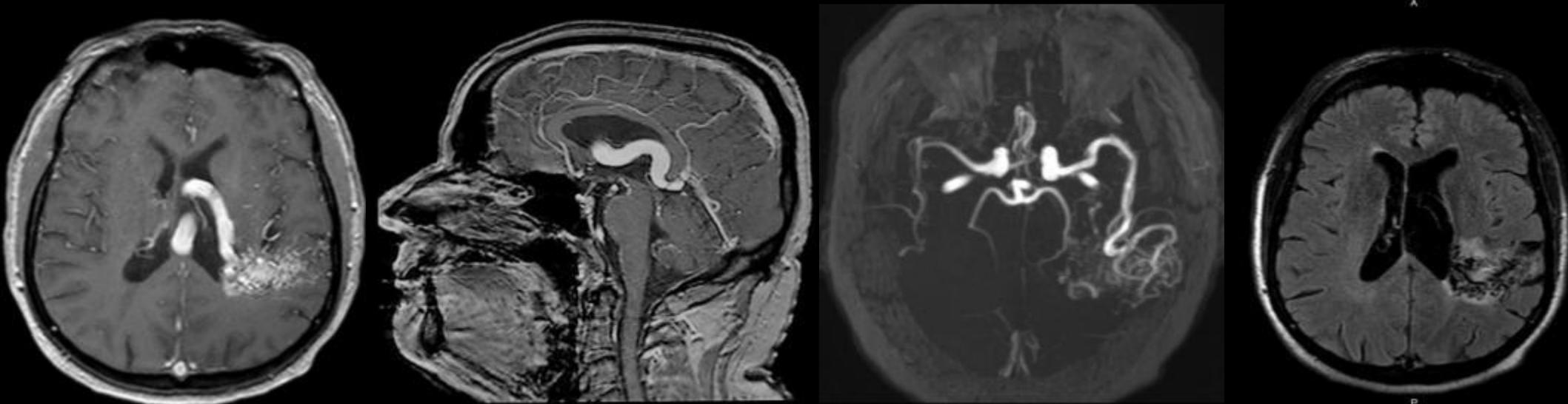


WLNC 2017
LIMOGES CASE FU /BY PROF MOUNAYER

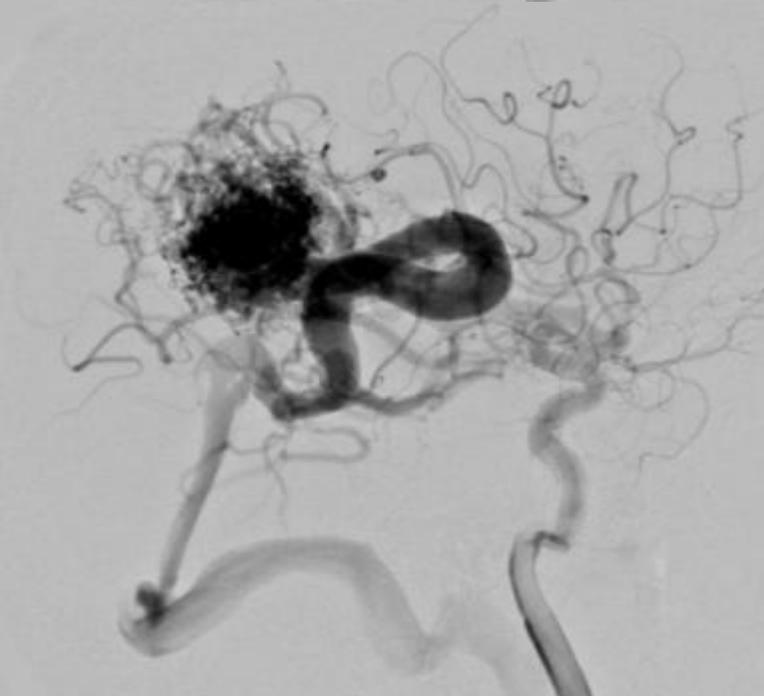
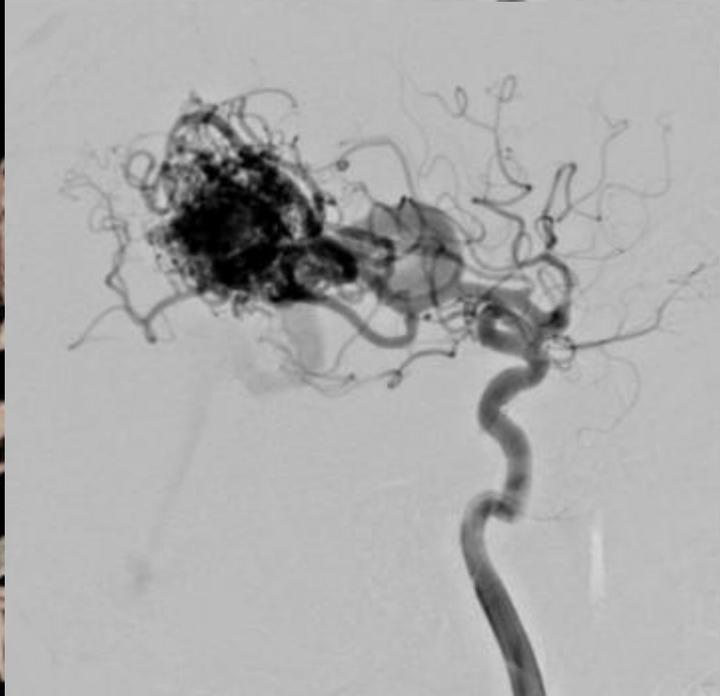
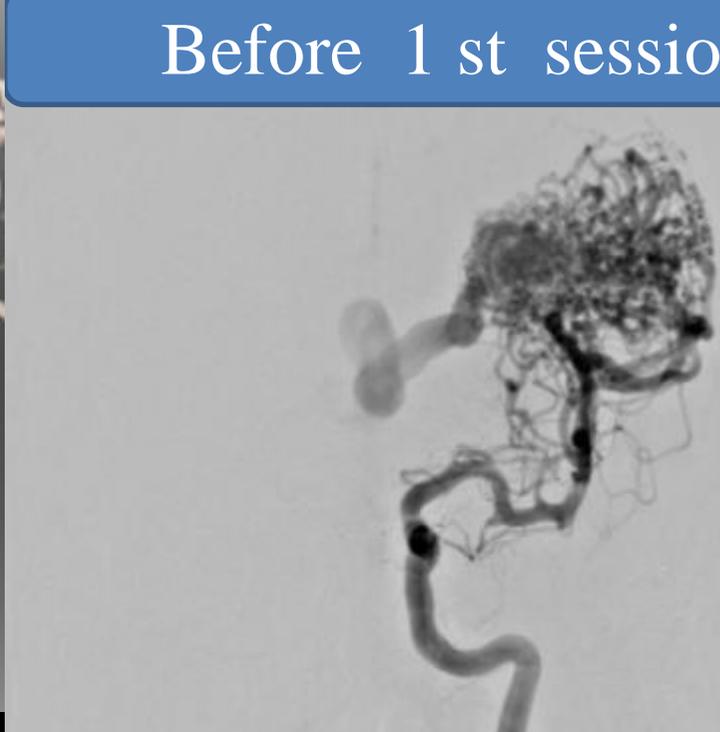
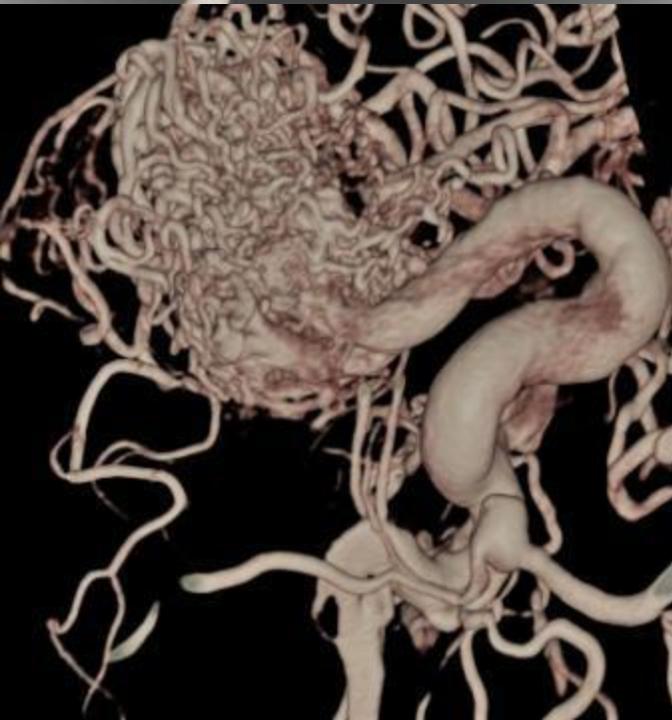
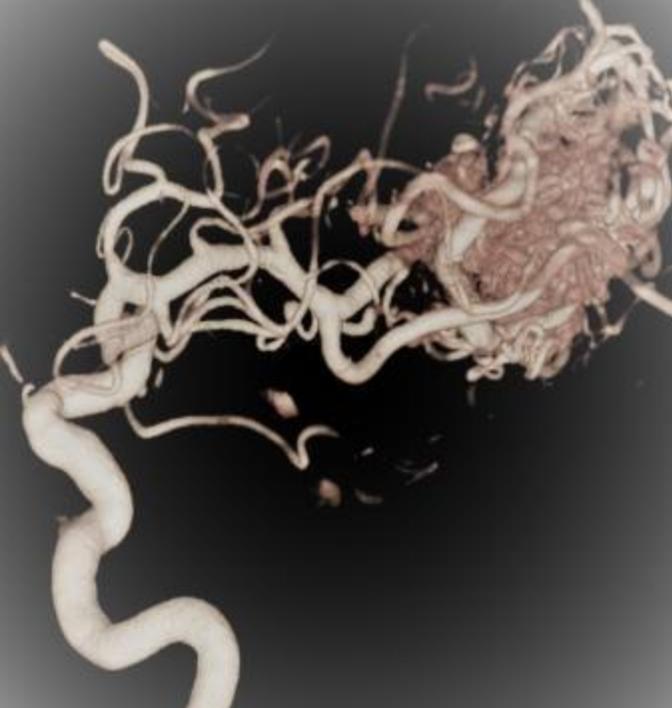


Cure of Brain AVM by transvenous approach LIMOGES CASE by Prof. Charbel Mounayer

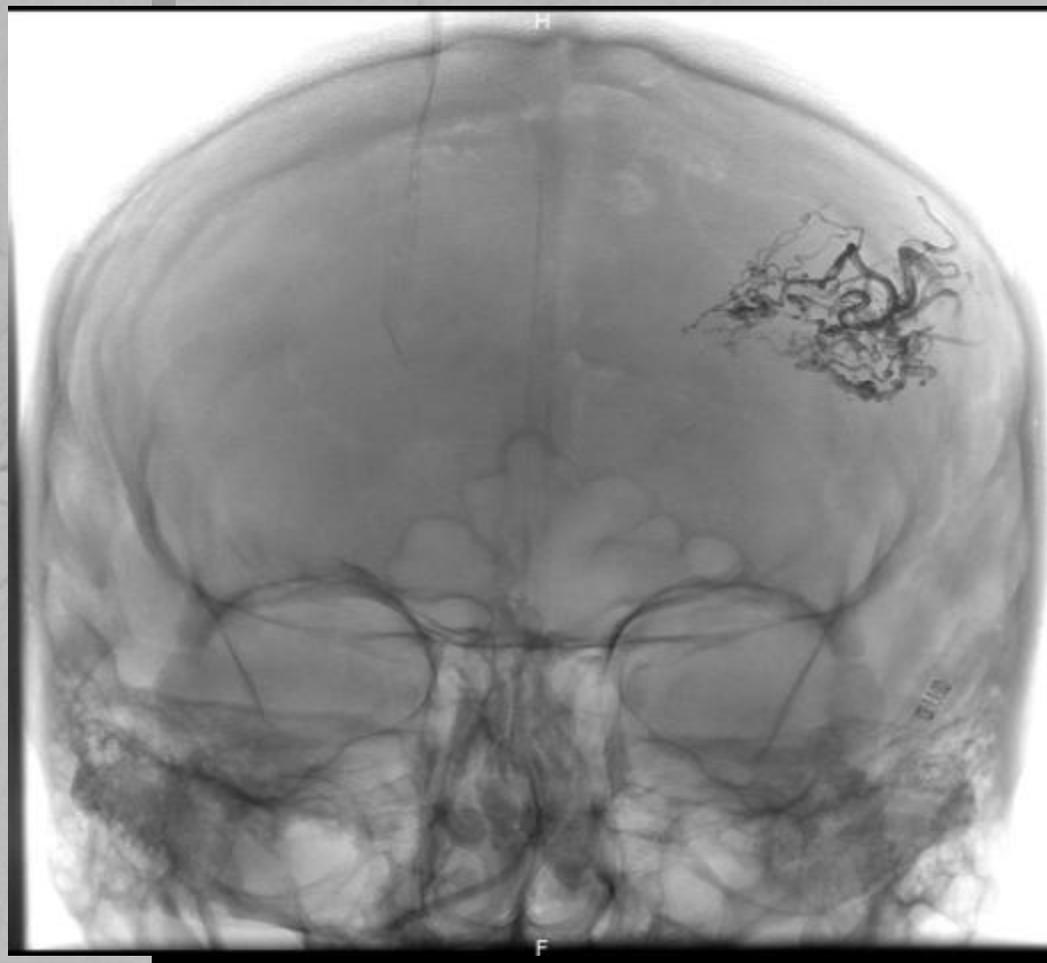
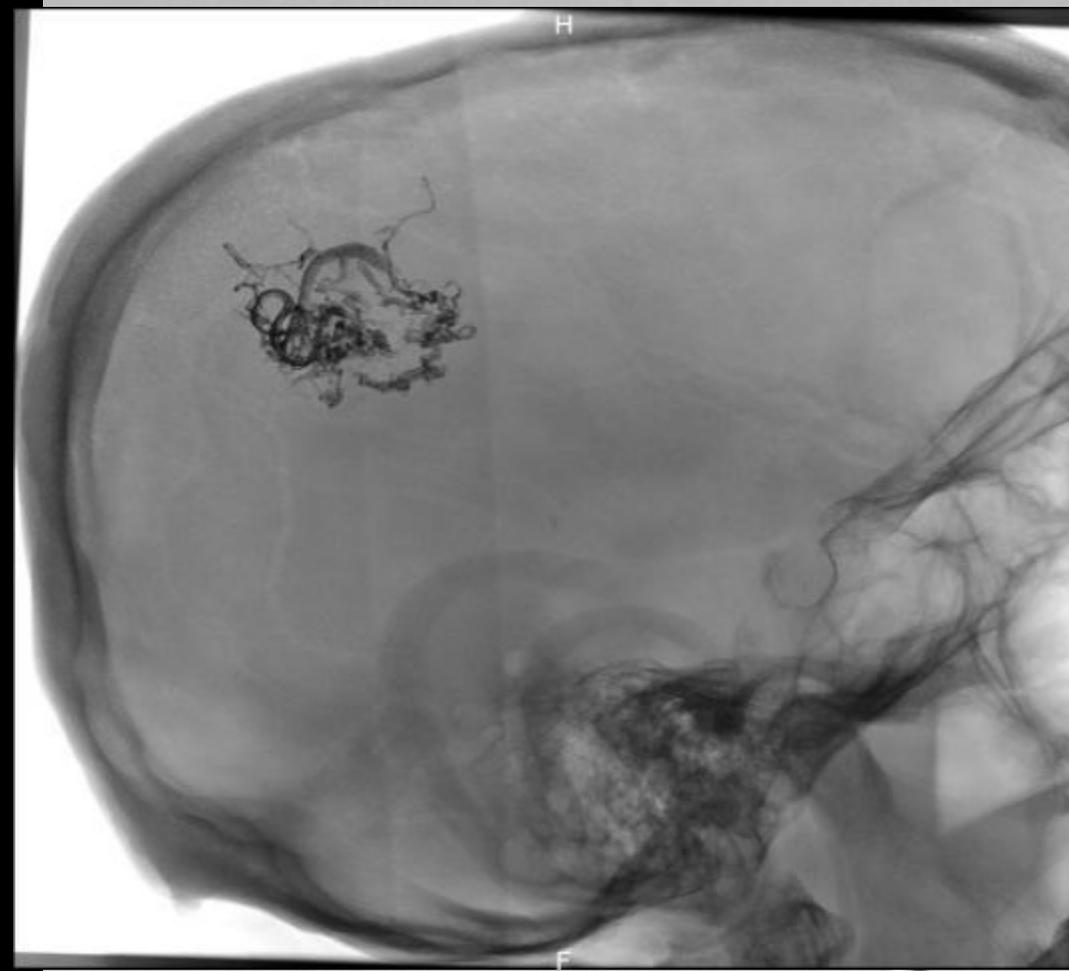
- 63 year-old male, diabetic
- 15 days of progressive **right hemiparesis**
- **Contrast head MR (25/03/2016)**
 - Left posterior parietal AVM with deep drainage and a dilated vein
 - No ischemia



Before 1 st session



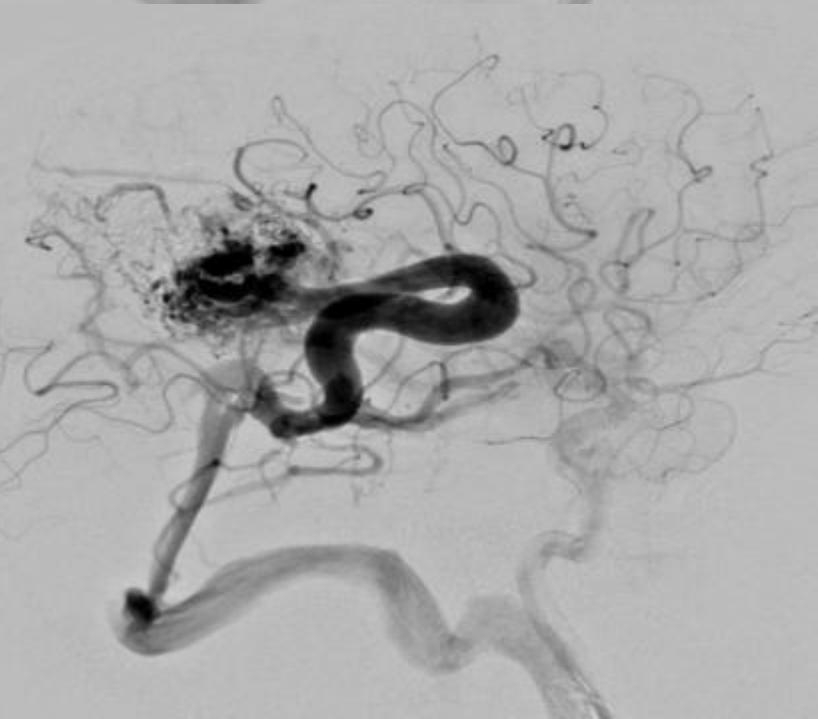
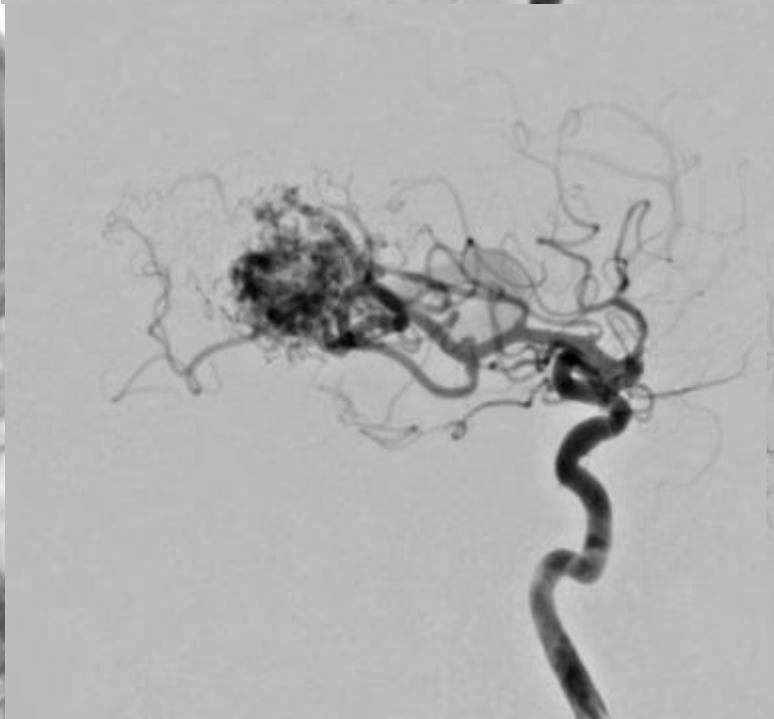
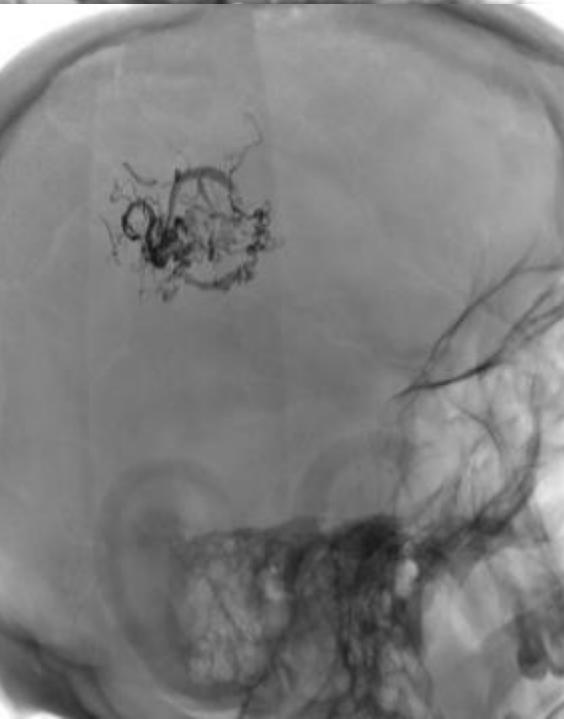
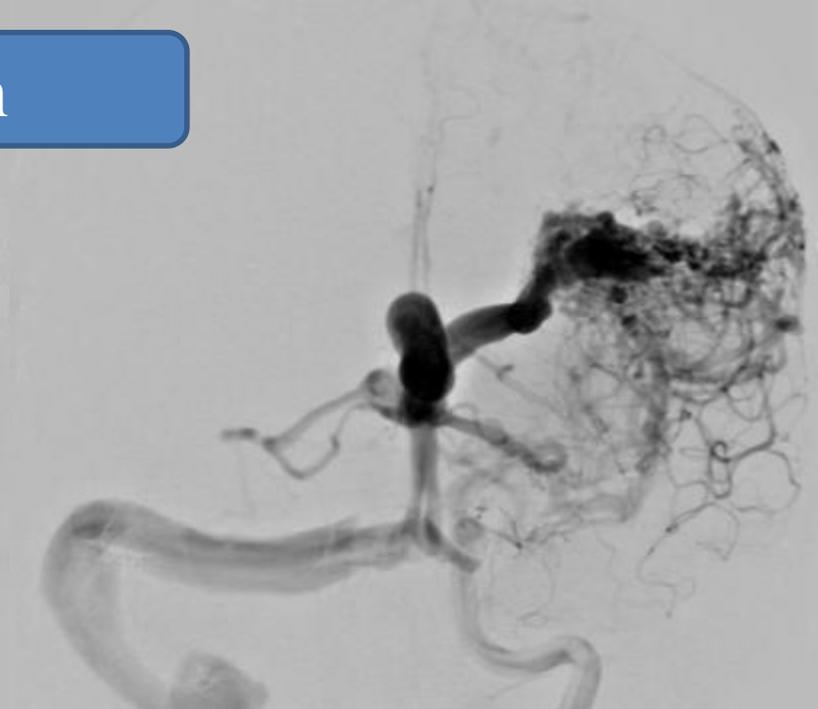
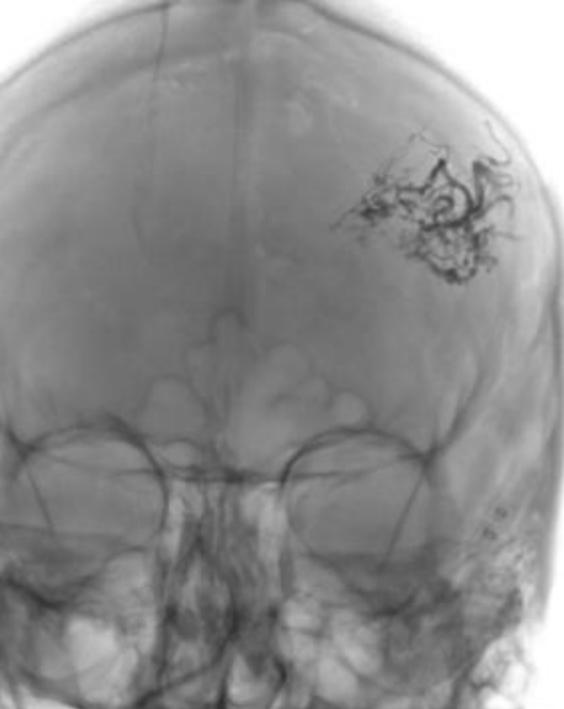
First session embolization (28/03/17)



Apollo 1,5

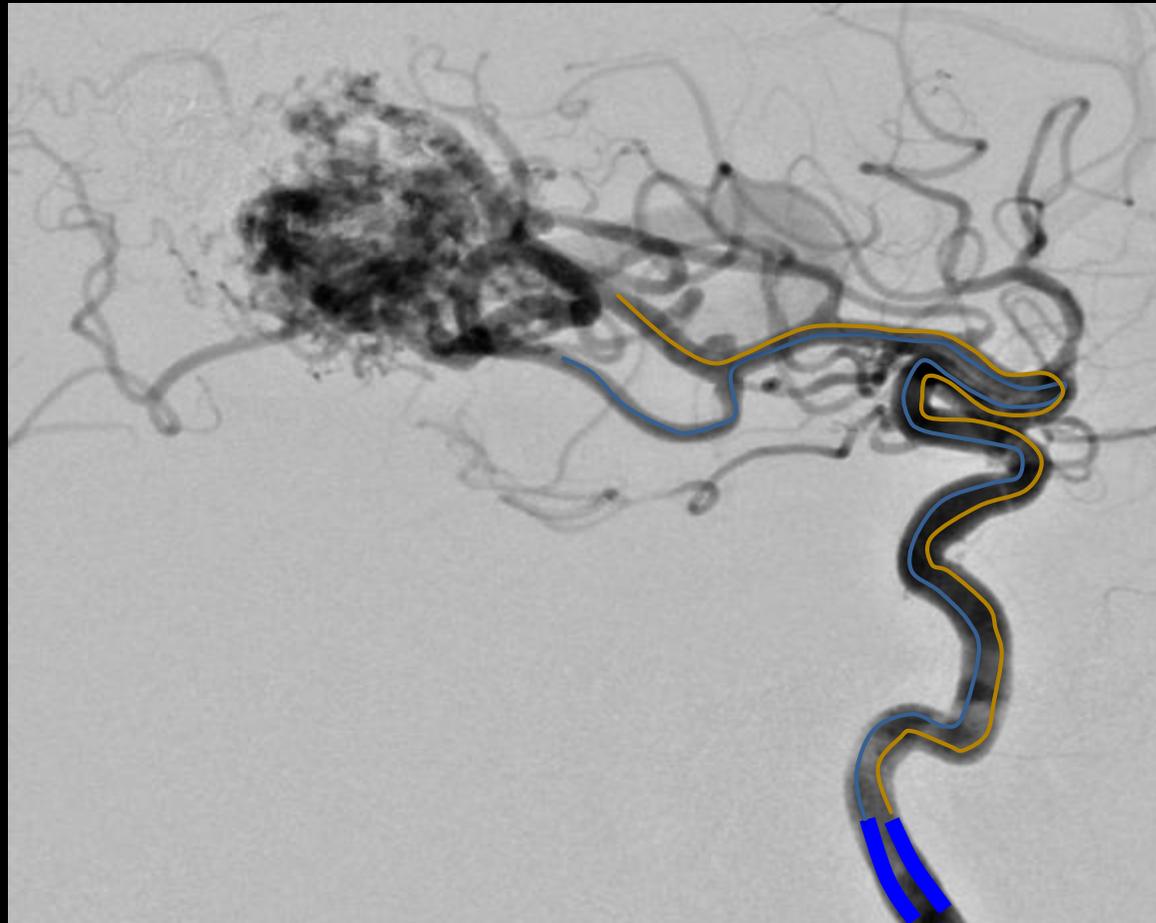
SQUID 18

After 1 st session



Second session embolization (17/05/2017)

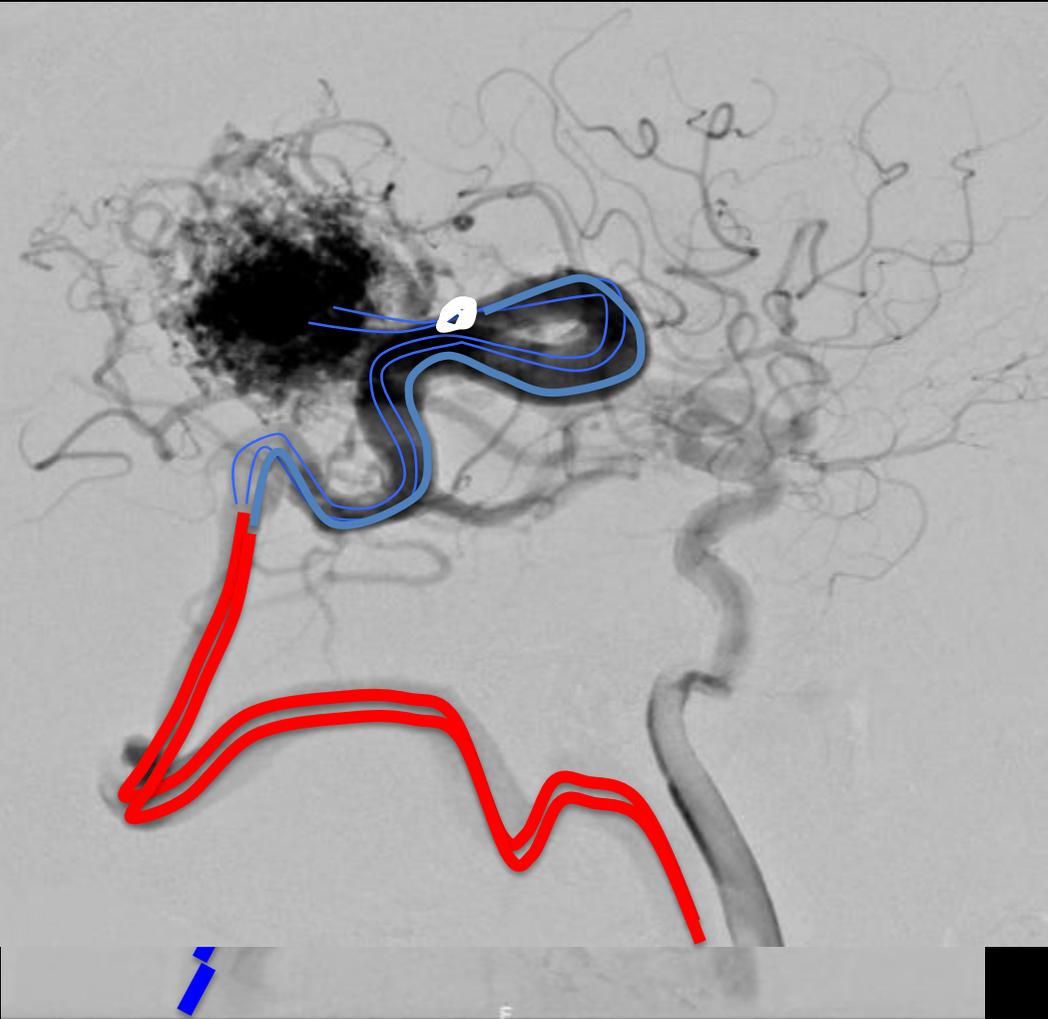
- Arterial side



Double catheterism
Chaperon 6F

Double microcatheterism
Apollo 1,5

The Venous Approach



Coils

Echelon 10

Marathon

Benchmark

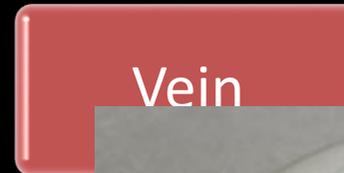
Double jugular approach

Porcelain Vein

Our plan

- Venous side

Fill the Nidus



Marathi

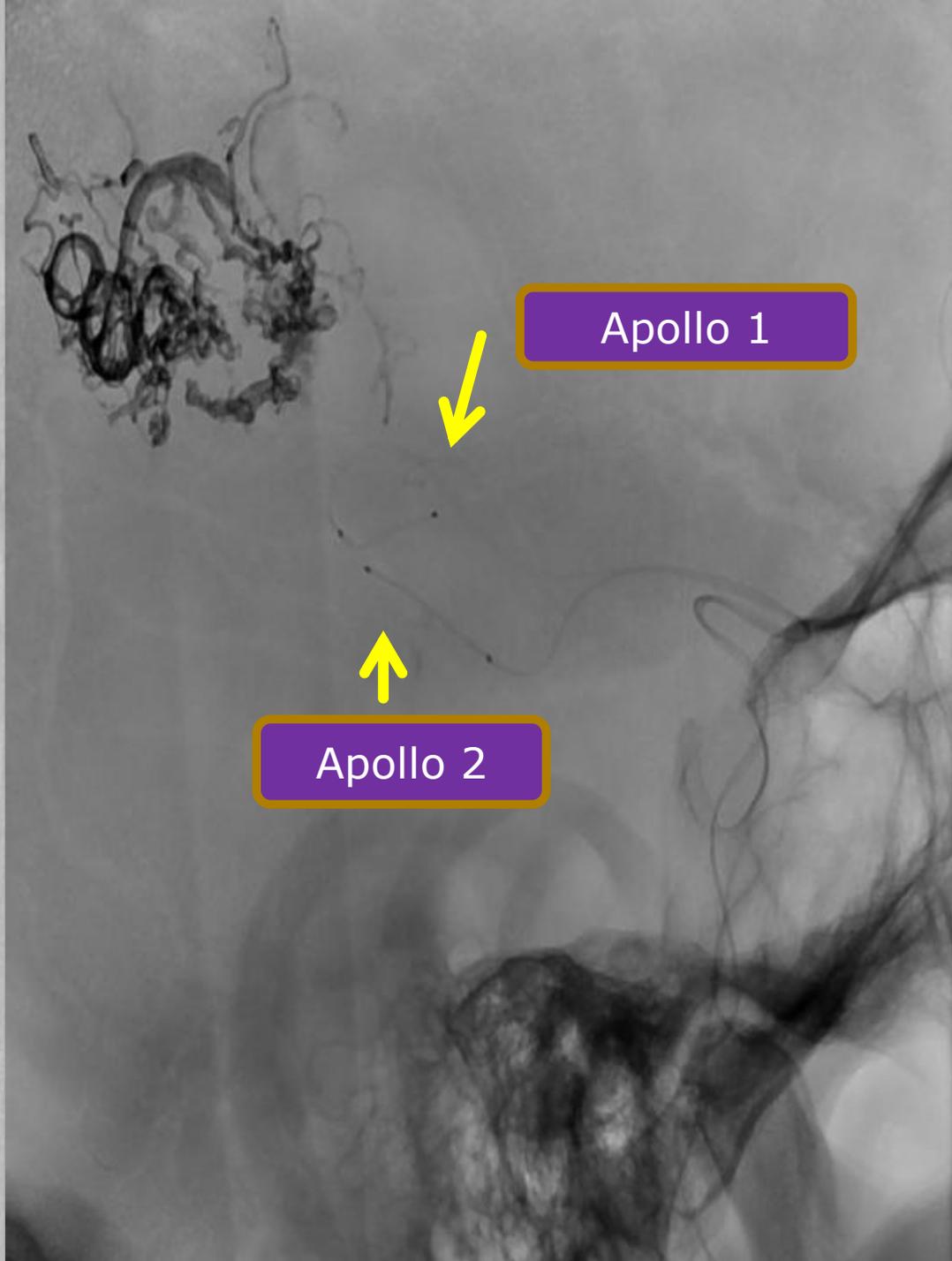
Marathi

Echlon

Porcelain Vein

Second session 17/05/2017

Arterial side



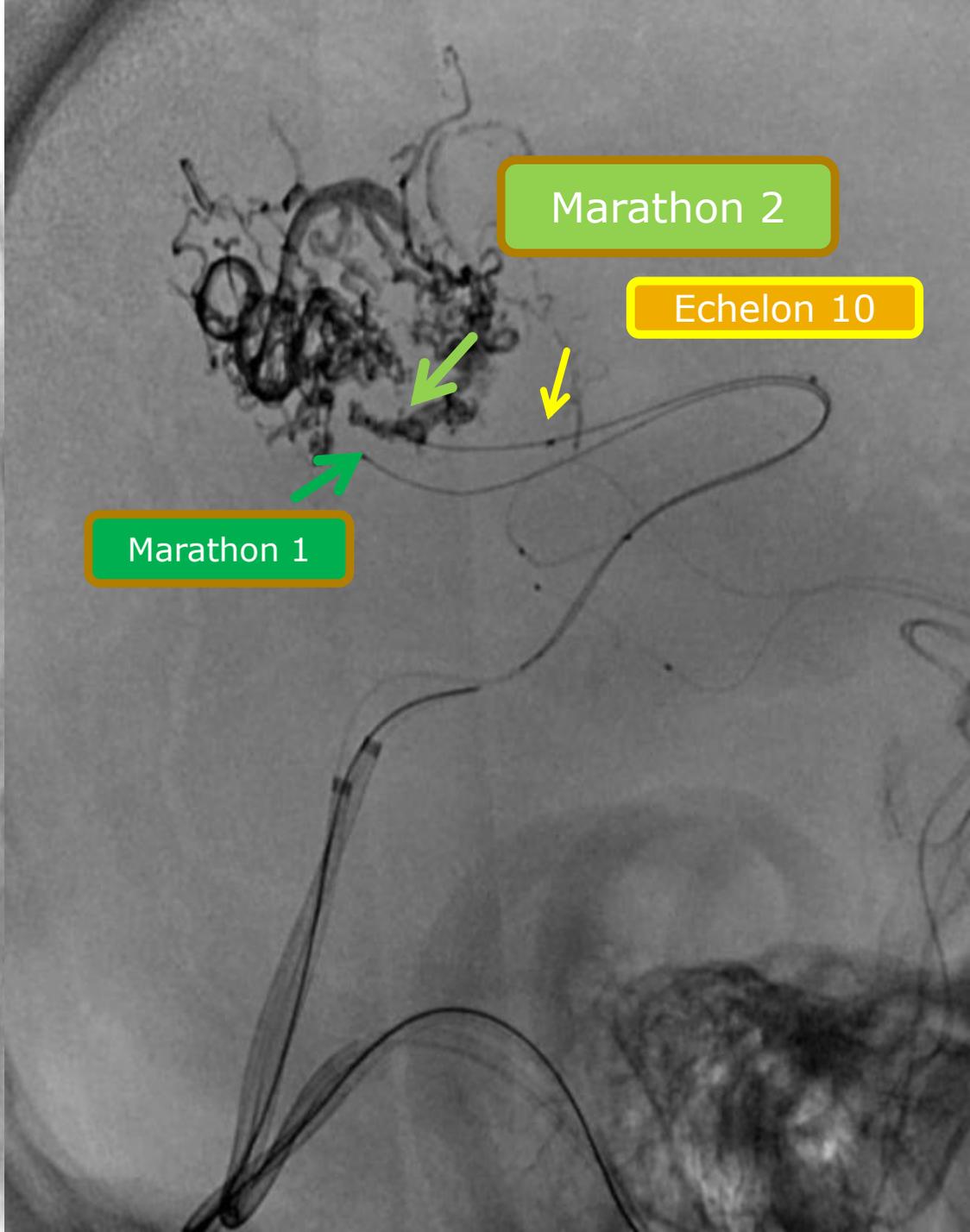
Venous side



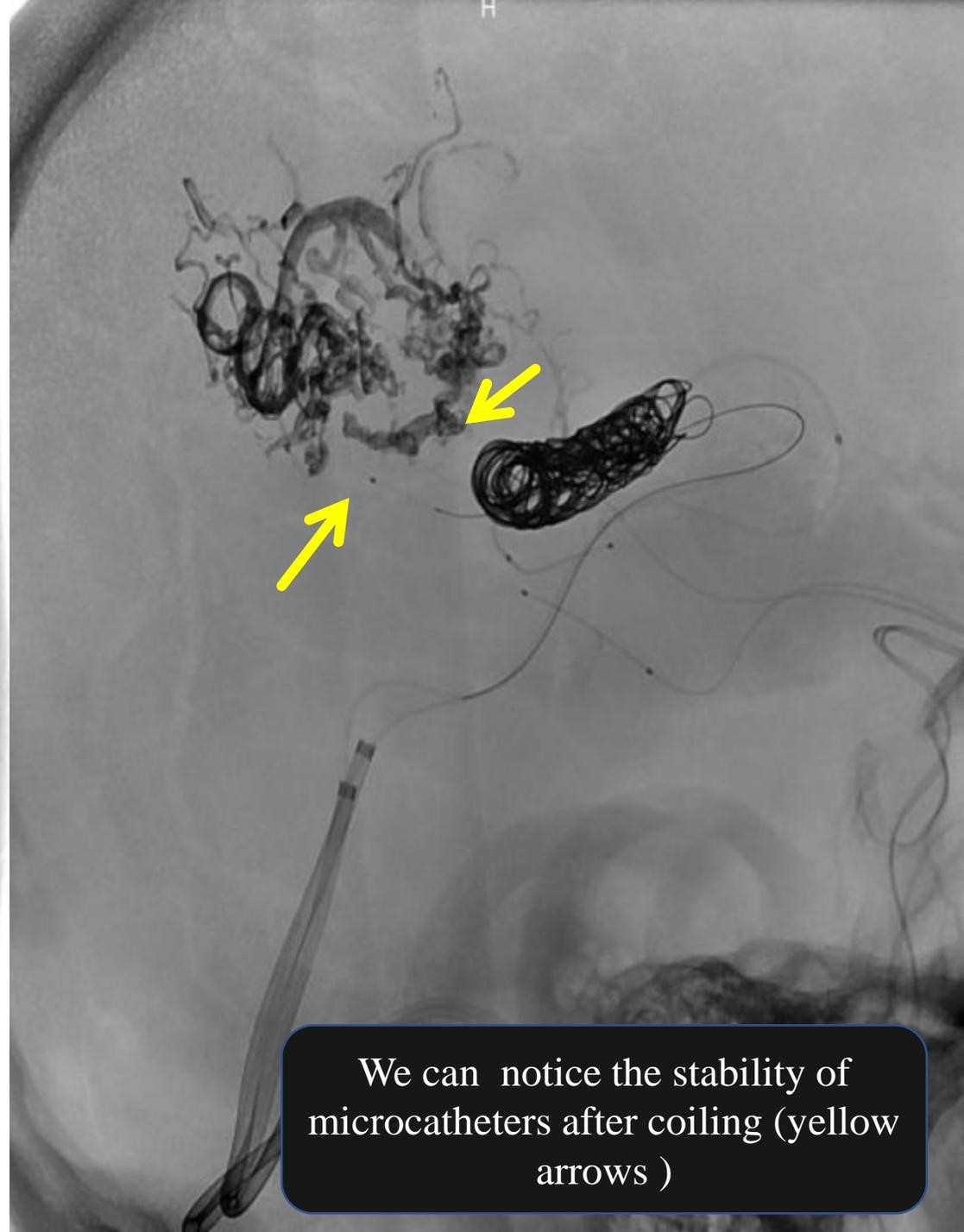
Marathon 2

Echelon 10

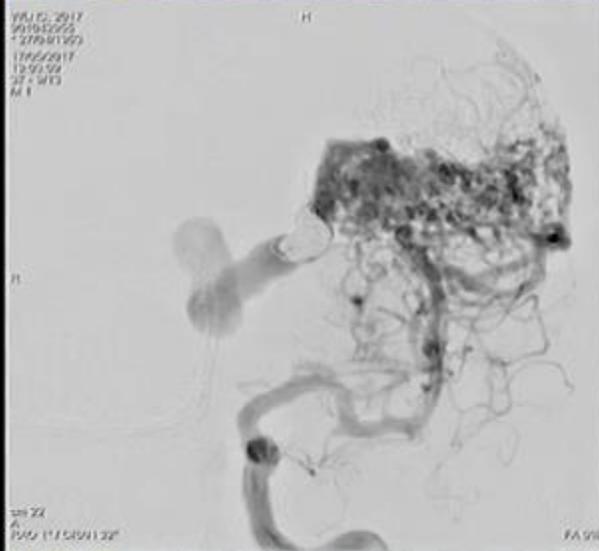
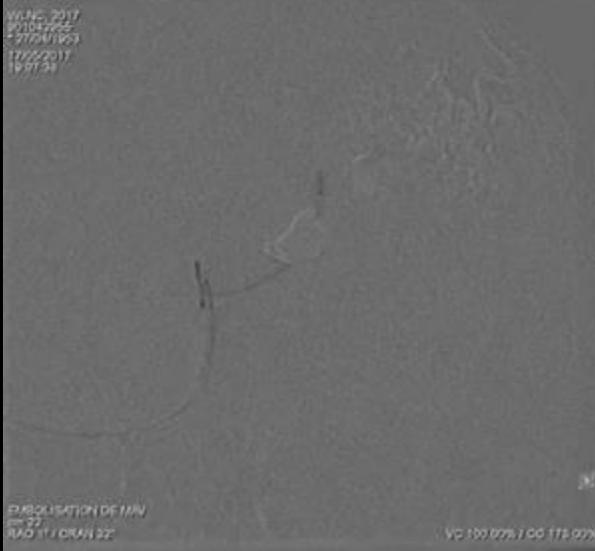
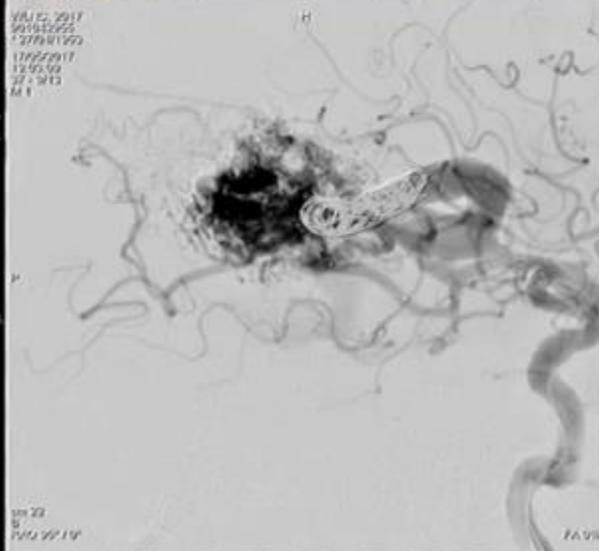
Marathon 1



Retrograde
pressure cooker
technique &
Coiling



We can notice the stability of
microcatheters after coiling (yellow
arrows)

Assist A**Assist B****Reference A****Live A****Live B****Reference B**

EMBOUSURE DE MAV
 00:22
 RAD 111 OKAN 32°

VO 100.00% / DO 175.00%

Sauvegarder Référence

EMBOUSURE DE MAV
 00:22
 RAD 111°

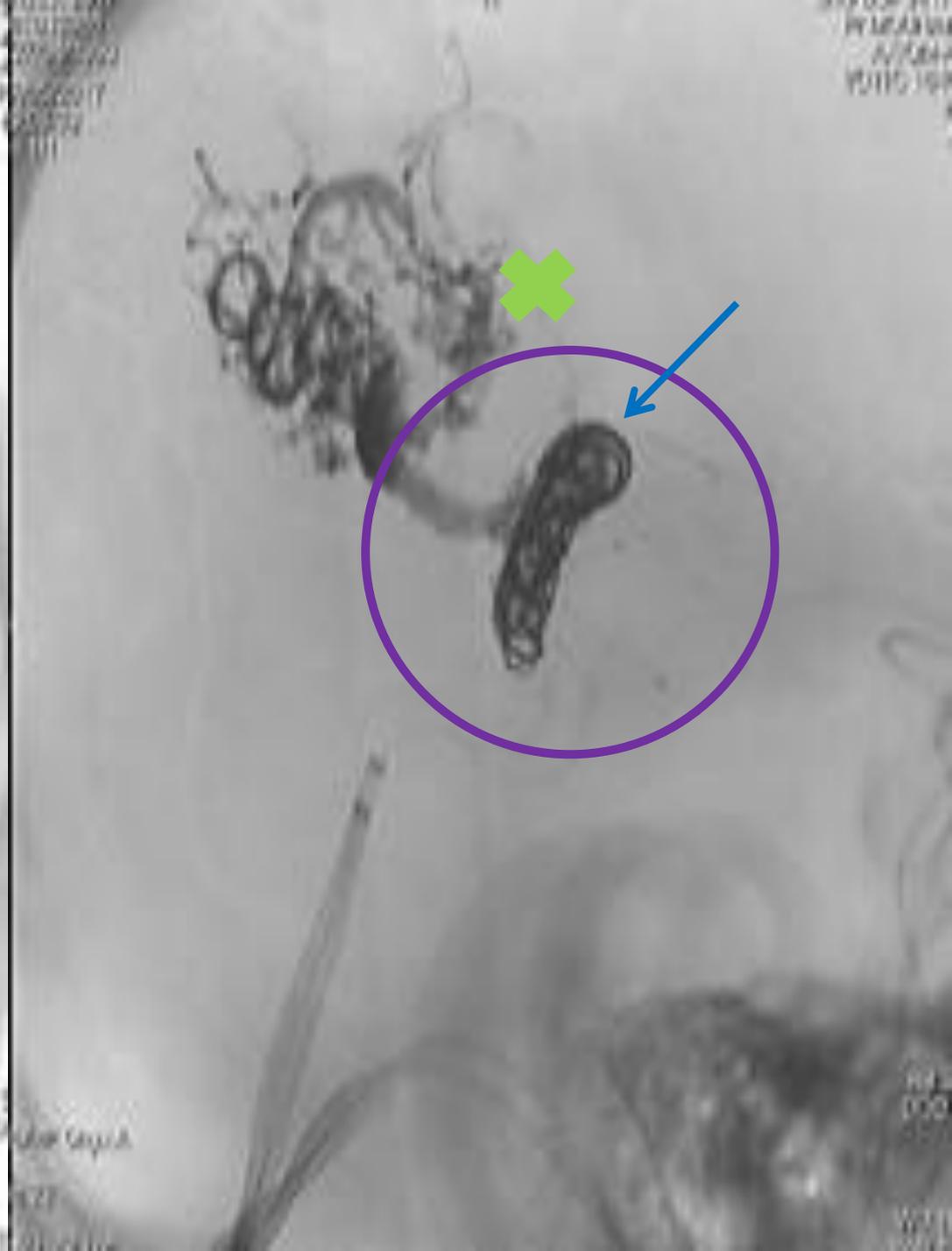
VO 101.00% / DO 175.00%

Sauvegarder Référence

00:22
 RAD 111°

FA 9%

Onyx injection & coils migration



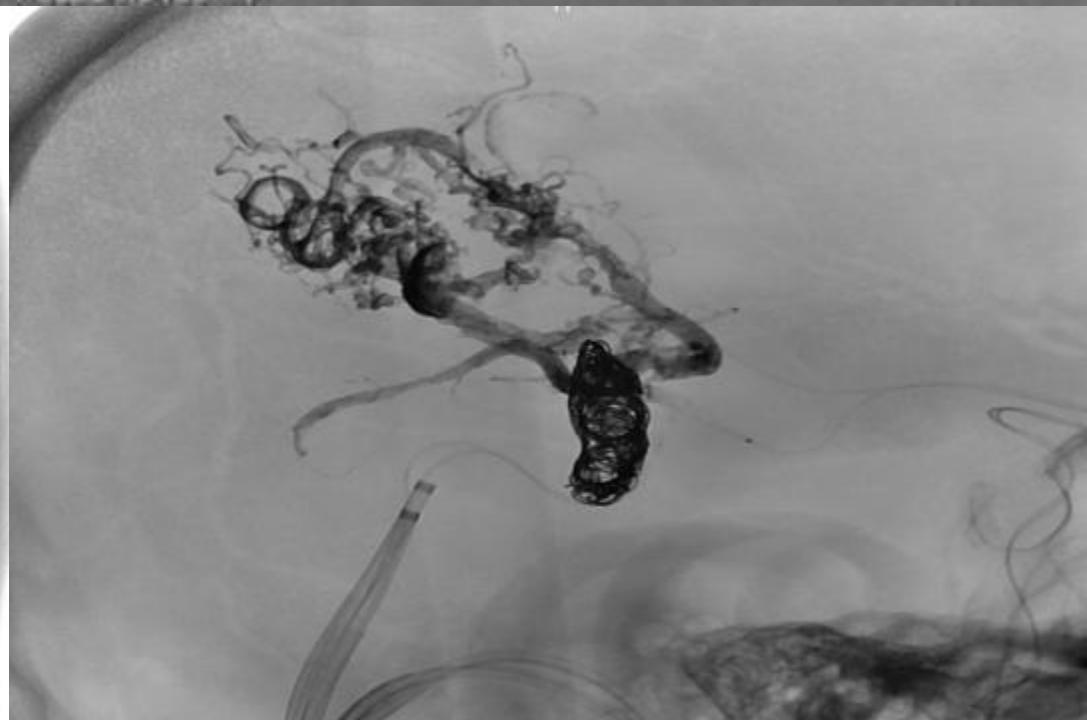
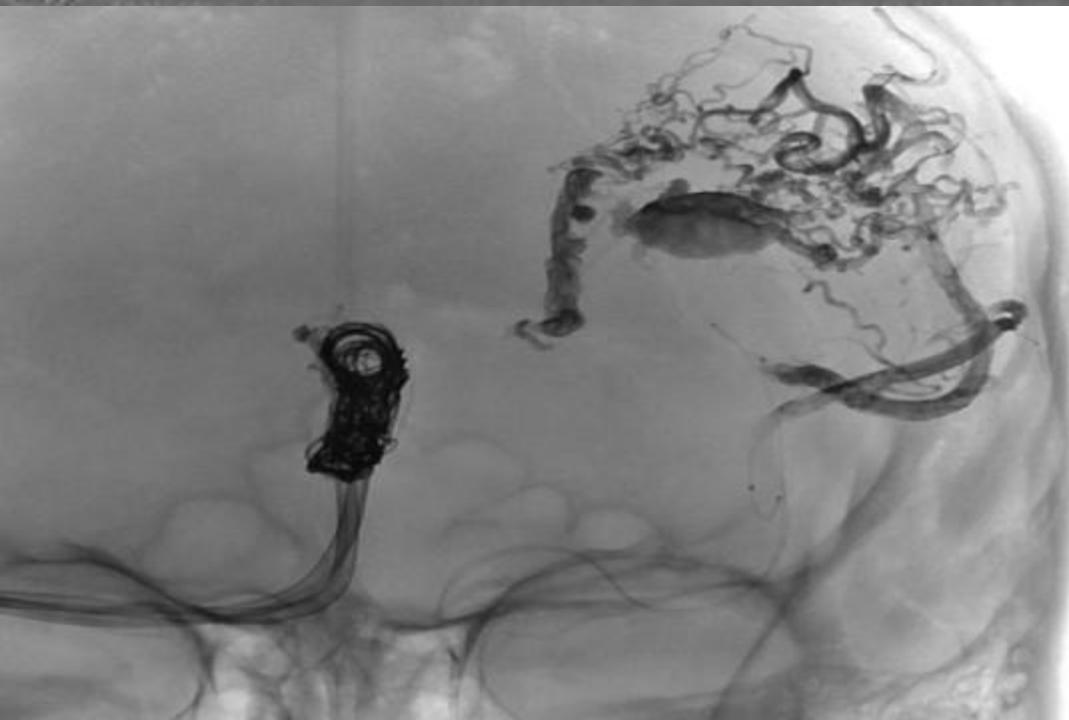
We can notice "Microcatheter migration" with coils (blue arrows)

Starting trans-arterial injection quickly
for haemodynamic balance

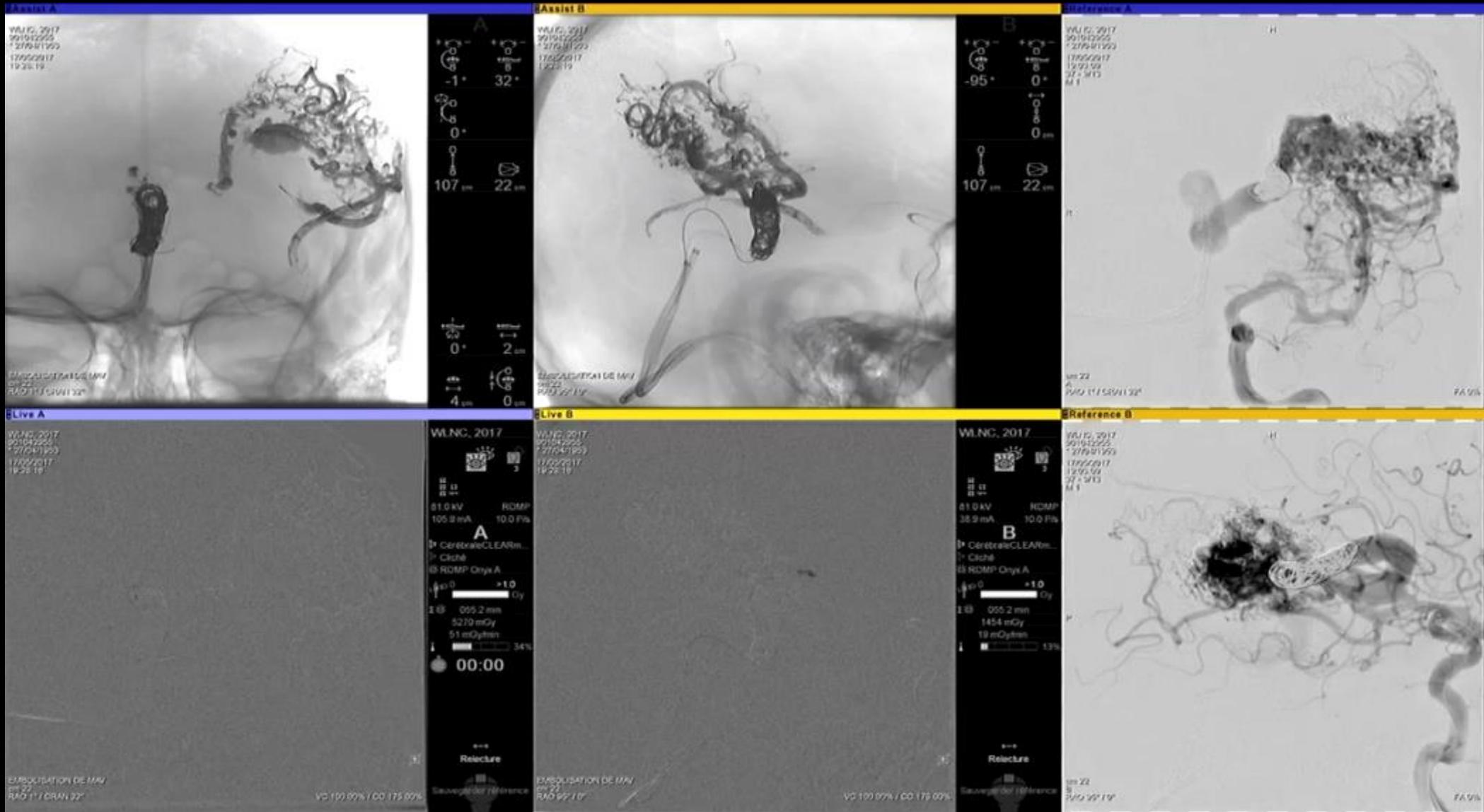


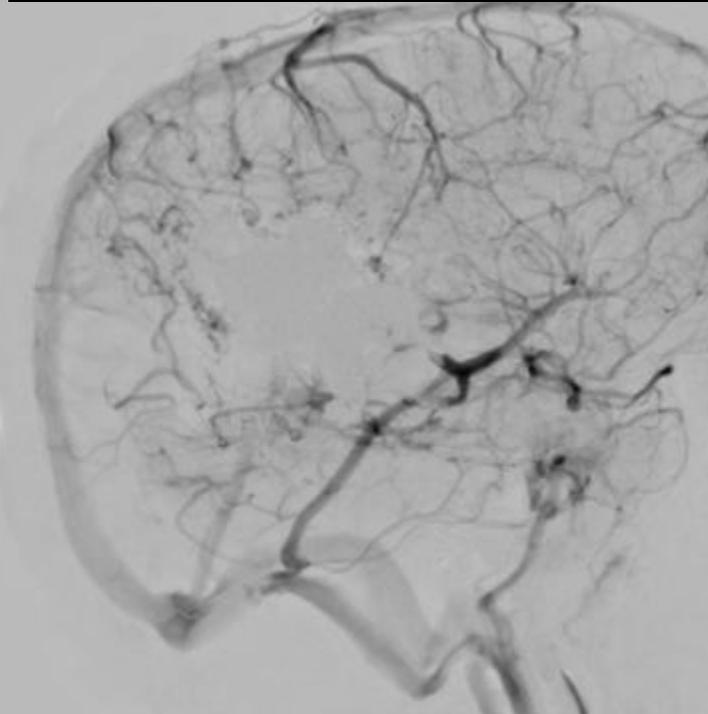
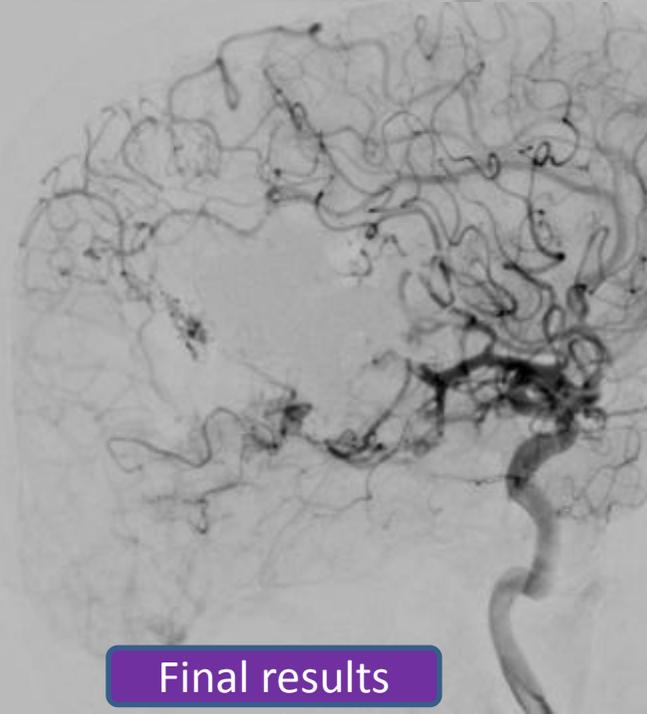
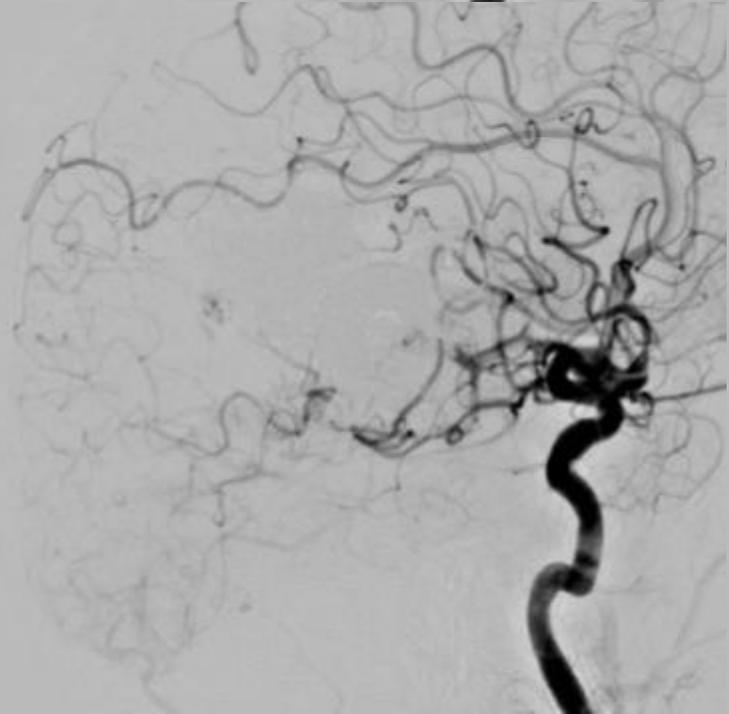
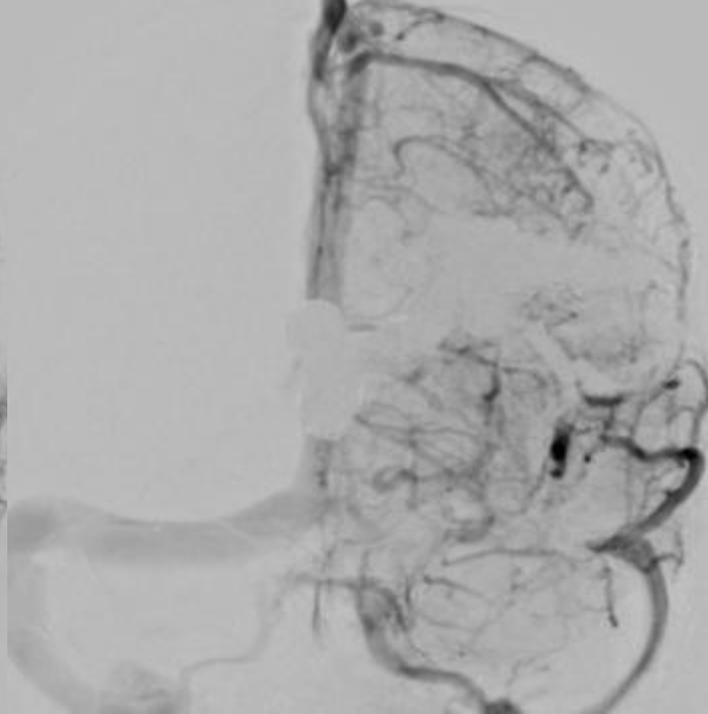
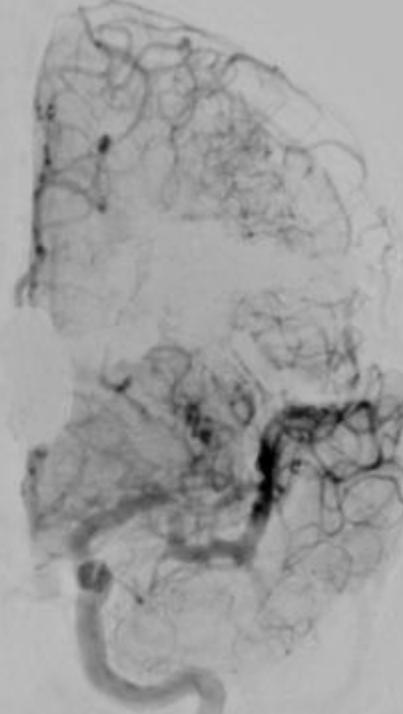
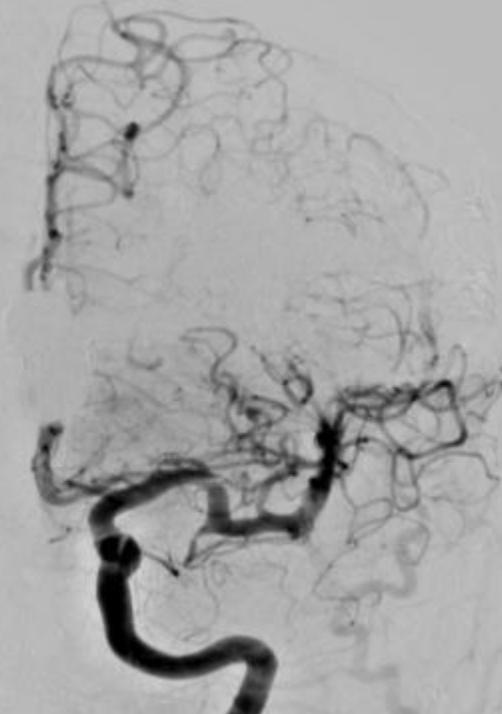
EMBOUSATION DC 1MM
10/2017
21/10/17

EMBOUSATION DC 1MM
10/2017
21/10/17

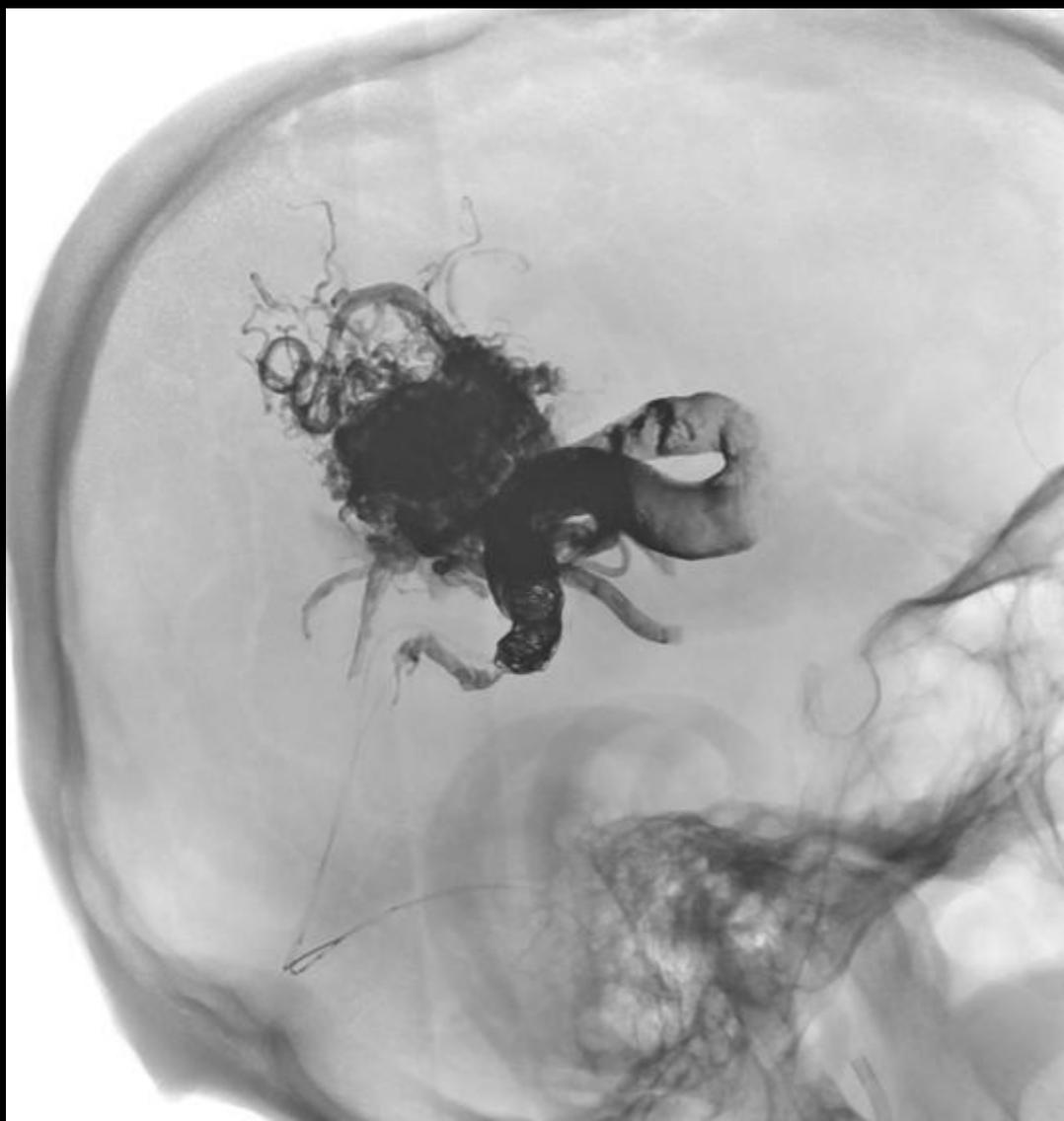
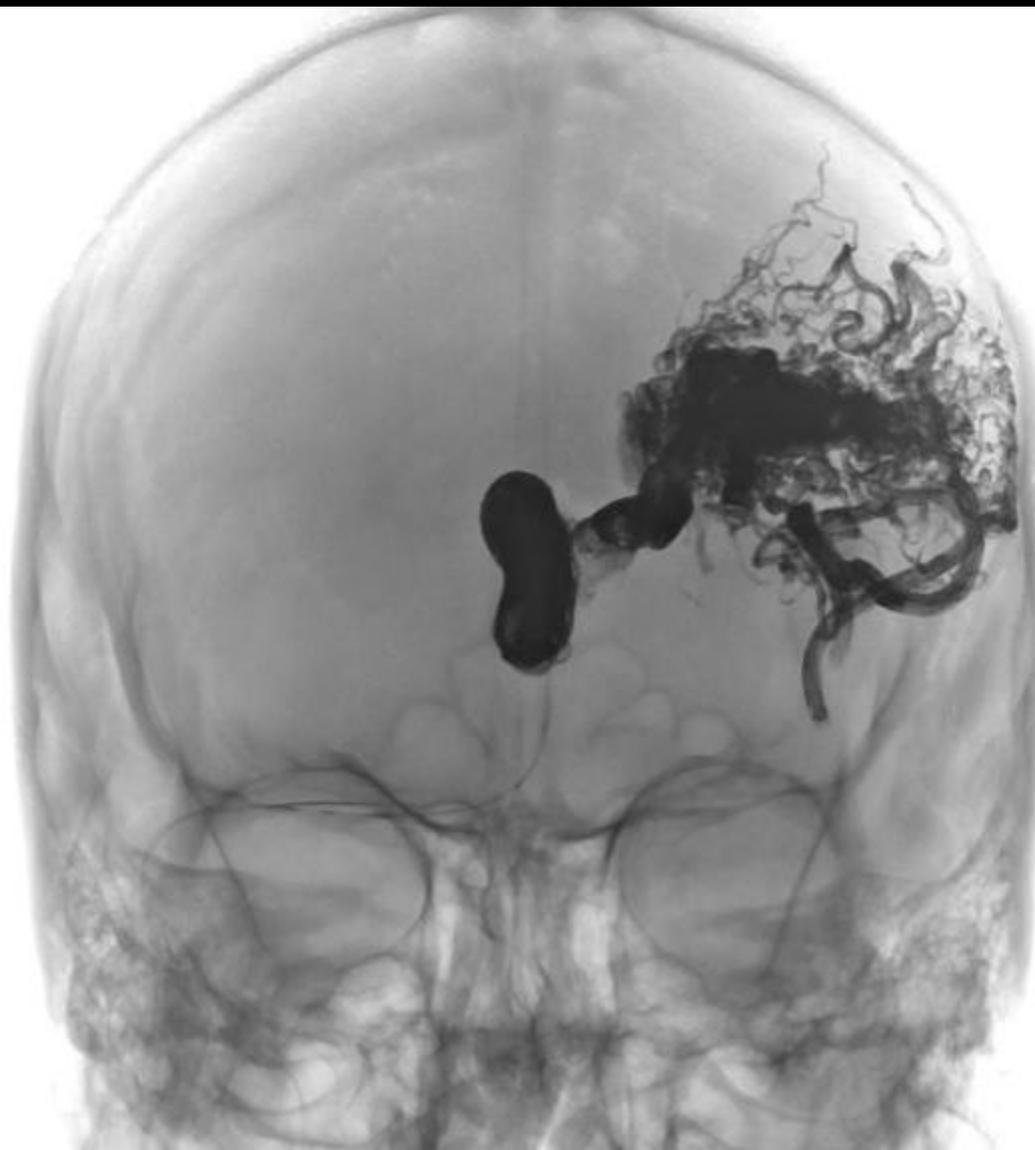


Return back to trans-venous injection till complete nidus exclusion





Final results

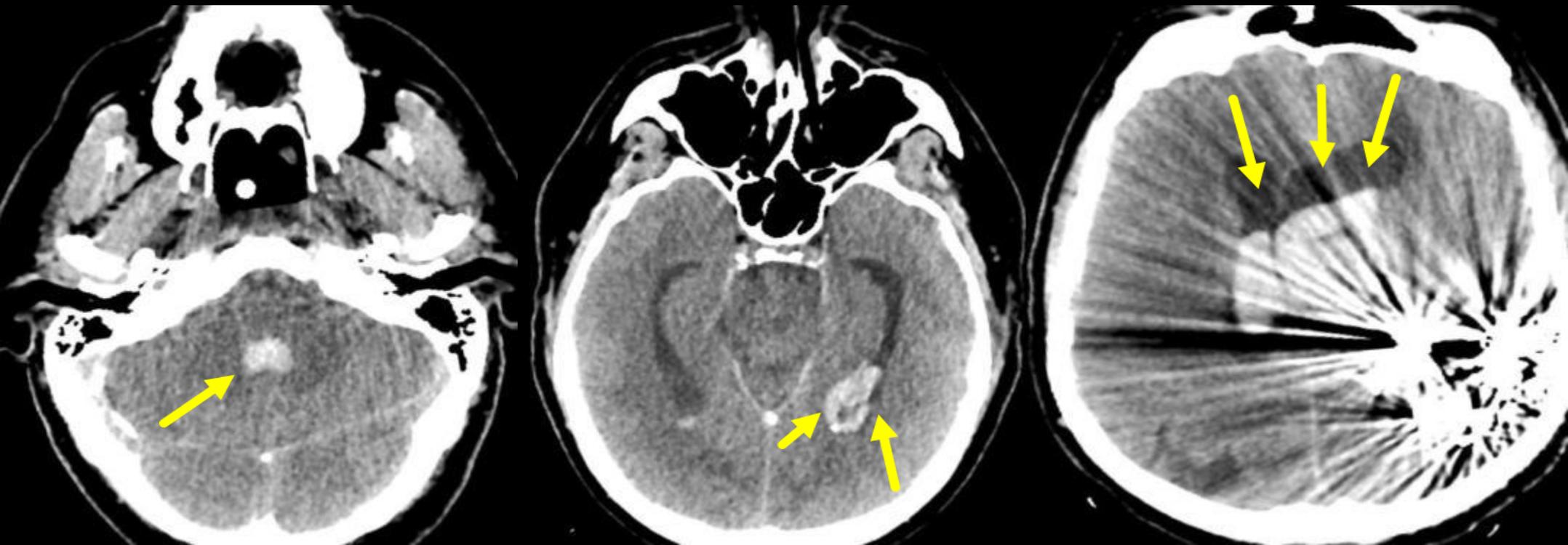




Beginning of IVH

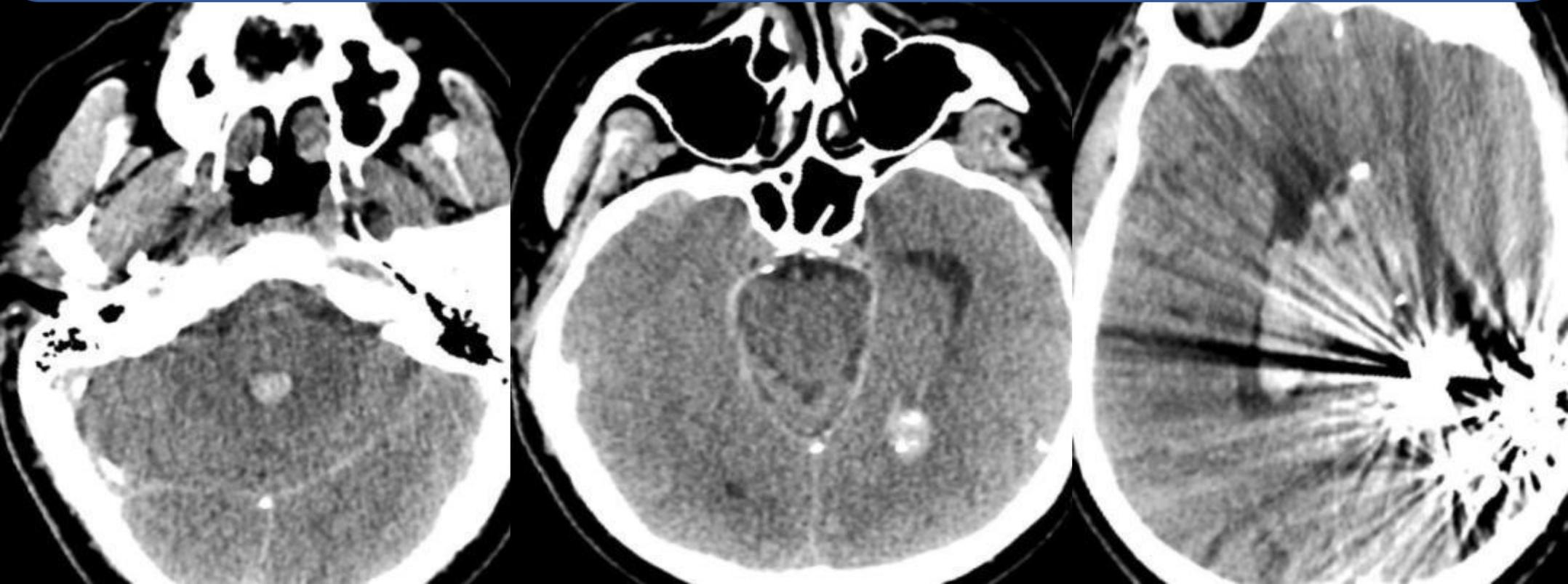


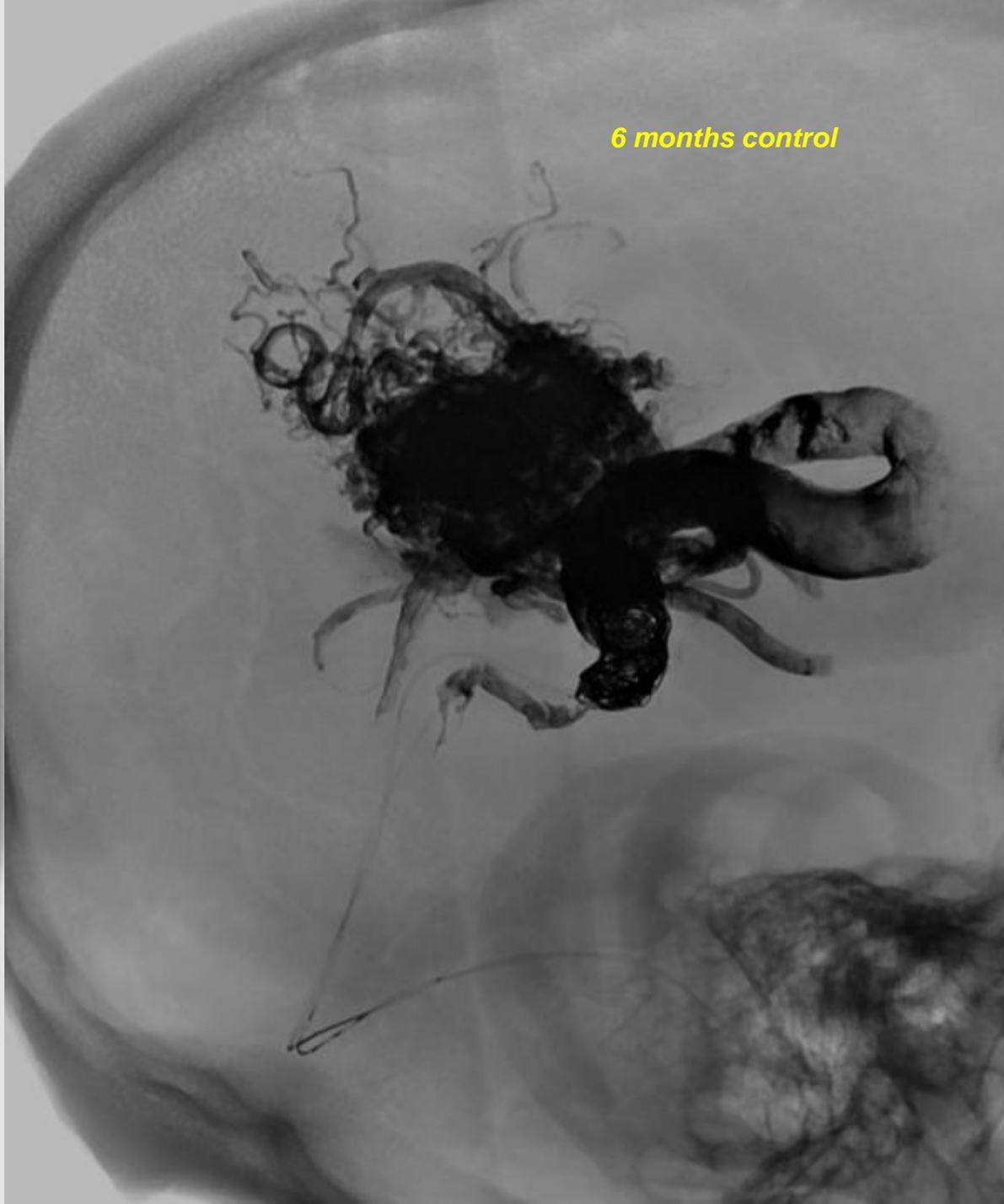
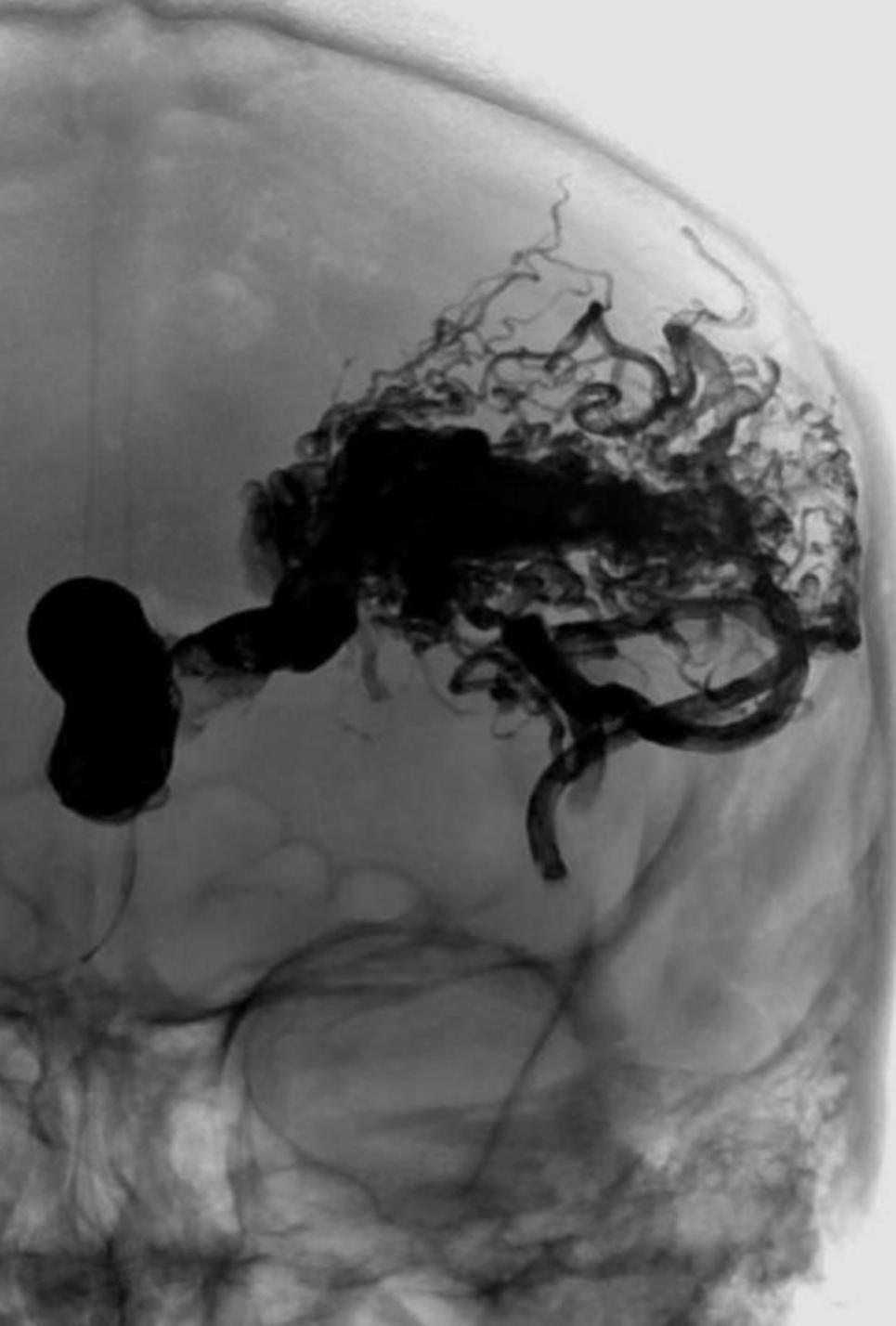
After complete embolization of the AVM, the patient was kept under anesthesia for the next 24 hours. CT BRAIN after 24h revealed **intra-ventricular haemorrhage**. EVD was ordered for urgent CSF diversion.

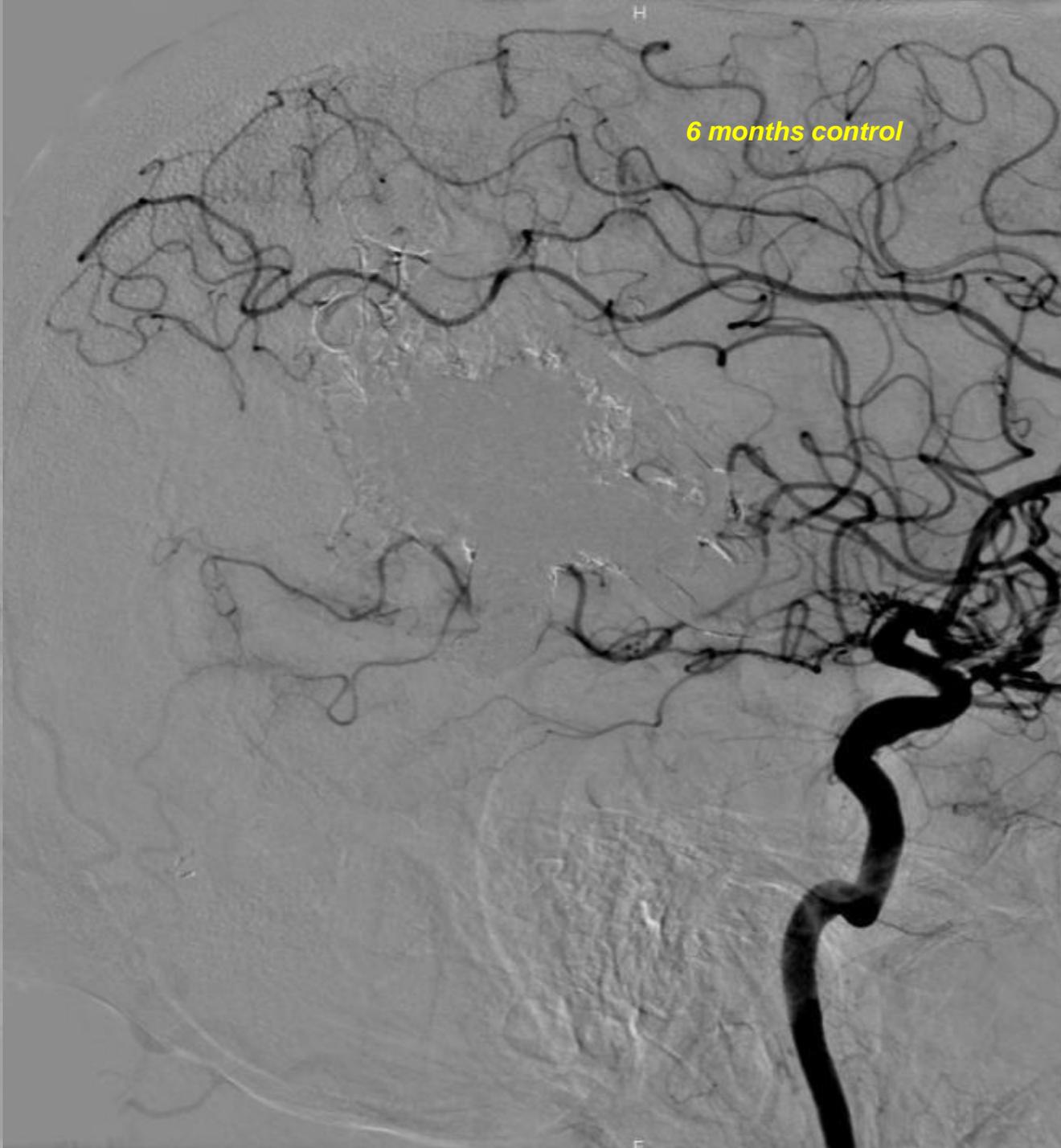
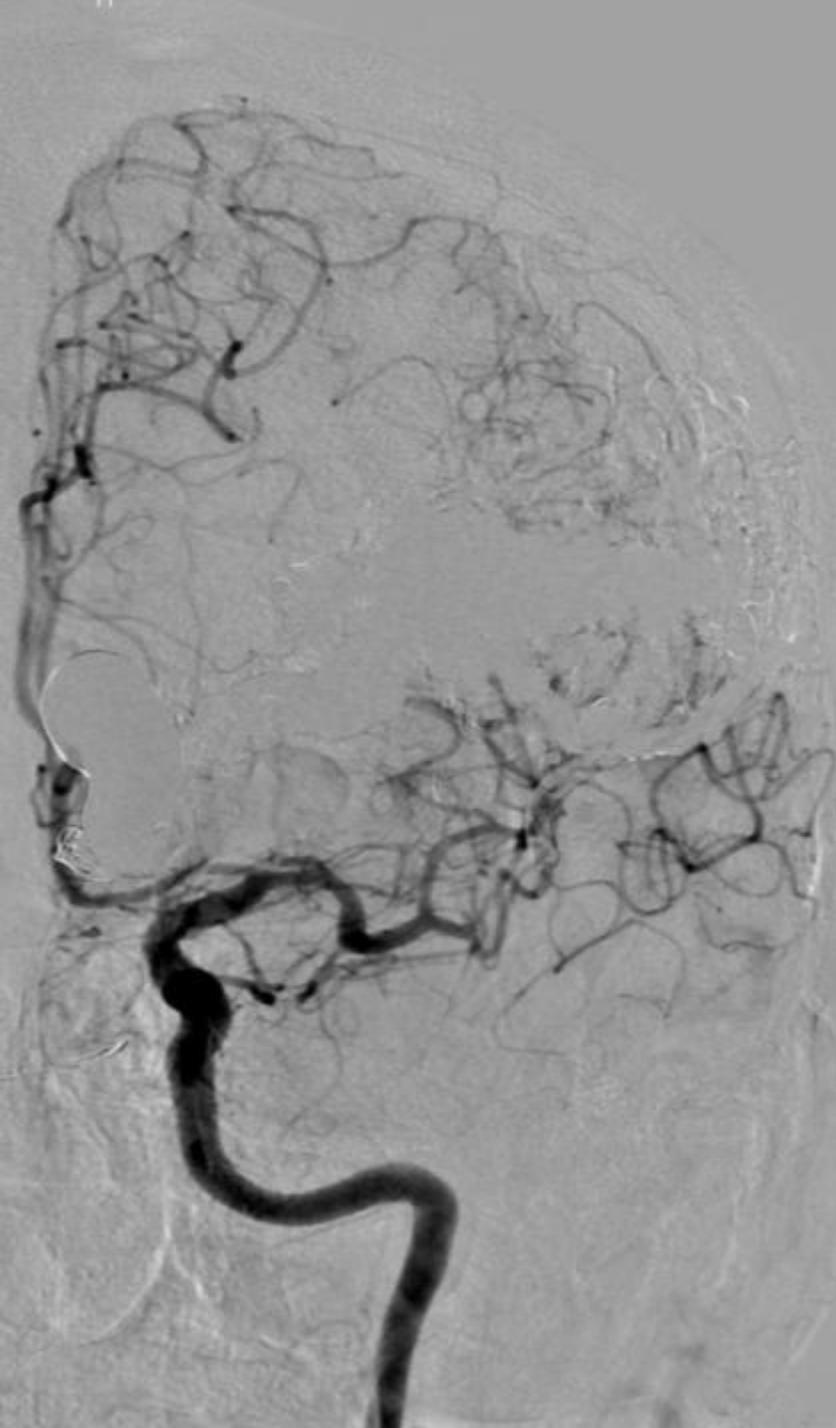


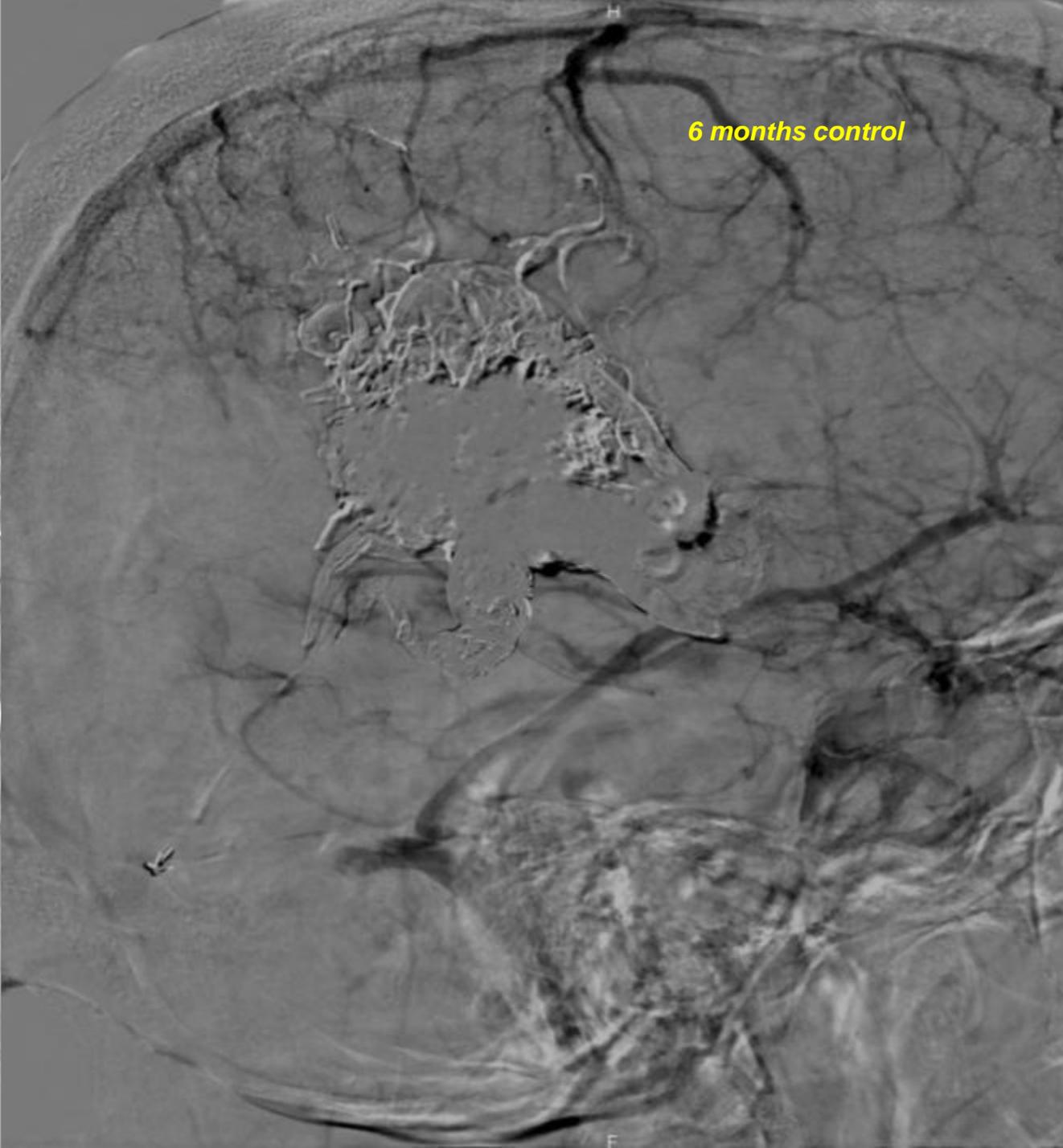
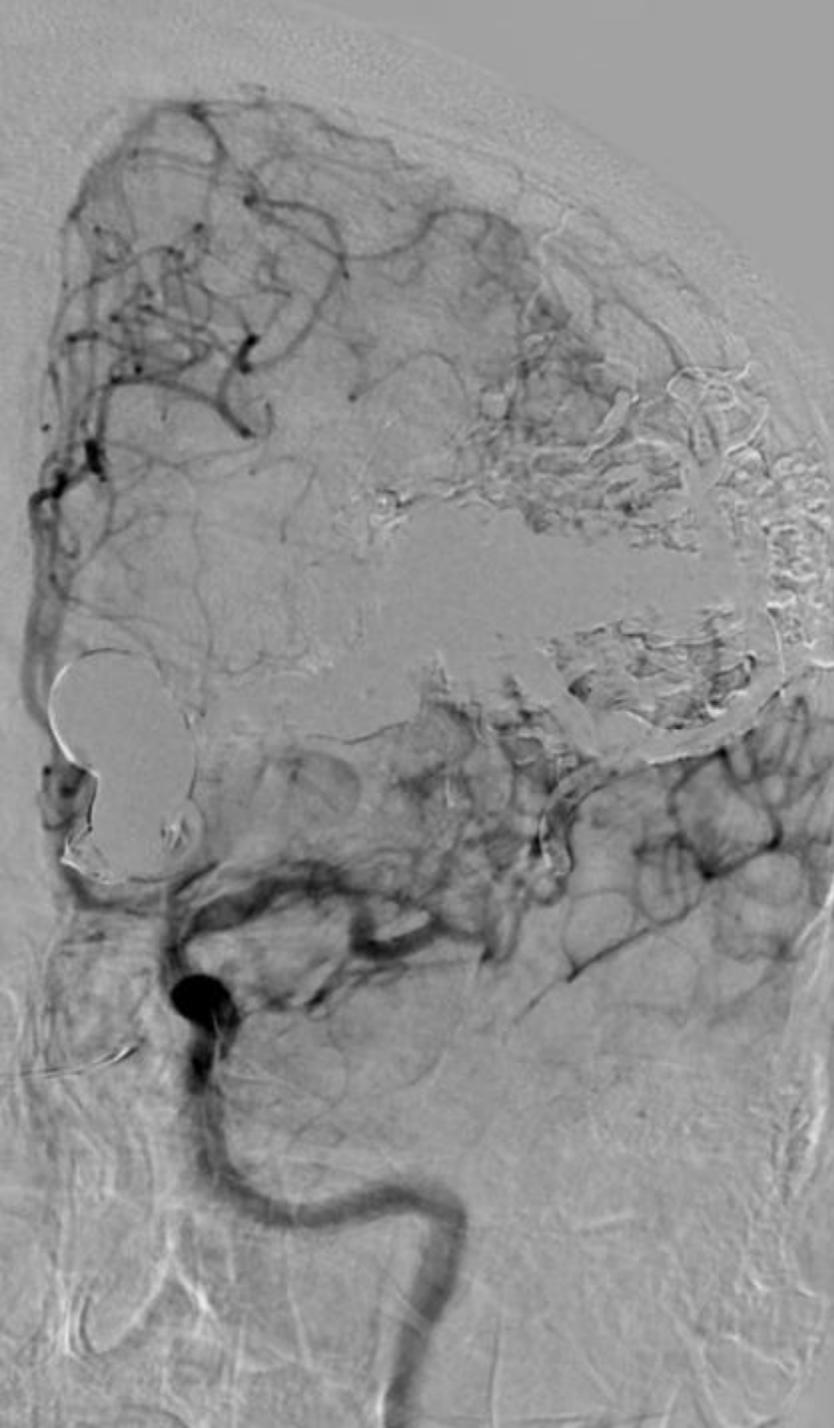
CT BRAIN after 5 days & EVD

After 5 days, the patient was free of any neurological symptoms .







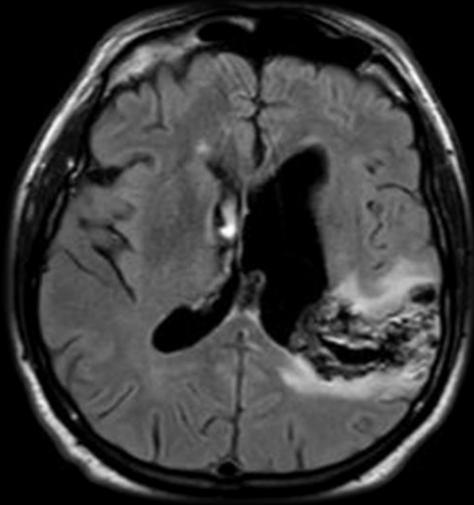
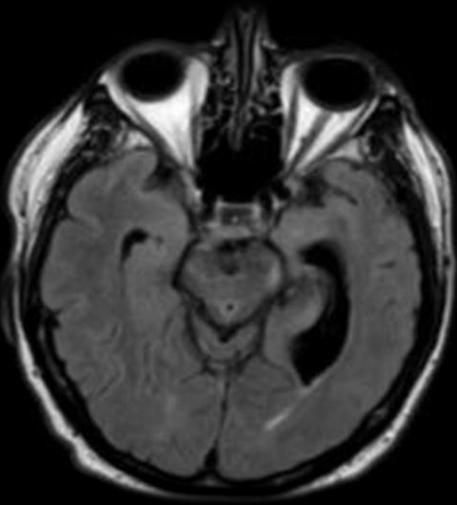


✓ No Ischemia
✓ Edema around AVM

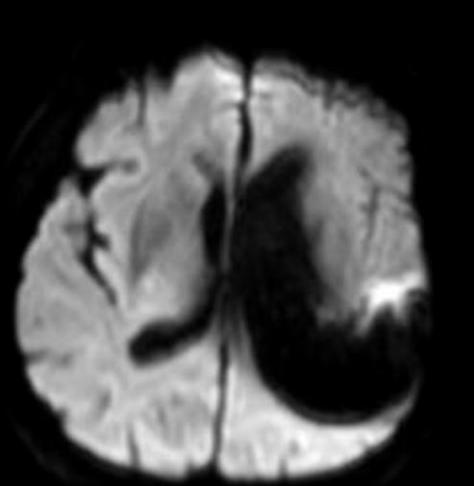
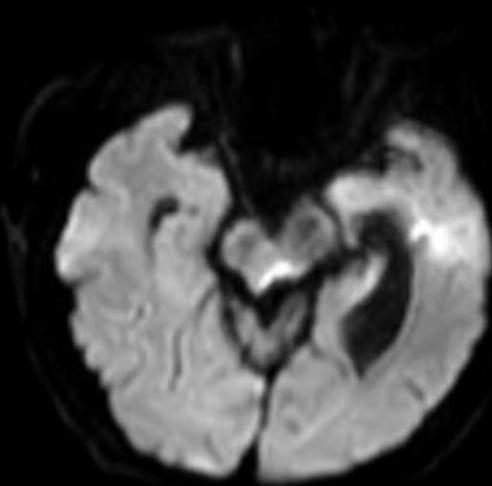
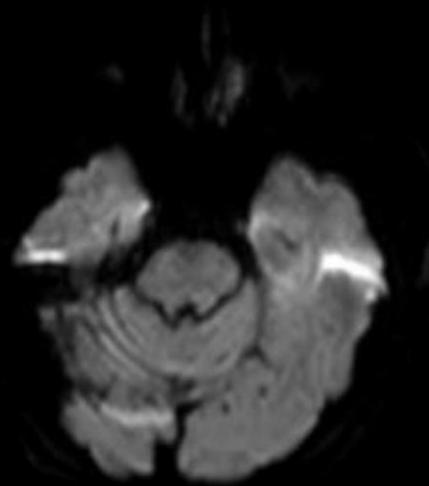


6 months control MRI

FLAIR



DIFFUSION

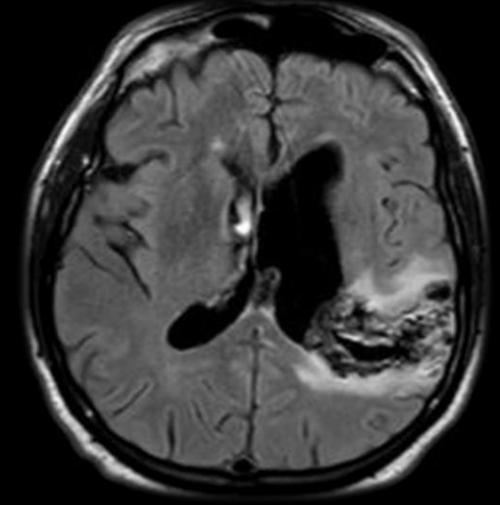
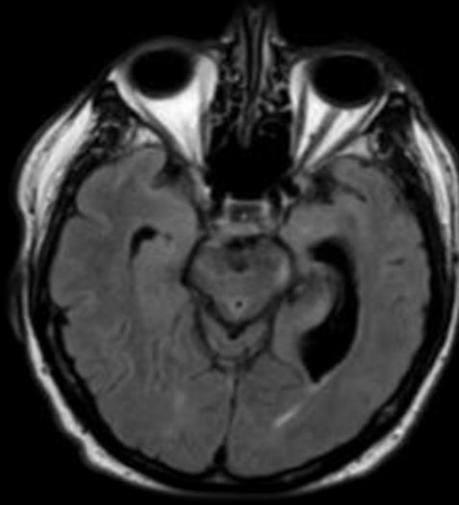


- ✓ No Ischemia
- ✓ Edema around AVM



6 months control MRI

FLAIR



mRS 2
after 1 year

***WLNC 2017 ISTANBUL CASES F-U
BY PROF KIZILKILIC AND ISLAK***



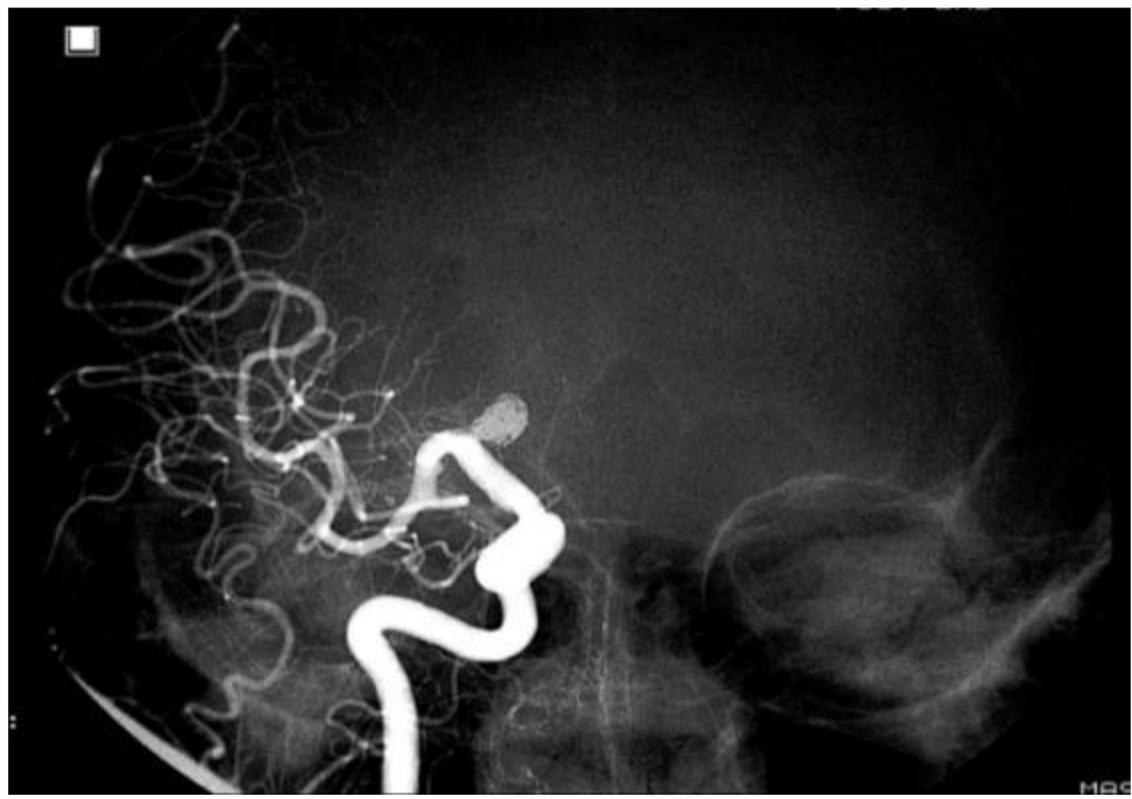
PT 1 DY

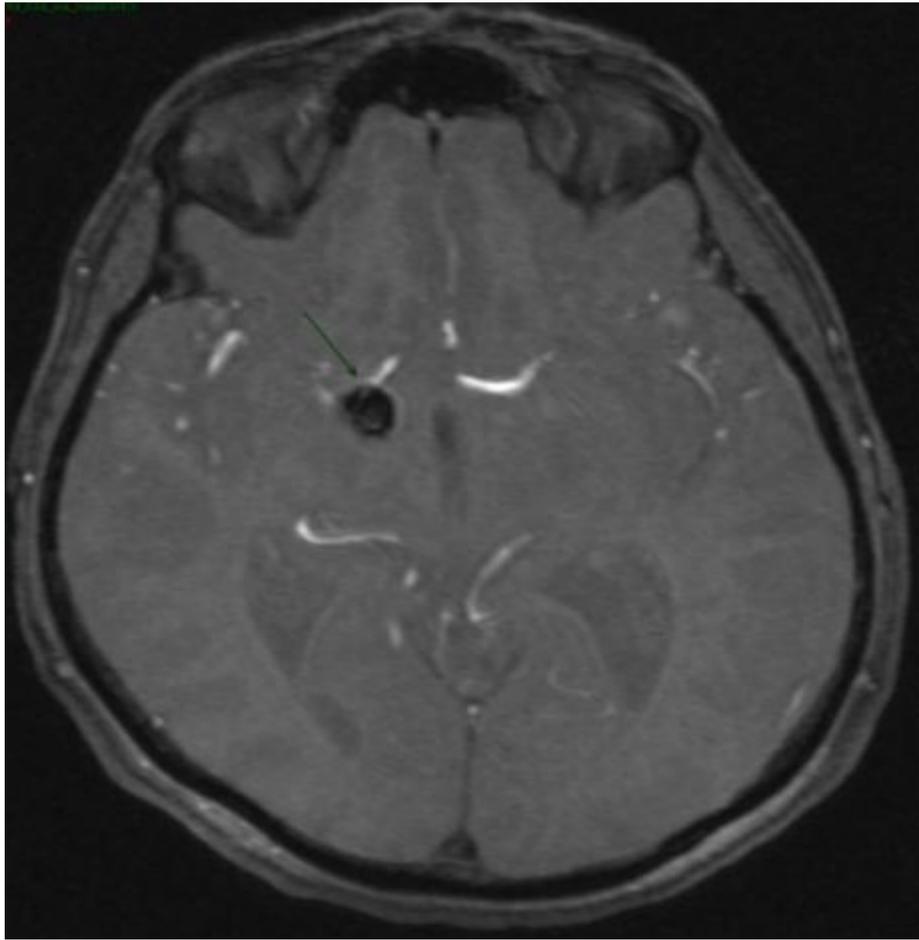
- 73 Y F
- Presented with SAH 6 years ago
- R ACA A1 segment aneurysm treated with coils as parent artery occlusion. 1st year cont N
- Routine 5th year control MRA R ACA A1
Recurrent aneurysm



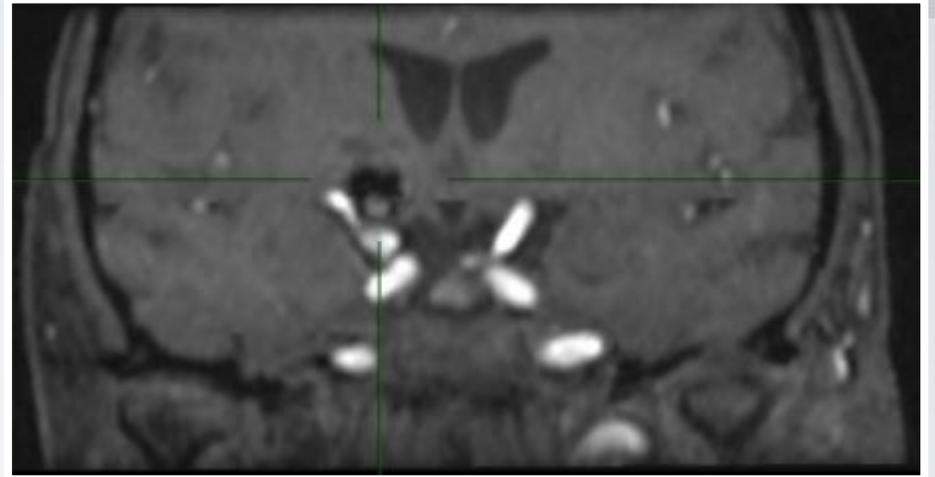


2010

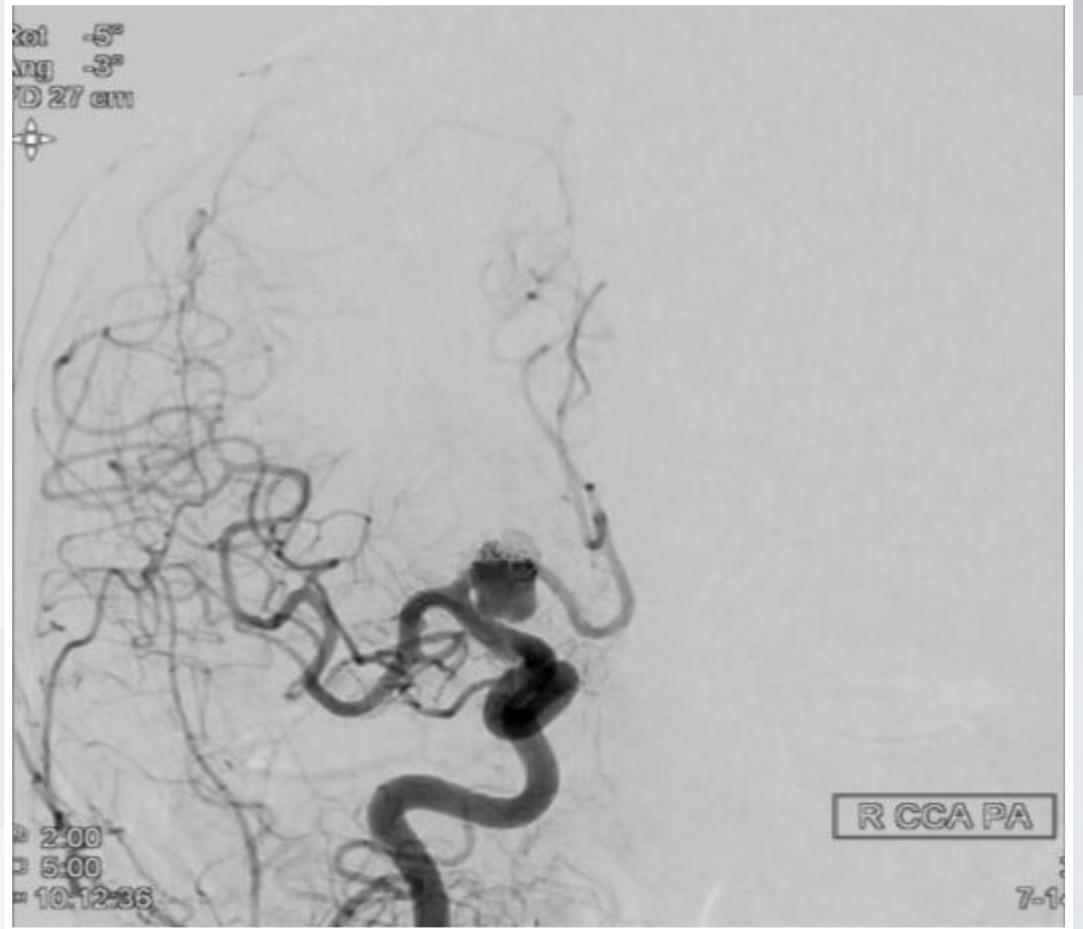




1st year control MRI



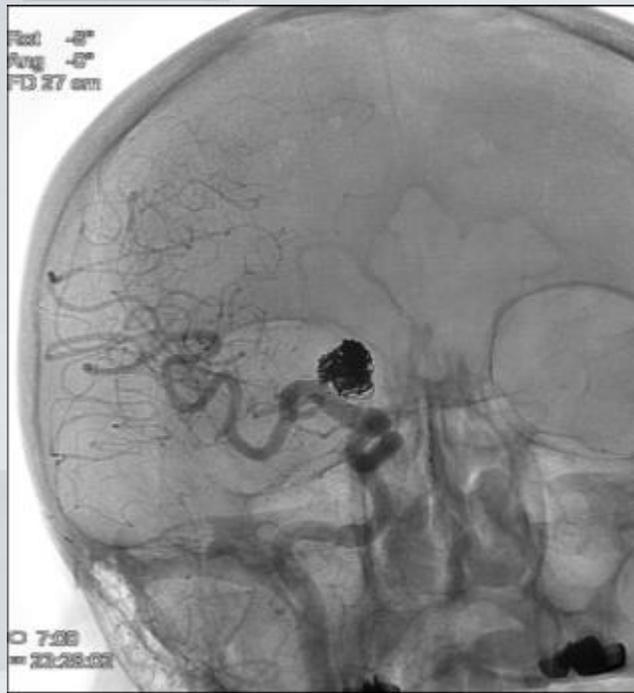
2017



TREATMENT

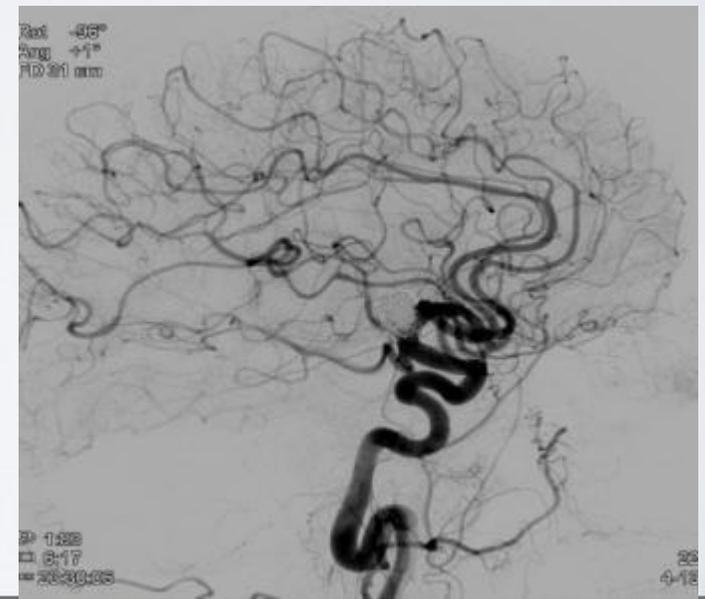
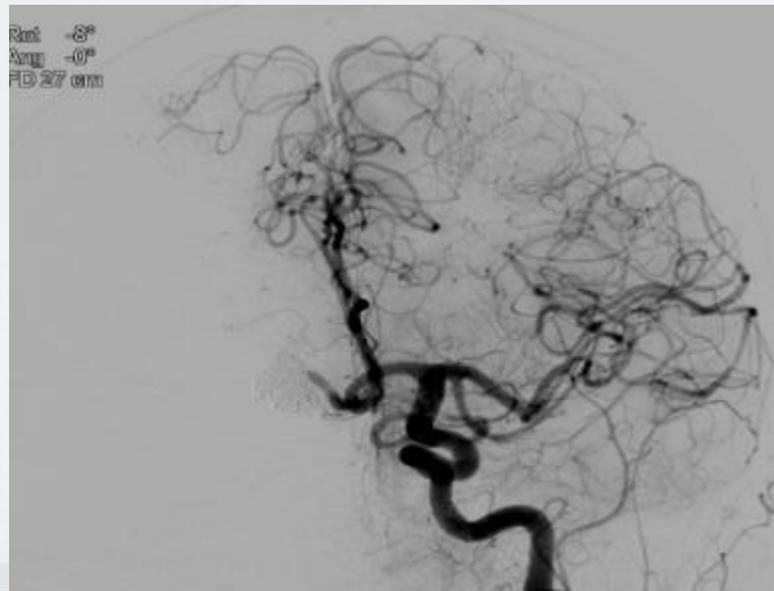
- Parent artery occlusion w coils versus FD

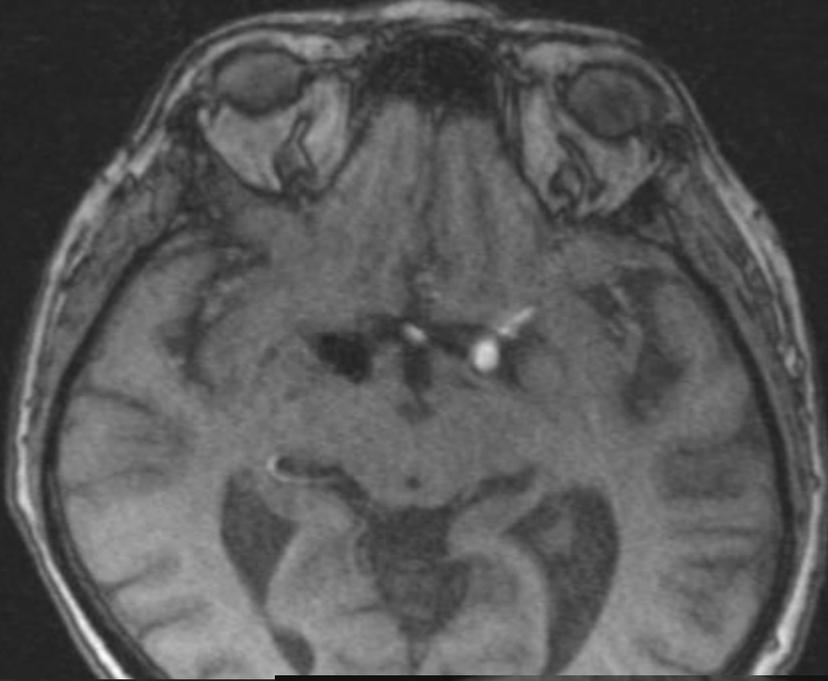
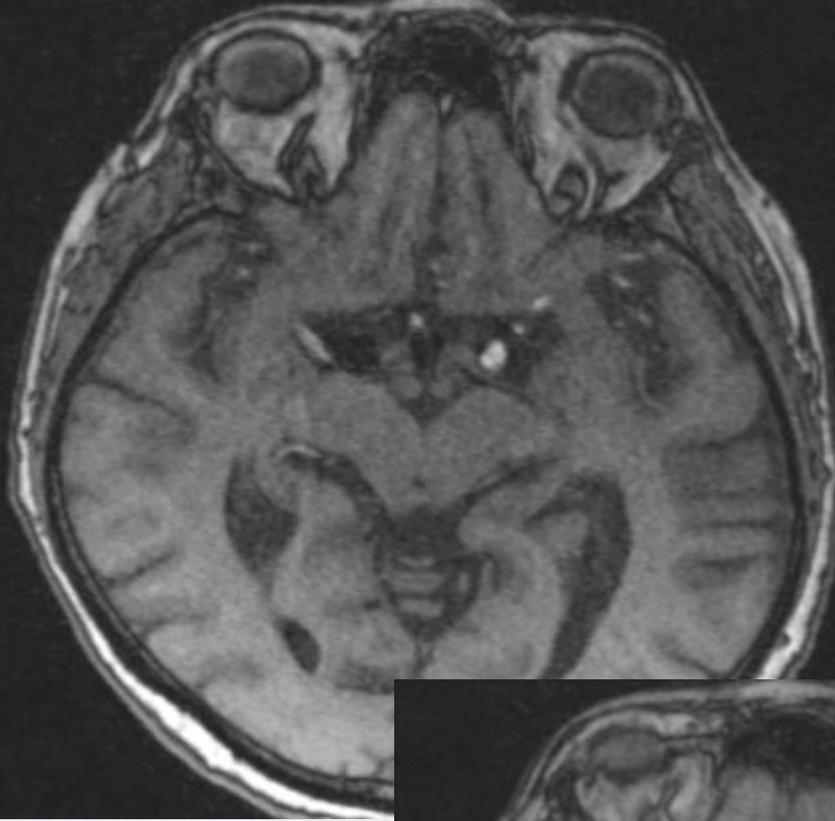




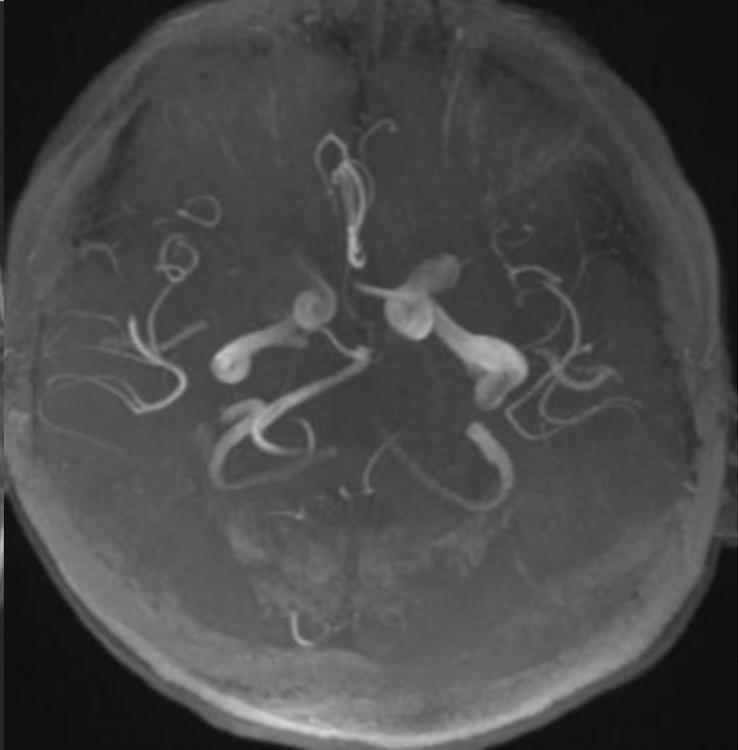
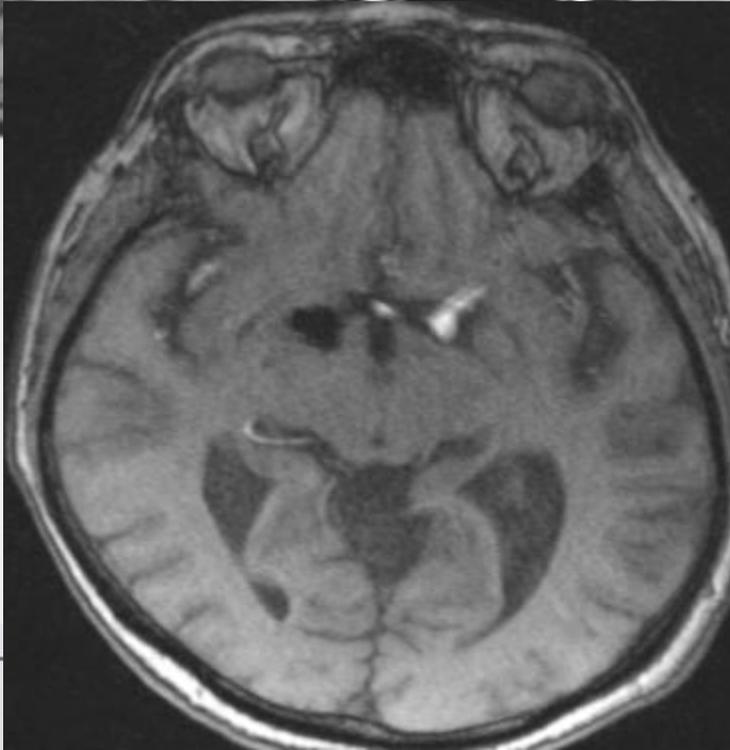
15.05.2017

Post treatment





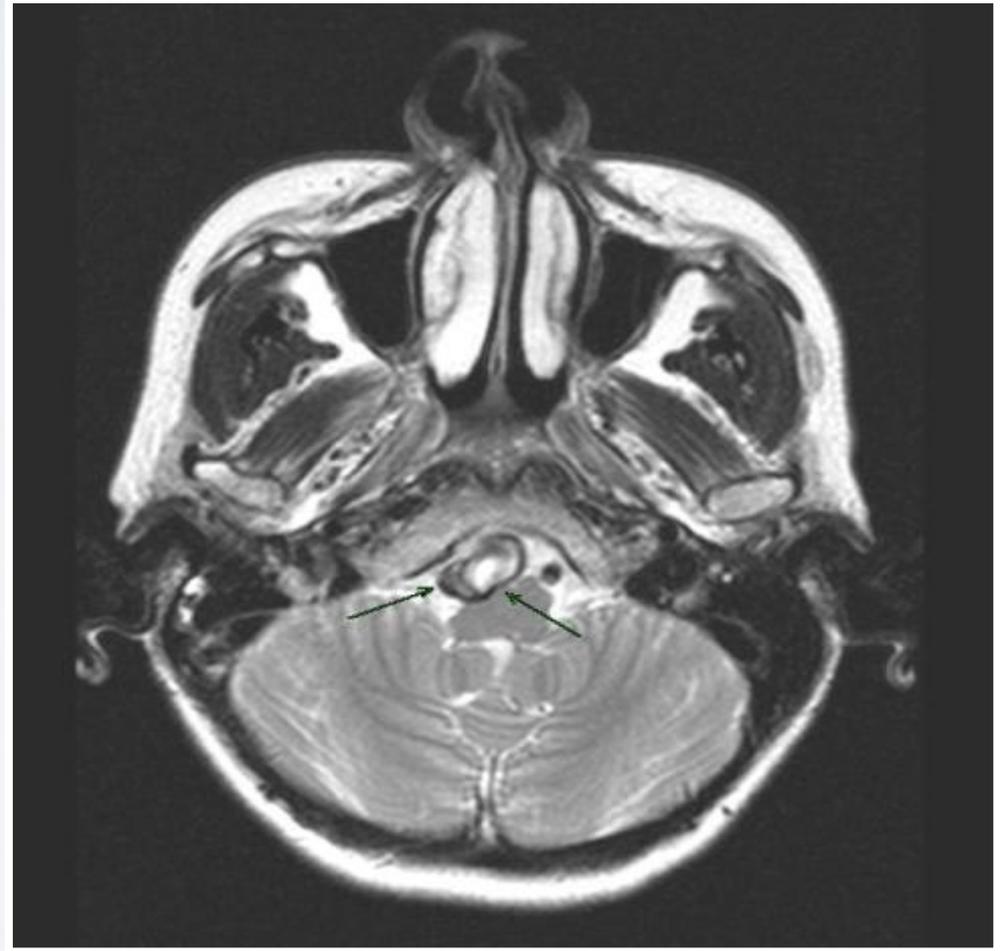
1 year control



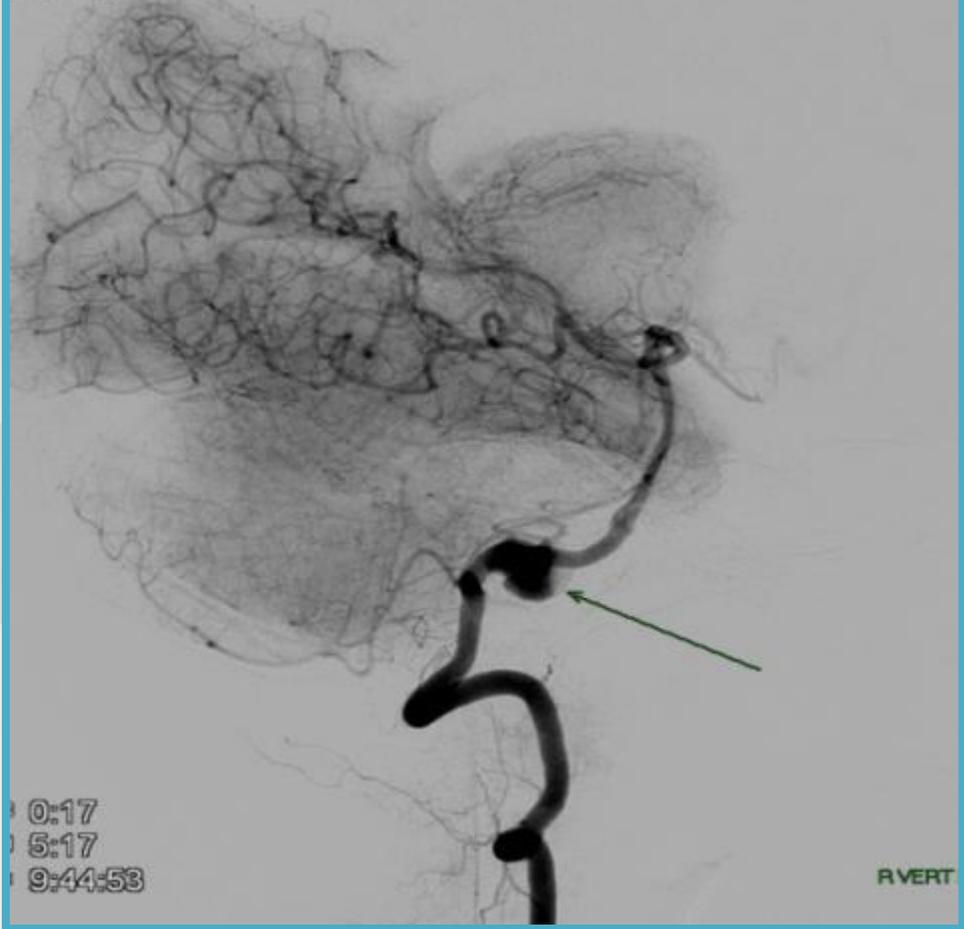
PT 2 BT

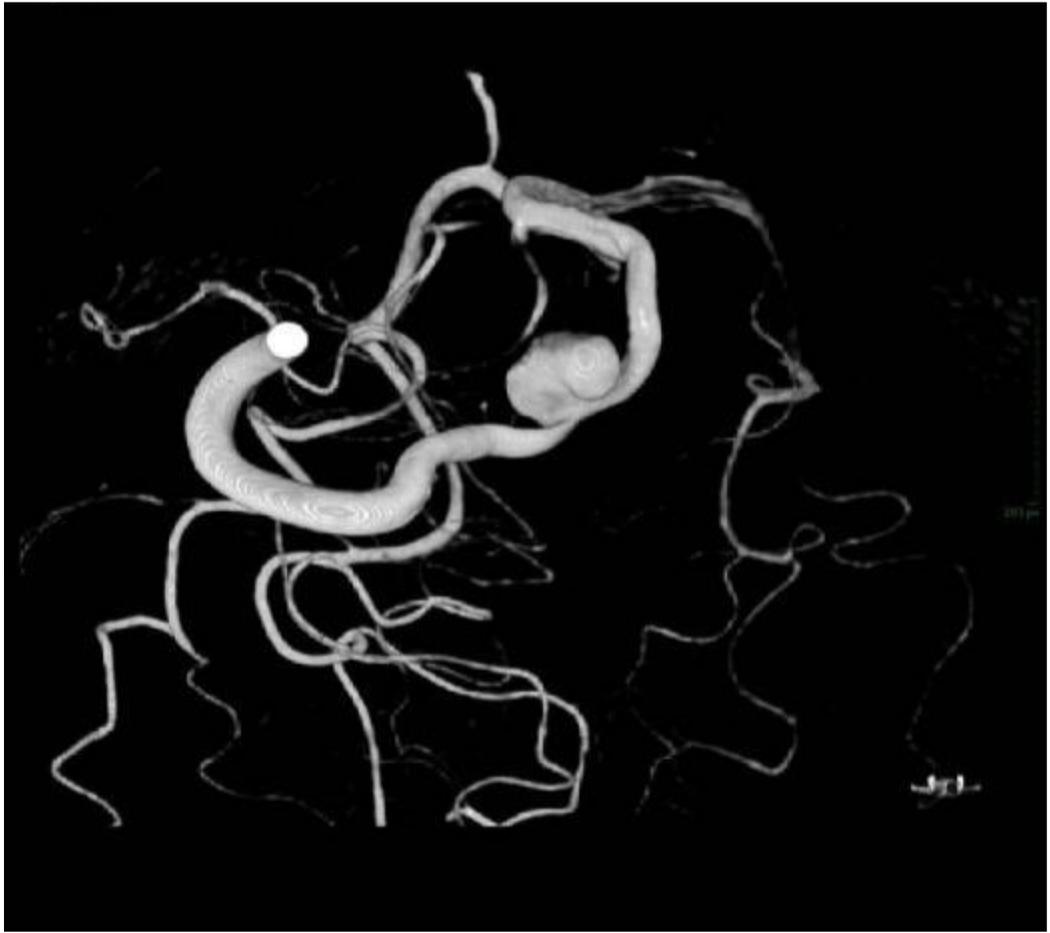
- 43 Y F
- Presented with headache
- CTA-MRA-DSA: R V4 ANEURYSM
- TREATMENT: FD





031 011



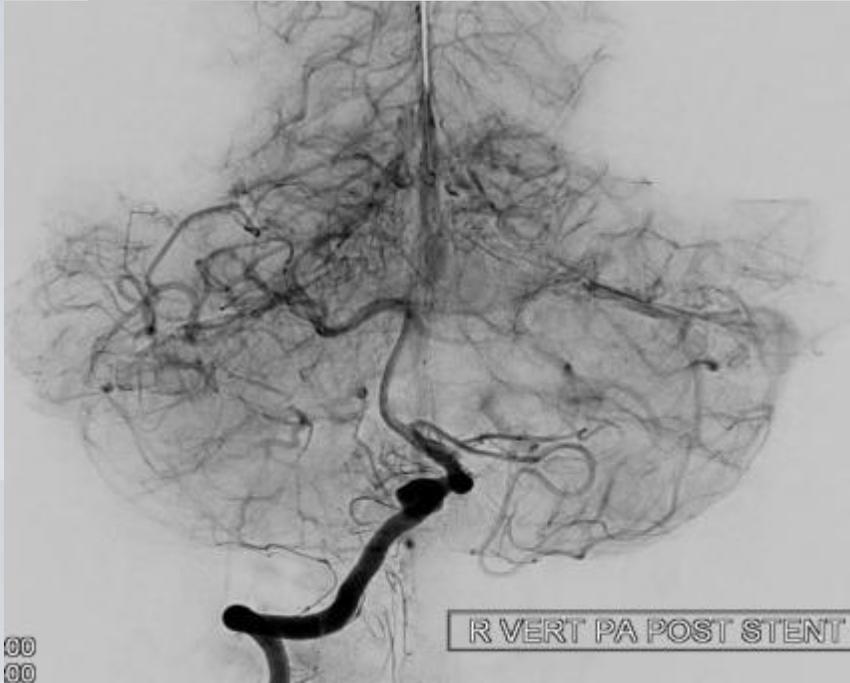


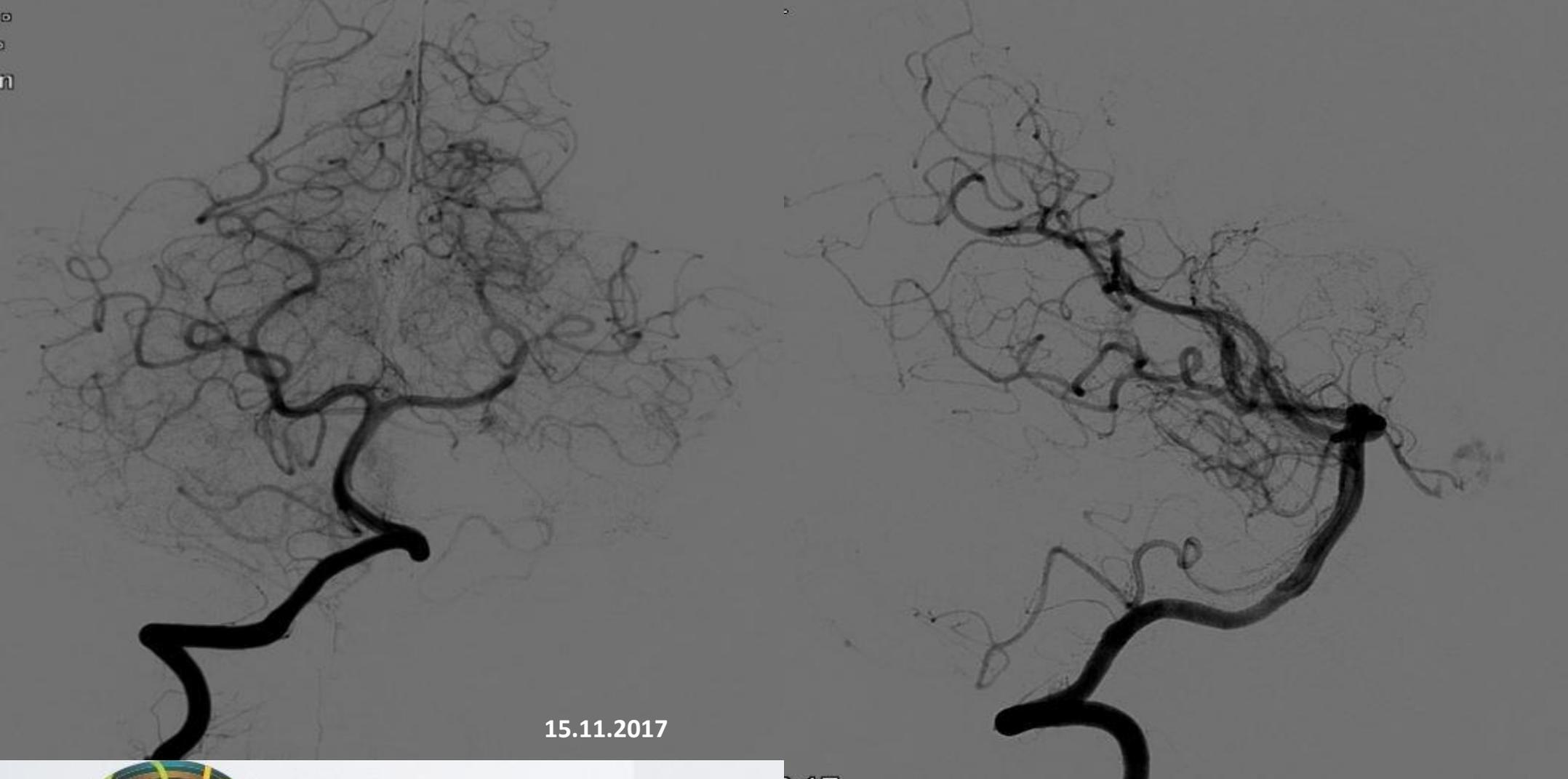
TREATMENT

- Flow diverter stent placement



15.05.2017





15.11.2017

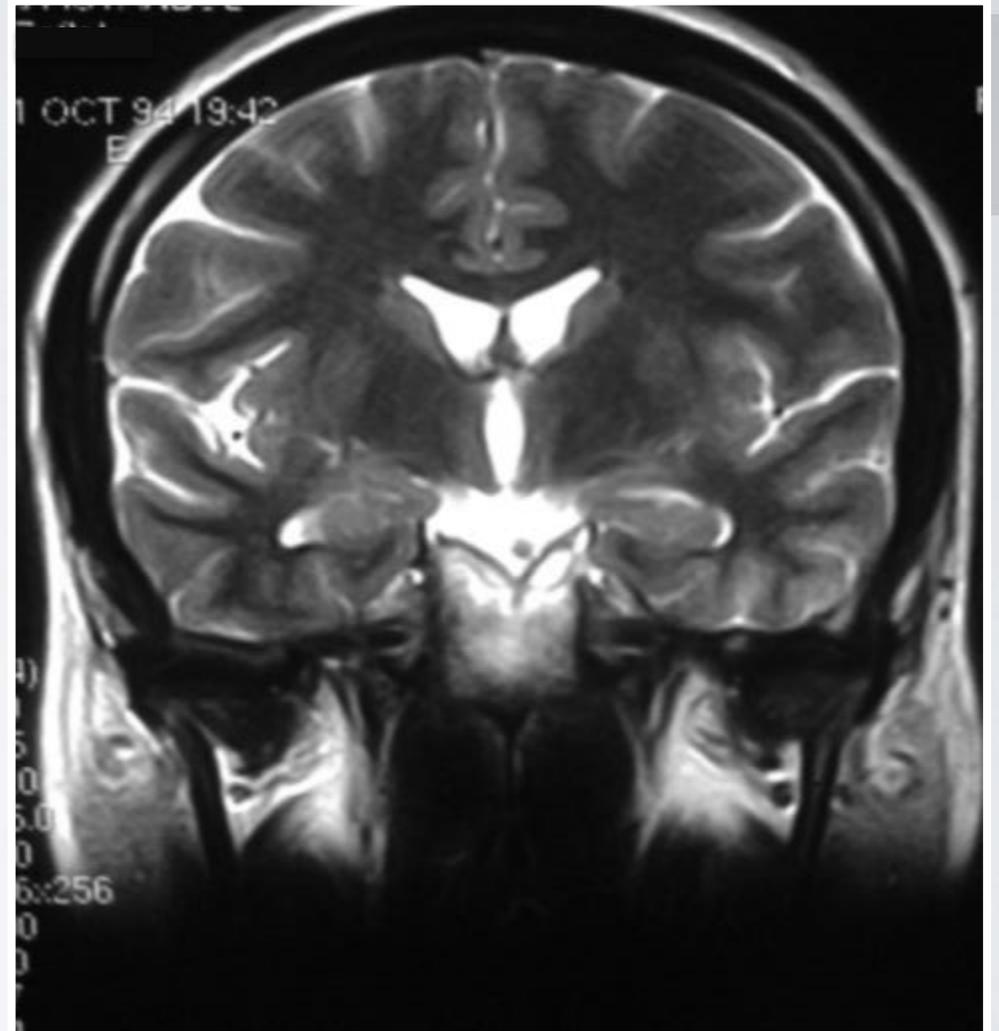
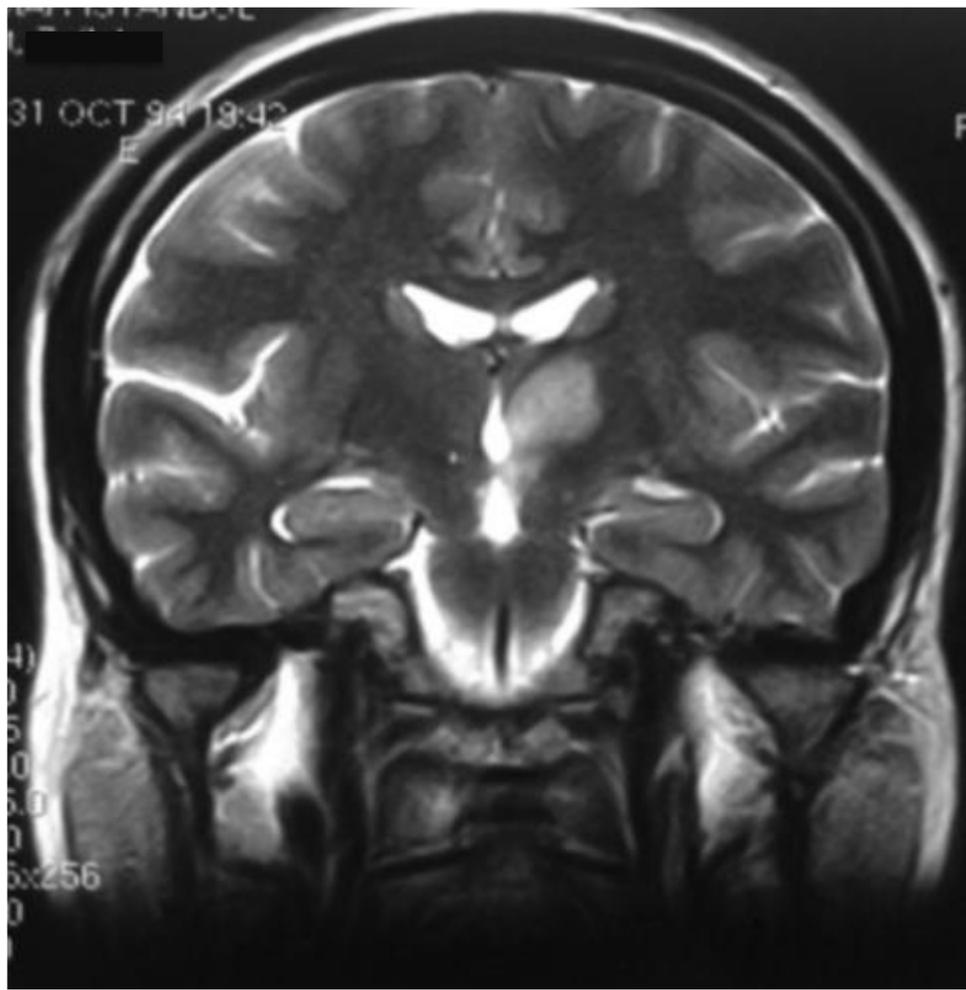


PT3 HZ

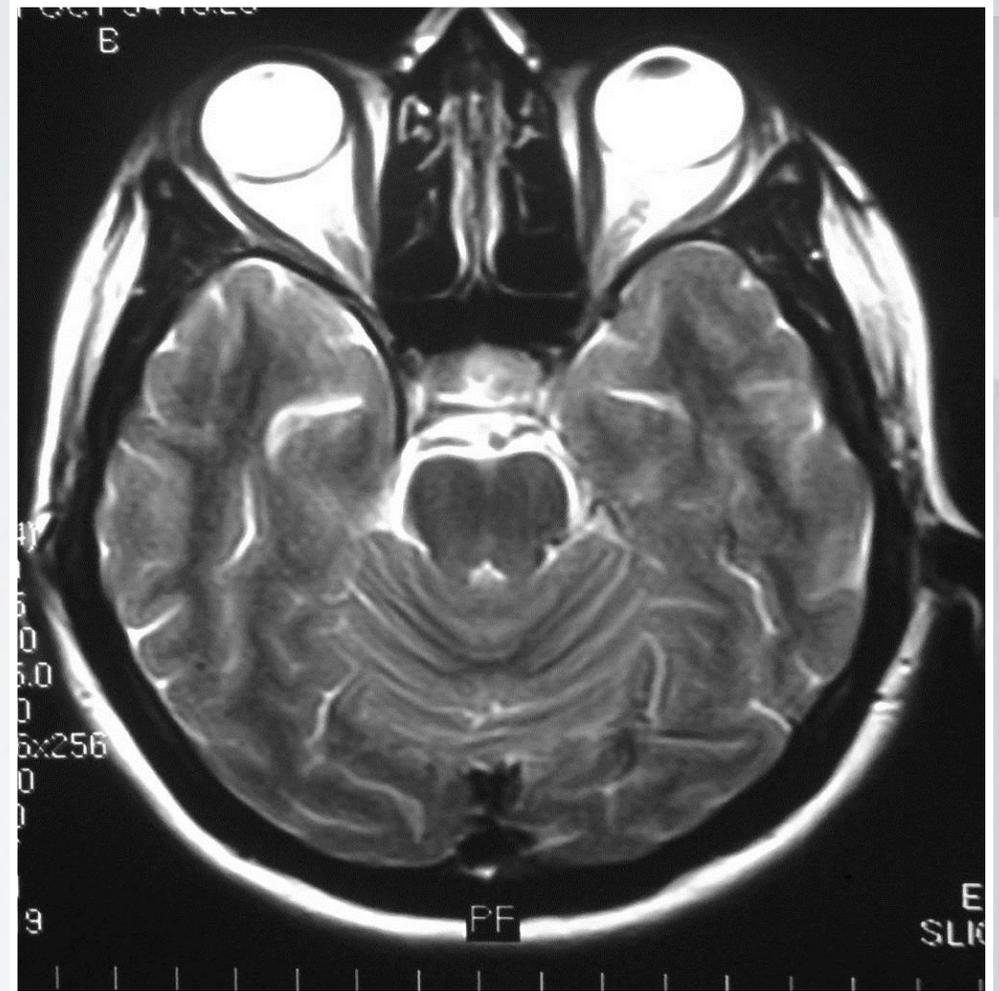
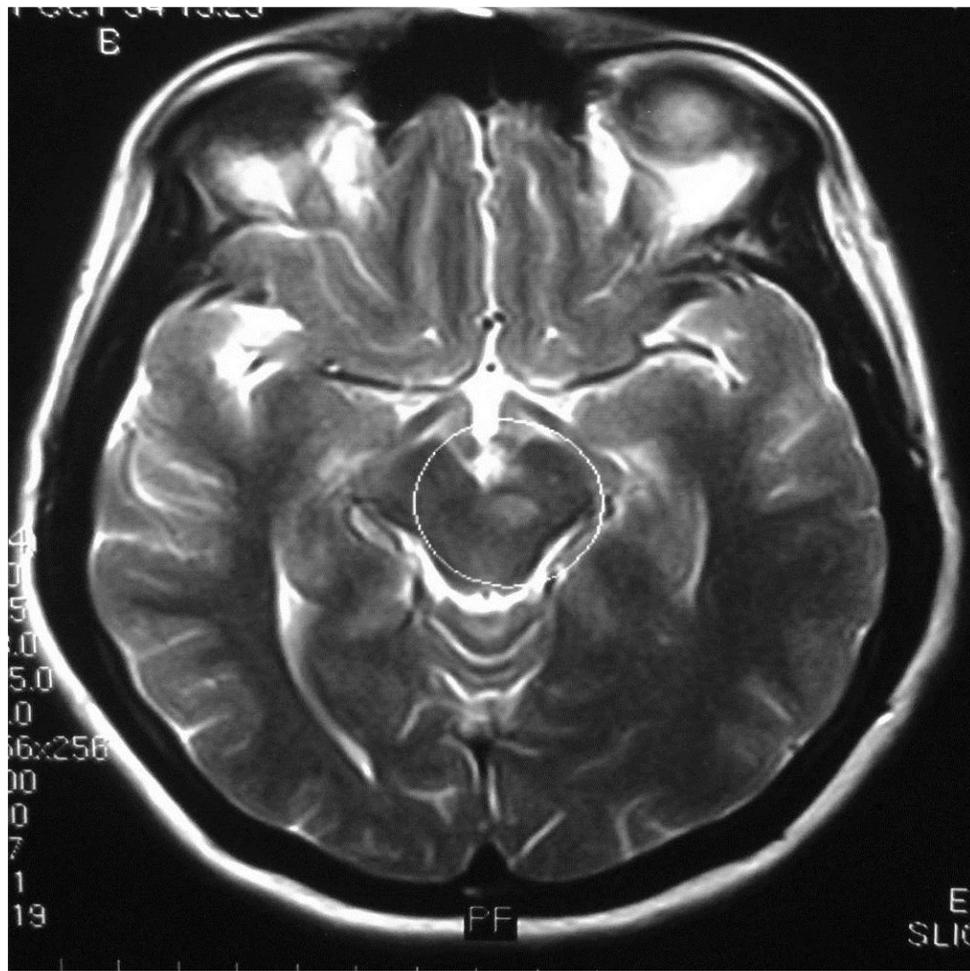
- 64 Y F
- 1994 basilar stroke (L thalamic & Mesencephalic)
- normal basilar bif
- 2016 Presented with headaches
- MRA-DSA: Basilar apex aneurysm
- Treatment: Y stent + coil embolization

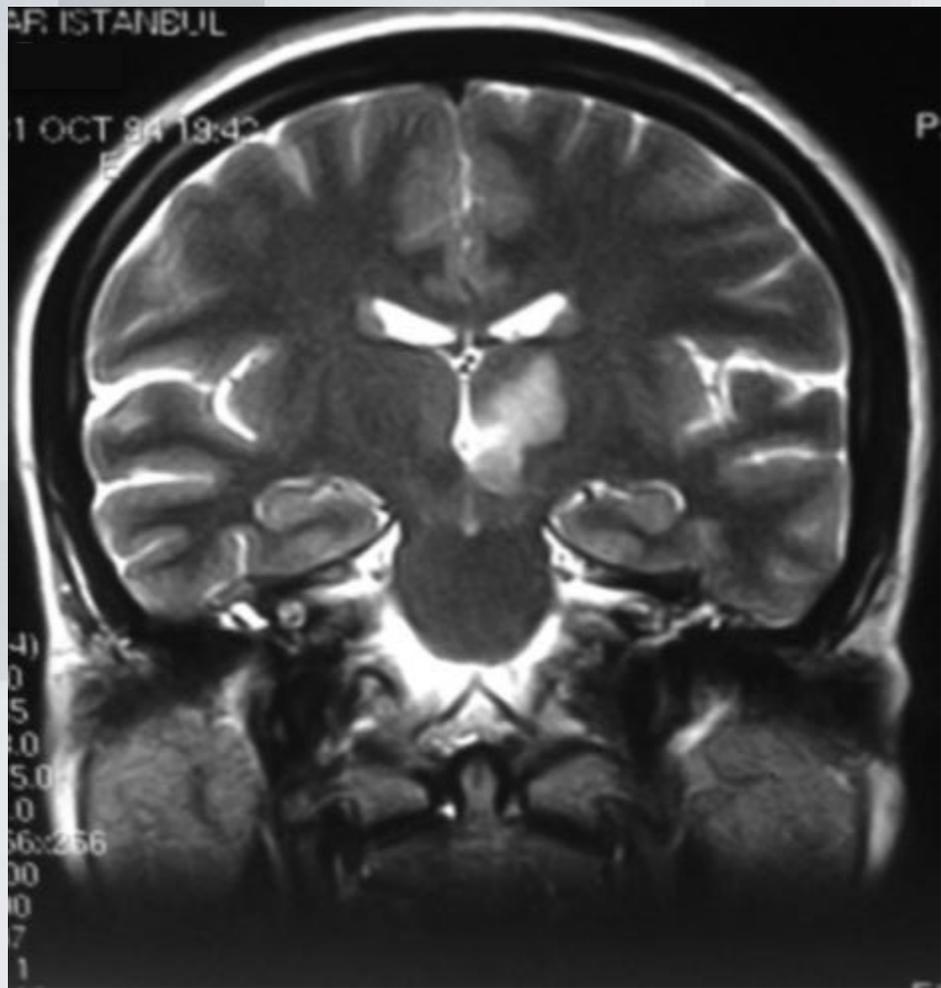


09/1994



09/1994





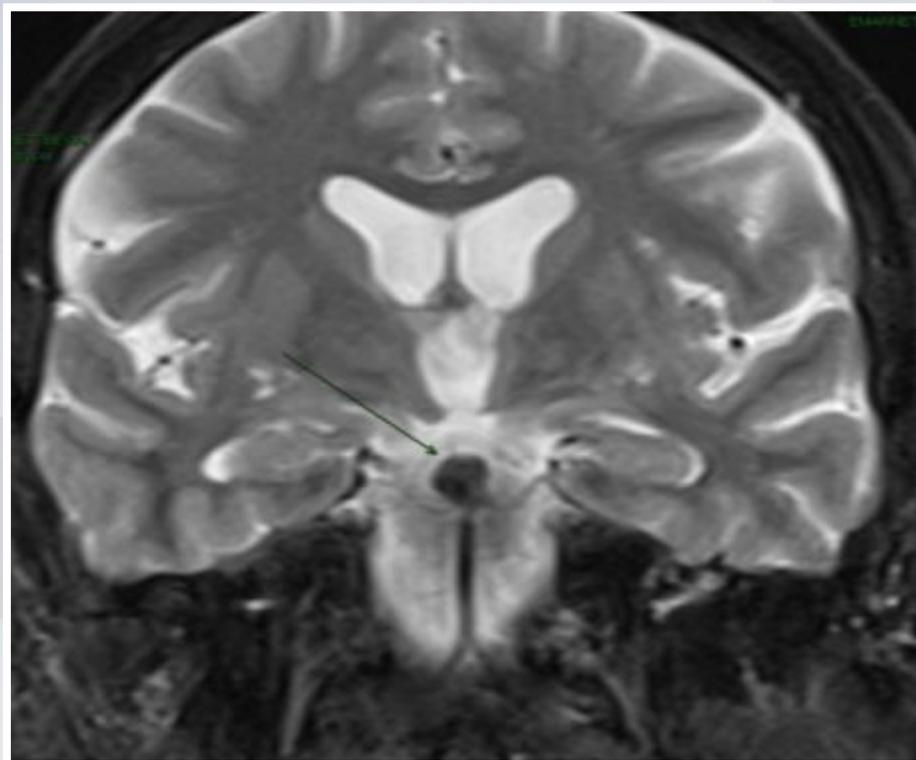
09/1994



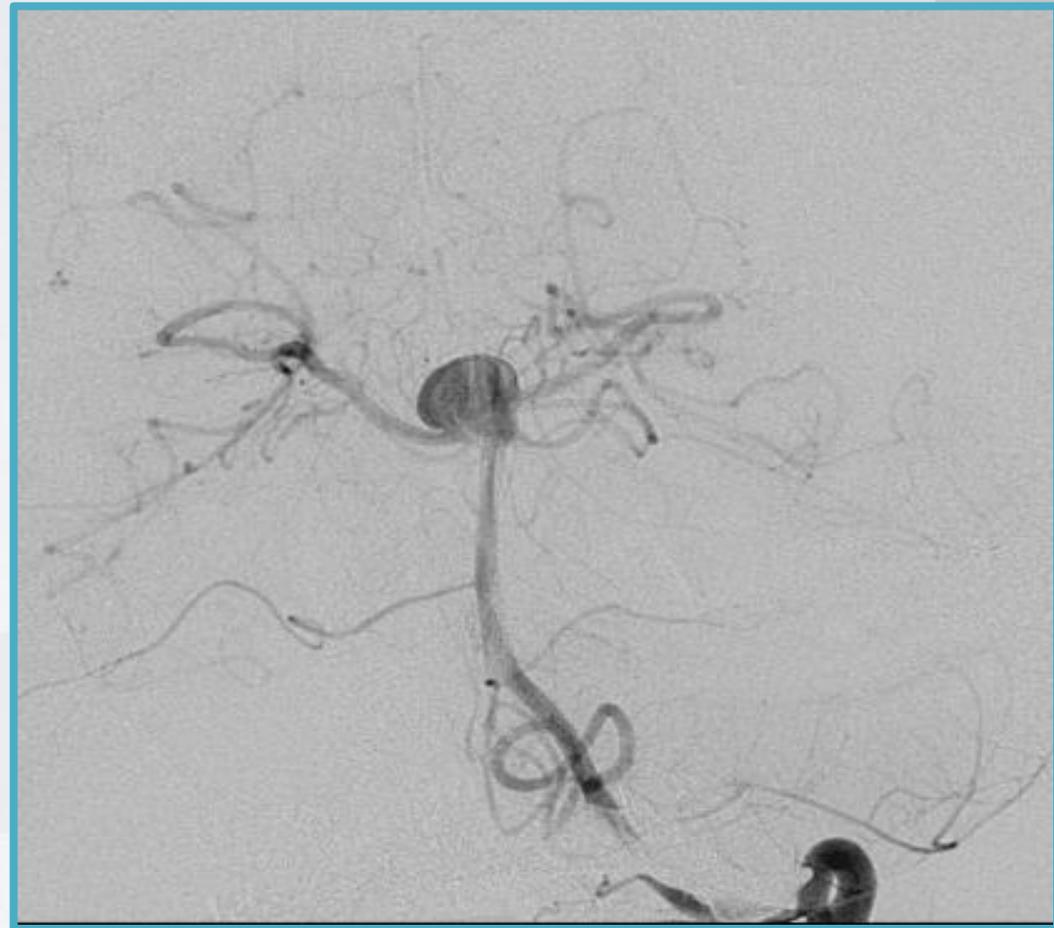
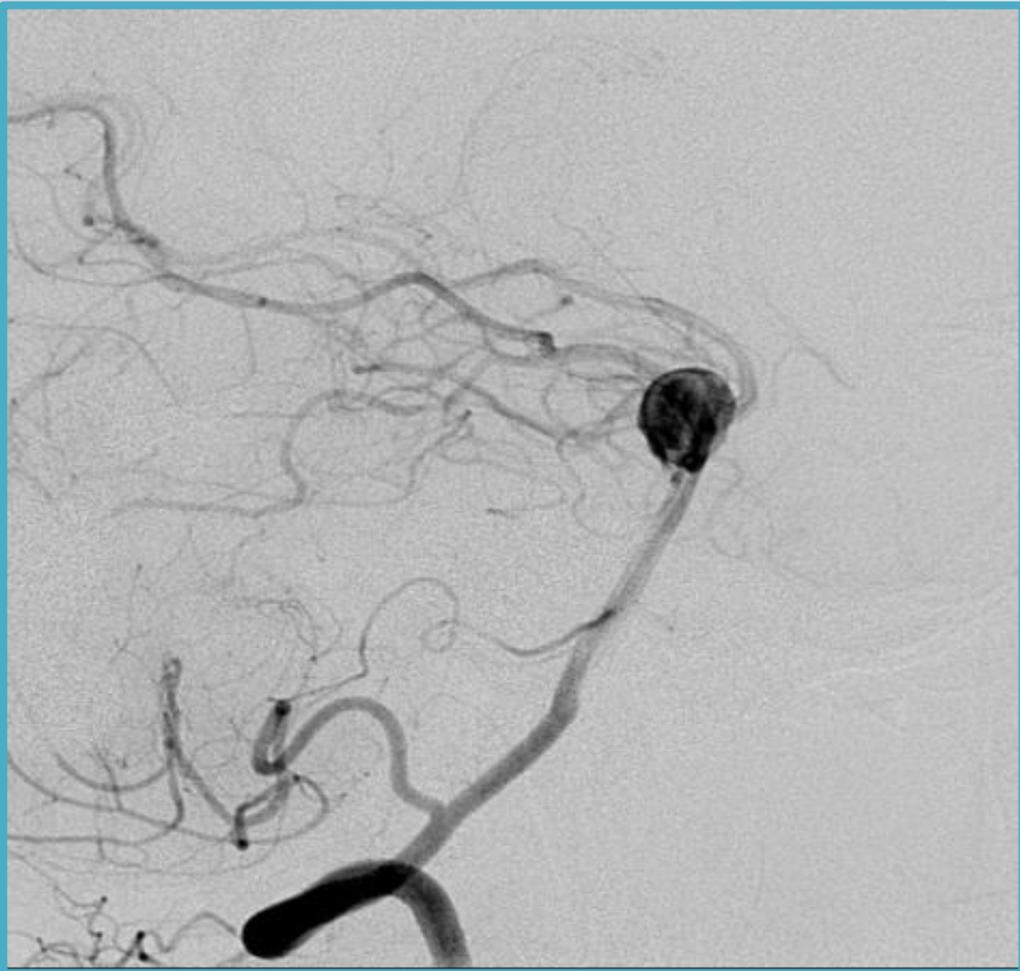
09/1994



2016



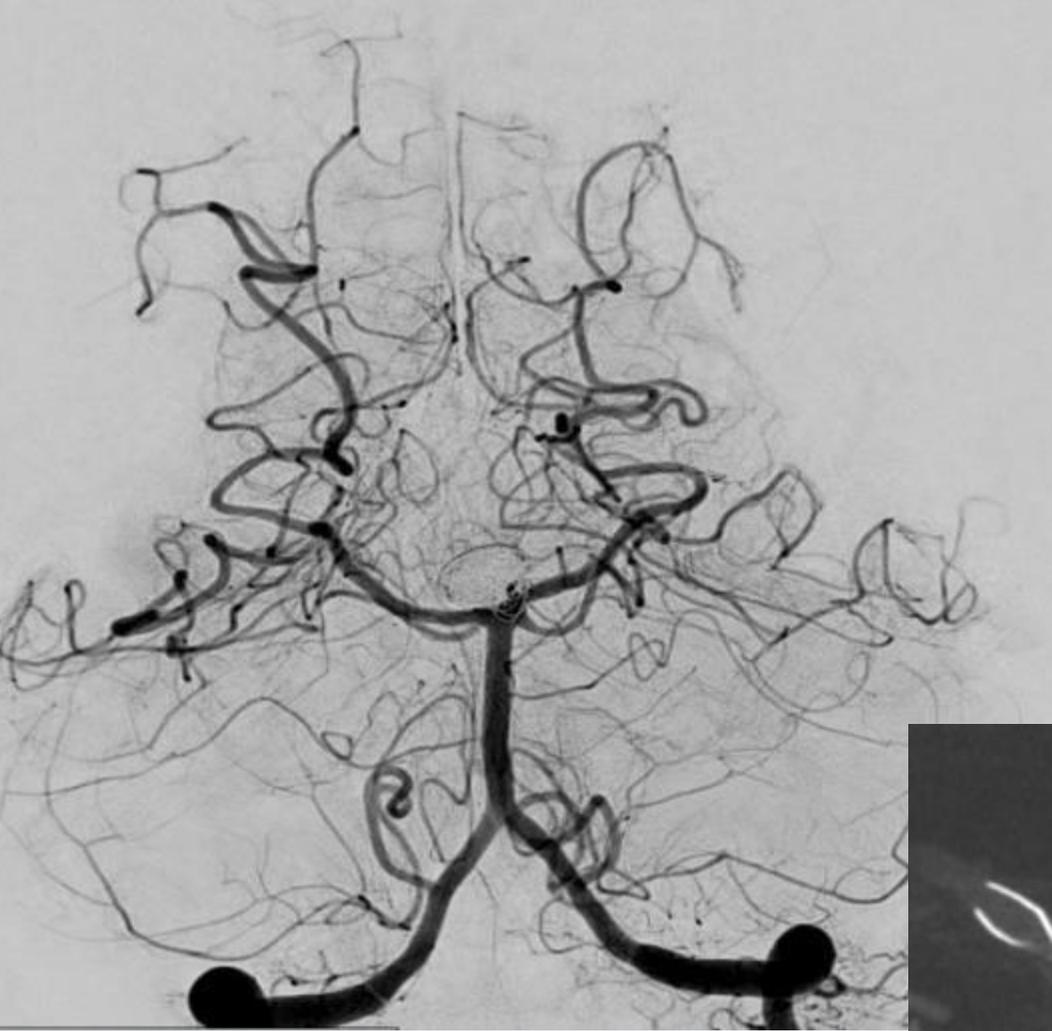
2016



TREATMENT

- Y stent + coil embolization





ot -97°
ng +8°
D 15 cm
↑

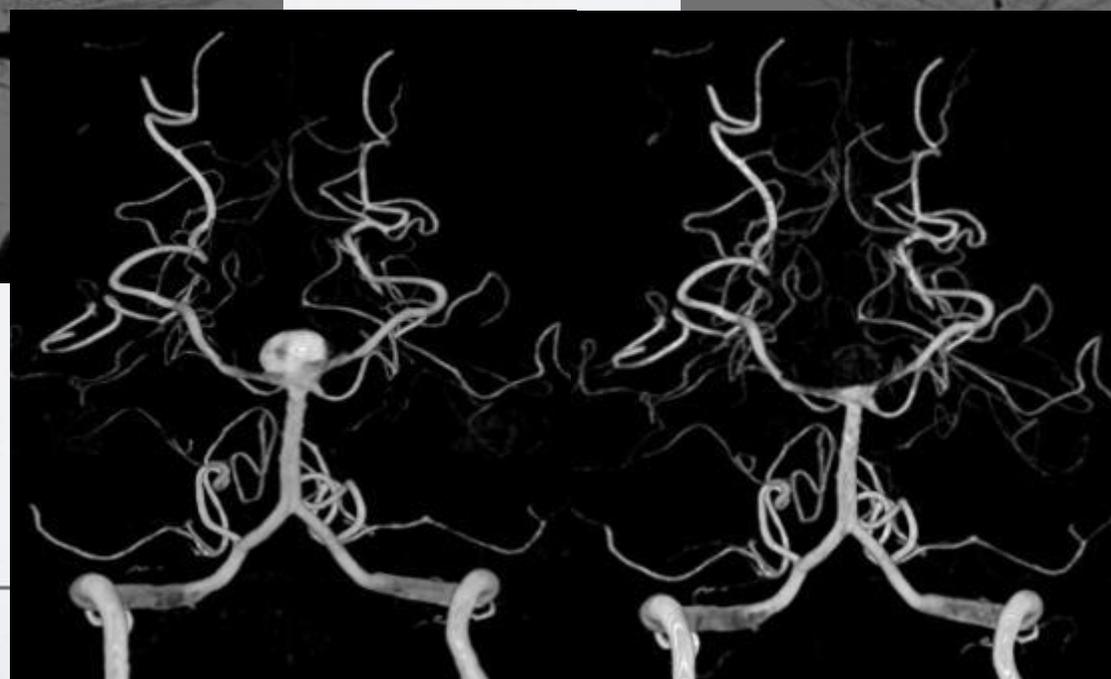
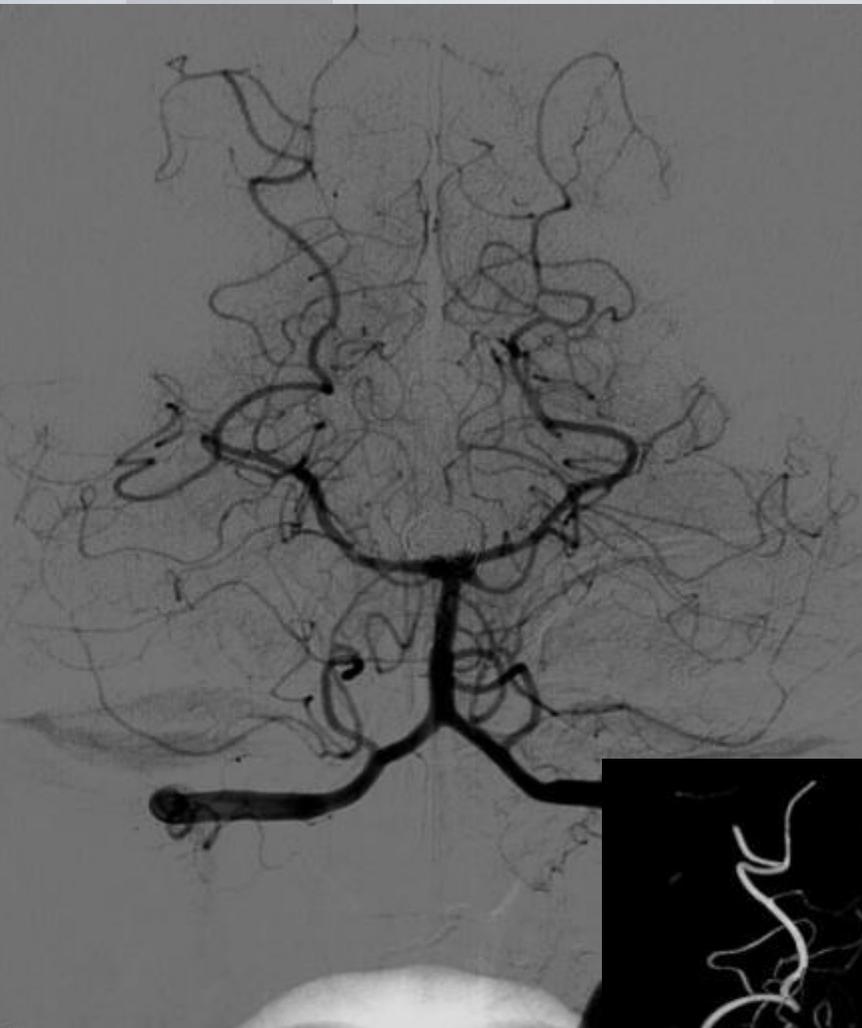
L VERT LAT POST EM



15.05.2017

15.11.2017

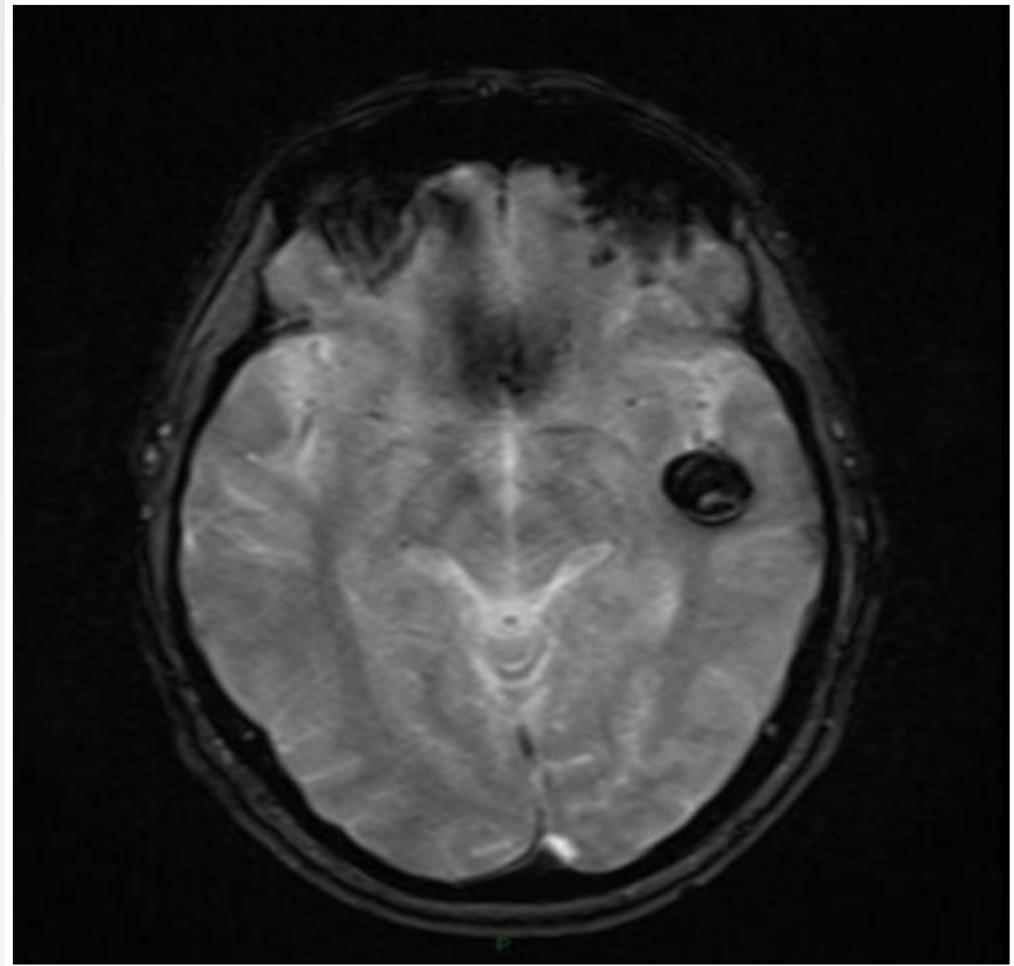
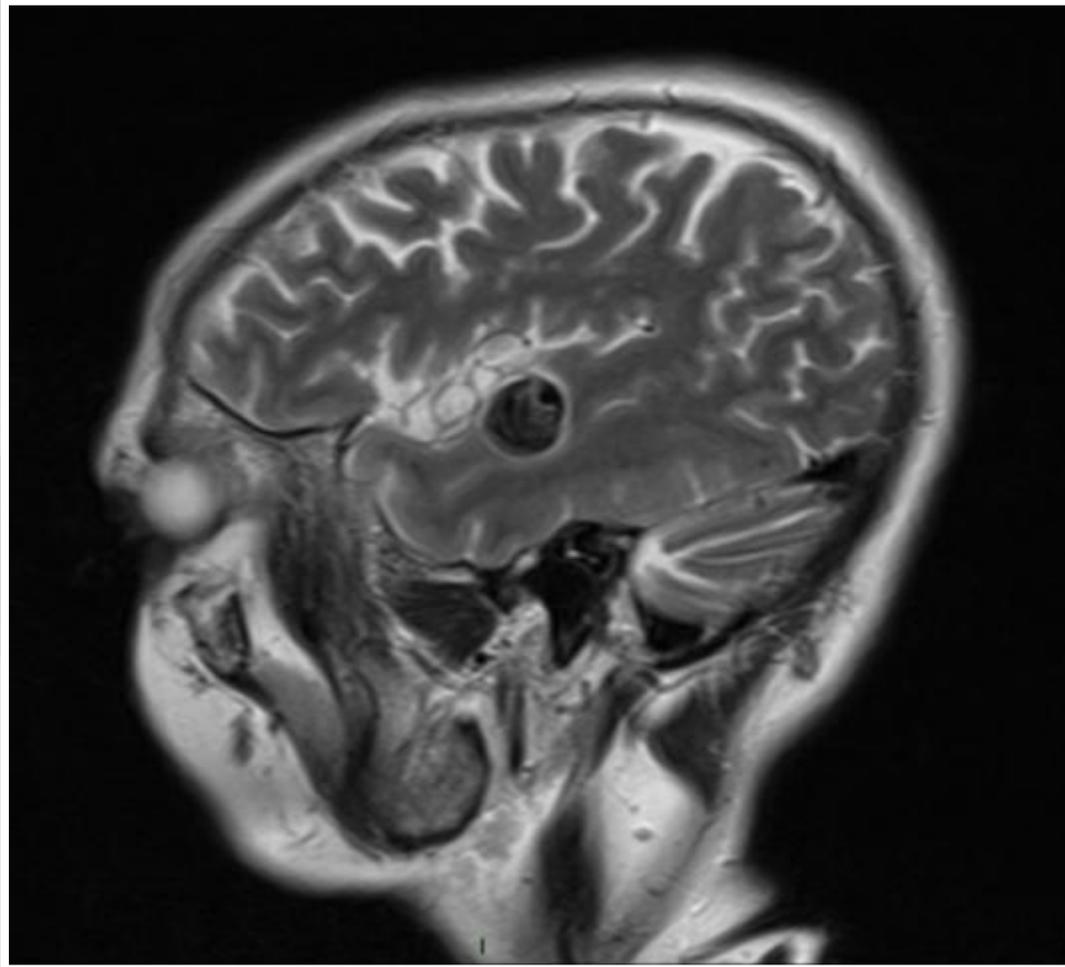
Rot -89°
Ang 0°
FD 27 cm



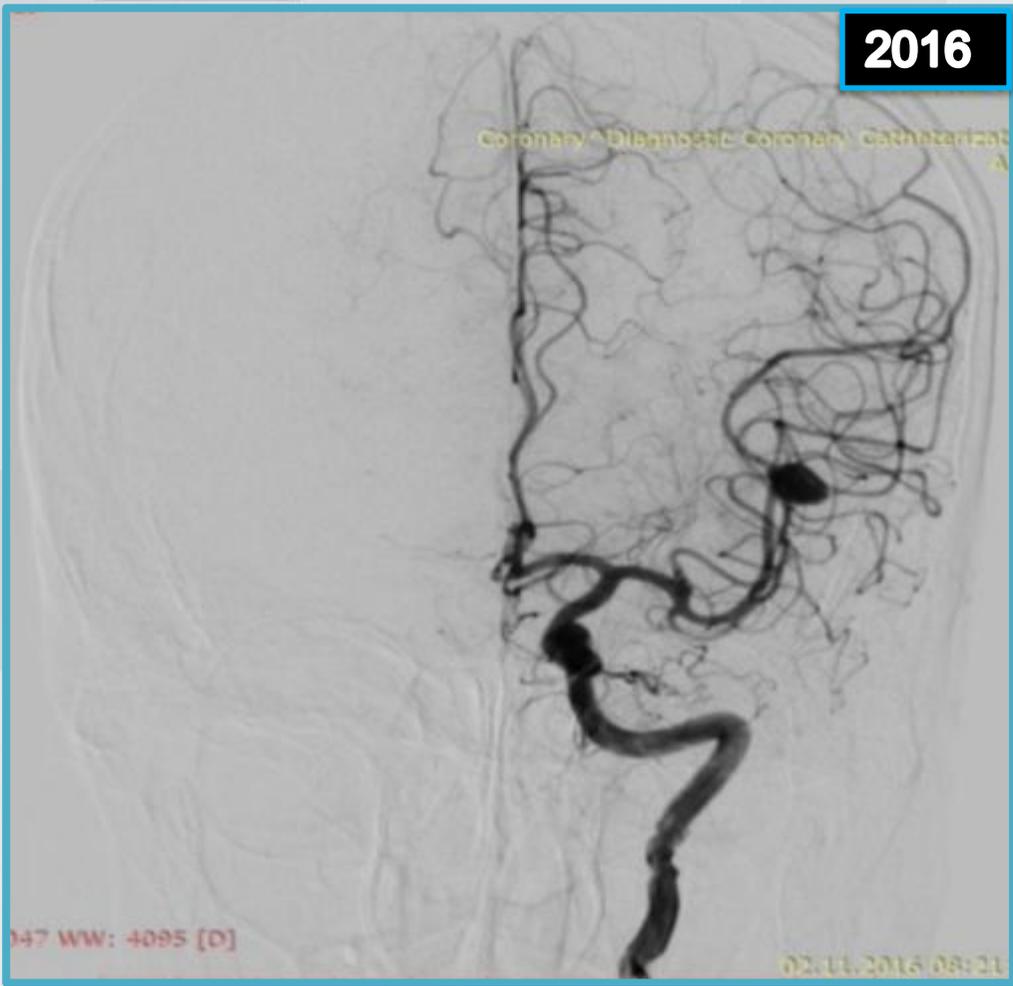
PT 4 AS

- 61 Y F
- Presented with headaches
- MRA-DSA: L M2 **dissecting** Aneurysm
- Treatment: Flow diverter stent placement





2016



2016



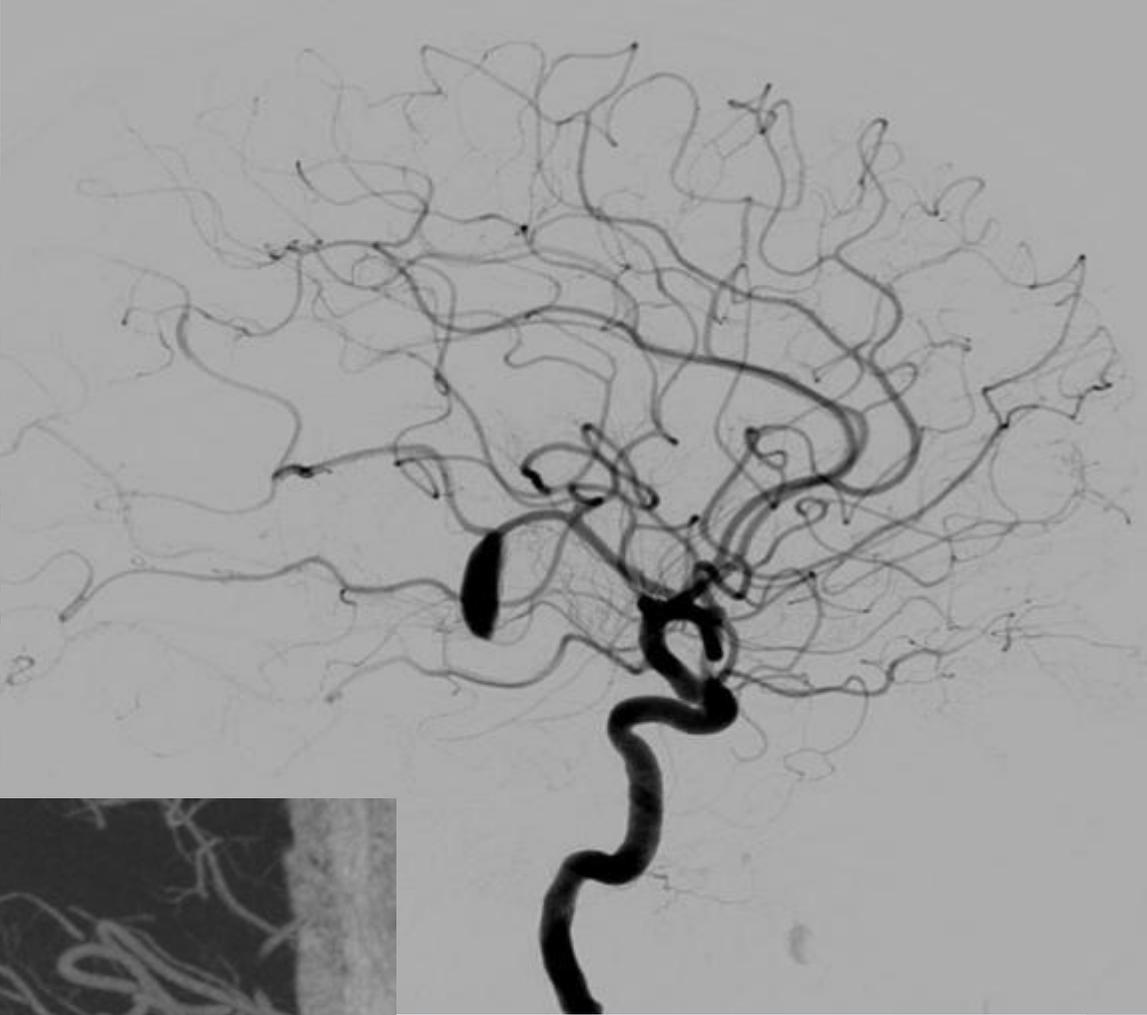
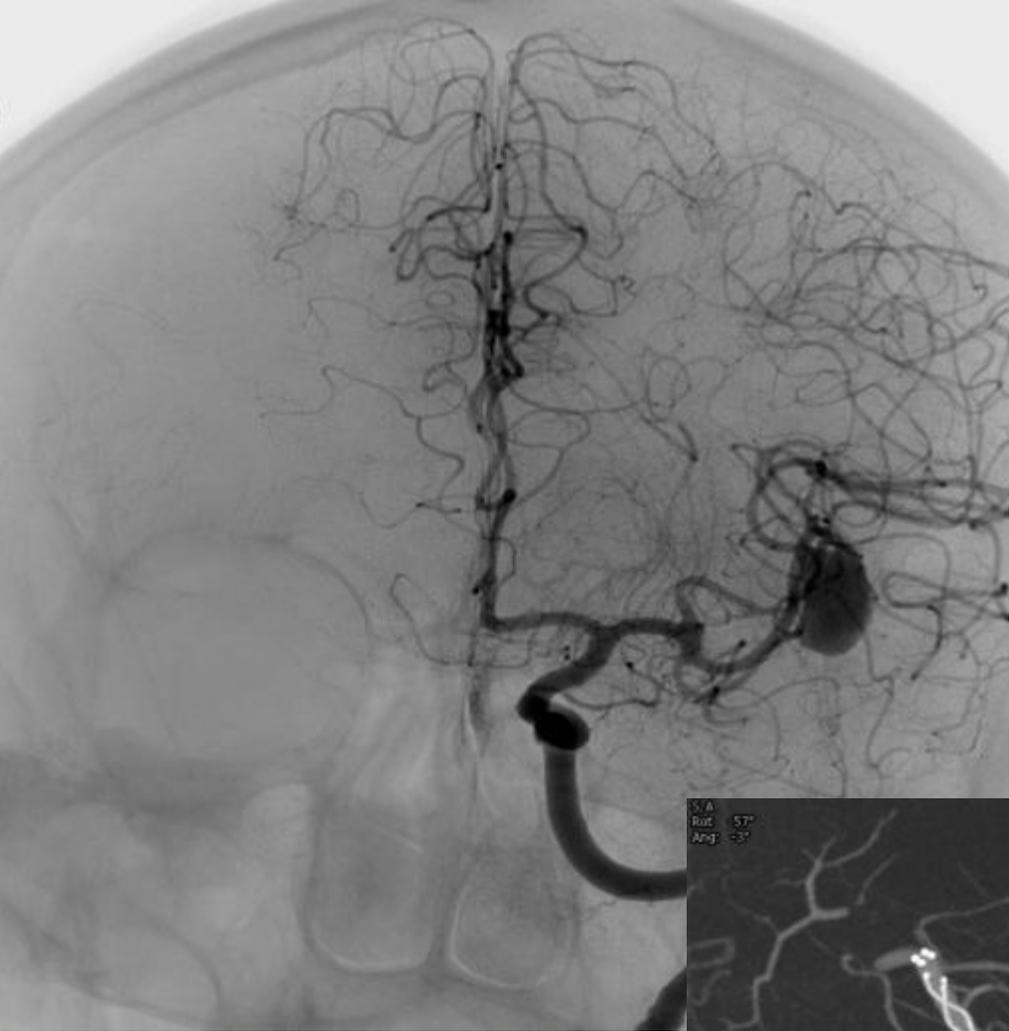
R ICA



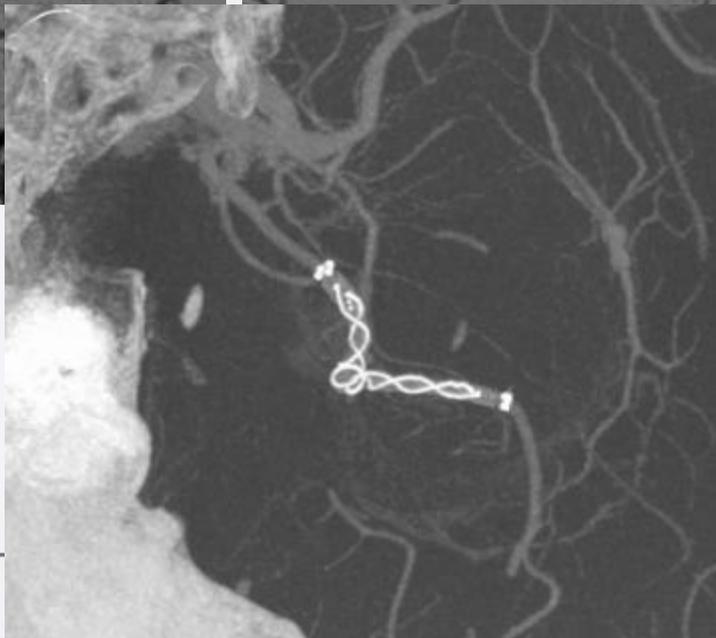
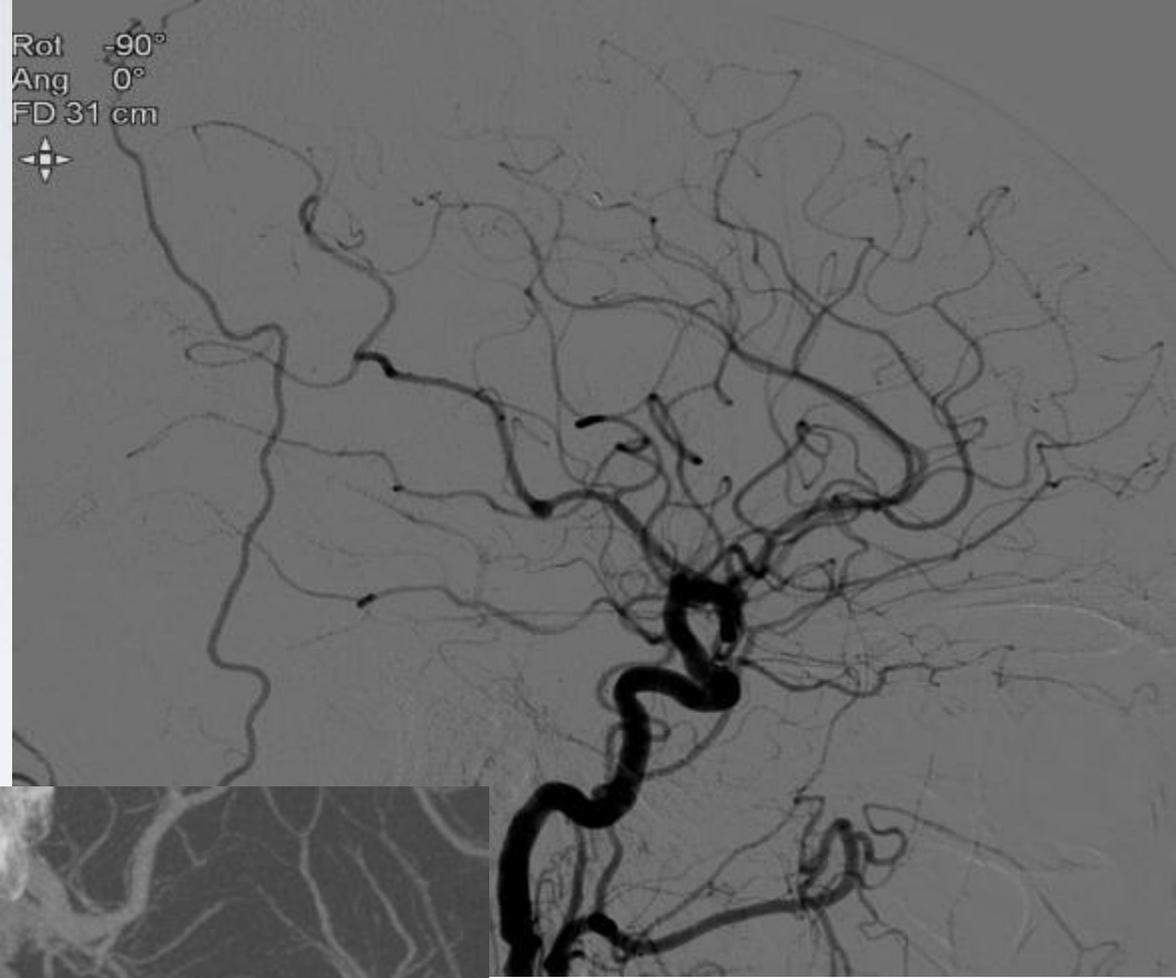
TREATMENT

- Flow diverter stent placement





15.05.2017

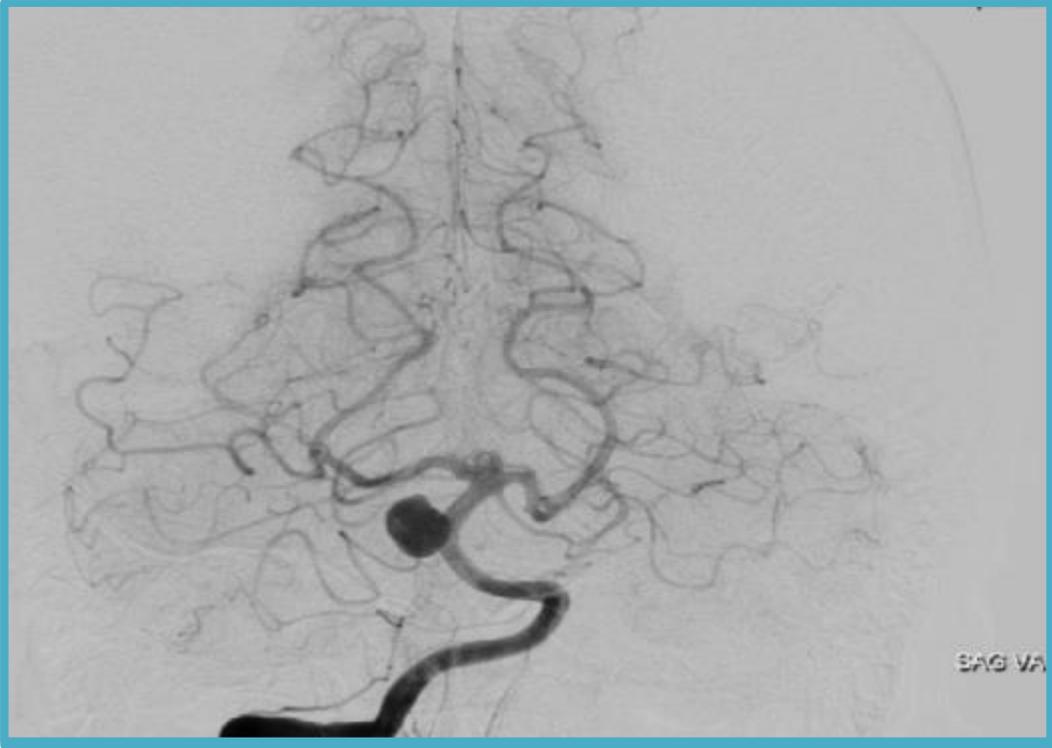
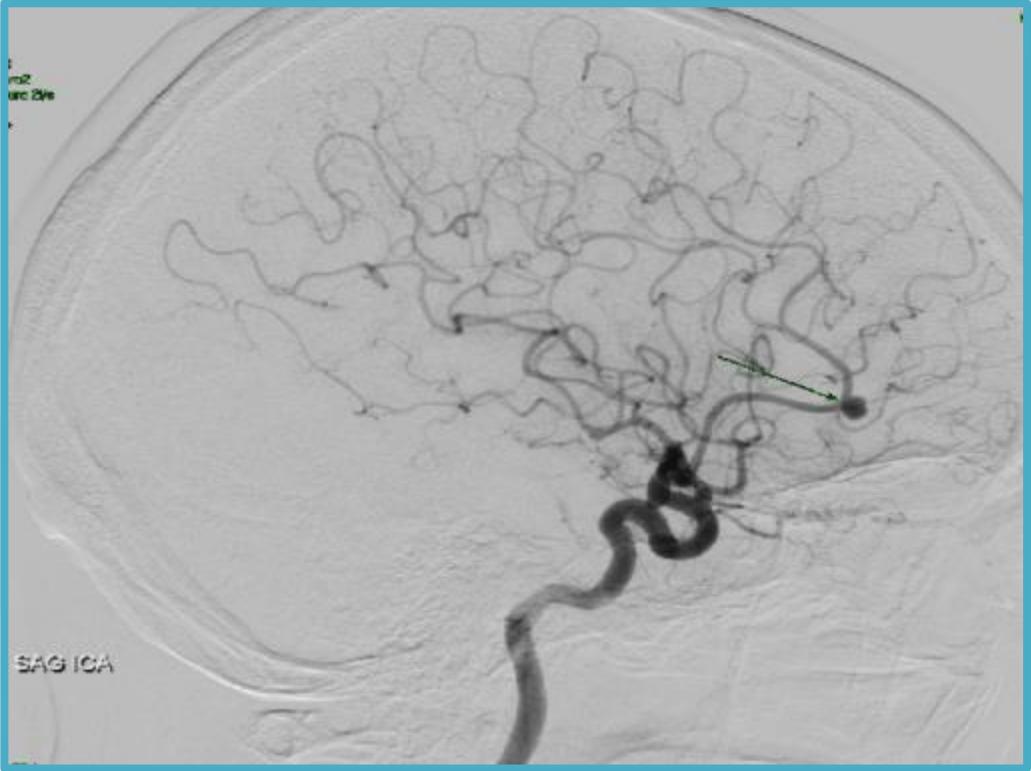


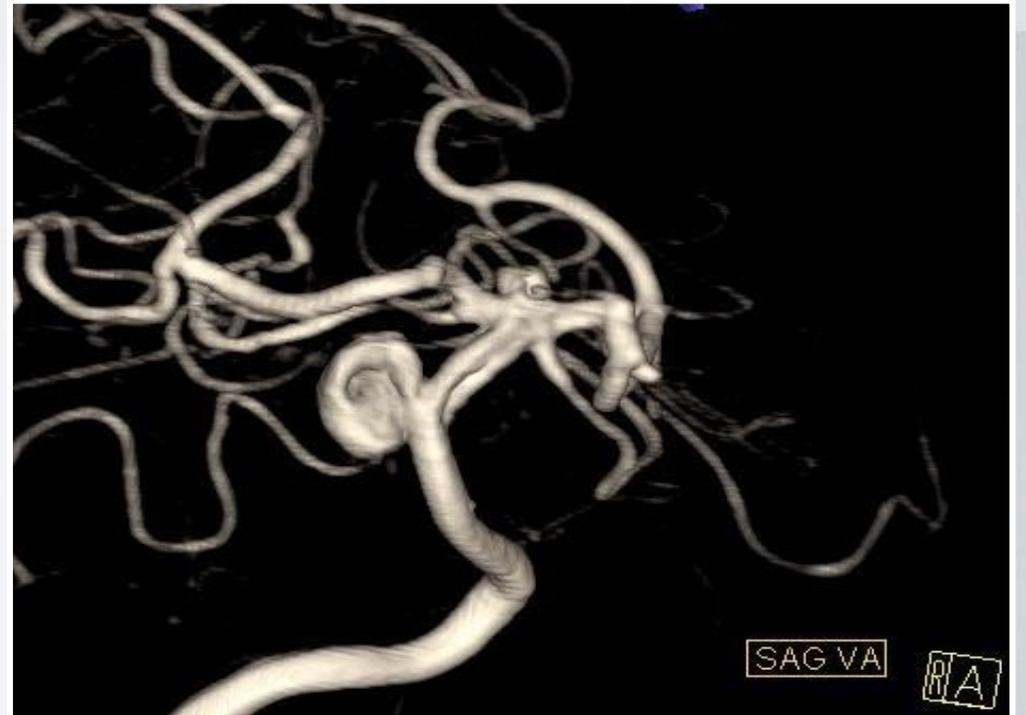
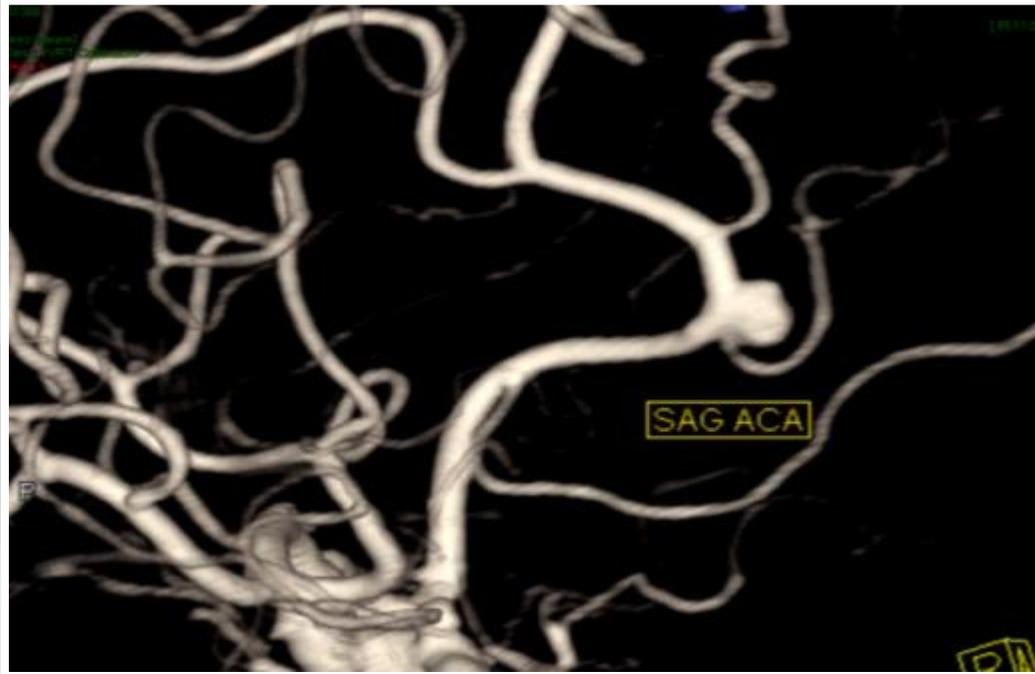
11.12.2017

PT 5 NO

- 60 Y F
- Presented with headache
- DSA: Pericallosal aneurysm
- Treatment: Flow diverter stent placement



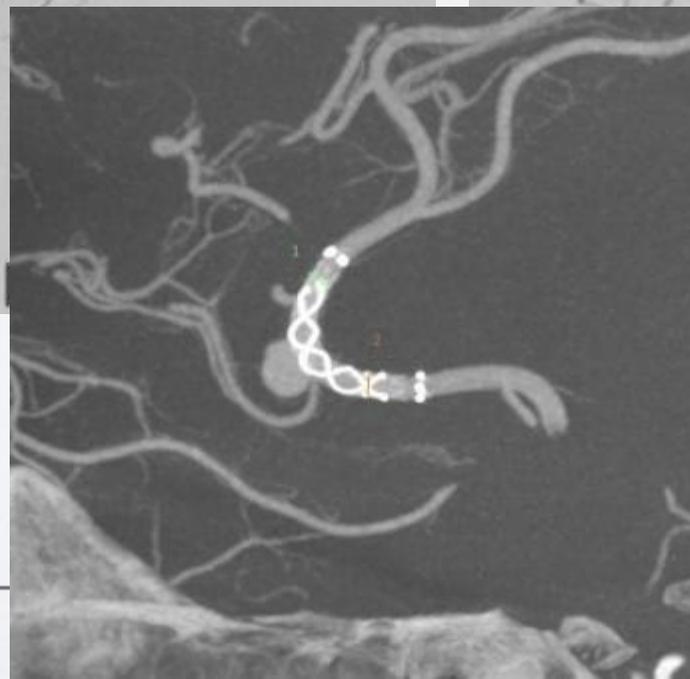




TREATMENT

- Flow diverter stent placement

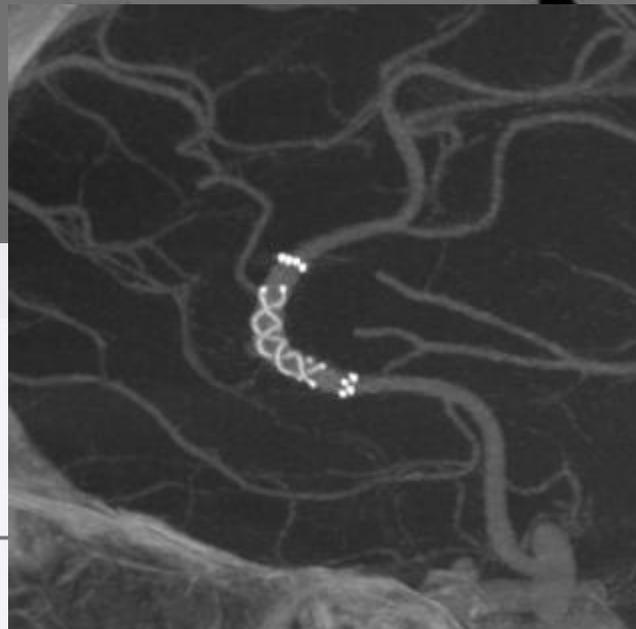
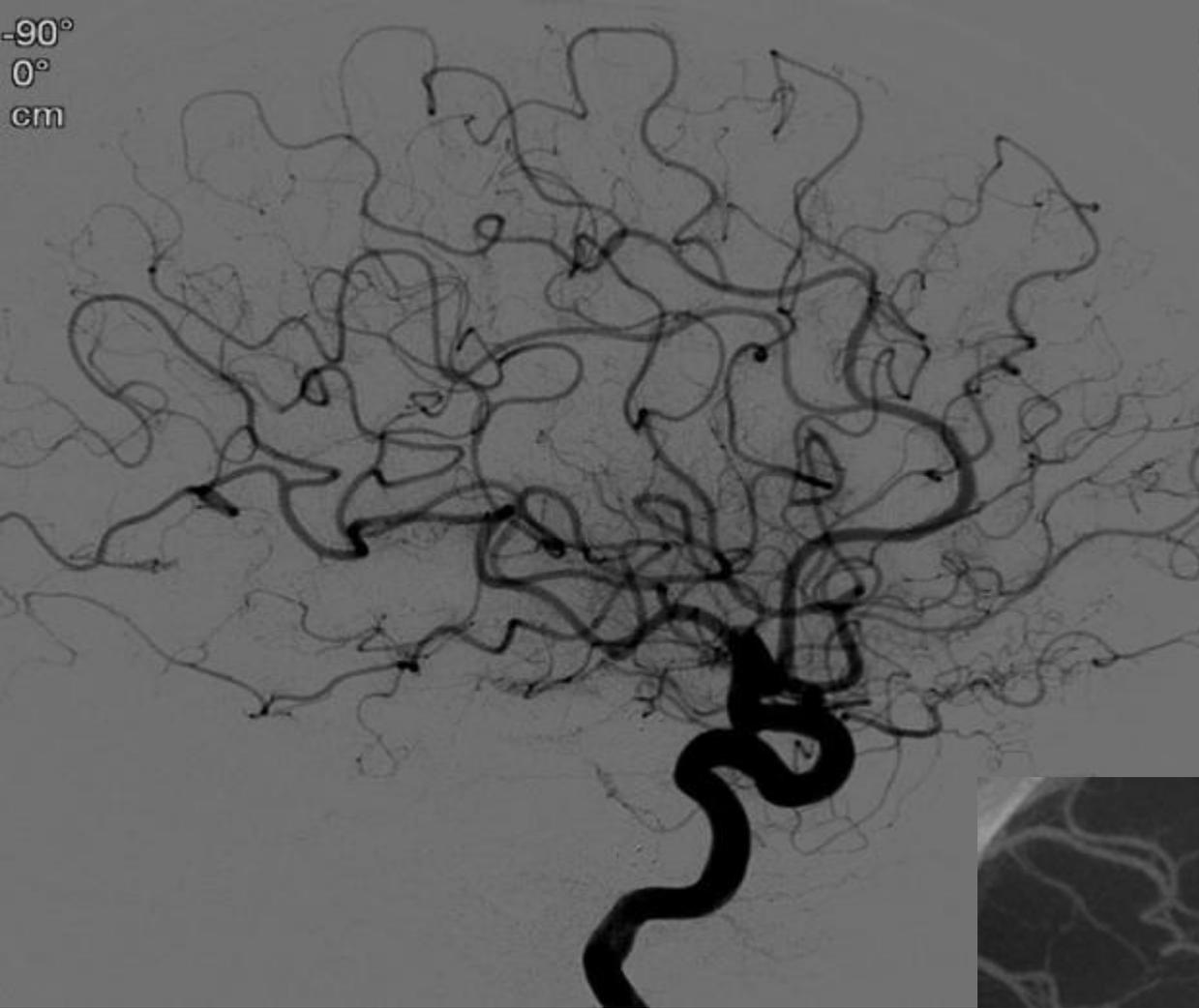




15.05.2017

-90°
0°
cm

Rot -3°
Ang -12°
FD 27 cm

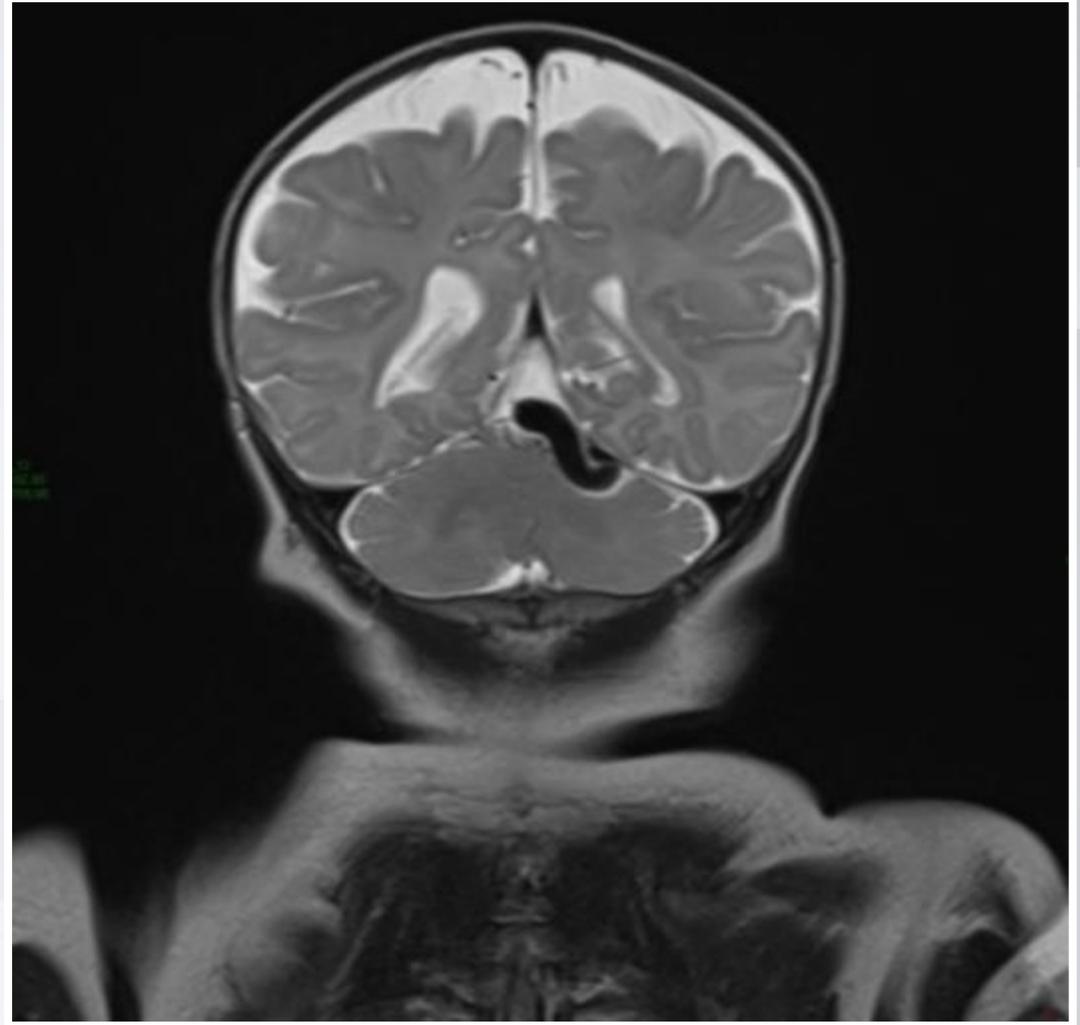
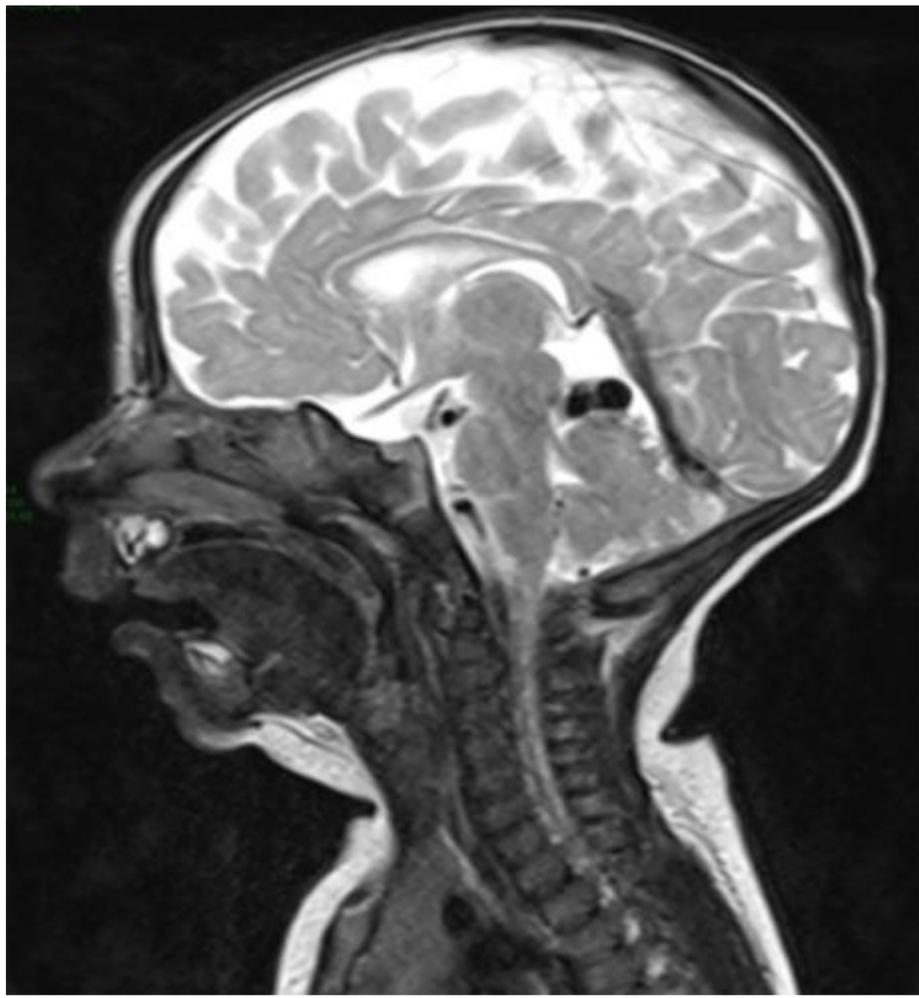


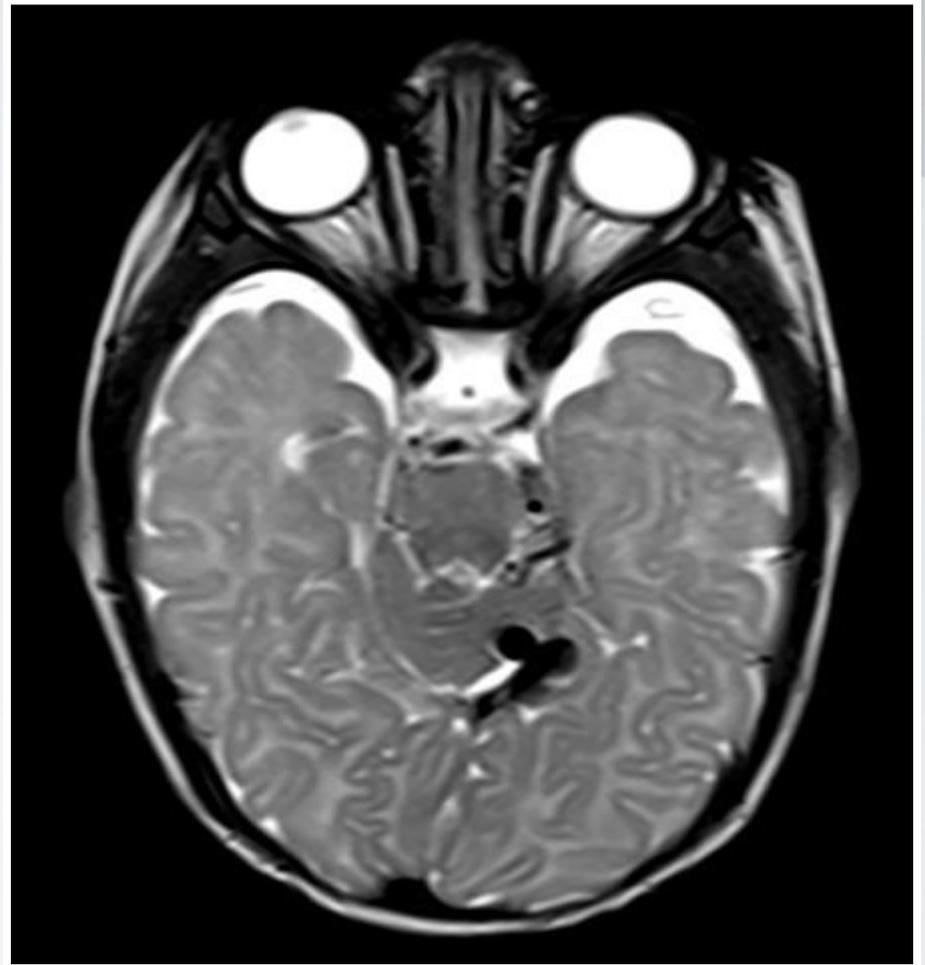
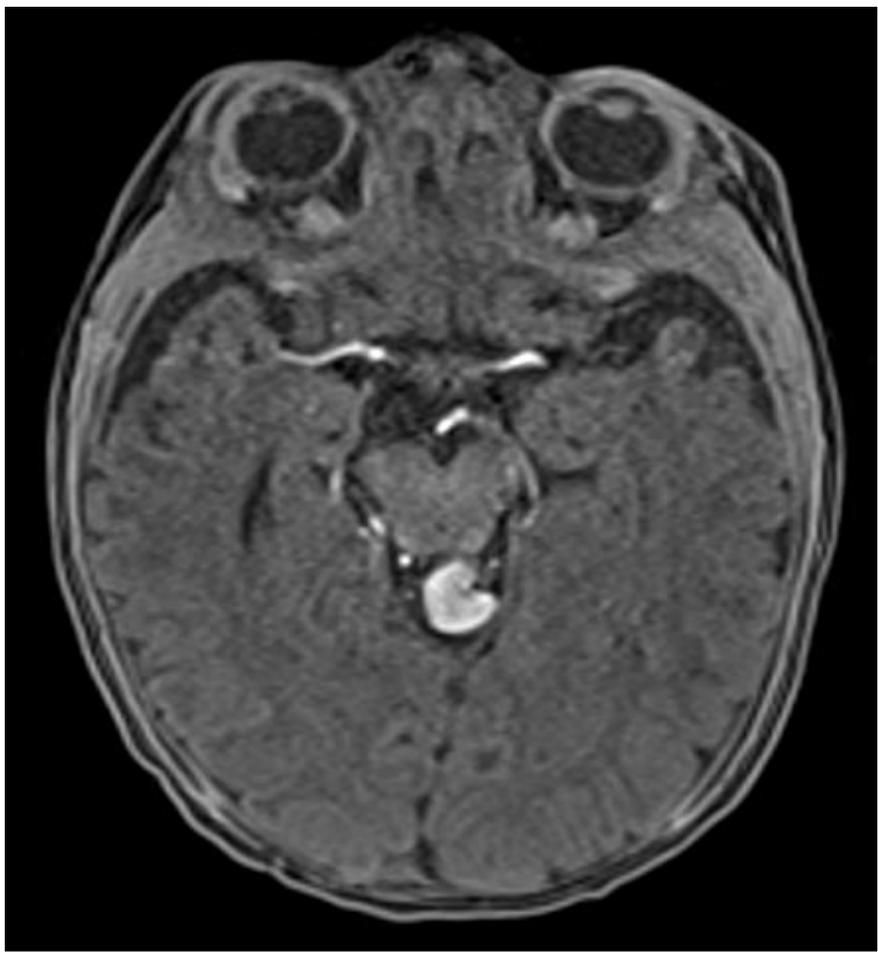
23.12.2017

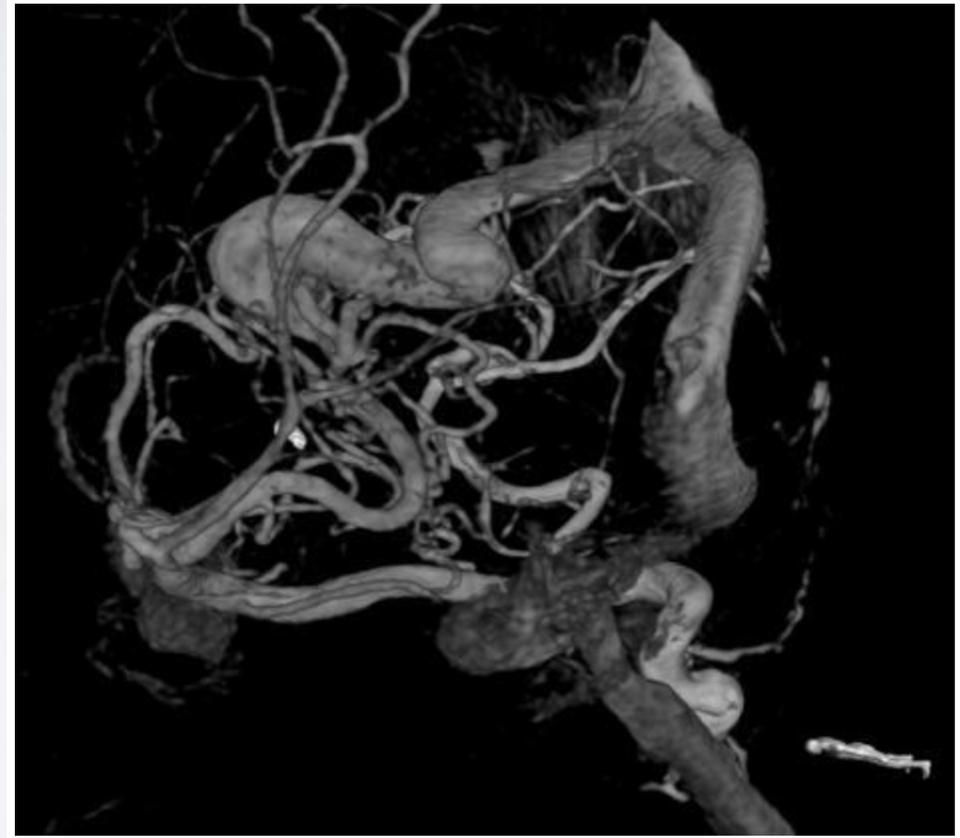
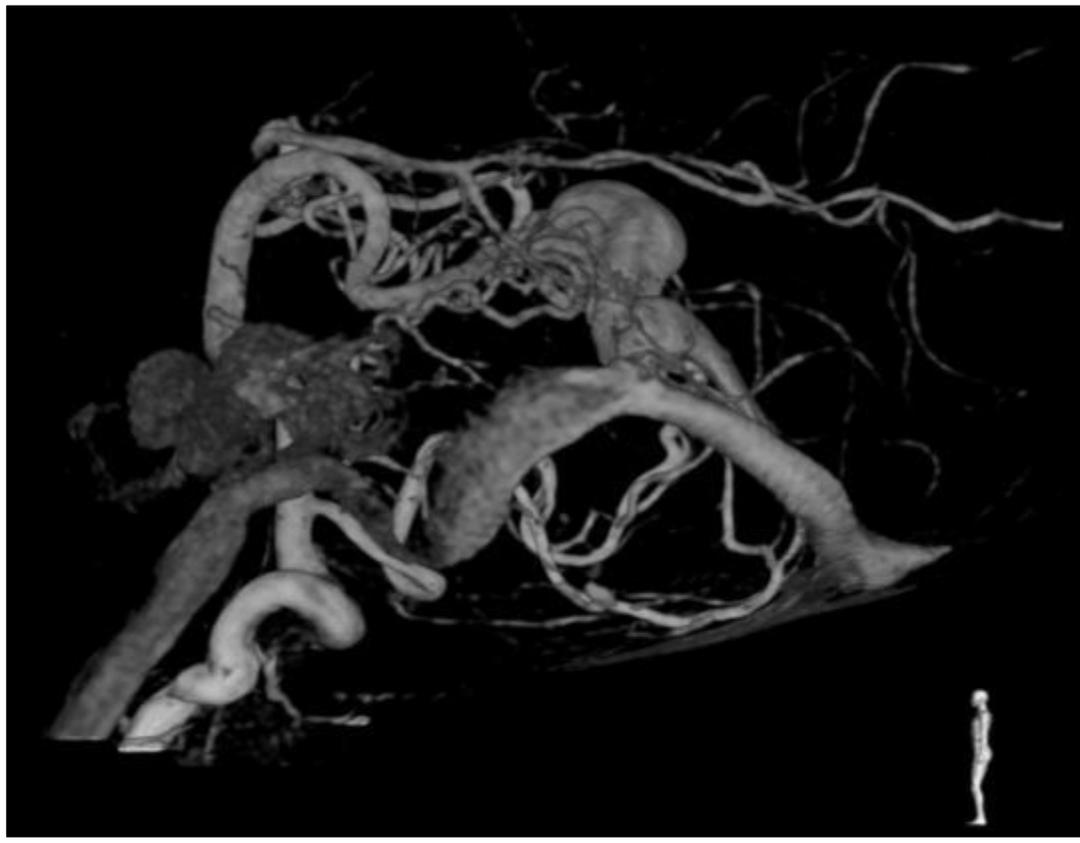
PT 6 RG

- 1 Y M
- Presented with head enlargement
- PE: Mild macrocephalia
- US: w/o ventricular enlargement
- MRA-DSA: Pial AVF in the posterior fossa
- Treatment: Transarterial-transvenous approach embolisation with liquid embolic agent









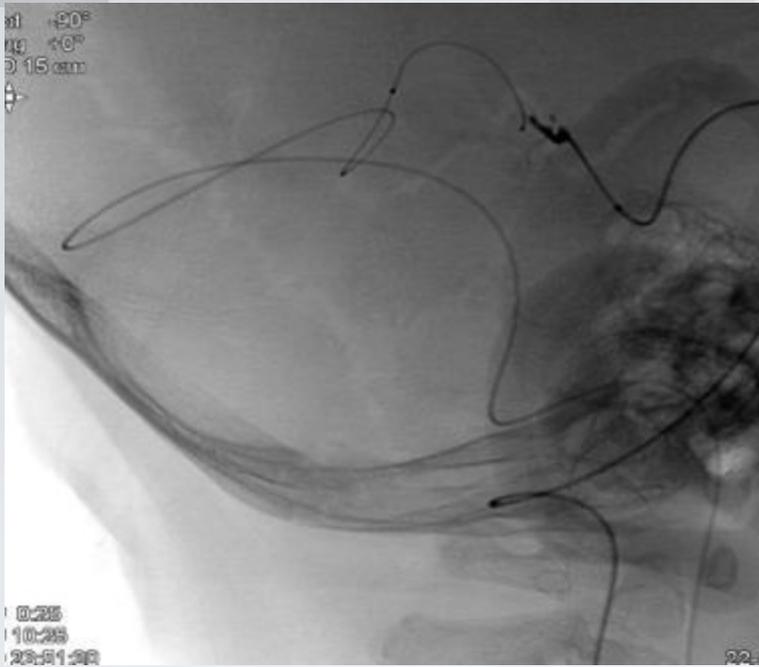




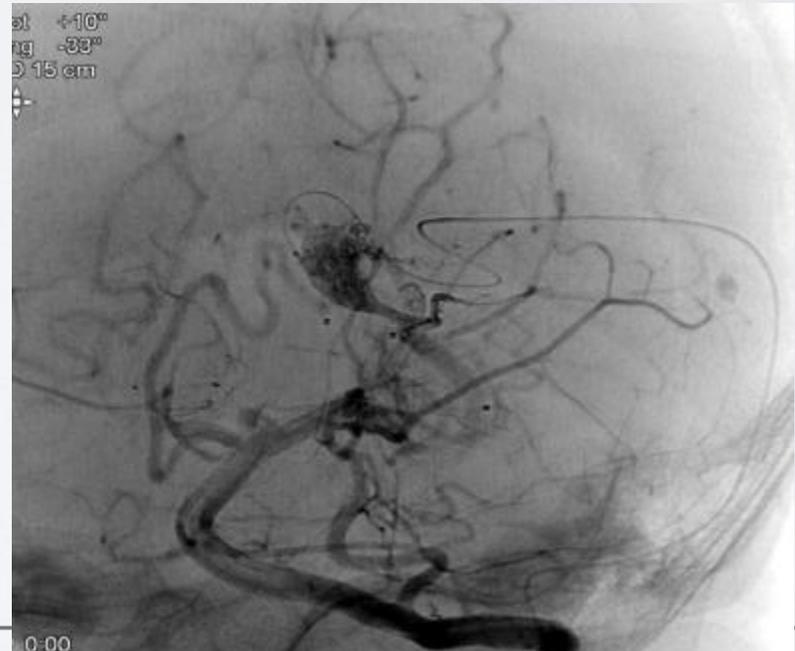
TREATMENT

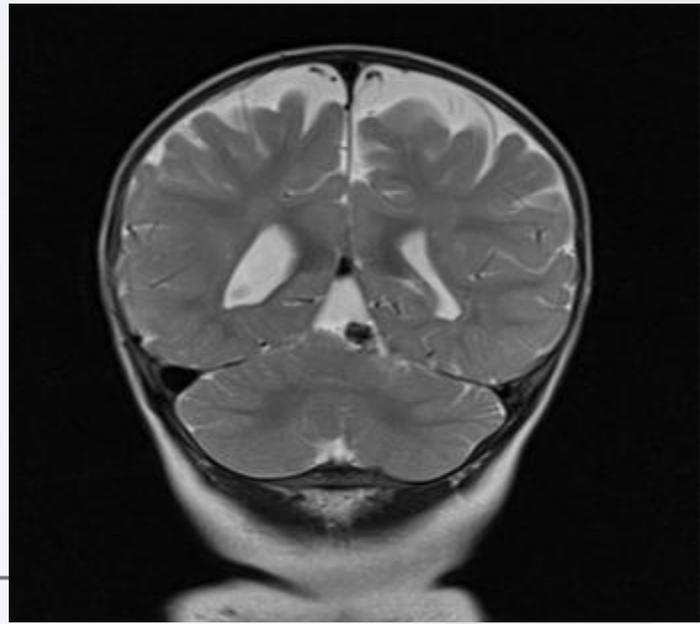
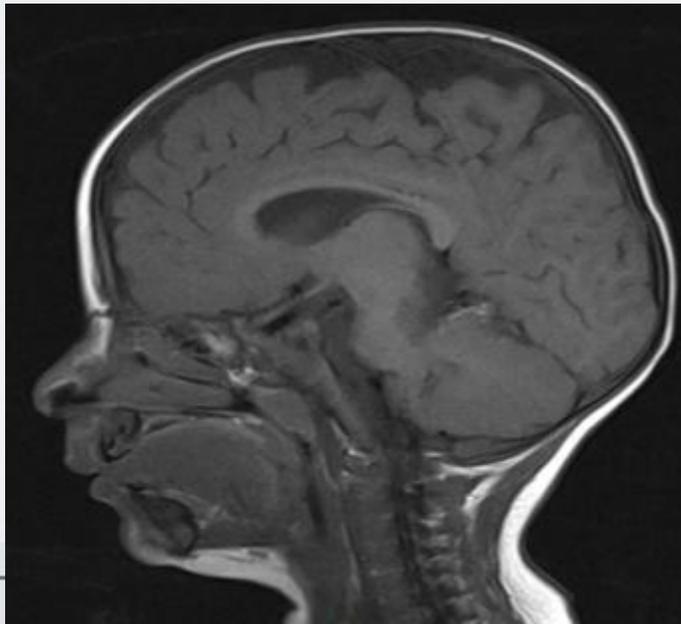
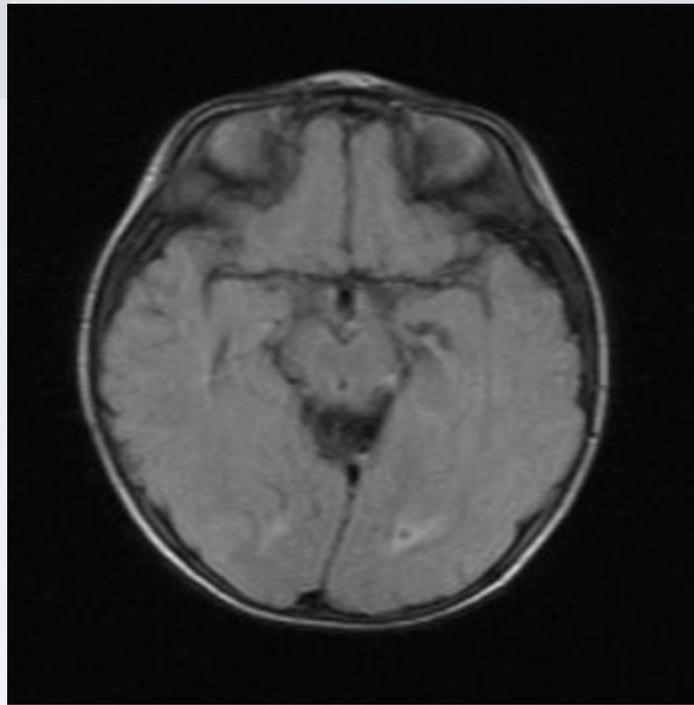
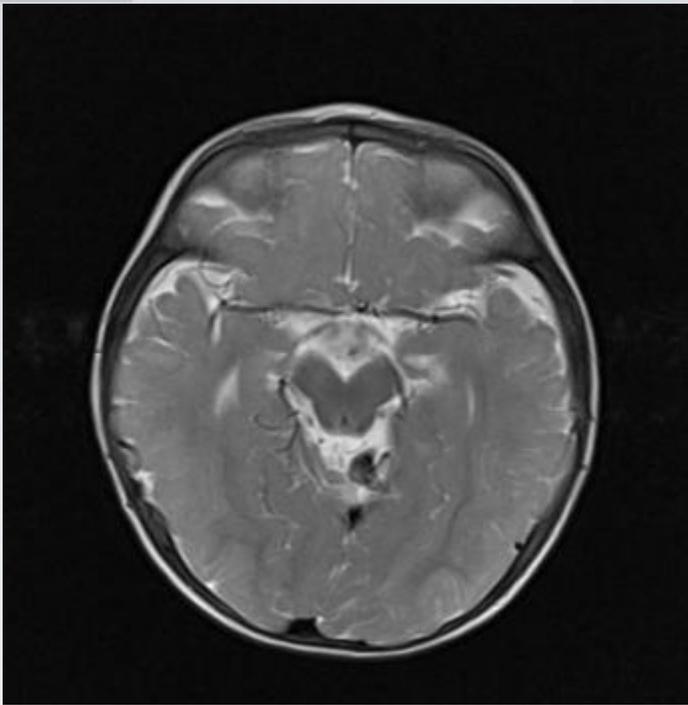
- Embolisation with liquid embolic agent





15.05.2017



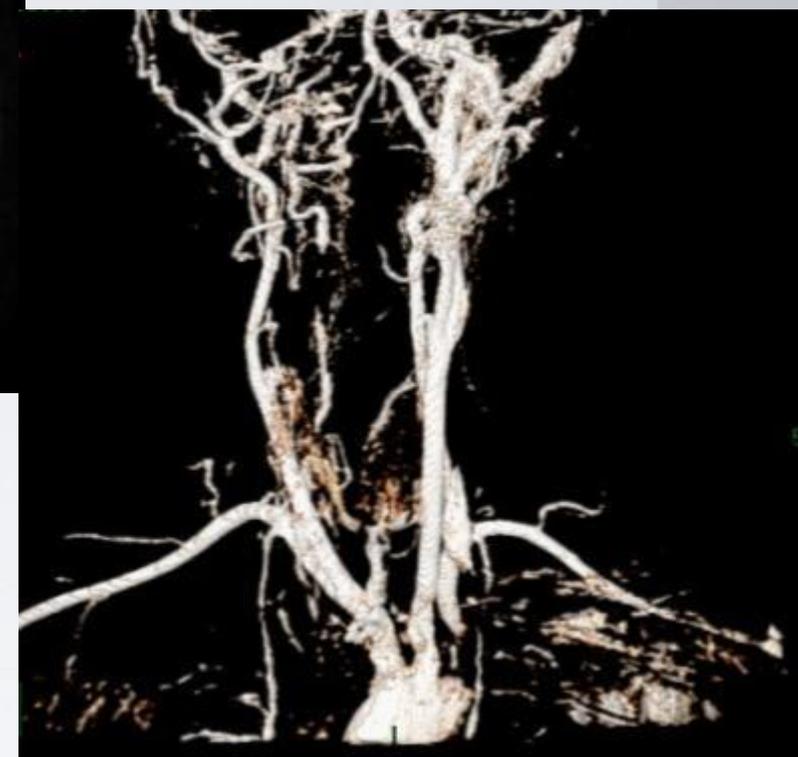
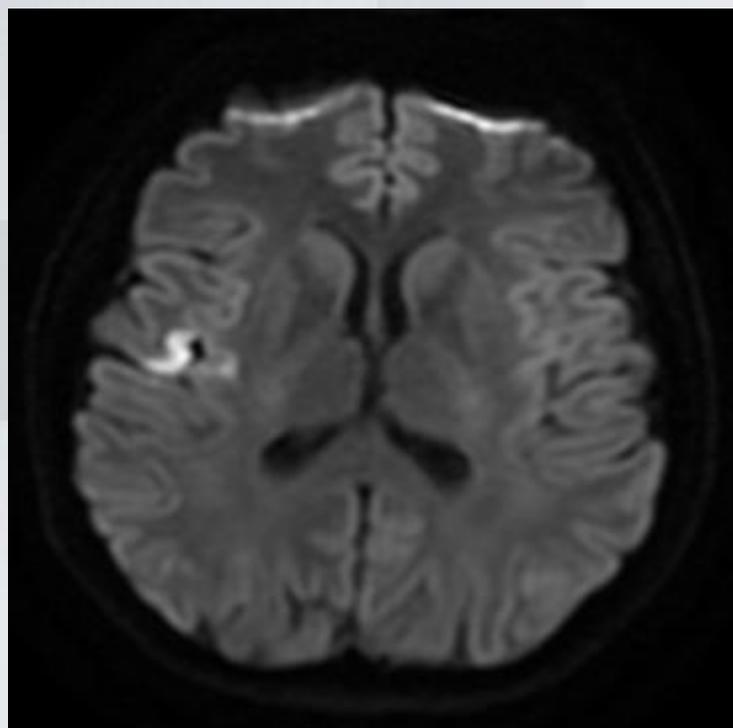
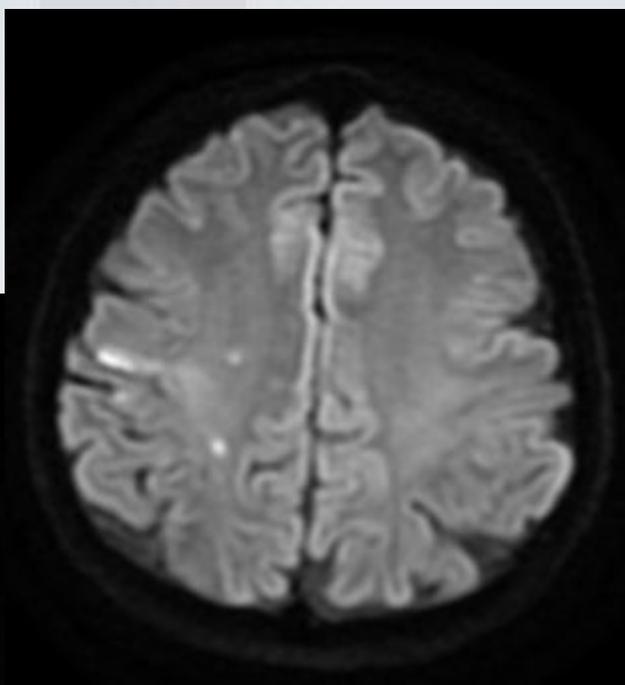


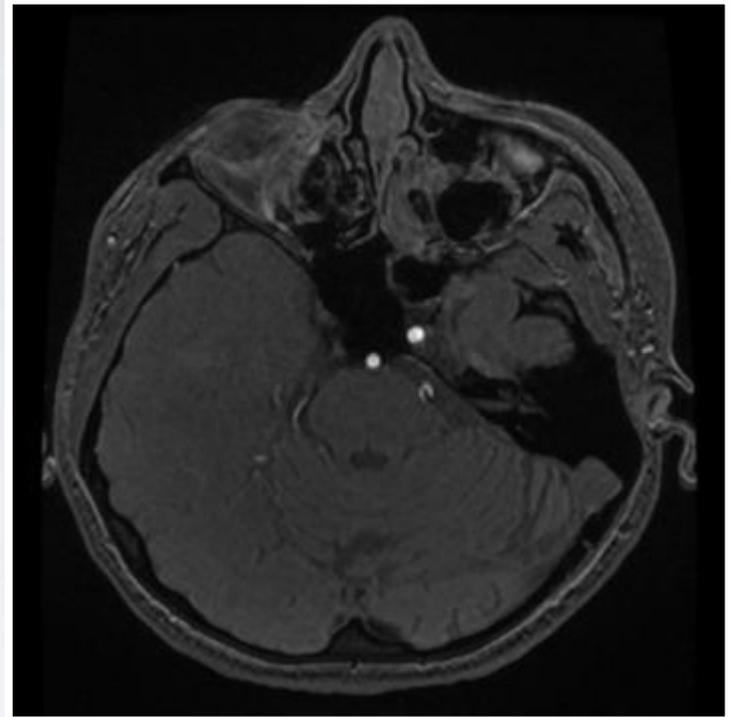
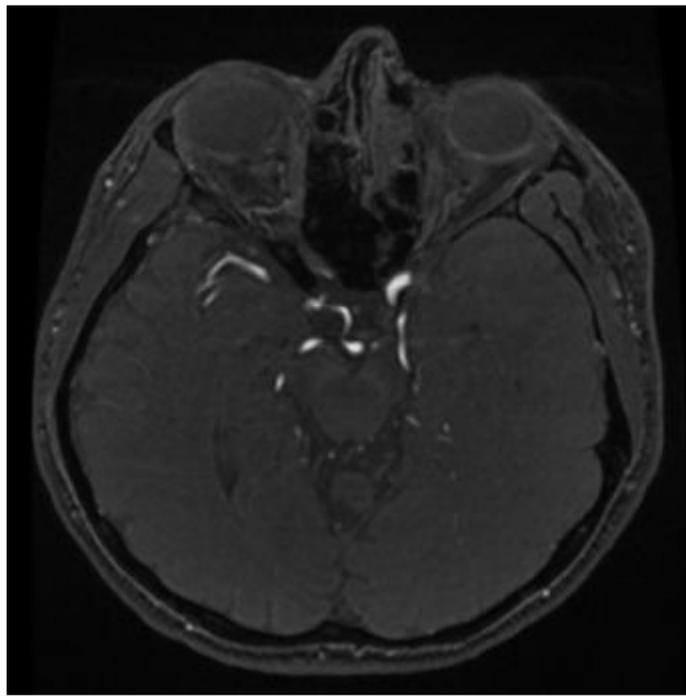
PT 7 BI

- 33 Y F
- Presented with: TIA in 2015
- MRA-DSA: R ICA subpetrozal segment obstruction due to dissection
- Treatment with anticoagulation
- 3rd M control opening of R ICA but 99% stenosis
- 18 months under Coumadin. Stenosis persists
- Treatment: Stent placement

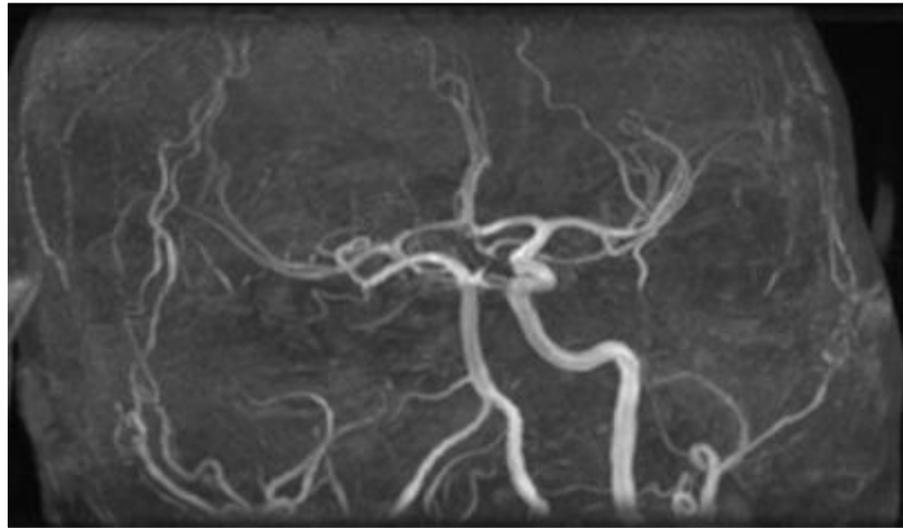


11/2015

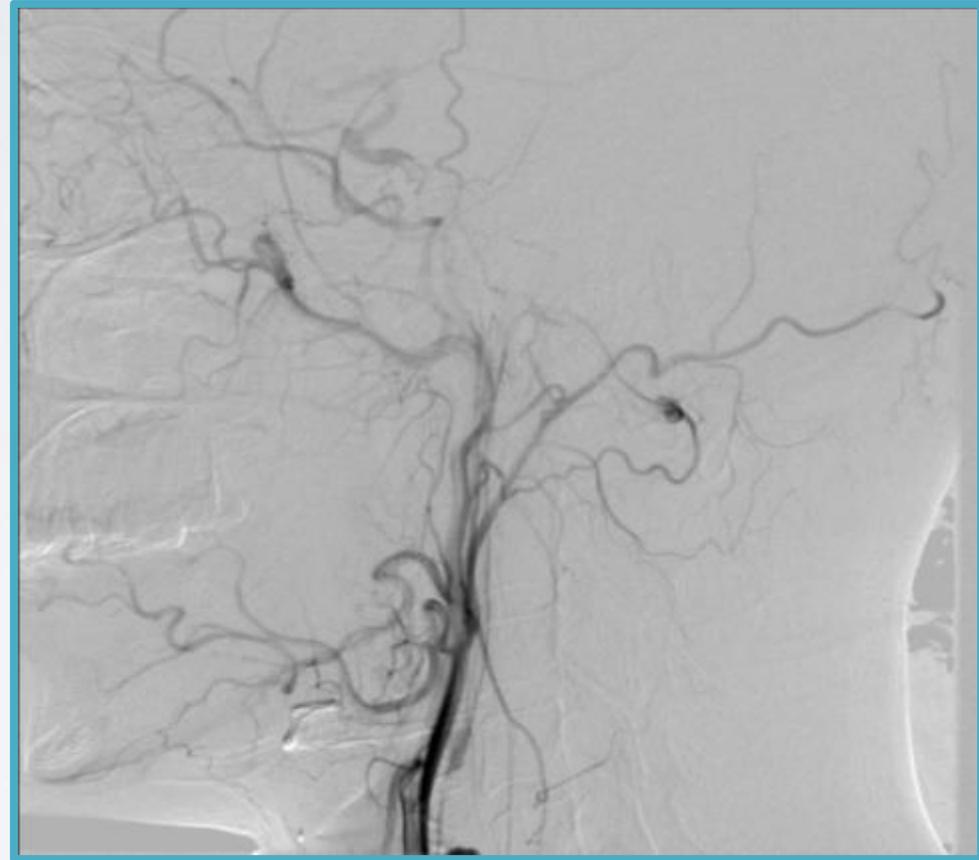
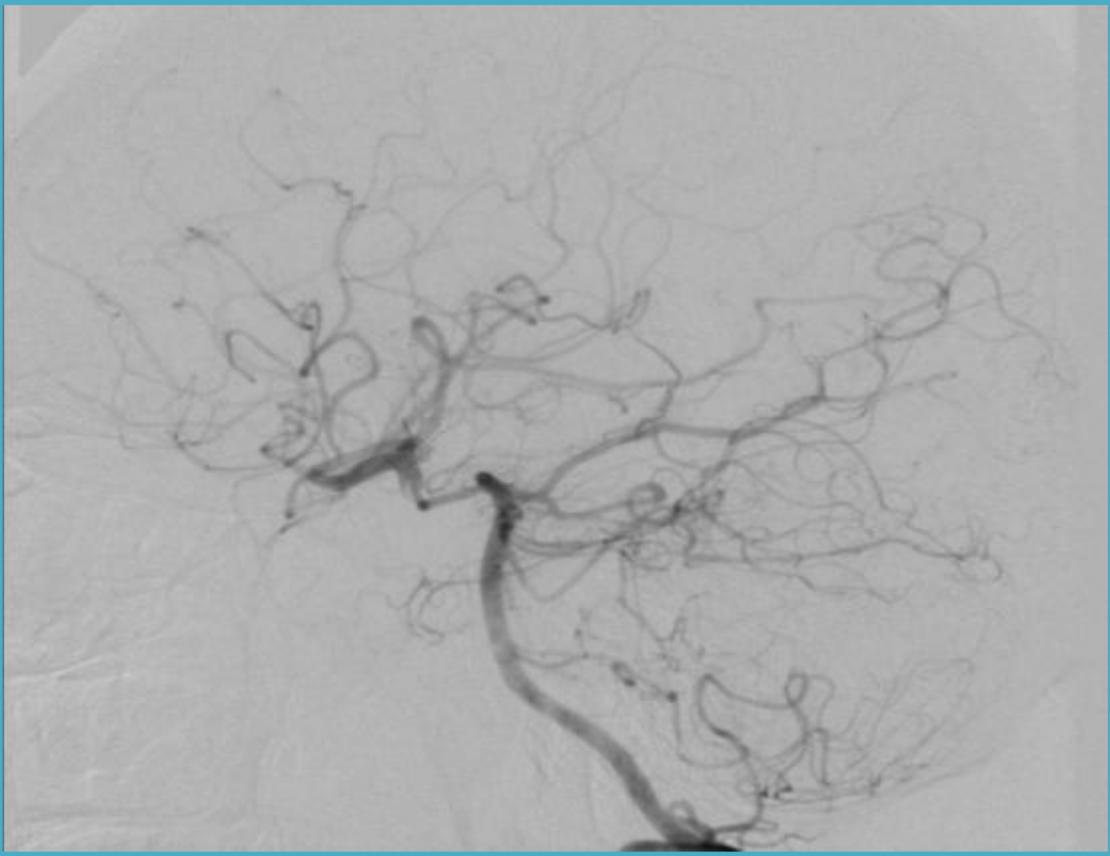


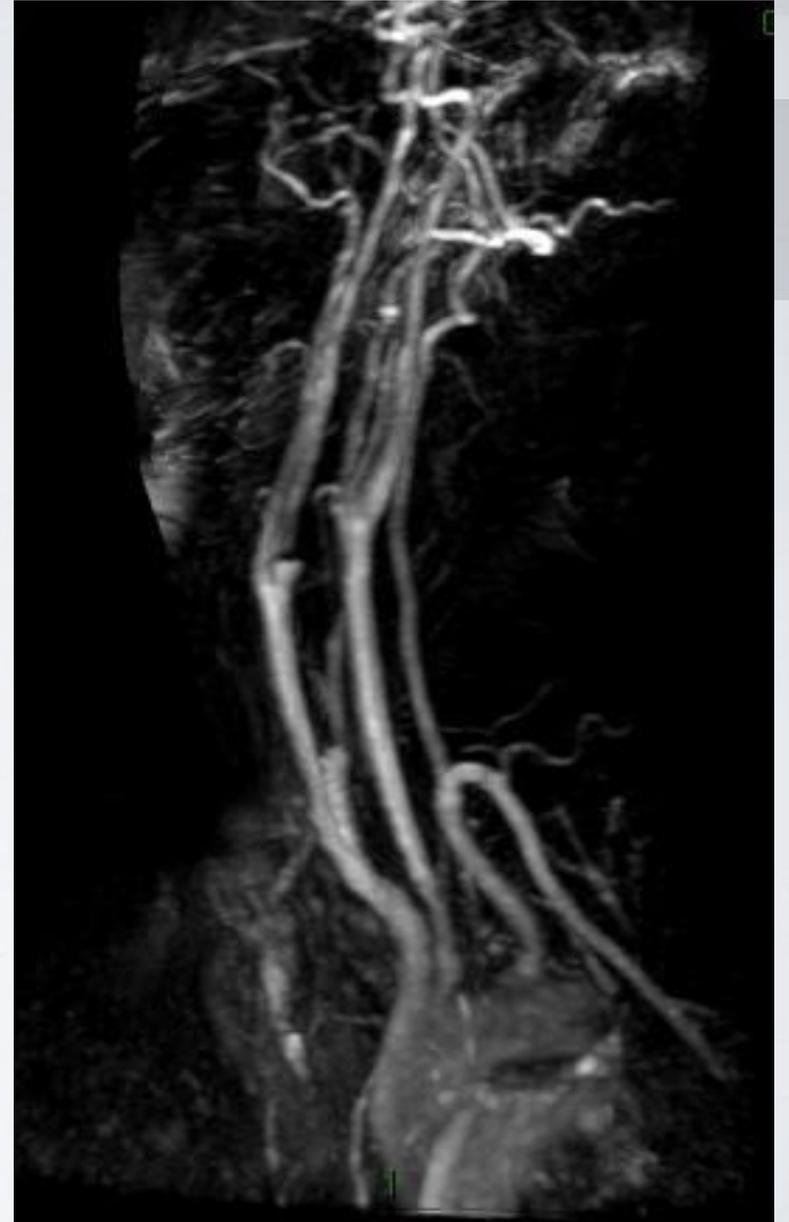


11/2015



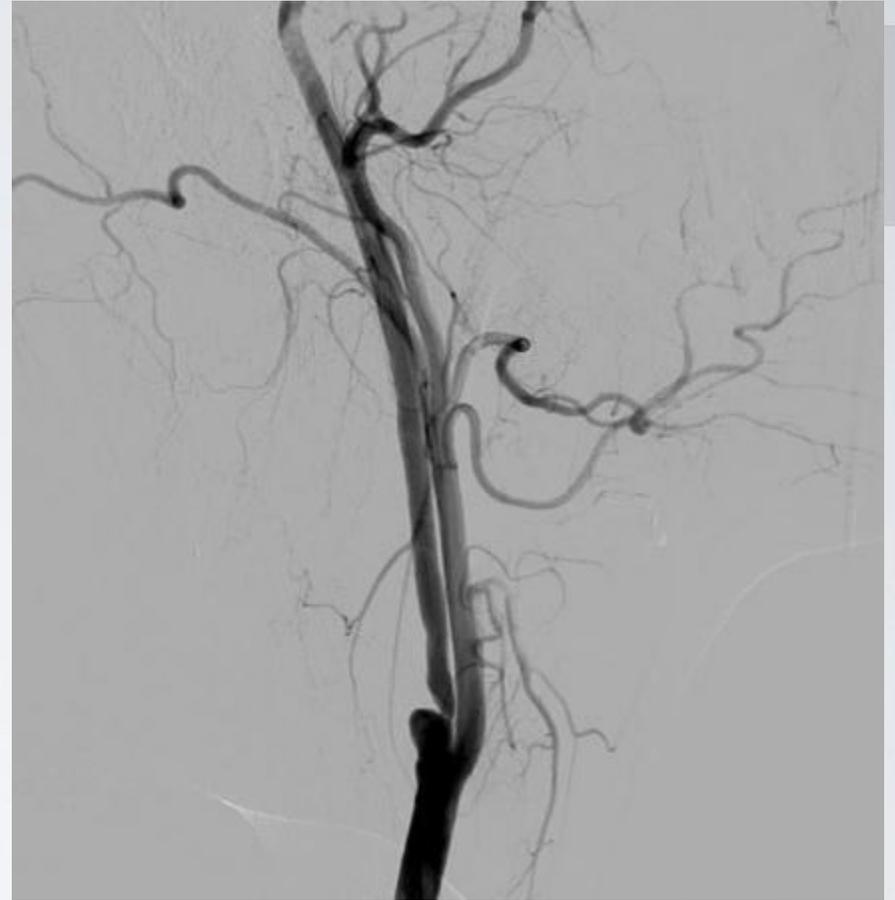
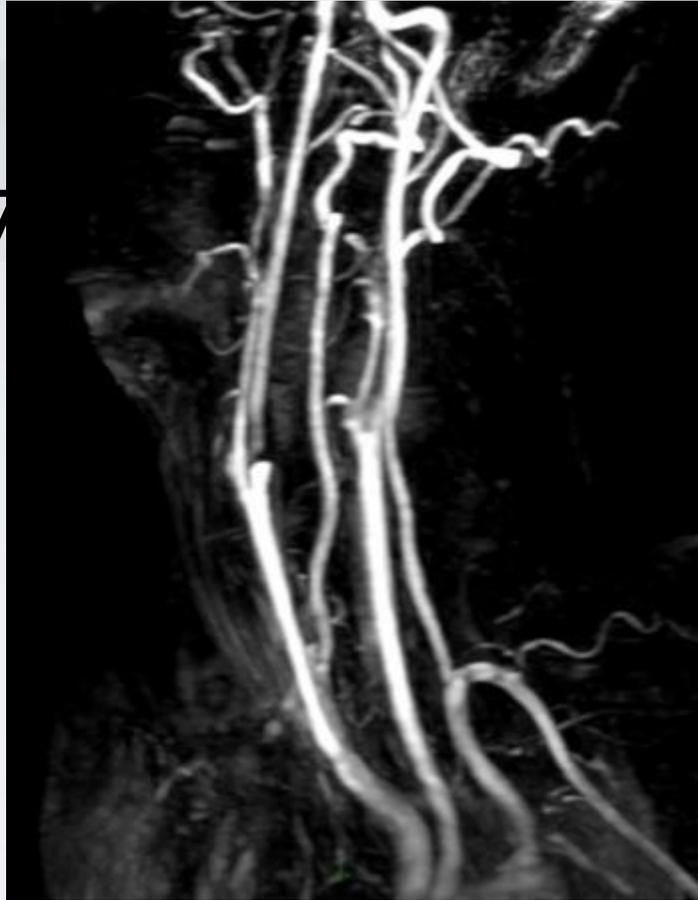
11/2015





11/2016

04/2017



TREATMENT

- Stent placement



Rot 0°
Ang 0°
FD 27 cm

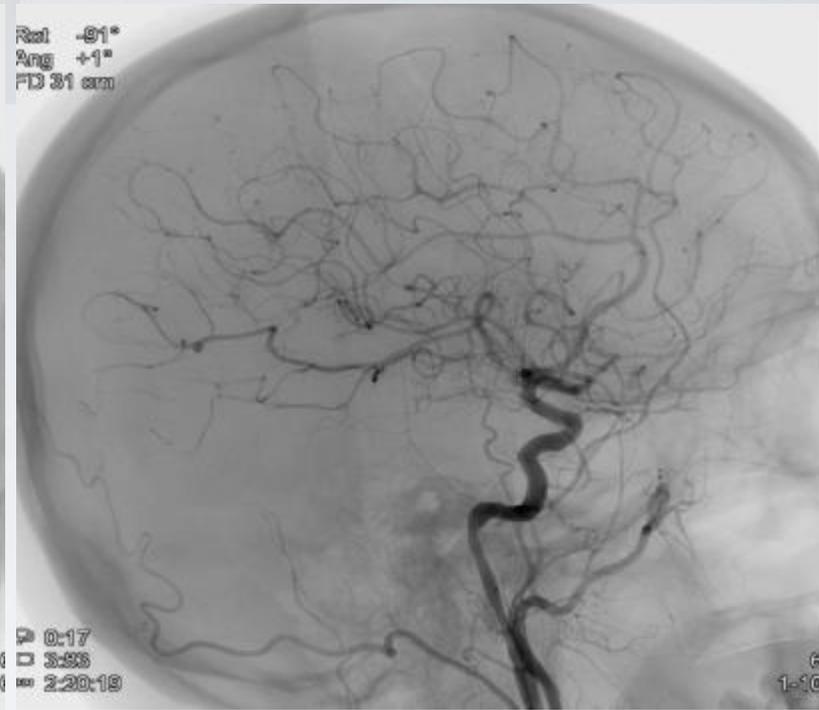


0:00
3:57
2:20:19



Rot -91°
Ang +1°
FD 31 cm

0:17
3:58
2:20:19

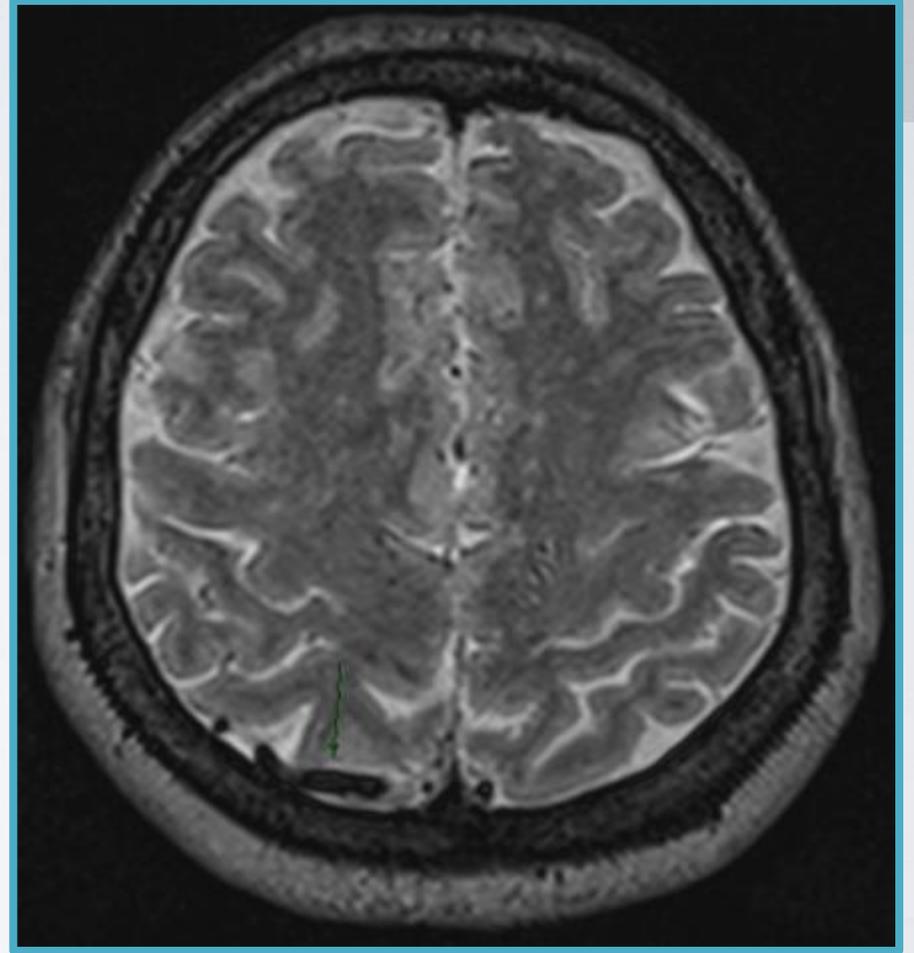
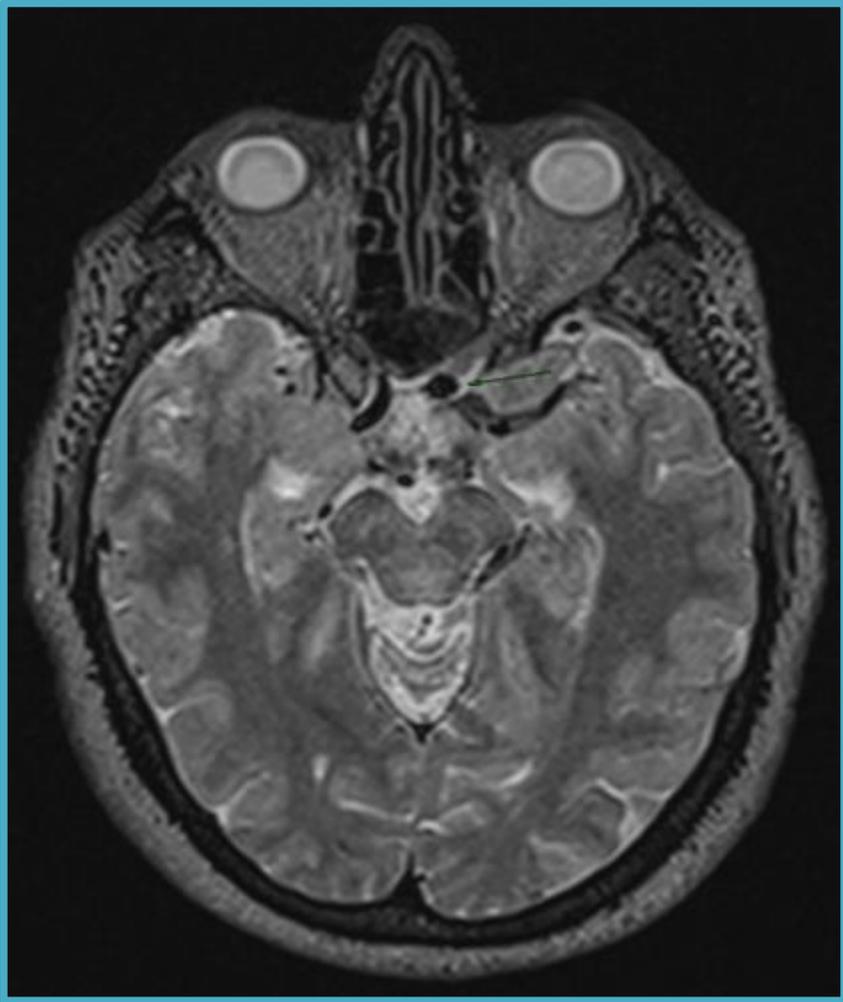


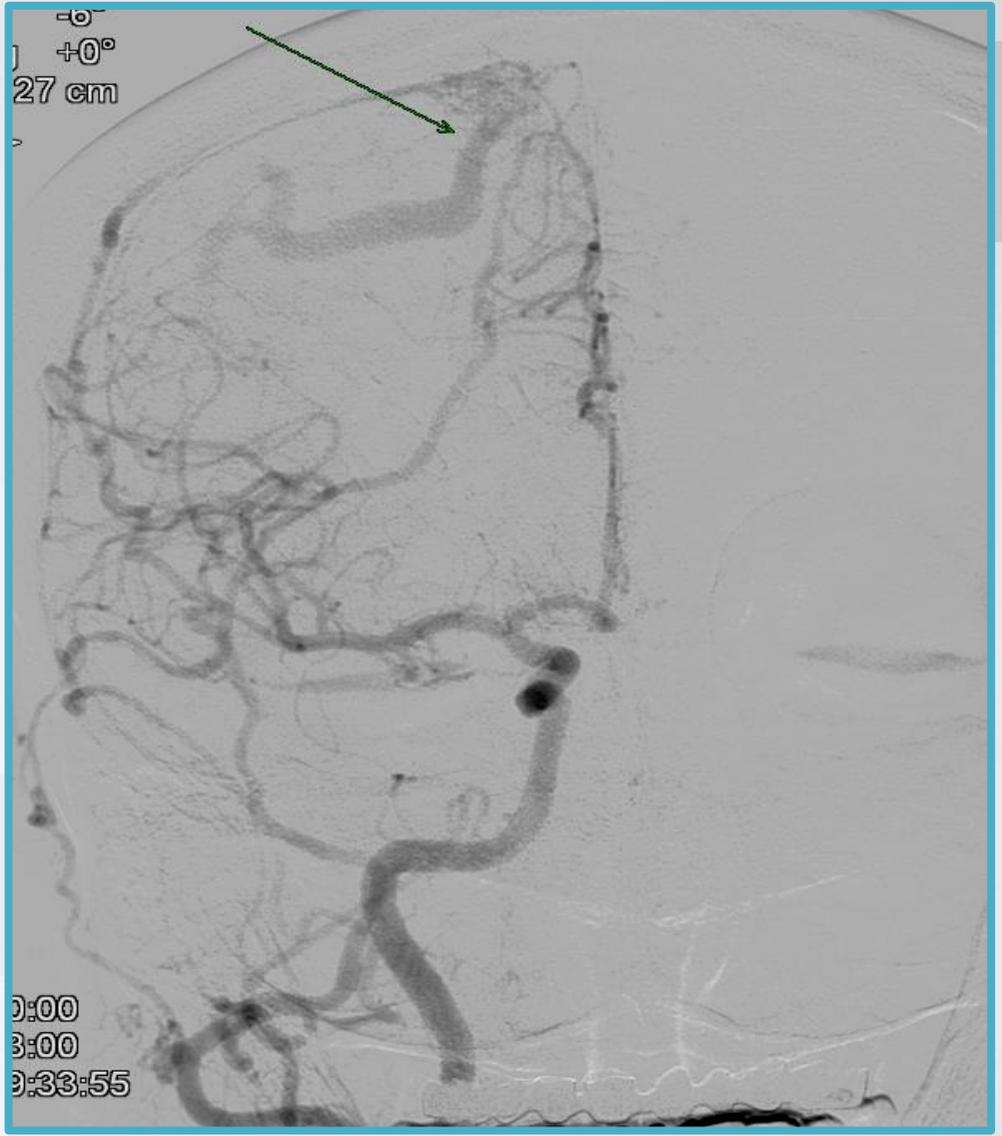
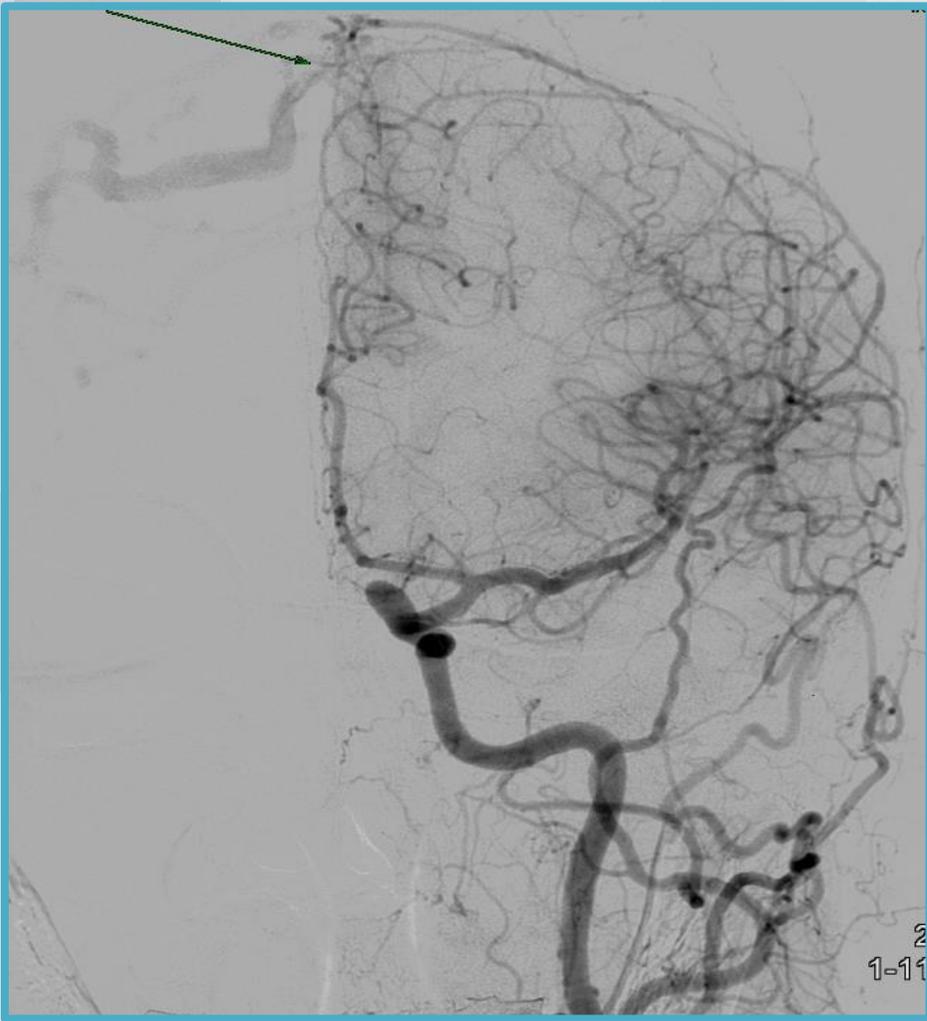
15.05.2017

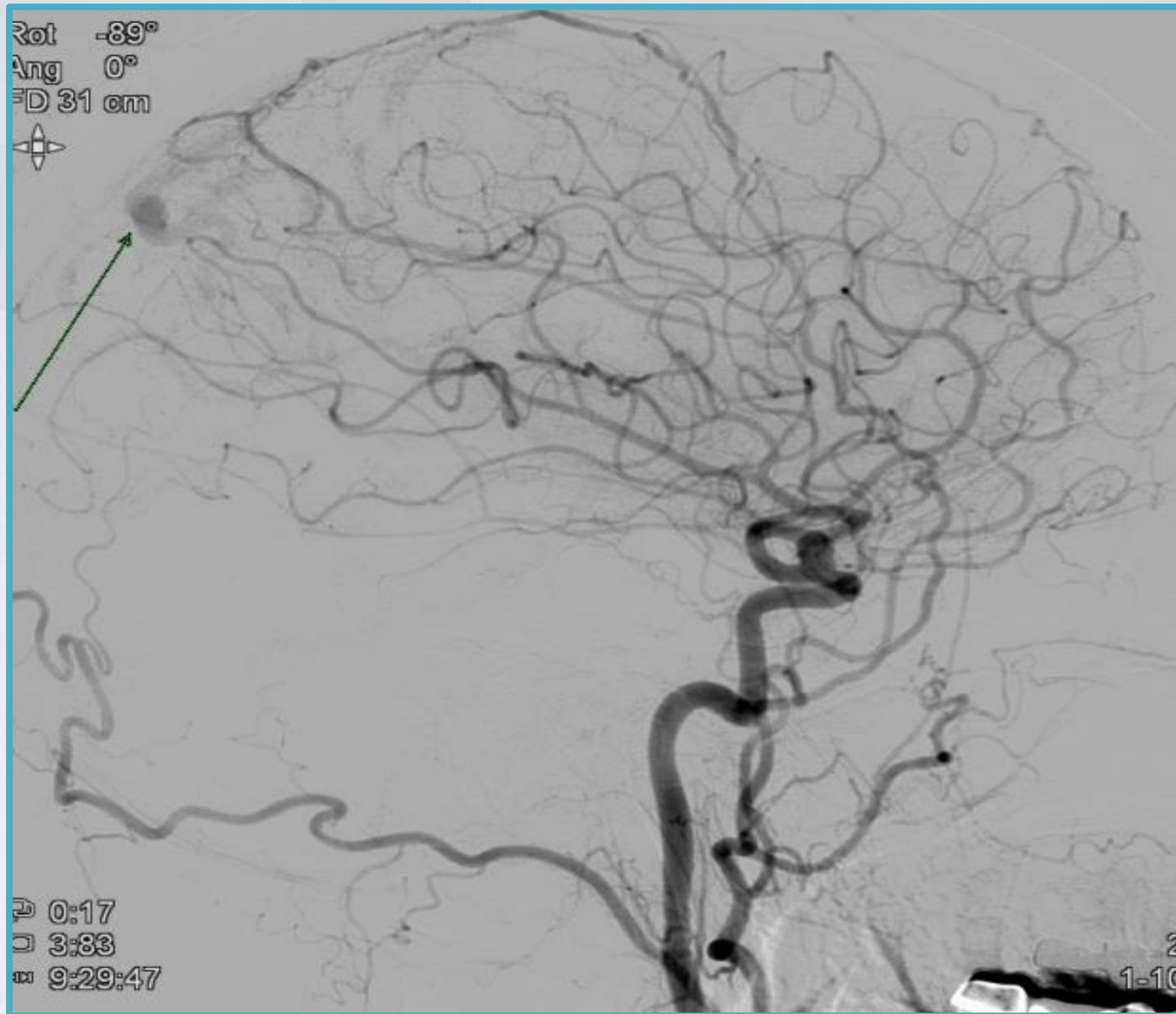
PT 8 NE

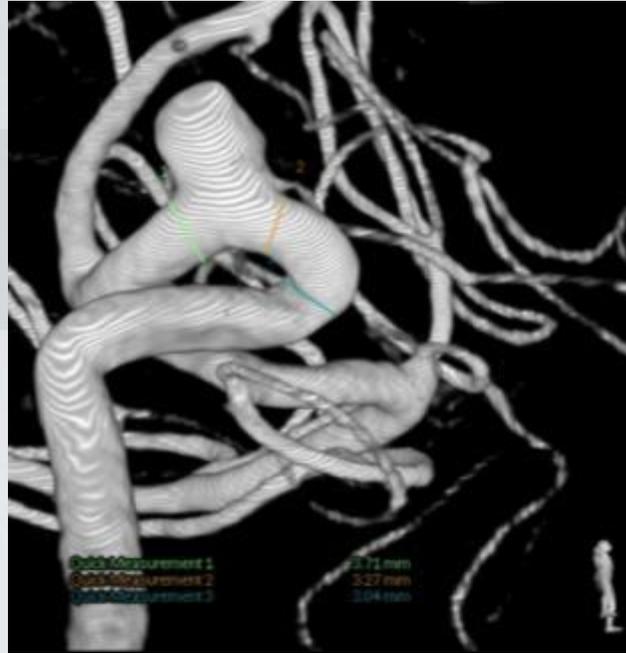
- 60 Y F
- Presented with headaches
- DSA: Superior sagittal sinus Dural AVF
- Treatment plan: Embolisation with liquid embolic agent







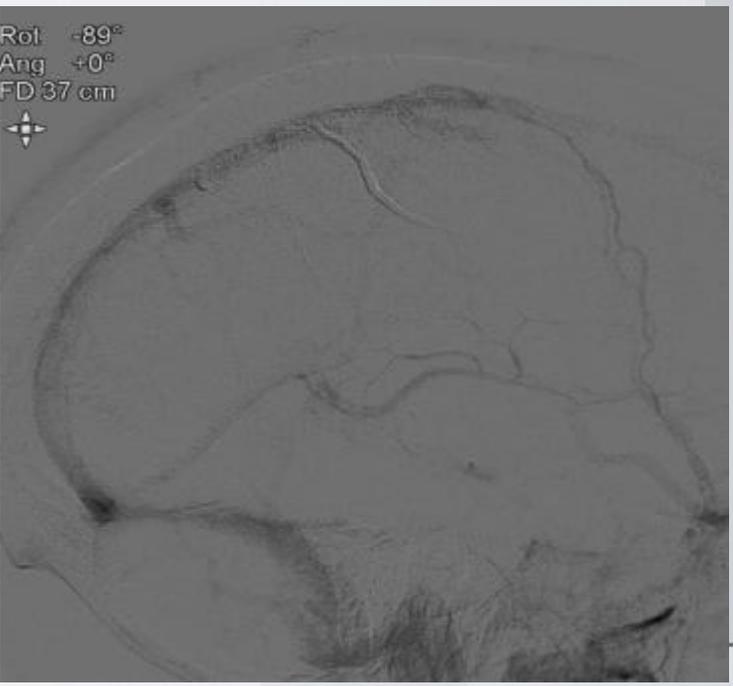
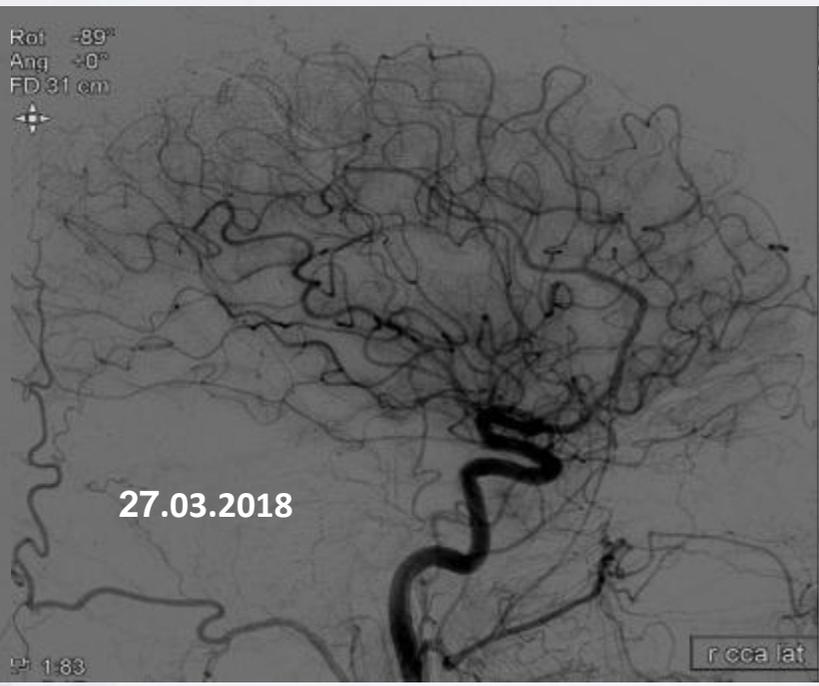
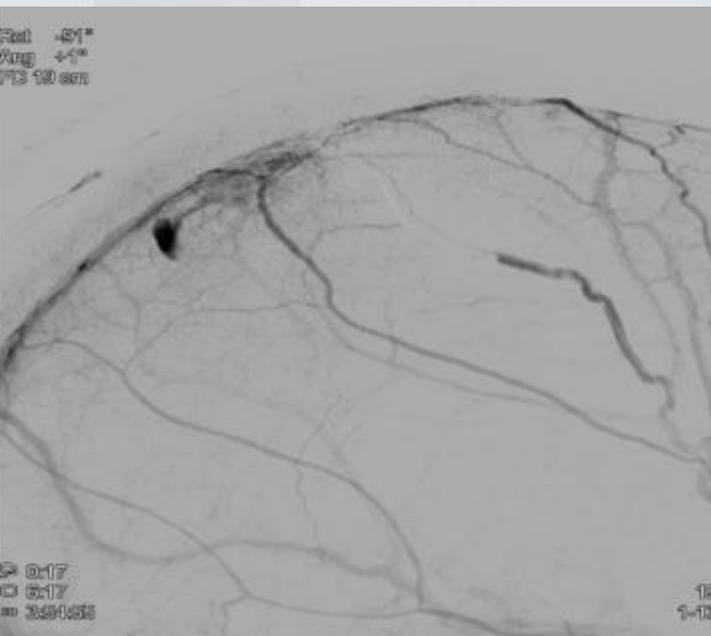
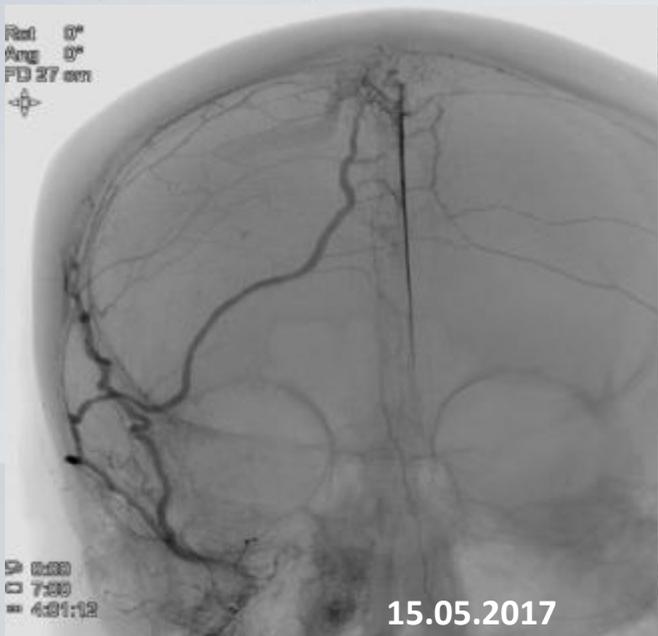




TREATMENT

- Embolisation with liquid embolic agent

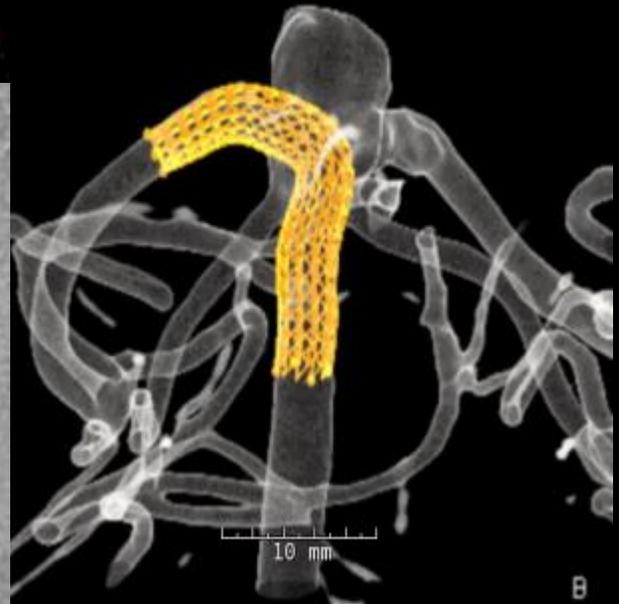
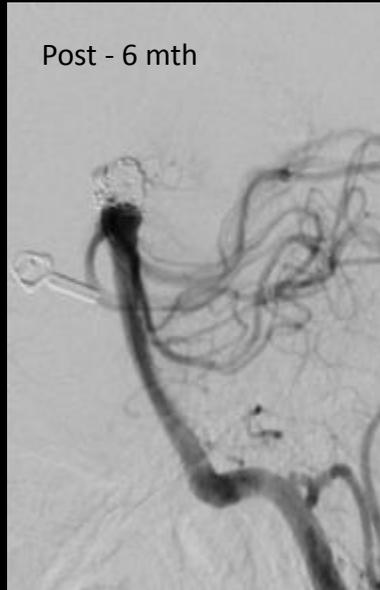
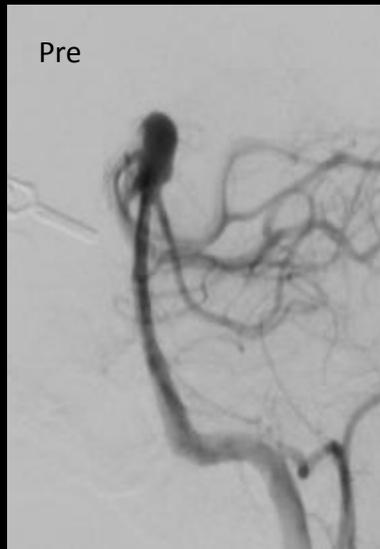




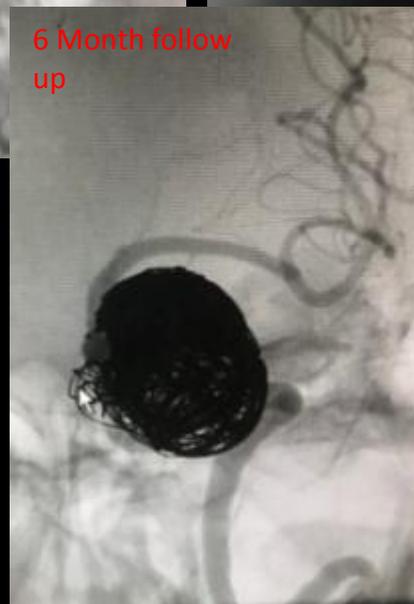
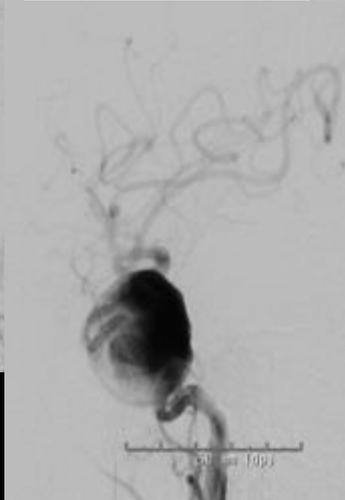
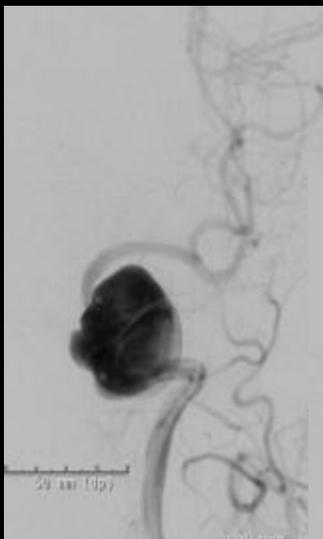
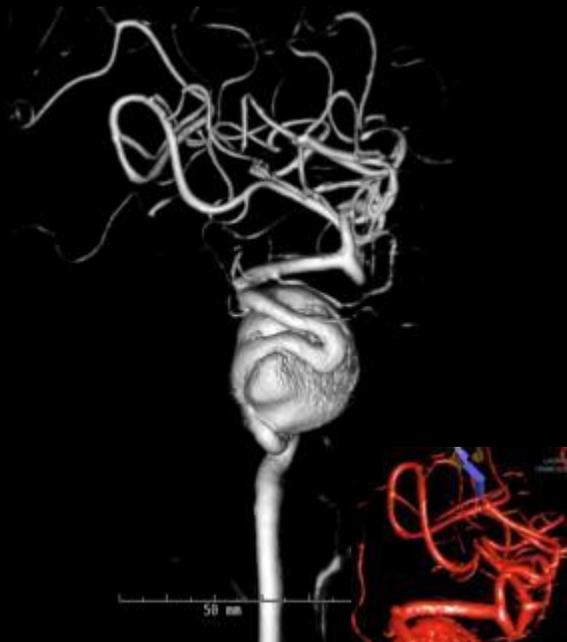
***WLNC 2017 CHICAGO CASES F-U
BY PROF DEMETRIUS LOPES***



Wide necked basilar aneurysm – Stent assisted coiling



Giant ICA aneurysm - Pipeline and coiling



Giant dolichoectatic Vertebro basilar aneurysm

