



Mechanical Thrombectomy of Repetitive Acute Basilar Artery Occlusion

Jianmin Liu

Changhai Hospital



Changhai Hospital

First time :2016-3-7 Local hospital



- Male, 51 yrs; NIHSS 32; GCS 4.
- Sudden loss of conscious for 1.5h
- HBP, Heavy smoking
- At discharge: mRS 0, NIHSS 0



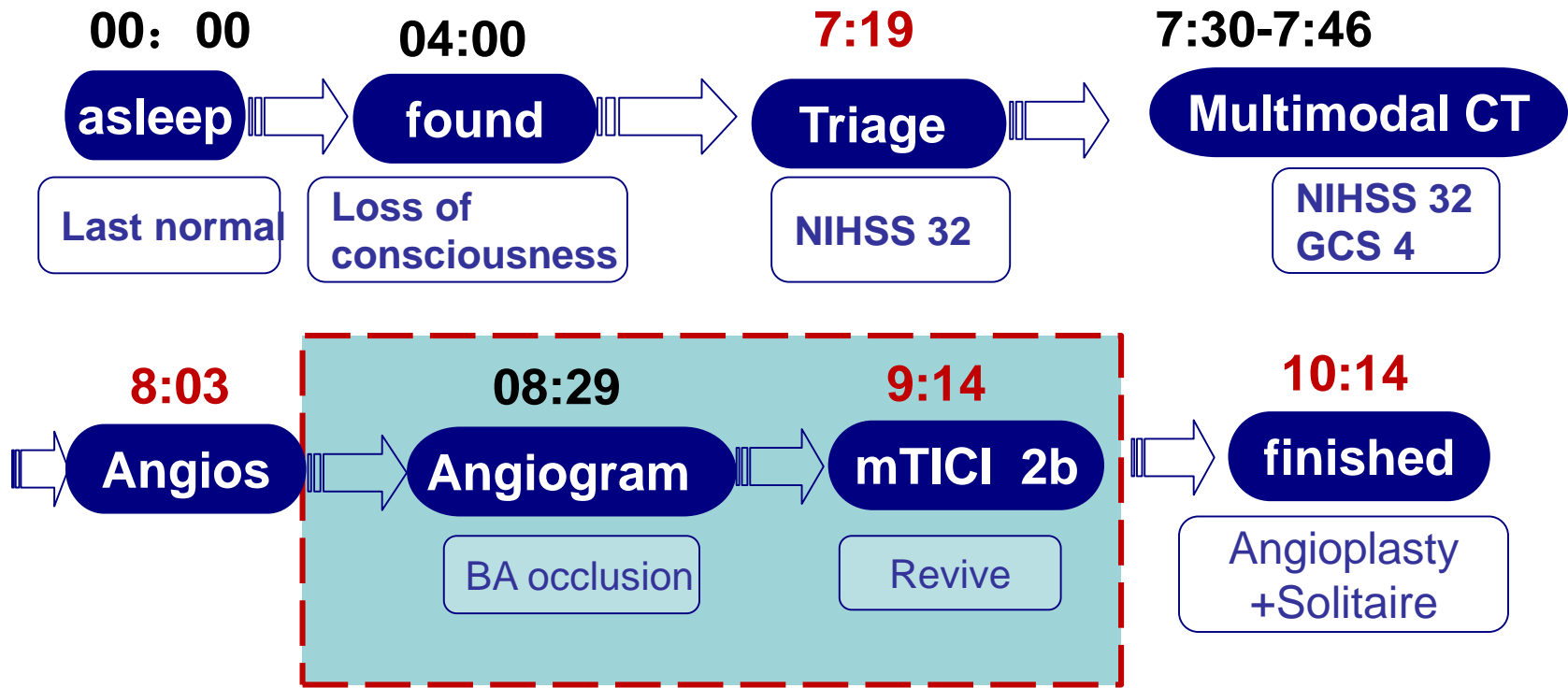
Changhai Hospital

Second Time



- **CC:** loss of conscious and vomiting for 3h
- **History:** 2016.09.04 0 am fall asleep, last normal, 2016-9-4 4am loss of consciousness found by colleagues, transferred to our stroke center finally .
- **PE:** pre-stroke mRS 0, NIHSS 32, GCS 4。 Coma, complete upward gaze, vertical nystagmus, forced extension in the limbs after stimulation.
- **Past medication:** After first discharge, aspirin (100 mg) and plavix (75mg) was taken occasionally.
- **Dix:** 1. AIS 2. Acute basilar artery occlusion

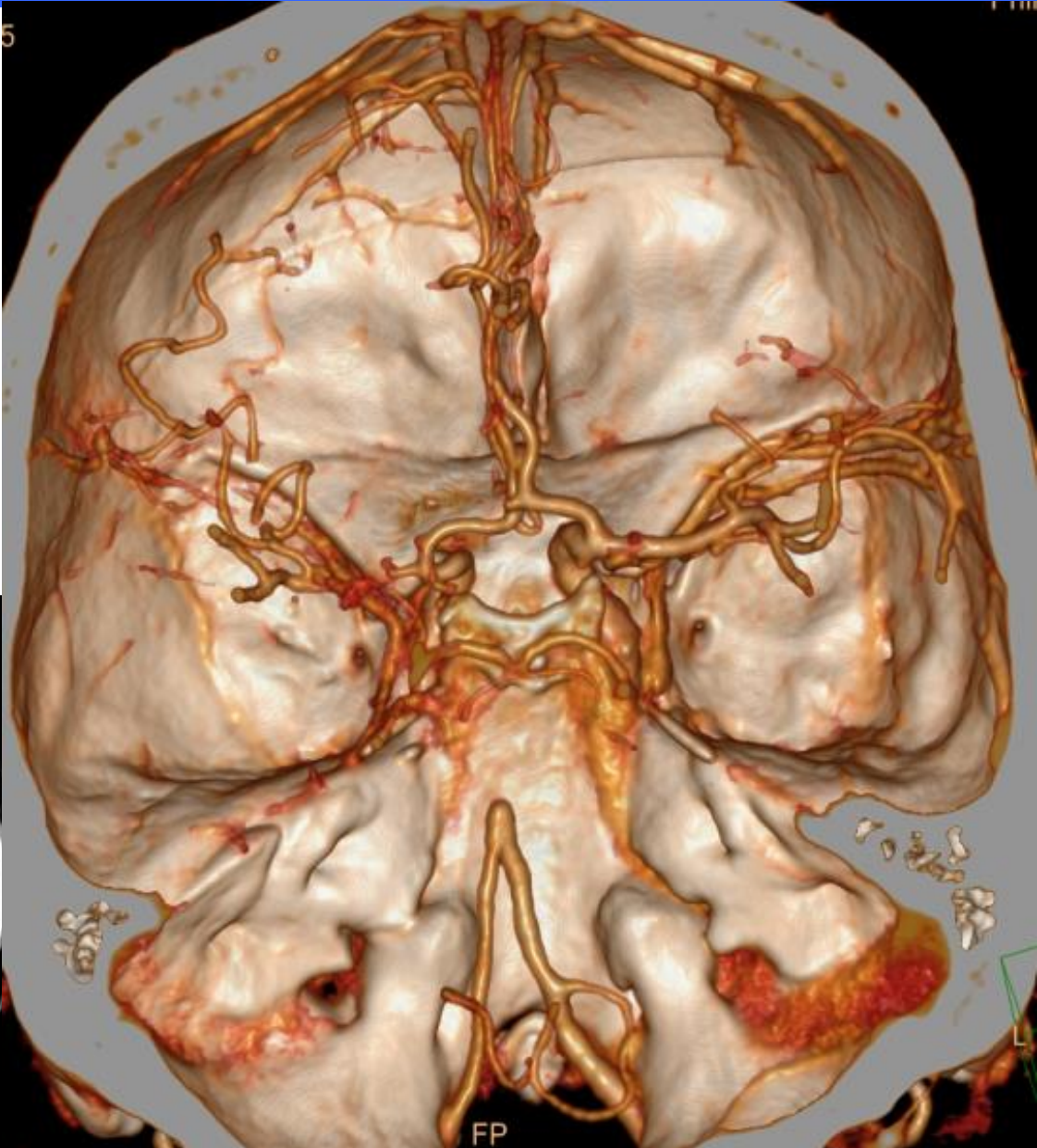
Timeline



Door to Puncture: 61mins
Puncture to reperfusion : 54mins
Door to reperfusion 554mins

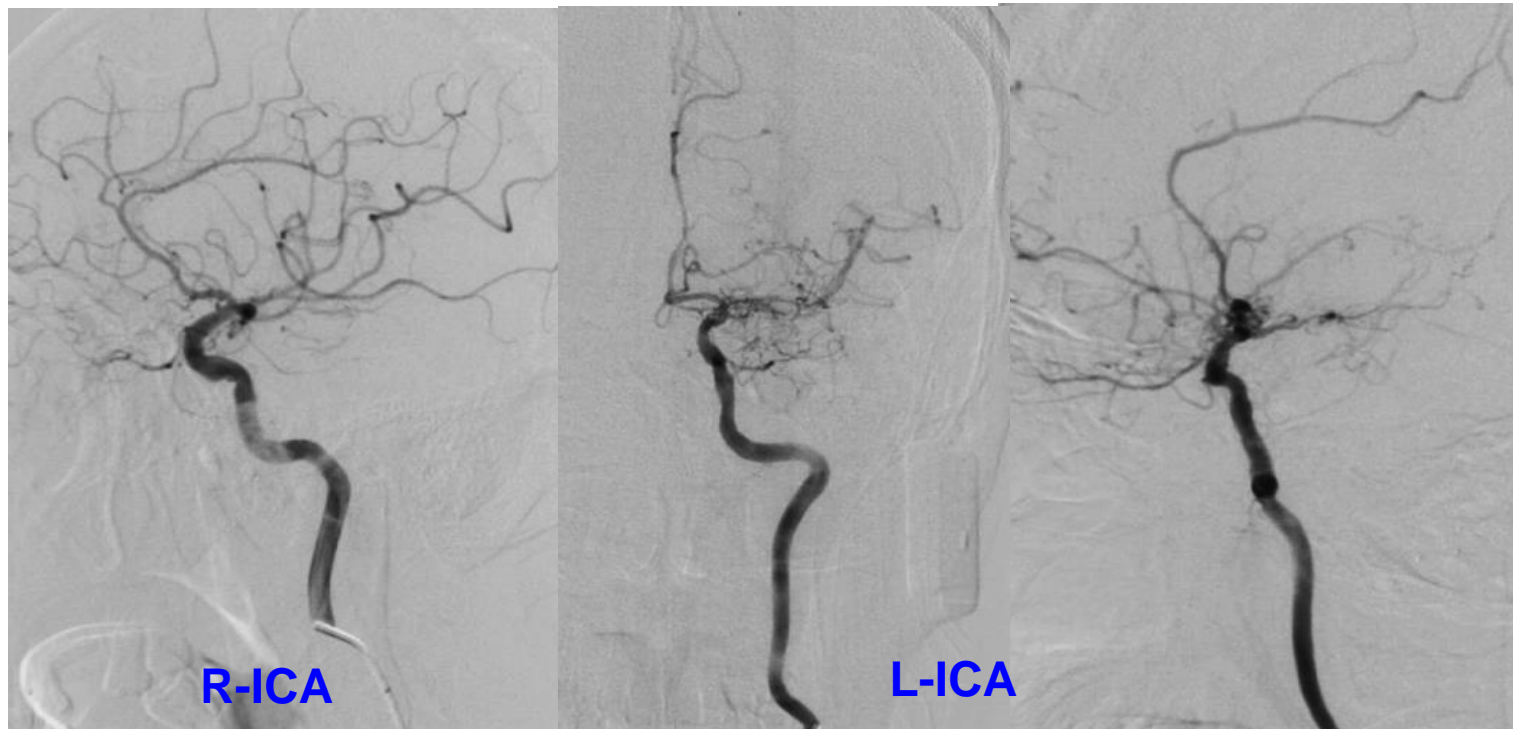
General anesthesia

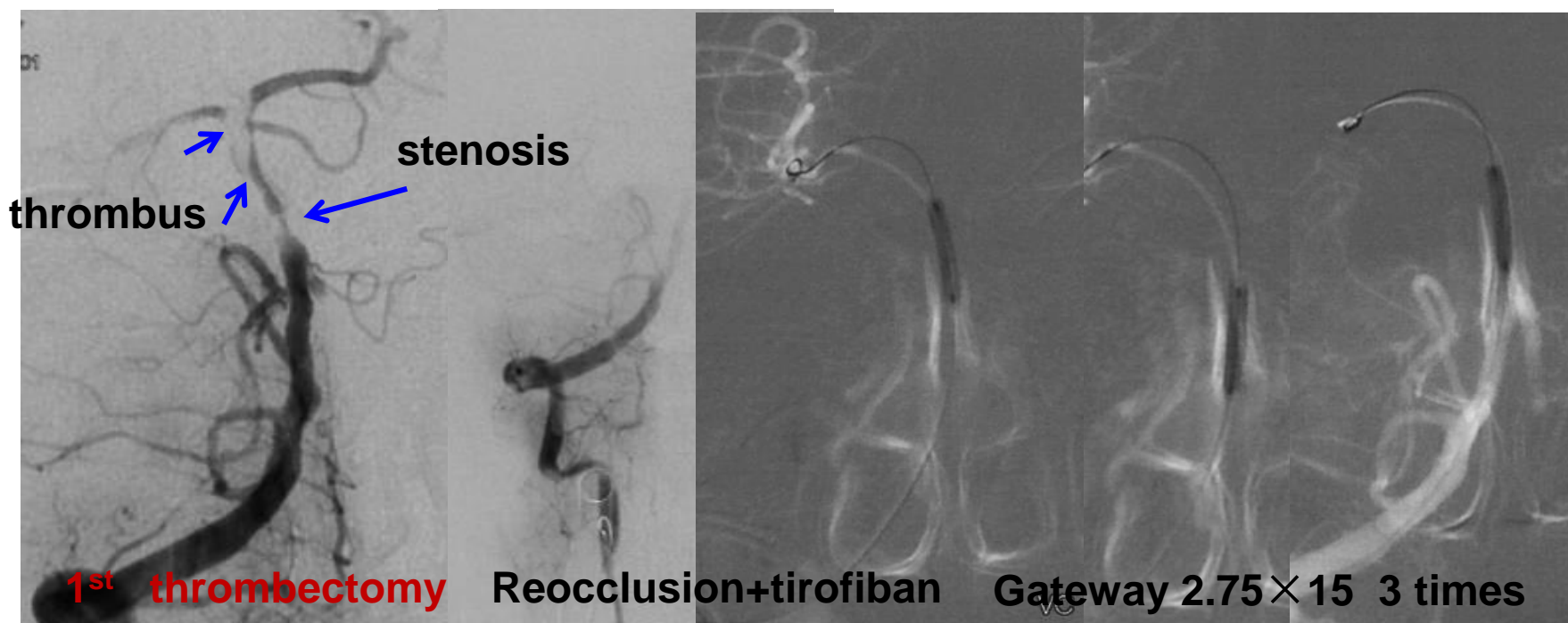
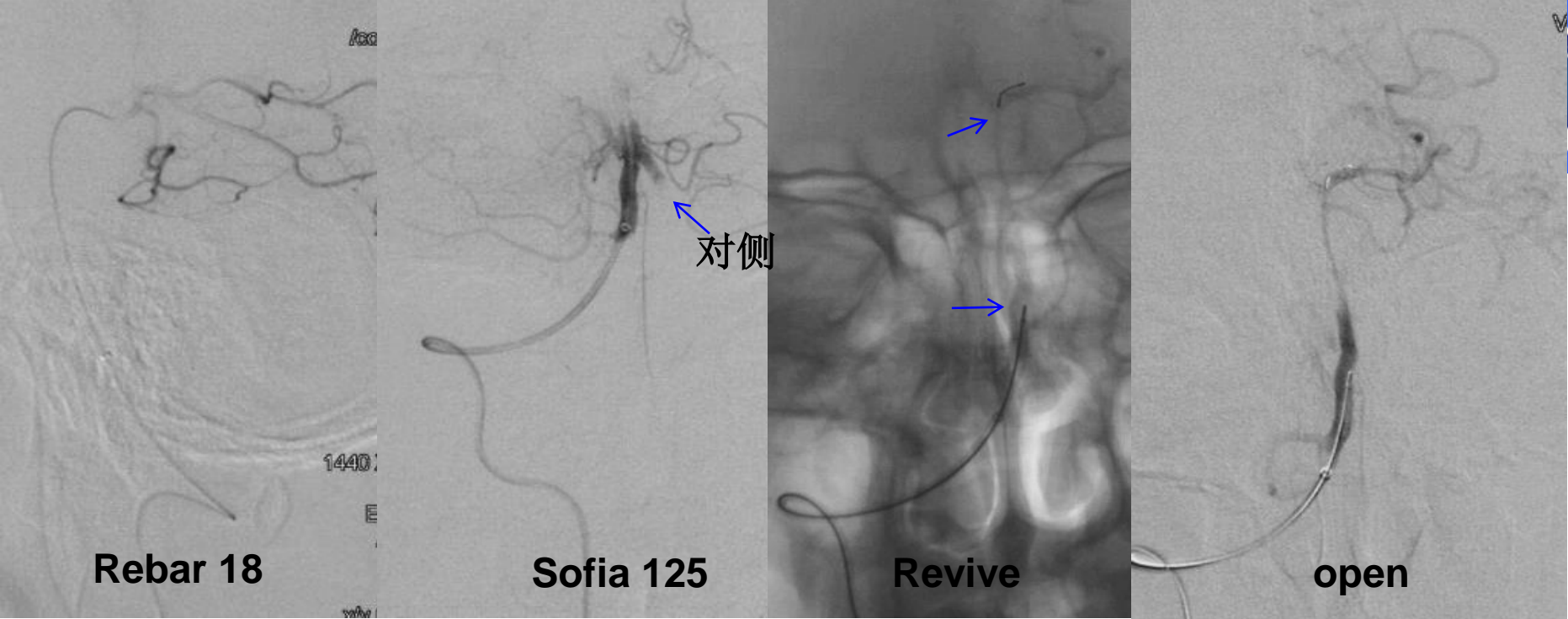
2016-09-04 multimodal CT

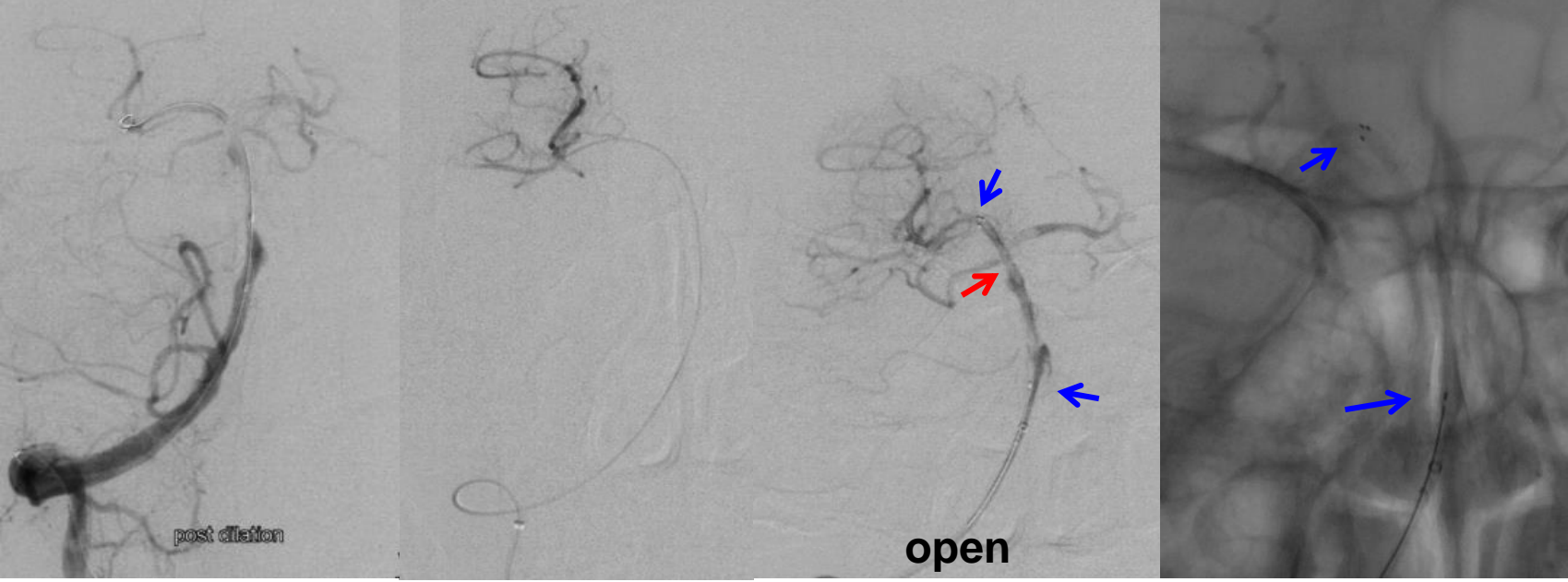




9.4 DSA

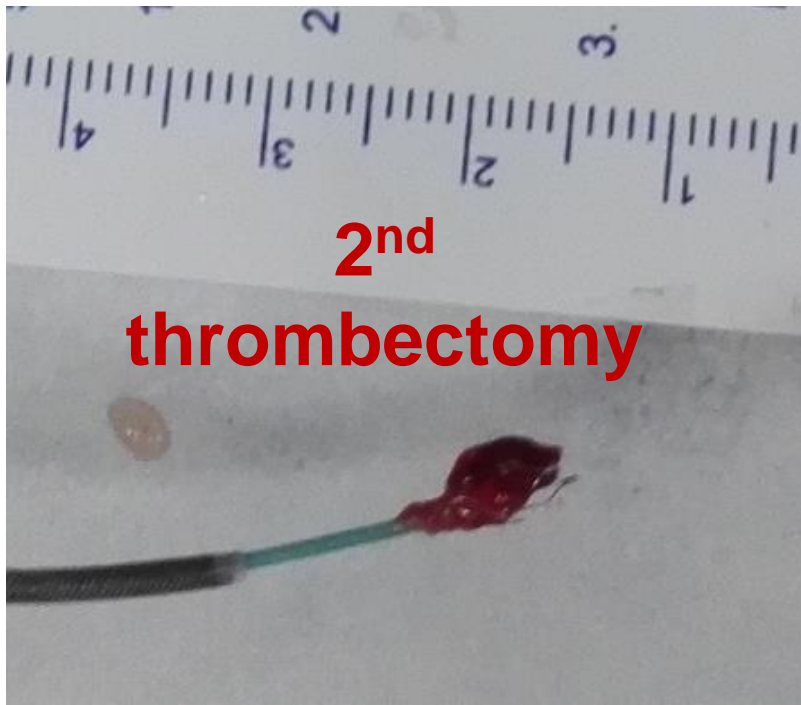






Post dilation

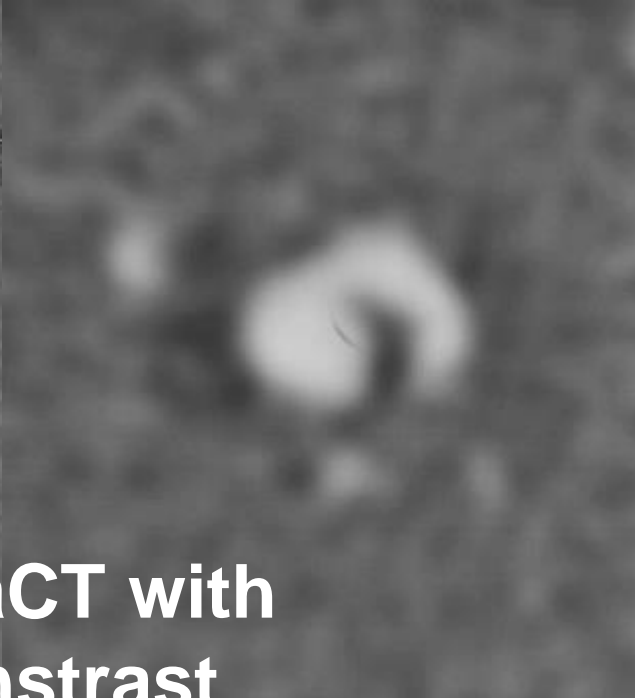
Solitaire 4×20



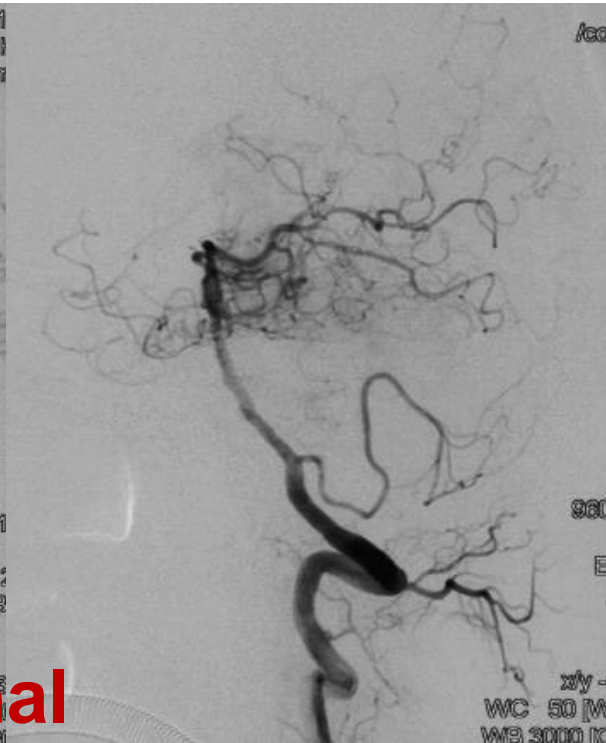
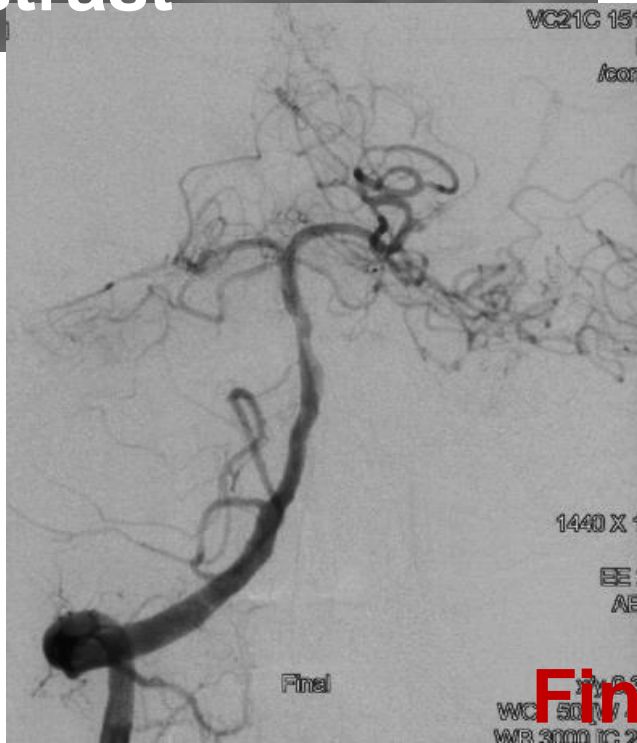
2nd
thrombectomy



mTICI 2b级



DynaCT with contrast



Final

2016-09-04

Clinical status



Postprocedural 2h: GCS 10, incubation,
Strength of bilateral limbs Grade 3.

NIHSS: 16+T。

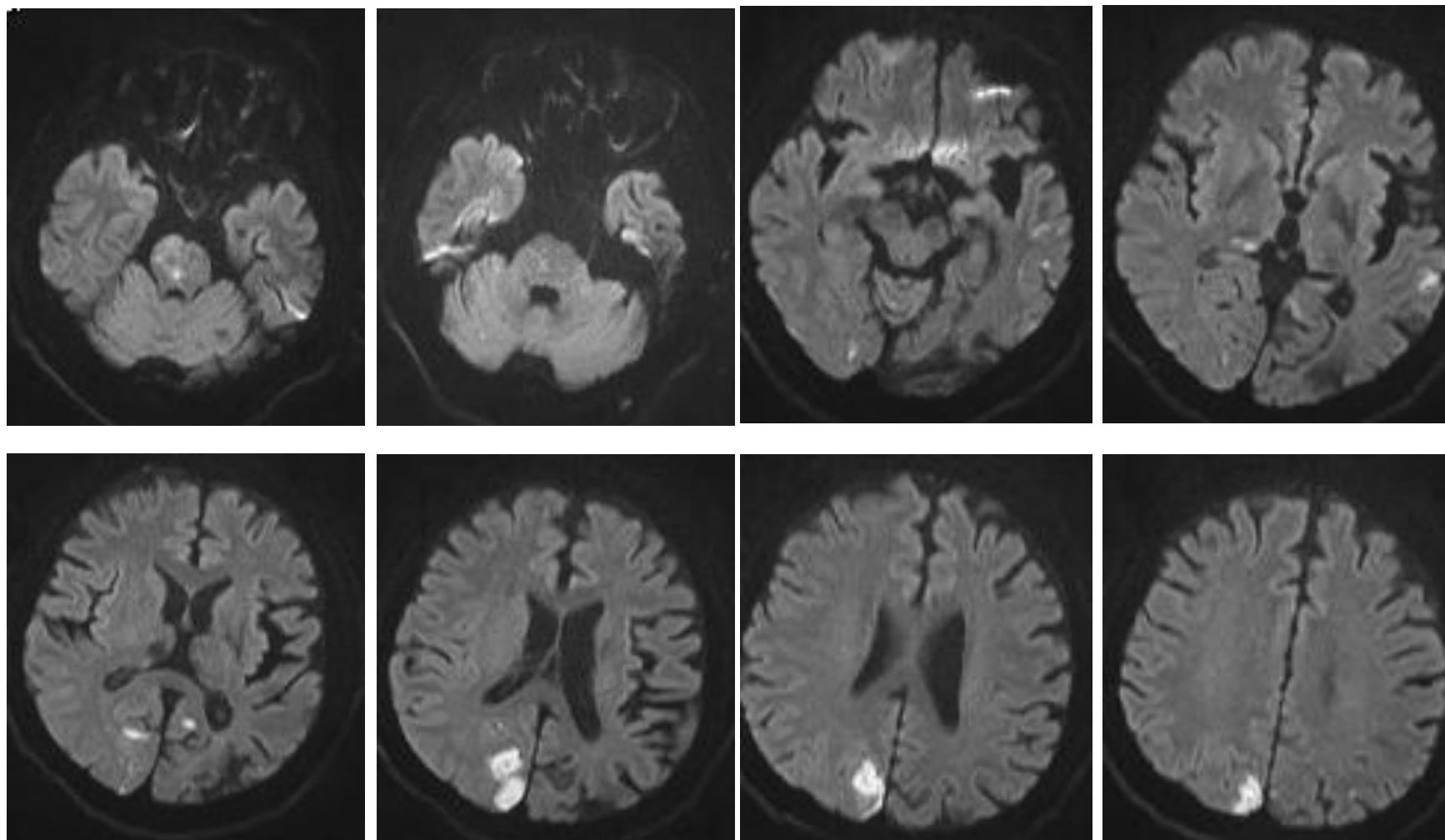
Postprocedural 24h: GCS 15, alert, motor
aphasia, dysarthria, bilateral limbs strength Grade
5, **NIHSS: 5。**



Changhai Hospital, s

2016-09-06

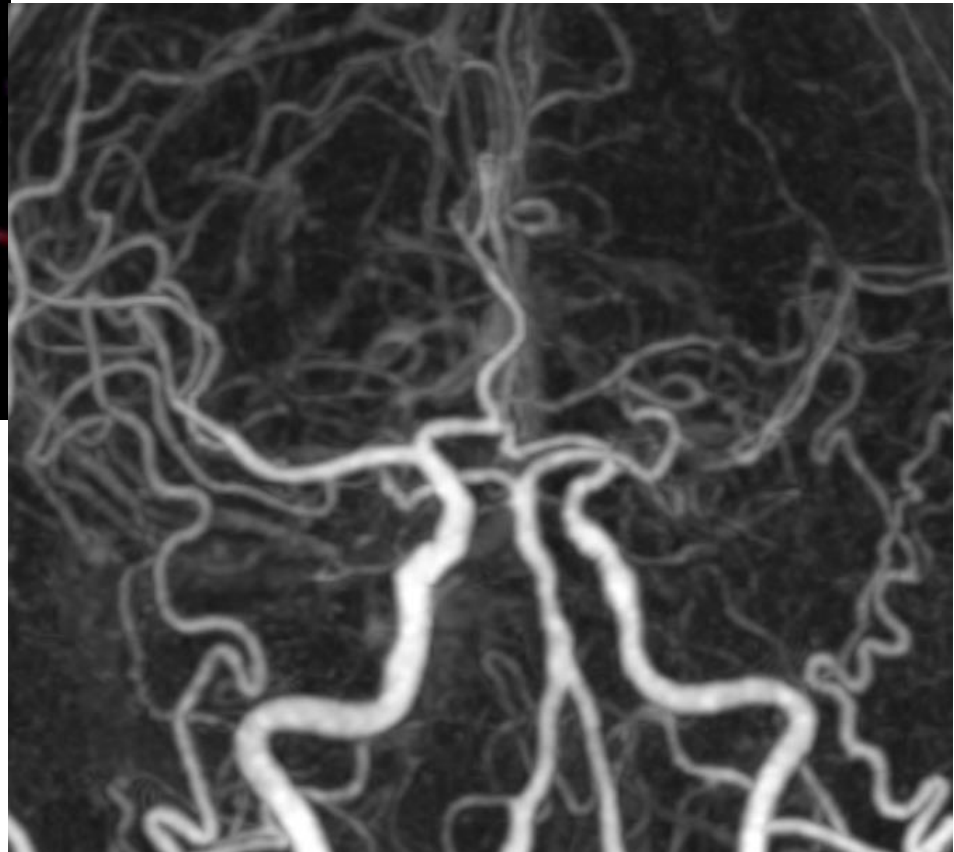
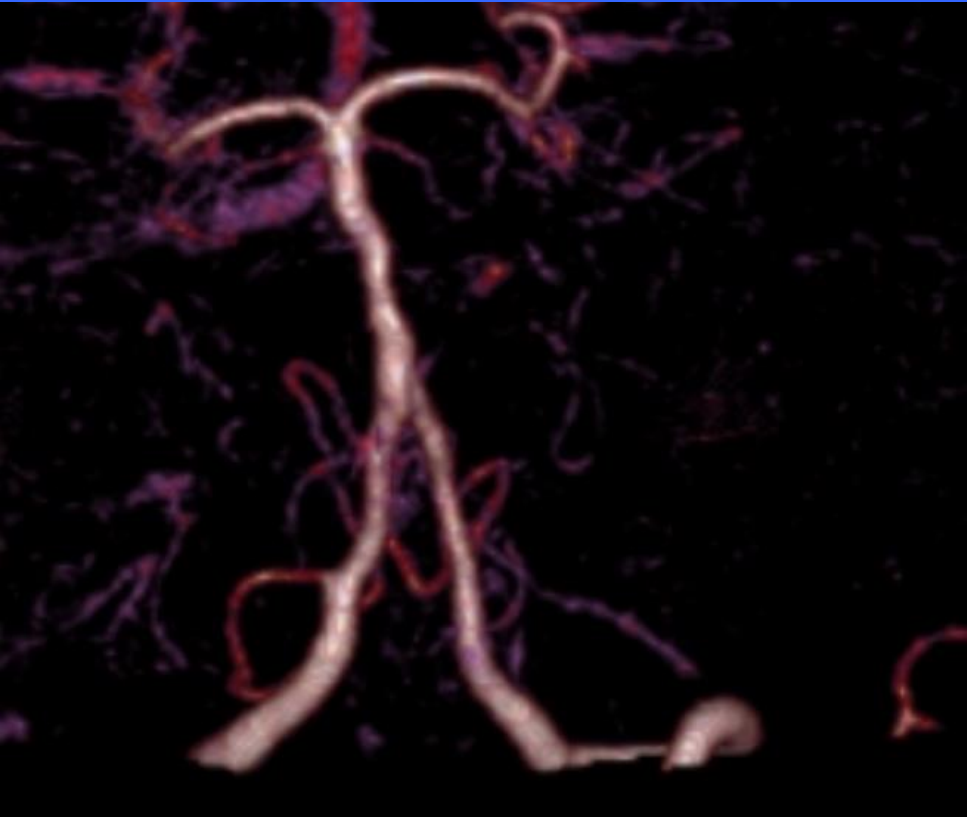
Postprocedural MR (Day 2)



Changhai Hospital, stroke Center

2016-09-06

Postprocedural CTA Day 2



- At discharge :NIHSS 1
- Dual antiplatelet



One month later

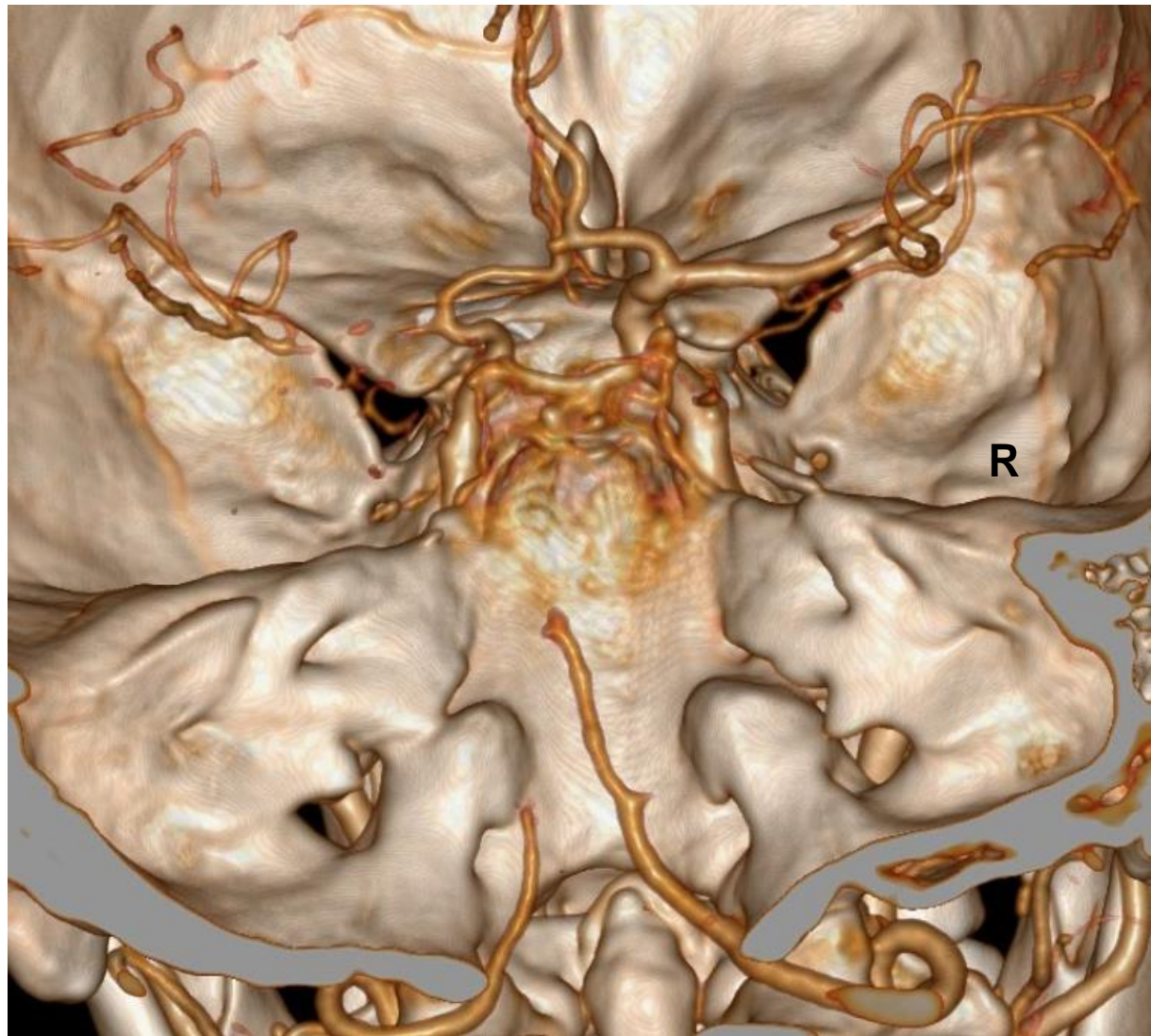
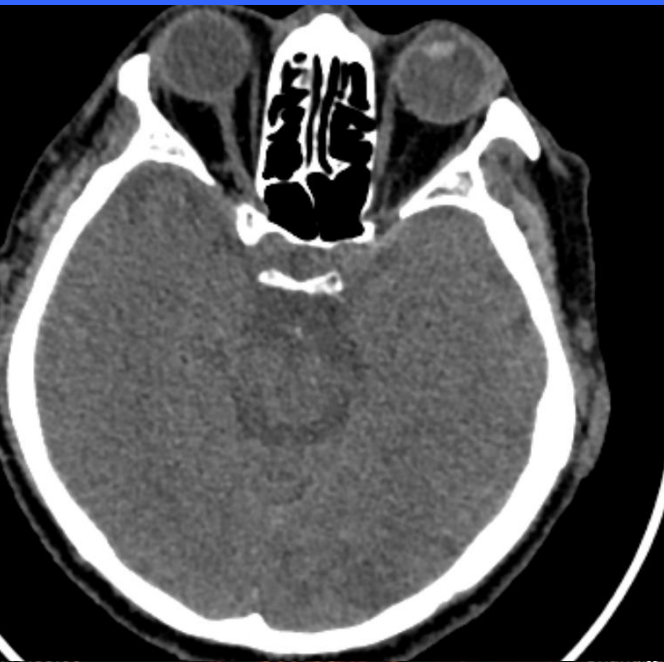
Changhai Hospital, stroke Center

Third time: 2016-10-19

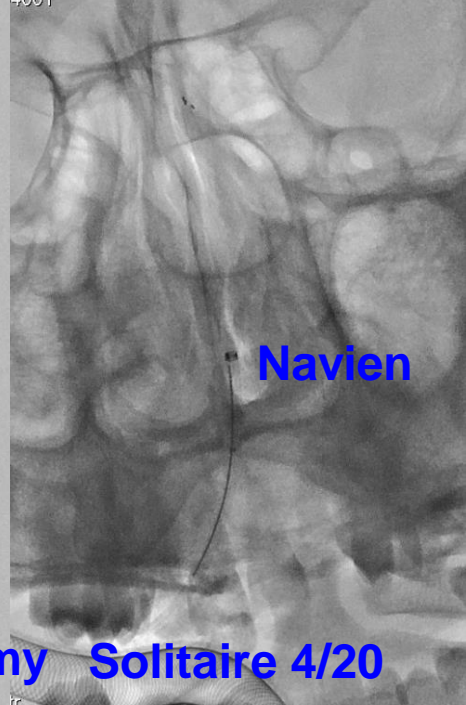


- CC: dizziness and limbs weakness in the left for 1.5h
- **PE:** pre-stroke mRS 0, NIHSS 8, GCS 14分; R-limb strength Grade 5, L-limb Grade 3, dystharthsia
- **Oral medication:** After discharge, aspirin stopped for 10 days and plavix taken.

2016-10-18 multimodal

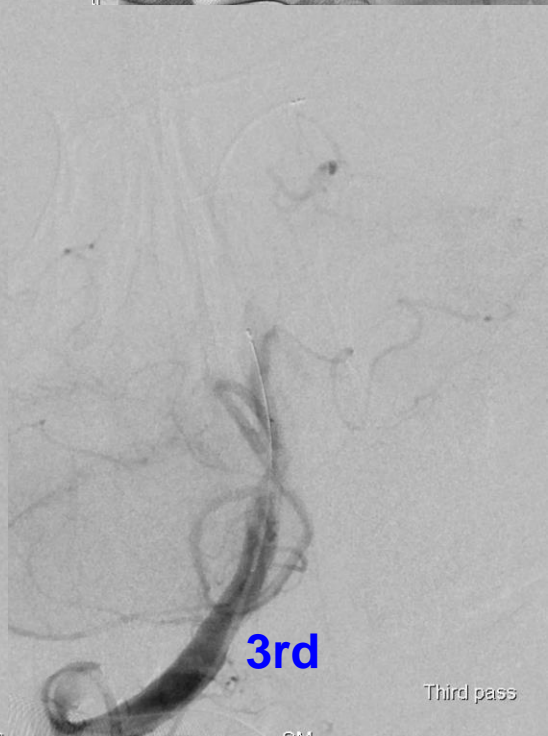


Changhai Hospital, stroke Center



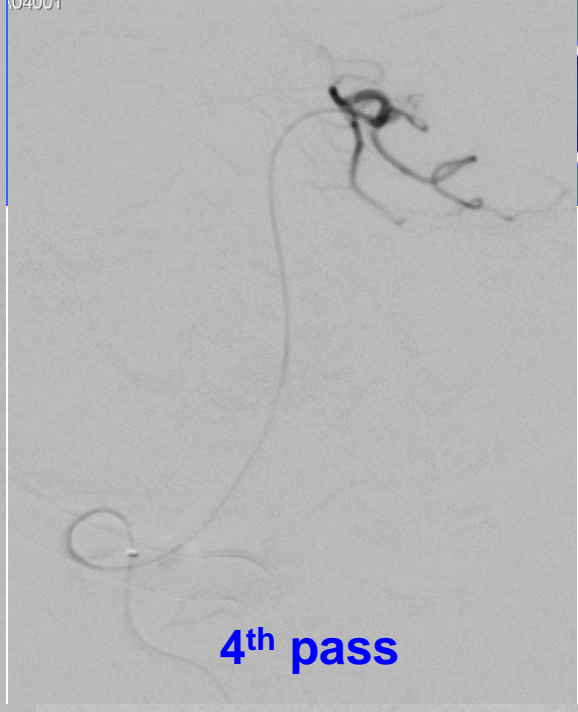
L-VA 1st thrombectomy Solitaire 4/20

10.19



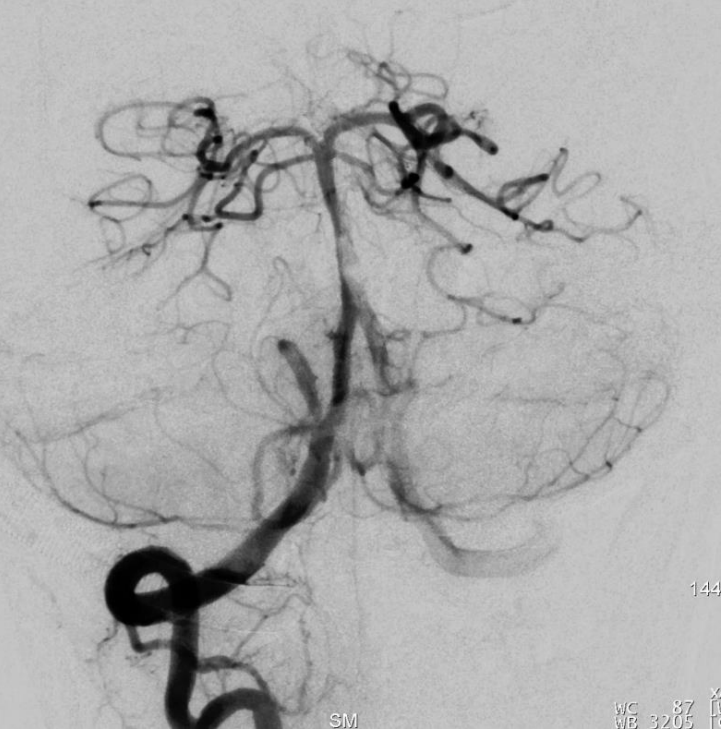
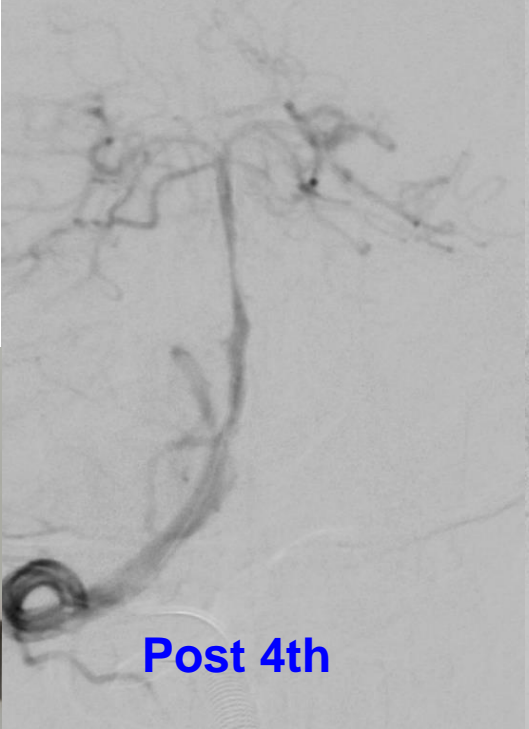
d pass

Third pass



el thrombectomy

SM



144
WC 87
WE 3205

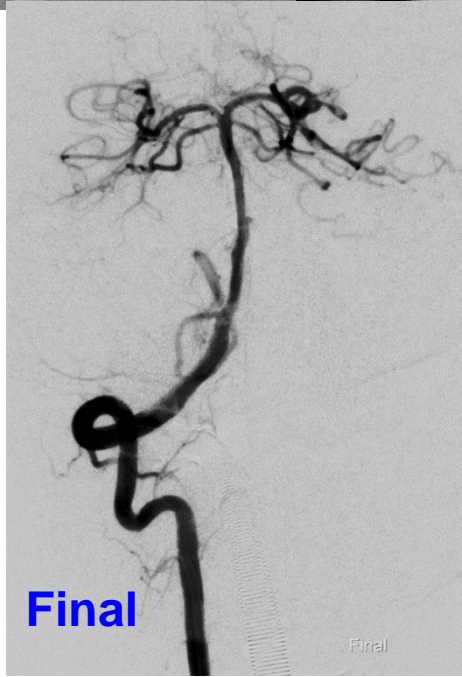


Apollo 2.5*13

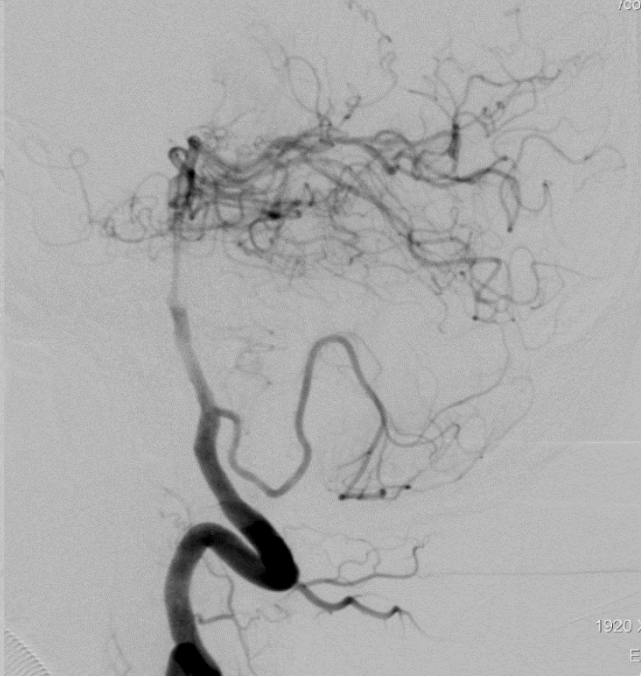
Apollo 2.5*13



6atm



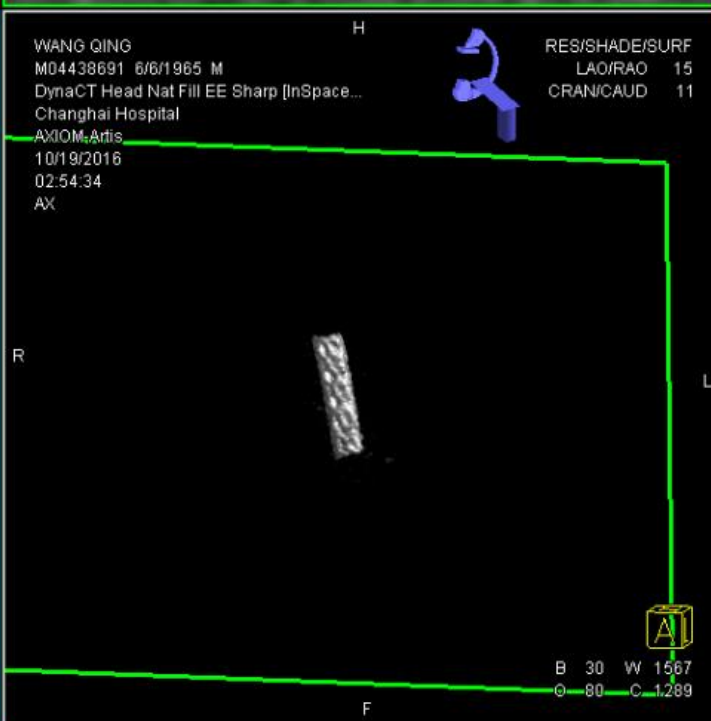
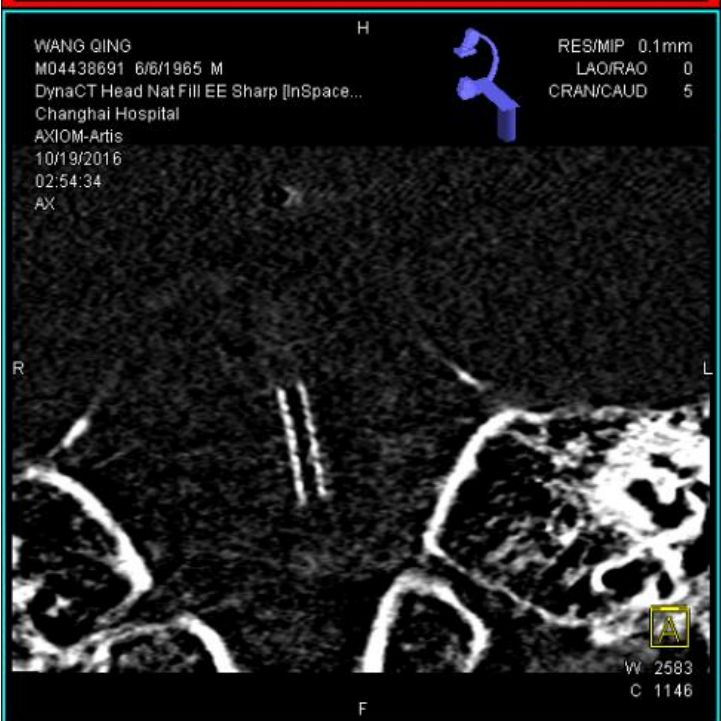
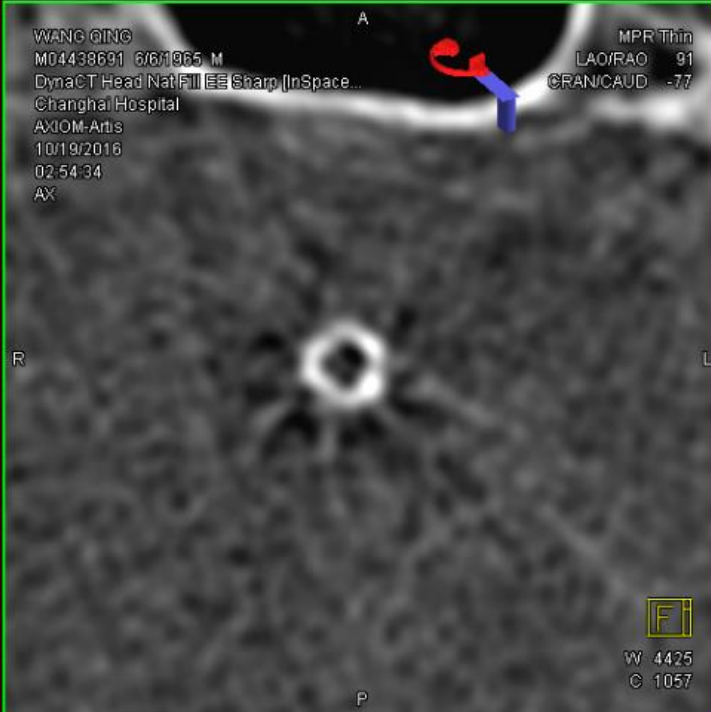
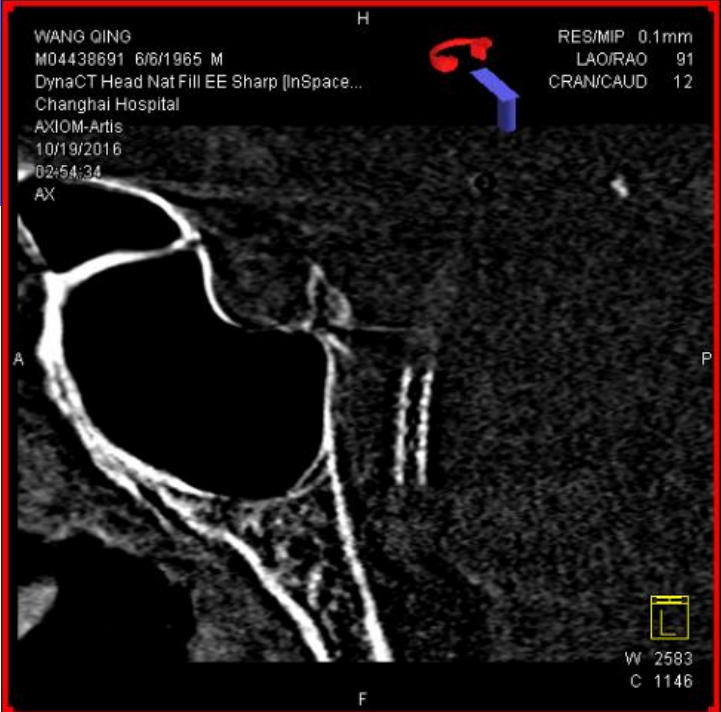
Final



Final

1920

E



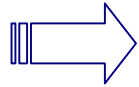
Clinical status



First

2016.03.09

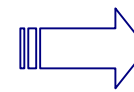
BA occlusion



Second

2016.09.04

BA occlusion



Third

2016.10.18

BA occlusion

**Stroke
onset:**

GCS 4

GCS 4, NIHSS 28

GCS 14, NIHSS 8

Thrombectomy

Thrombectomy

Thrombectomy
Apollo

Outcome: NIHSS 0

NIHSS 1

GCS 15, NIHSS 2

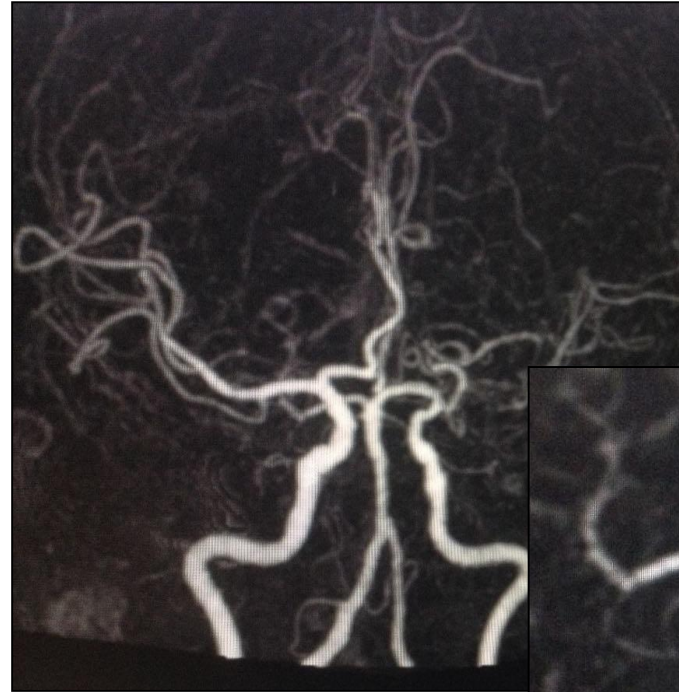
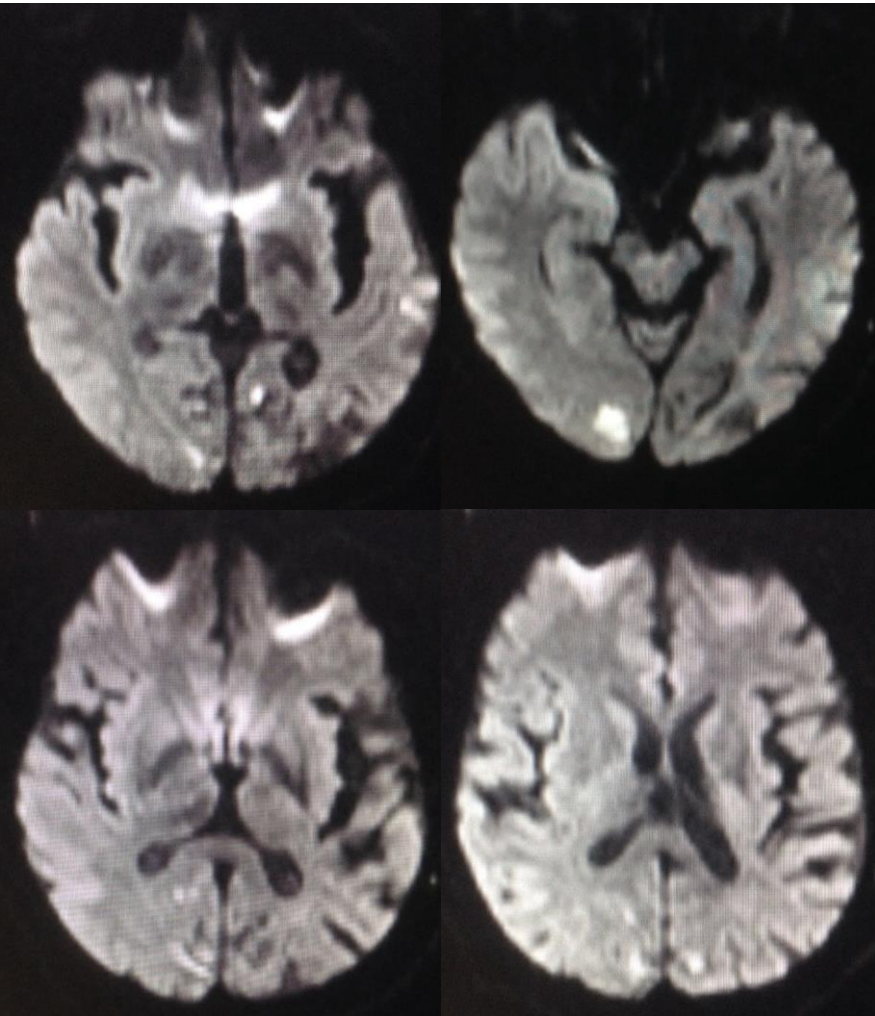
Discharge Medication: Aspirin 100mg
Plavix 75mg

Aspirin 100mg (TEG 6.7%)
Plavix 75mg (TEG 44%)

Aspirin 300mg
Cilostazol 200mg
Plavix 75mg

2016-10-19

Postprocedural Image



Changhai Hospital, stroke Center

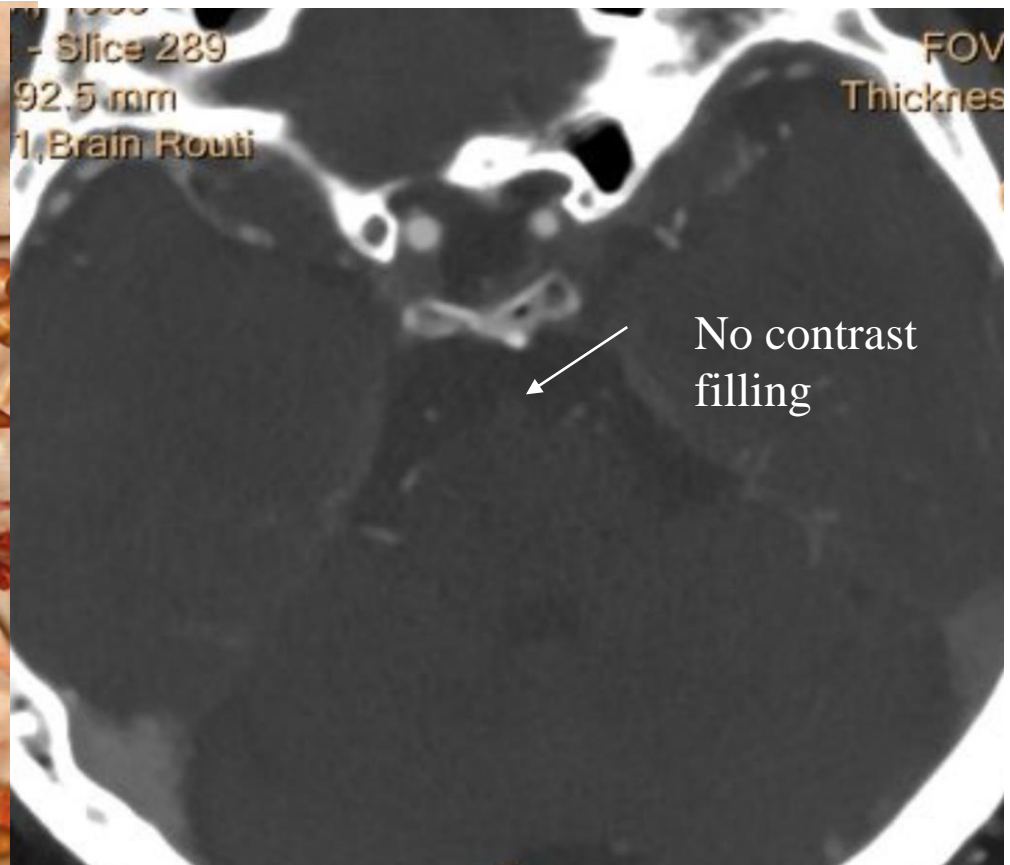
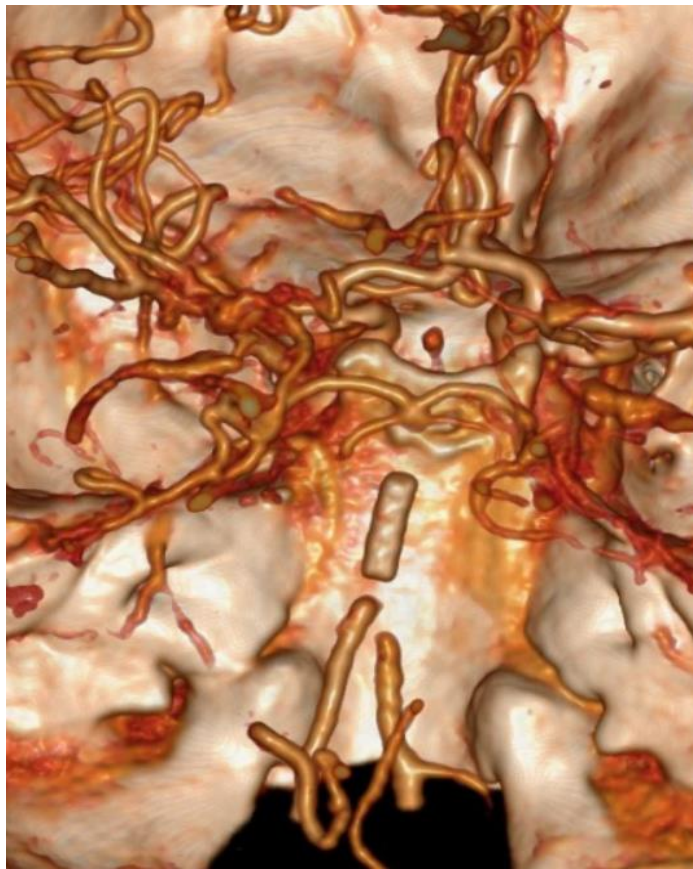


Another 1 month later

Changhai Hospital, stroke Center

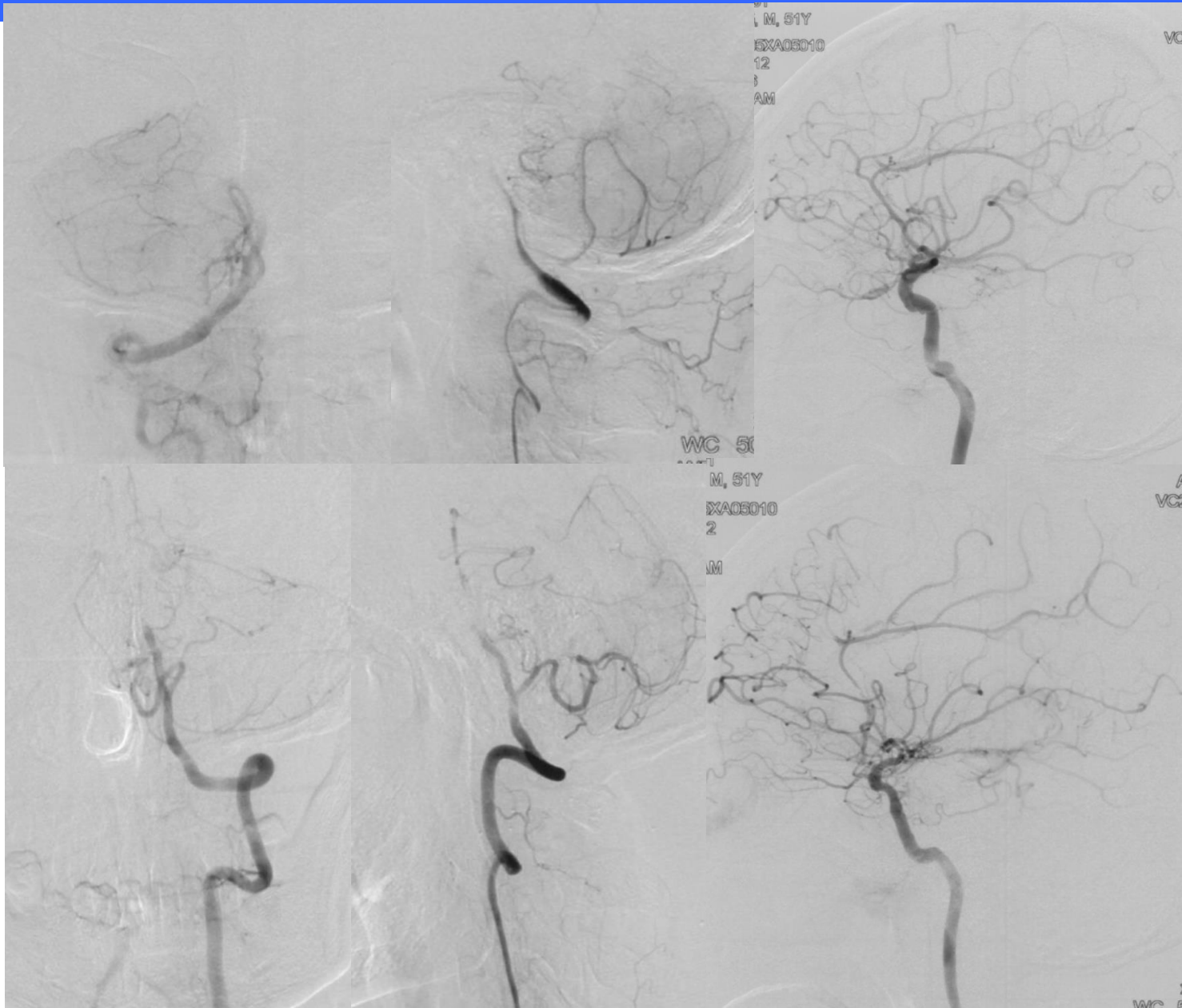


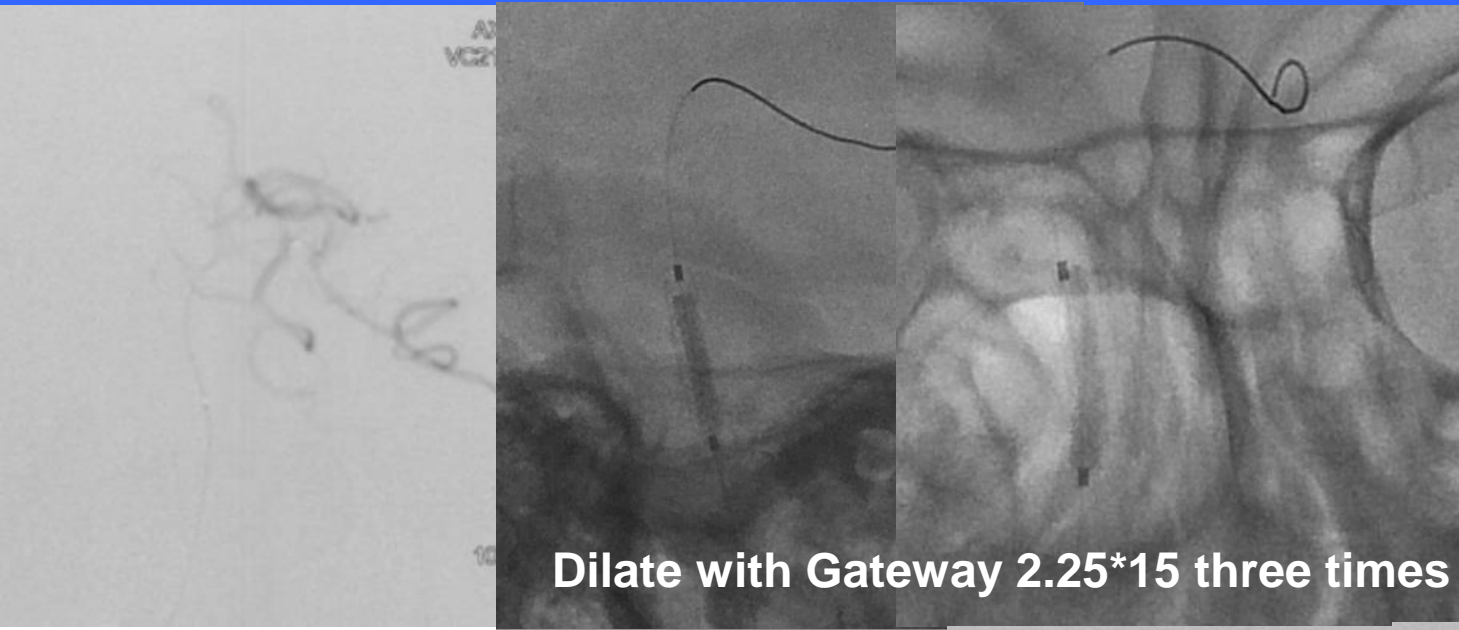
Fourth time 2016.12.05 multimodal CT



- **CC:** sudden onset of dizziness and slurred speech for 3h
- **PE:** NIHSS 2. GCS 15

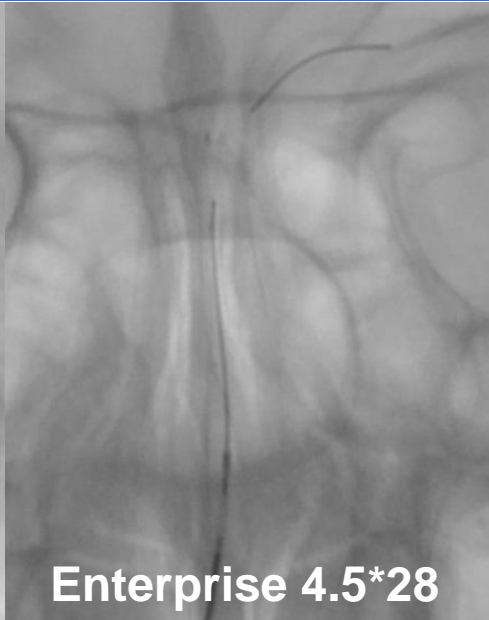
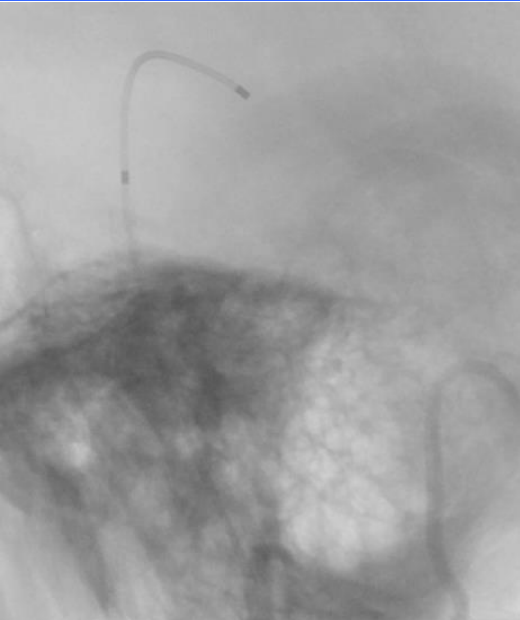
2016-12-05 DSA



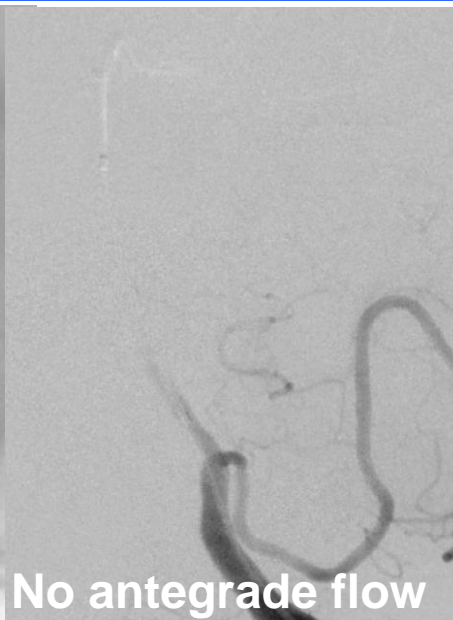
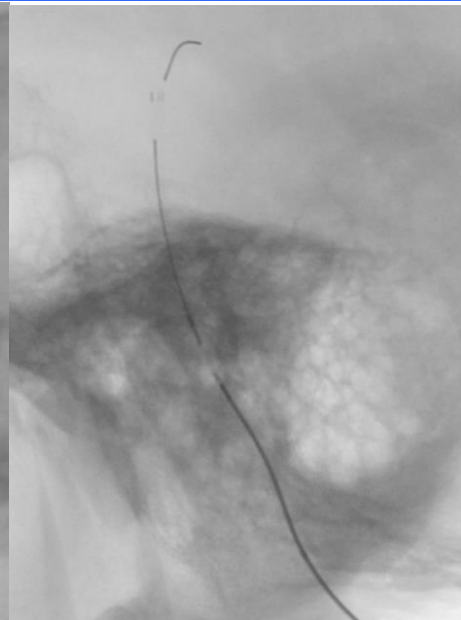


Dilate with Gateway 2.25*15 three times

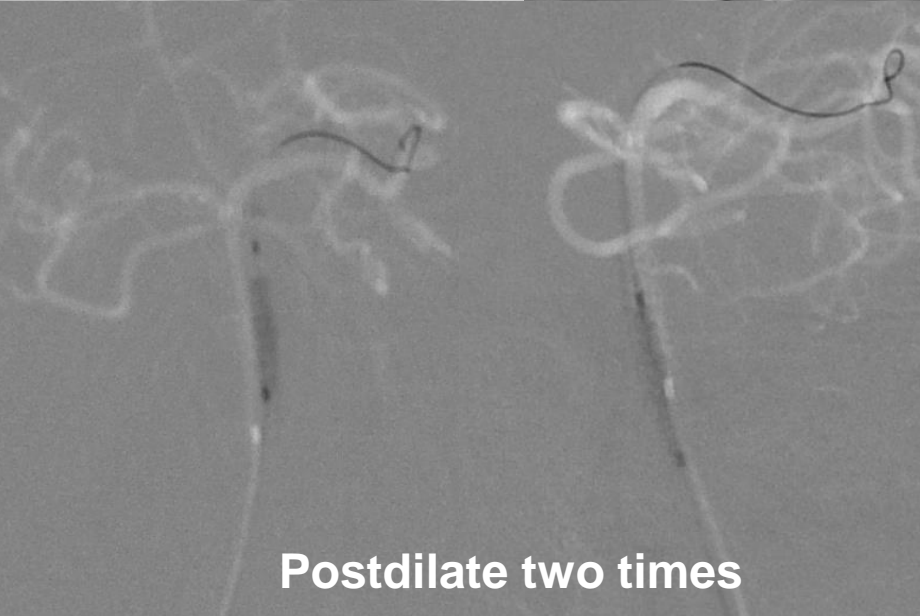




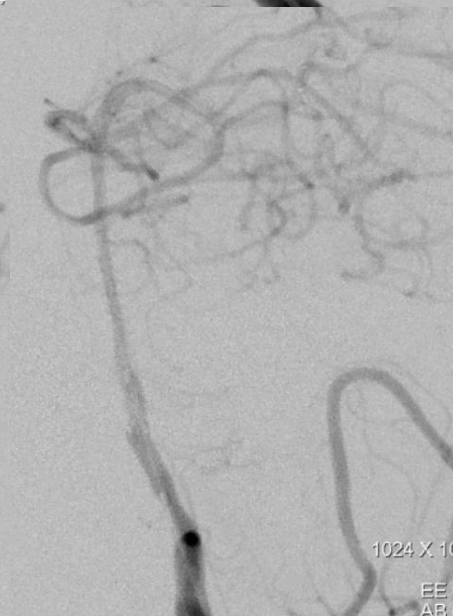
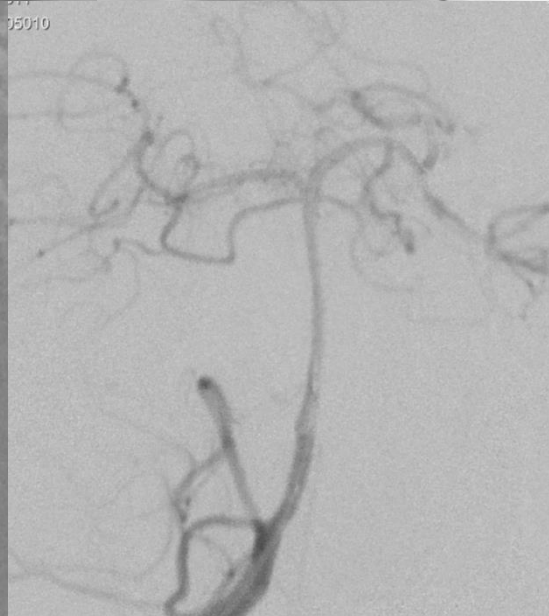
Enterprise 4.5*28



No antegrade flow



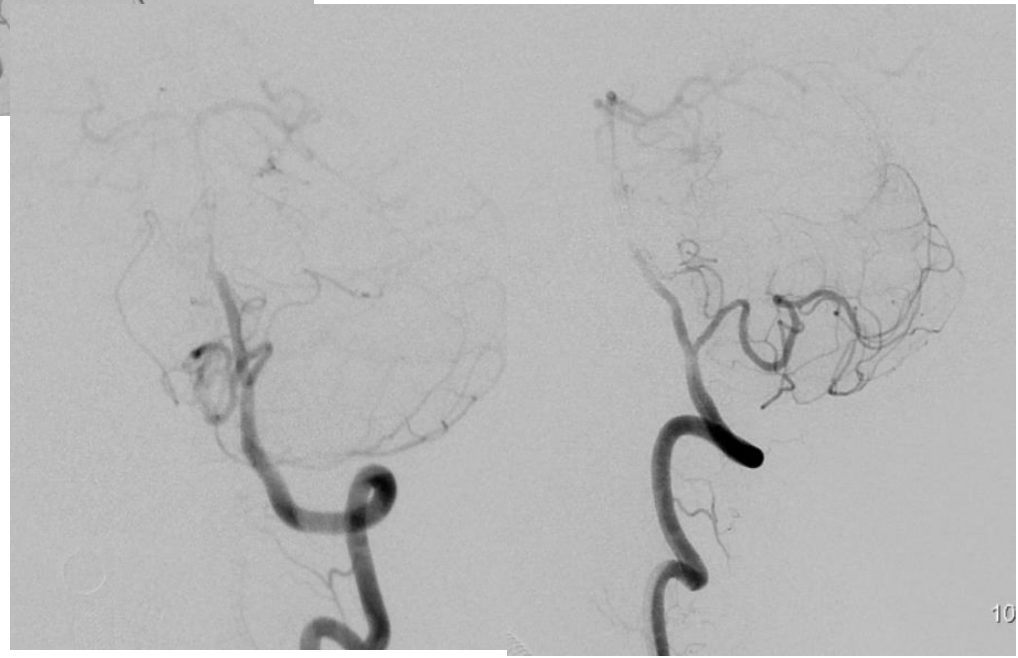
Postdilate two times



Final



- **mTICI 3**



Clinical status

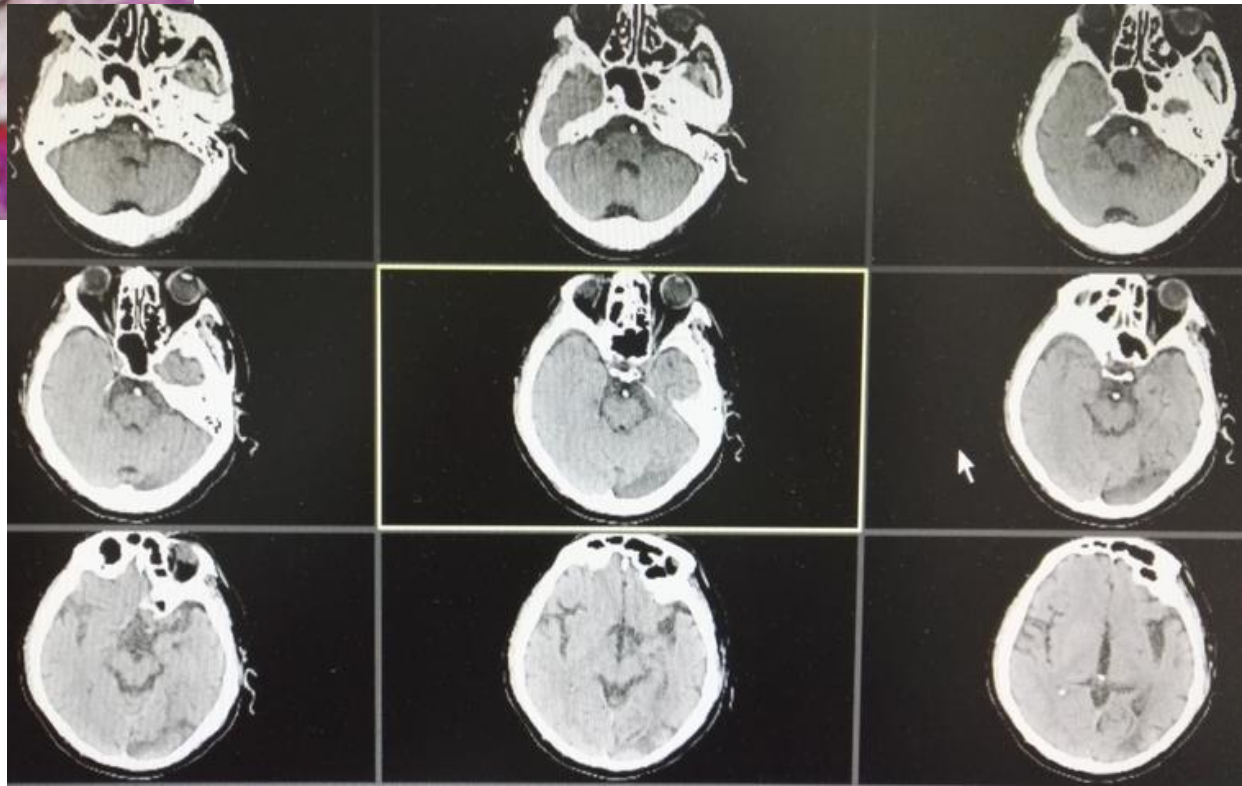
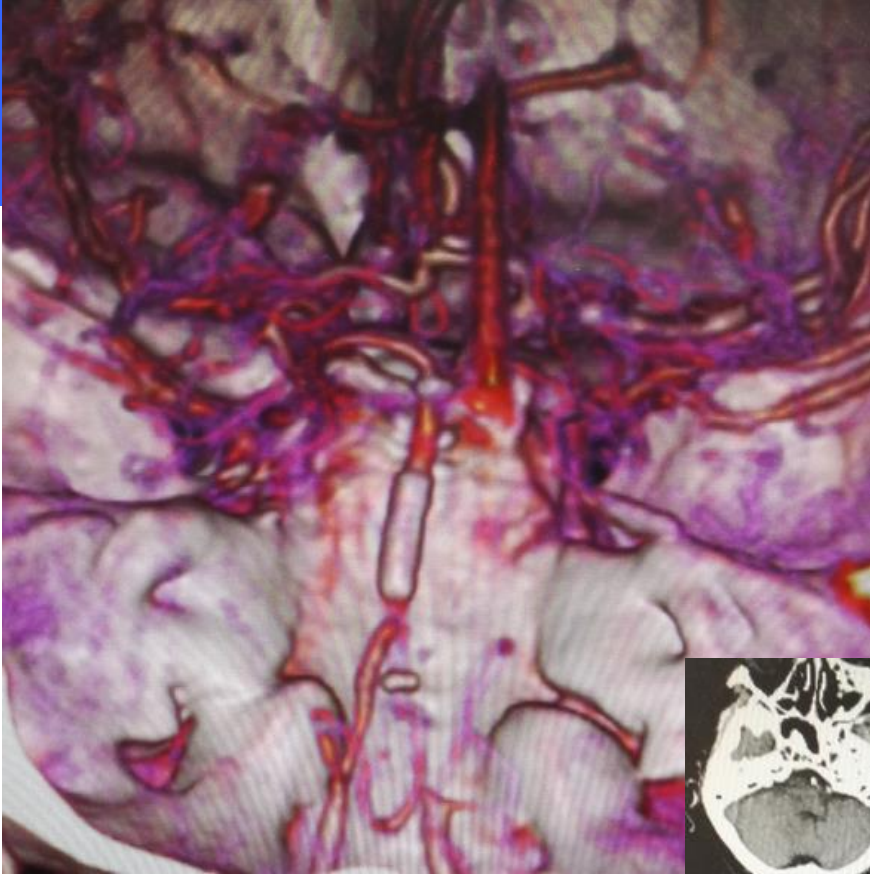


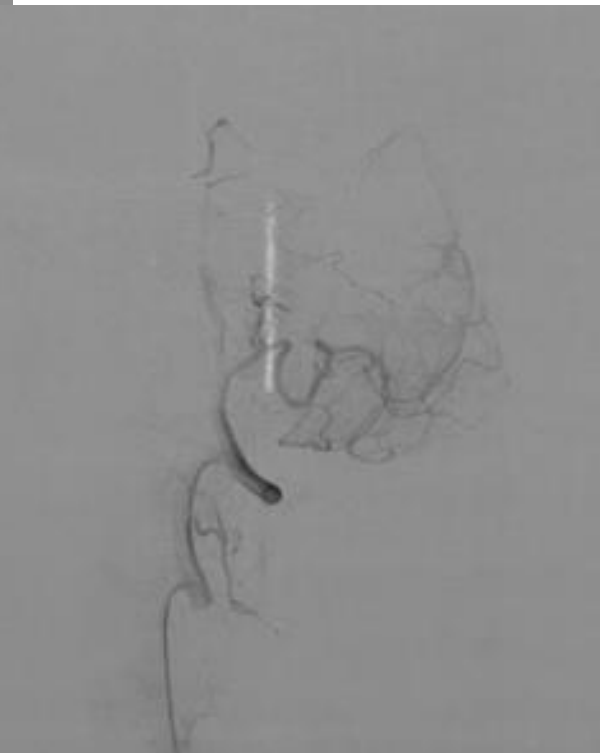
- **Postprocedural 2h:** NIHSS 2, GCS 15.
- Continuous IV. Tirofiban

Fifth time: Deterioration



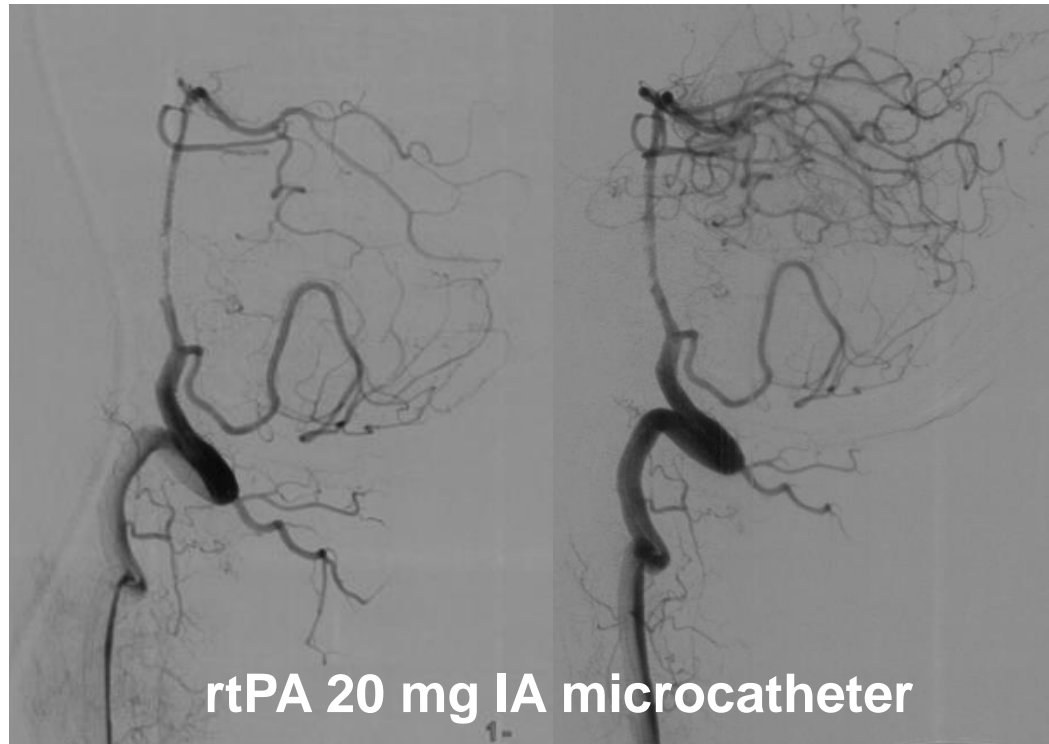
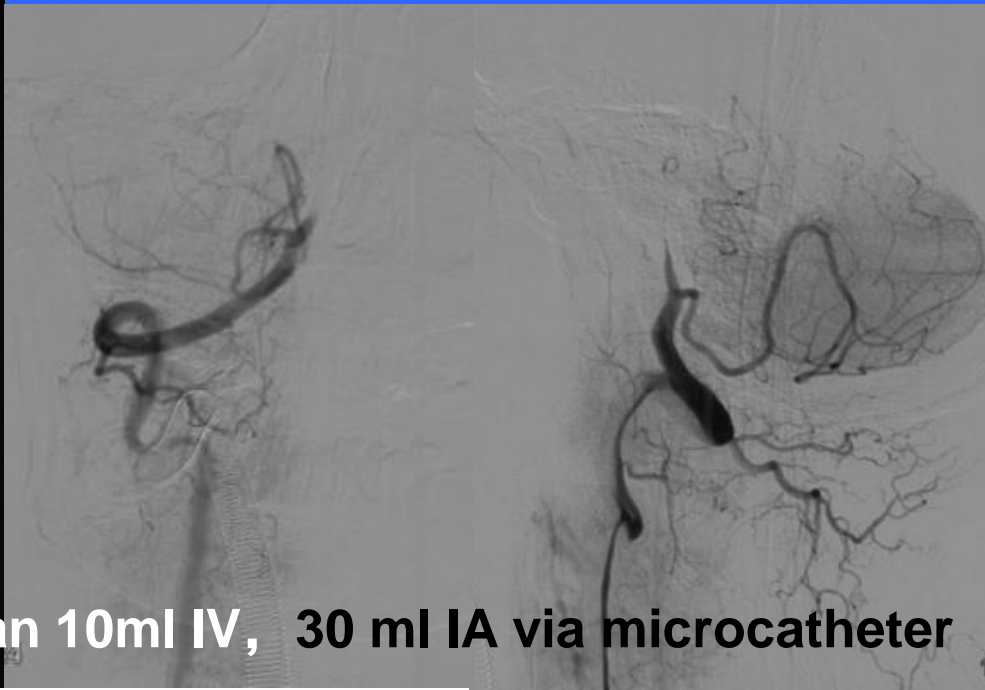
- **Postprocedural 7h**: consciousness level decreased、L-limbs weakness。NIHSS 22 GCS 9。



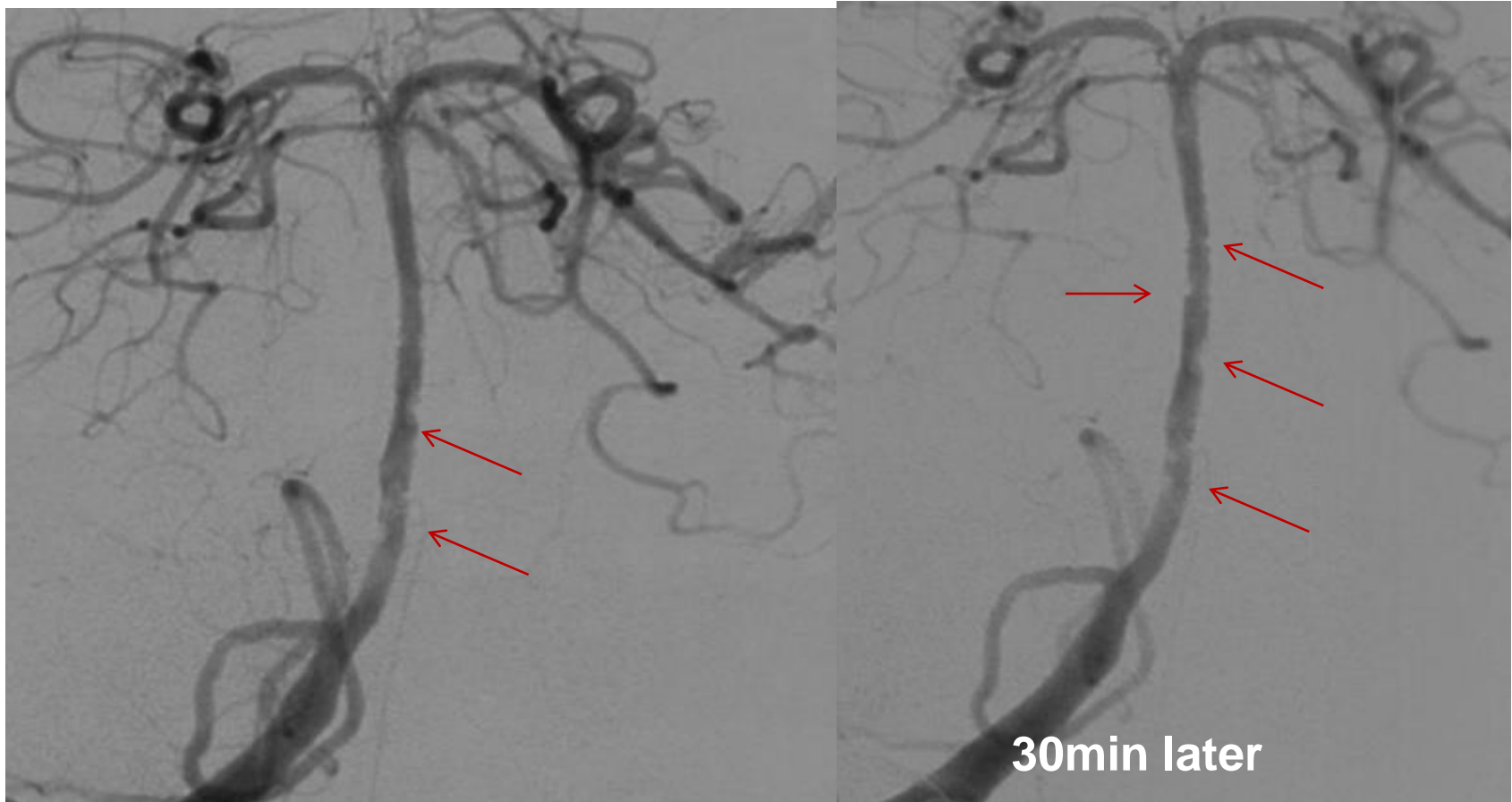




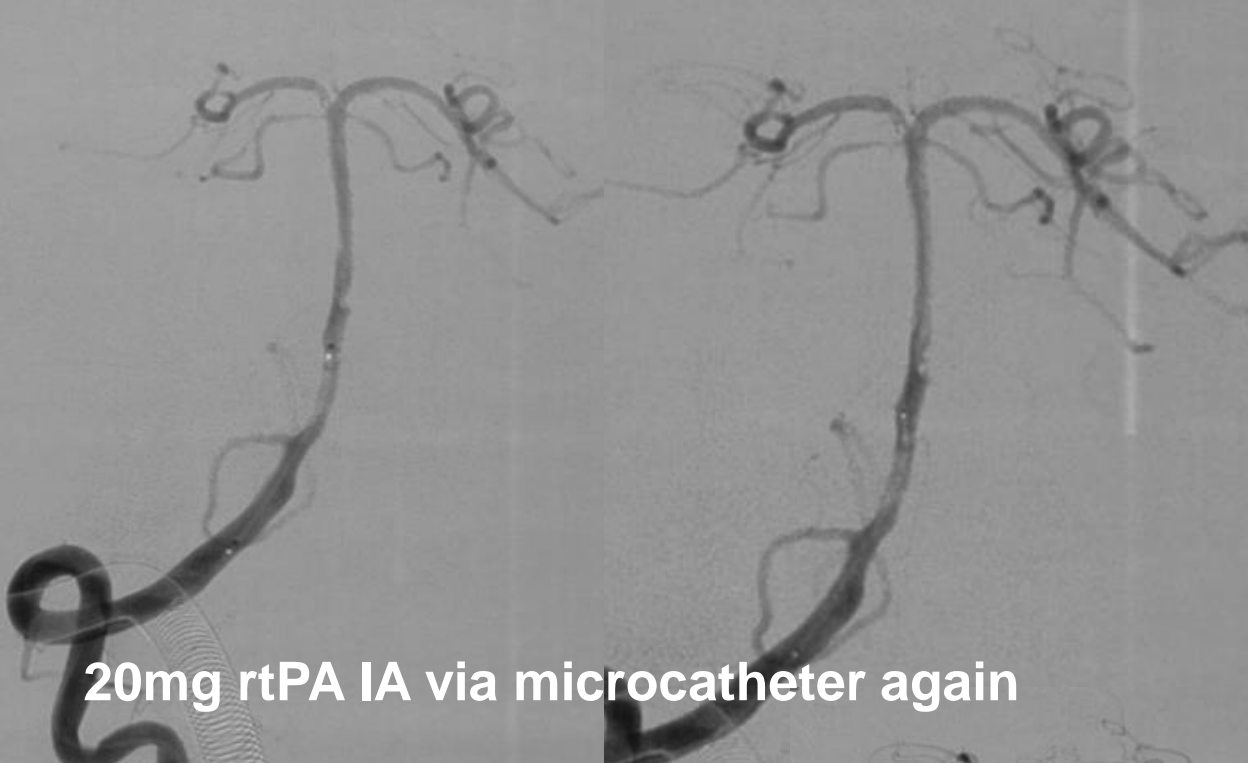
Tirofiban 10ml IV, 30 ml IA via microcatheter



rtPA 20 mg IA microcatheter



- **rtPA stopped, 30 min later, thrombus increased**



20mg rtPA IA via microcatheter again



Final



Clinical status



- **Postprocedural treatment:** tirofiban 10ml/h continuous IV
- **Postprocedural 2h:** incubation, drowsiness, L-limbs strength 0, Lower limb Grade I. **NIHSS 15.** GCS 11
- **Postprocedural 8h:** Alert, L-limbs strength Grade 3, Lower limbs Grade 3. **NIHSS 5.** GCS 15.

Antiplatelet regime

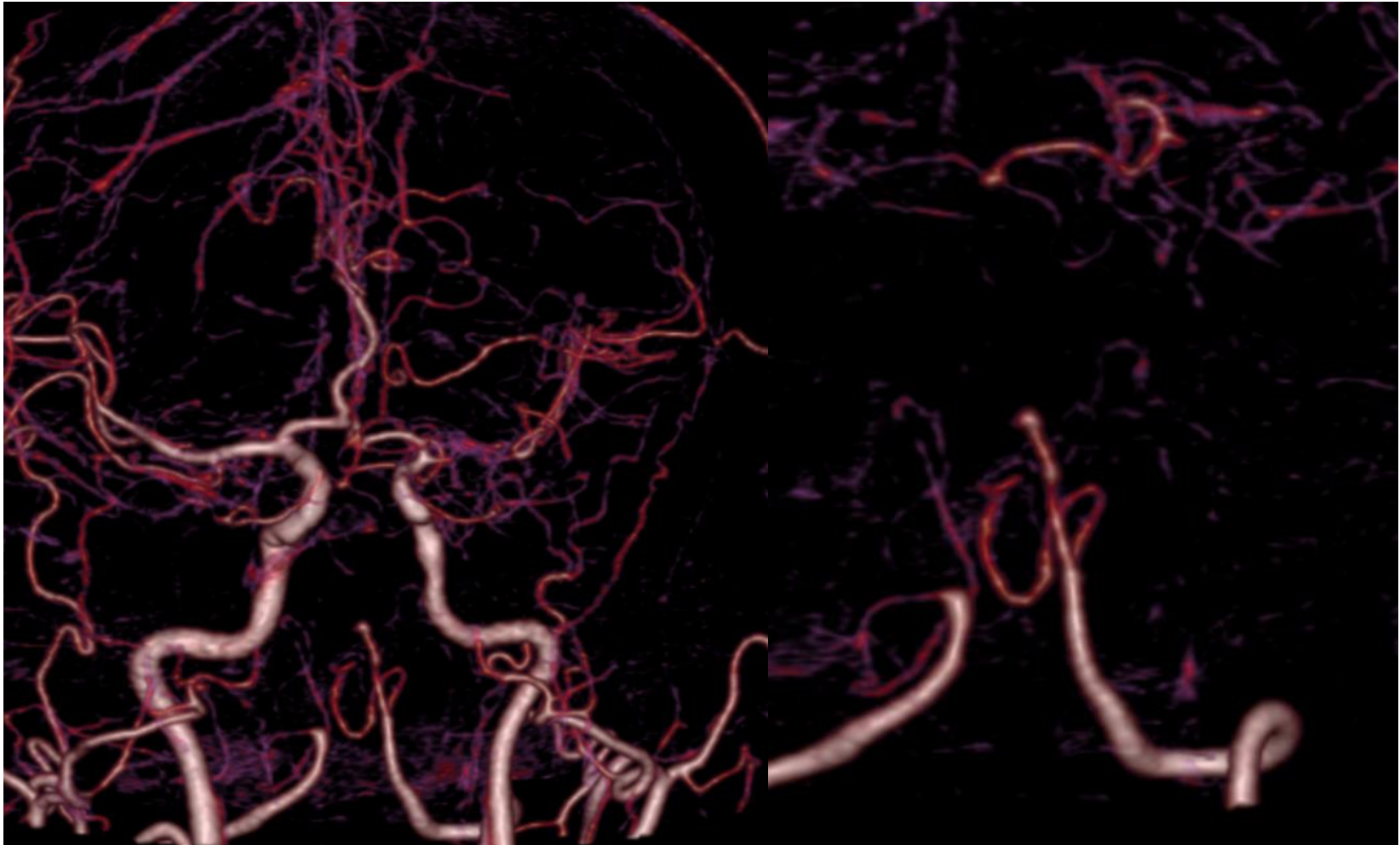


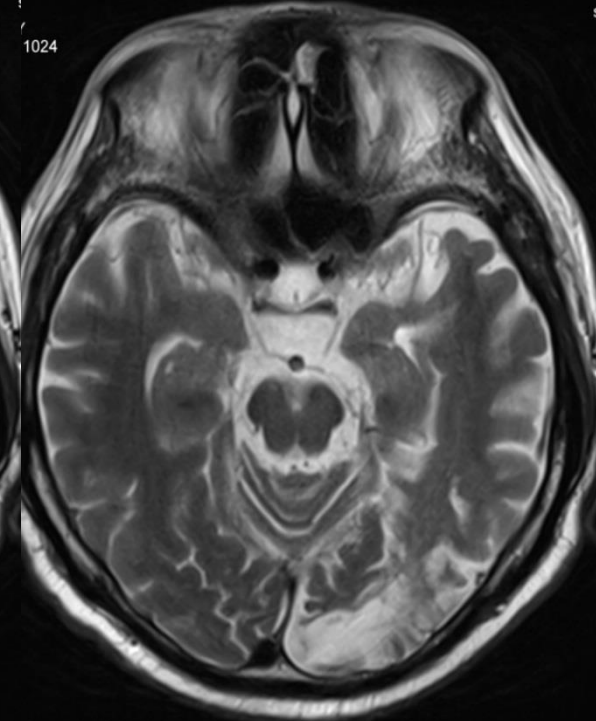
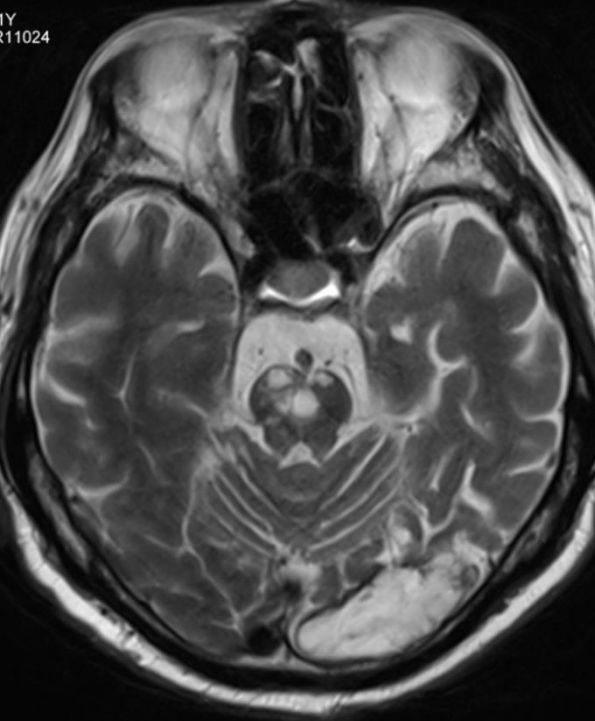
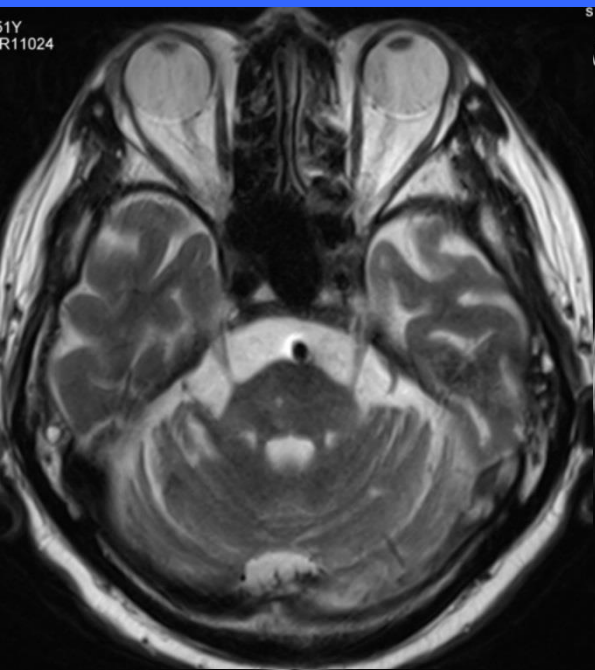
- Continuous tirofiban plus oral Ticagrelor
- Loading dose: 180mg; 90mg bid p.o
- Plus aspirin (100mg Qd po)
- **TEG: Plavix inhibition index 97.6%, aspirin: 91.7%**
 -



1个月后

2017.1.21 Follow up





Lab test



1. Holter: sinus rhythm , artrial premature beat, premature ventricular beat.
2. Cardiac Ultrasound: slight regurgitation of mitral valve and tricuspid valve.
3. Transesophageal echocardiography : no POF and thrombus in the artrium;
4. LDL: 4.45 mmol/L, Cys: 48.3 mmol/L, Glu 8.3 mmol/L;
5. positive syphilis

Gene test



1	CYP2C19*2	rs4244285 G>A	GA	} CYP2C19*1/*1
2	CYP2C19*3	rs4986893 G>A	GG	
3	CYP2C19*17	rs12248560 C>T	CC	
4	PON1	rs662 A>G	AG	
5	62ABCB1(3435T>C)	rs1045642 T>C	TT	

1	120GP IIIa PlA2	rs5918 T>C	TT
2	106PEAR1	rs12041331 G>A	GA
3	168PTGS1	rs10306114 A>G	AA
4	113LTC4S	rs730012 A>C	AC

Discussion:



- Reasons of the repetitive Basilar artery occlusion?
- Mechanical thrombectomy strategy?
- Antiplatelet regimen?



Thanks *Shanghai Hospital, stroke Center*