

Intracranial Access



Gates Vascular Institute

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TOSHIBA
STROKE &
VASCULAR
RESEARCH CENTER



Kaleida Health
Building a healthier future



University at Buffalo
State University of New York

Research Grants: Co-investigator: NINDS 1R01NS064592-01A1, Co-investigator: NIBIB 5 R01 EB002873-07, Co-investigator: NIH/NINDS 1R01NS091075, Co-investigator: NIH-NICHHD R01 HD-04483101

Financial Interest: StimSox, Valor Medical, Neuro Technology Investors, Cardinal Health, Medina Medical Systems, Buffalo Technology Partners, Inc., International Medical Distribution Partners

Consultant: Codman, Medtronic, GuidePoint Global Consulting, Penumbra, Stryker, MicroVention, W.L. Gore & Associates, Three Rivers Medical, Inc., Corindus, Inc., Amnis Therapeutics, Ltd., CereVasc, LLC, Pulsar Vascular, The Stroke Project, Inc., Cerebrotech Medical Systems, Inc., Rapid Medical, Neuroavi, Silk Road Medical, Rebound Medical. Lazarus (acquired by Medtronic), Medina Medical (acquired by Medtronic), Reverse Medical (acquired by Medtronic), Covidien (acquired by Medtronic),

Advisory Board: Intersocietal Accreditation Committee

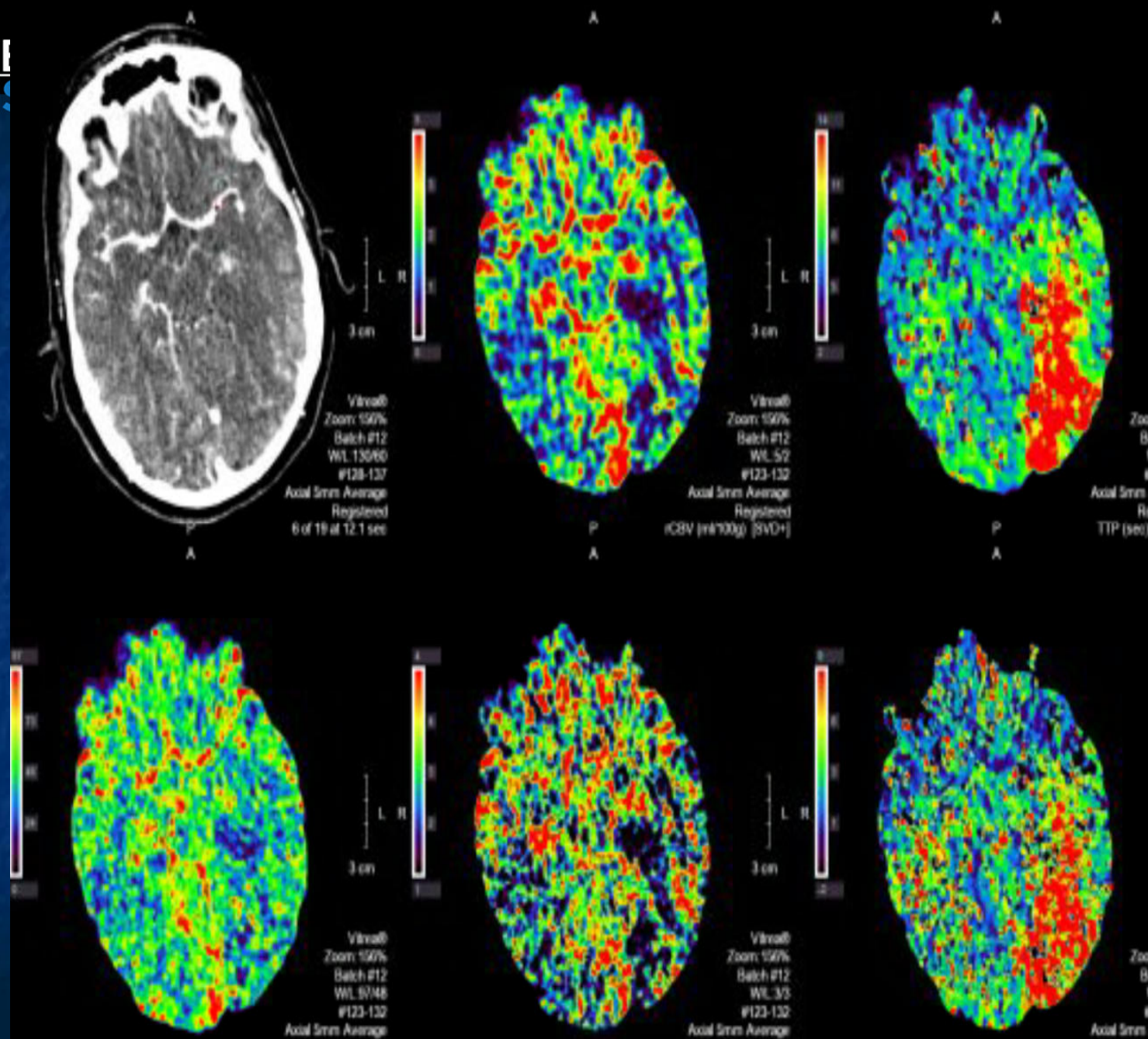
National Steering Committees: Penumbra, 3D Separator Trial, Covidien (Now Medtronic), SWIFT PRIME and SWIFT DIRECT Trials, MicroVention, FRED Trial, MicroVention, CONFIDENCE Study, LARGE Trial, POSITIVE Trial, Penumbra, COMPASS Trial, Penumbra, INVEST Trial

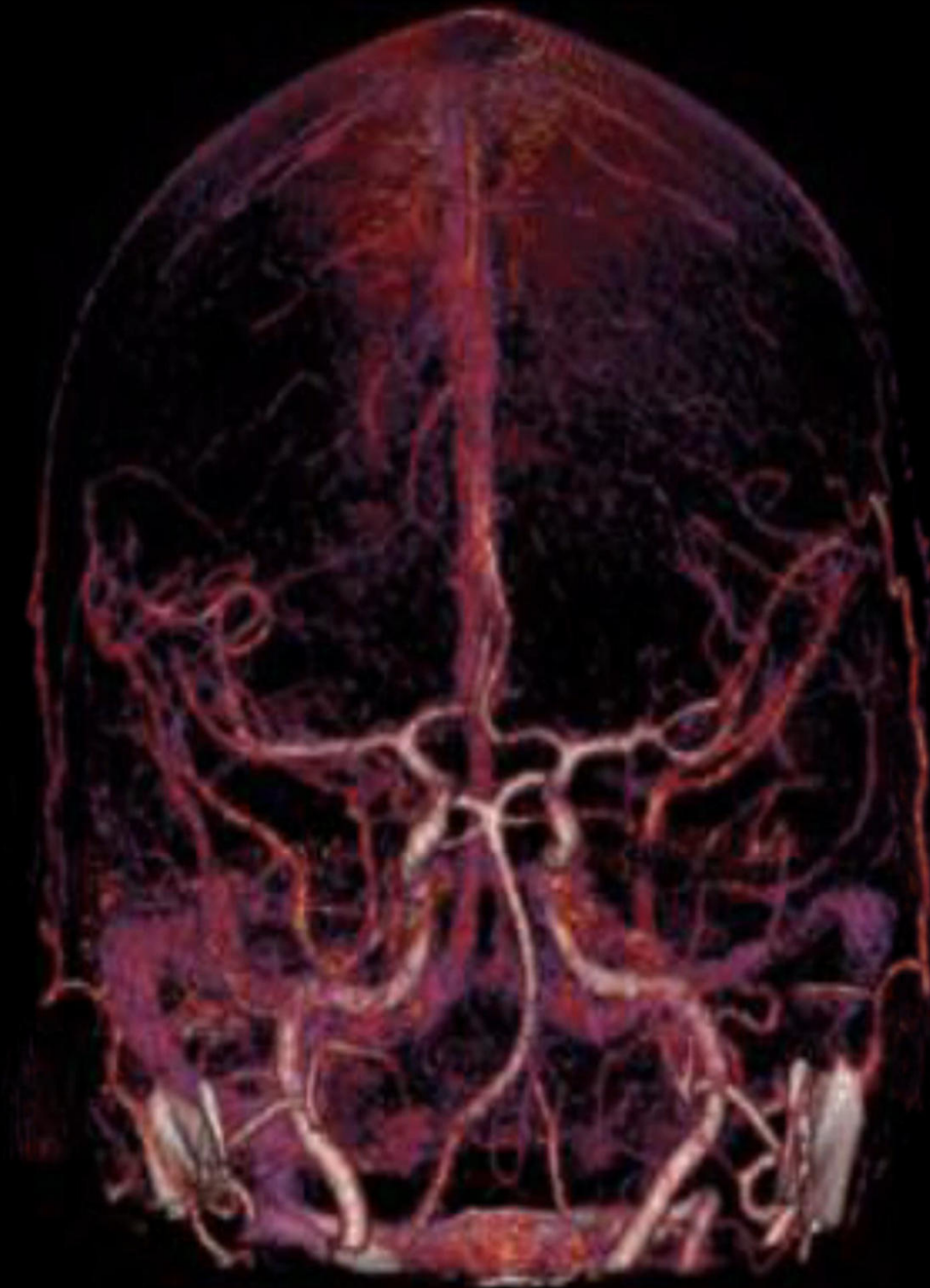
- No consulting salary arrangements. All consulting is per project and/or per hour.

Case 1

- 57M 30 pack year history of obesity w/ NIH 7 Right hemisensory loss, field cut, weakness. LKN 4 hrs

-

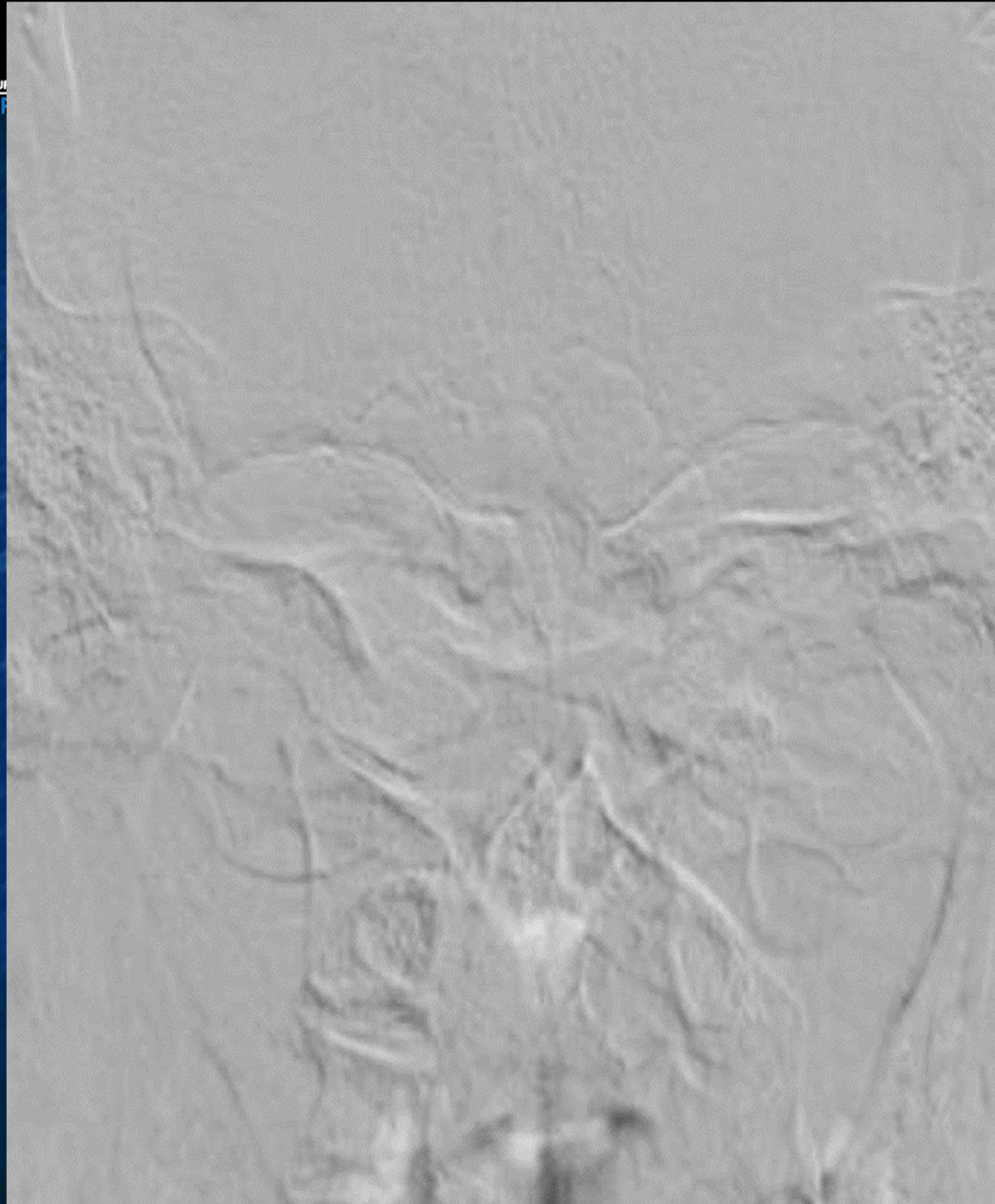






Case 1 57M right weakness

- Left P2/3 occlusion
 - Benchmark
 - 3MAX aspiration catheter ADAPT technique mechanical thrombectomy
- Post thrombectomy run



Case 1 57M right weakness

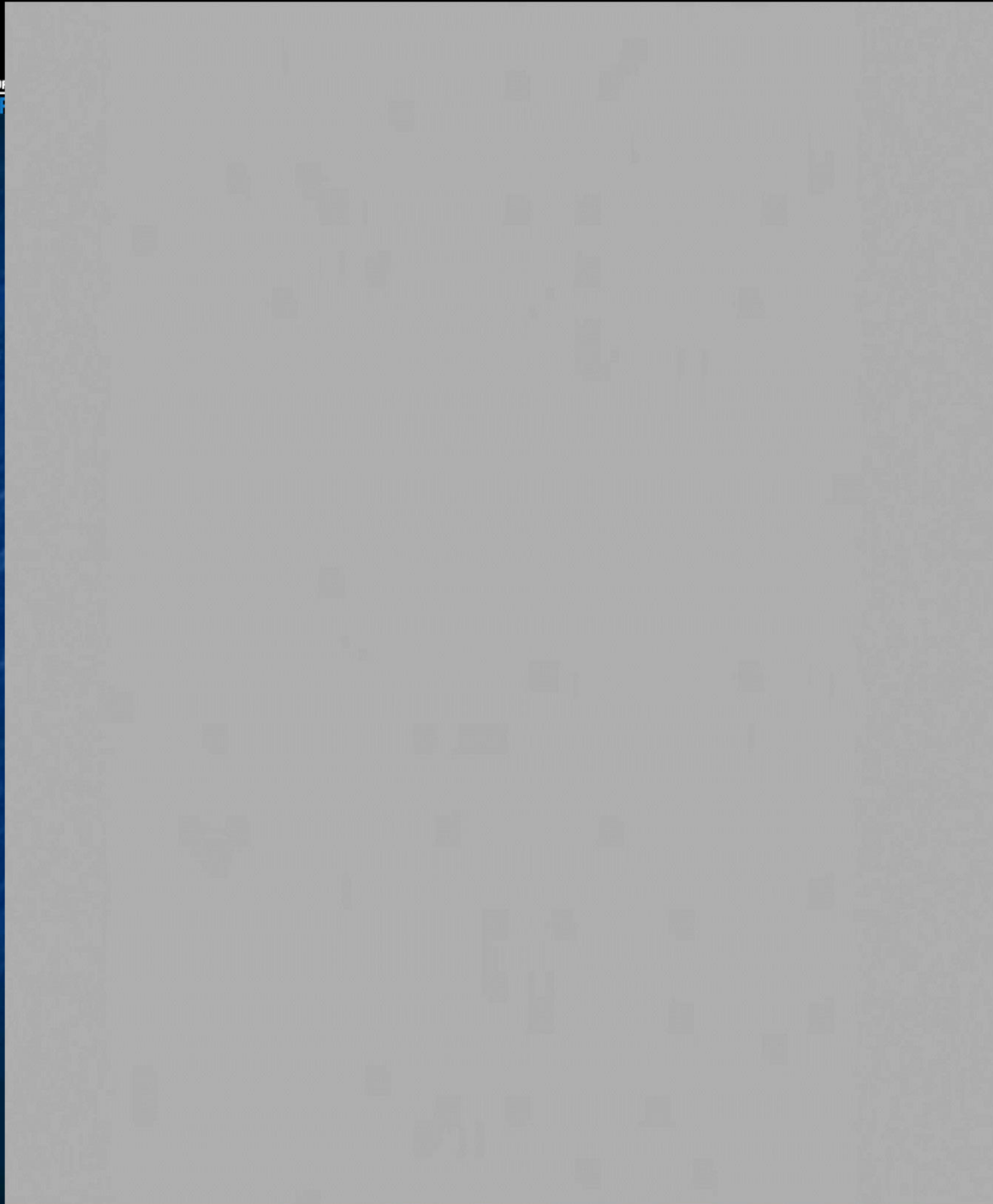
- Now what?

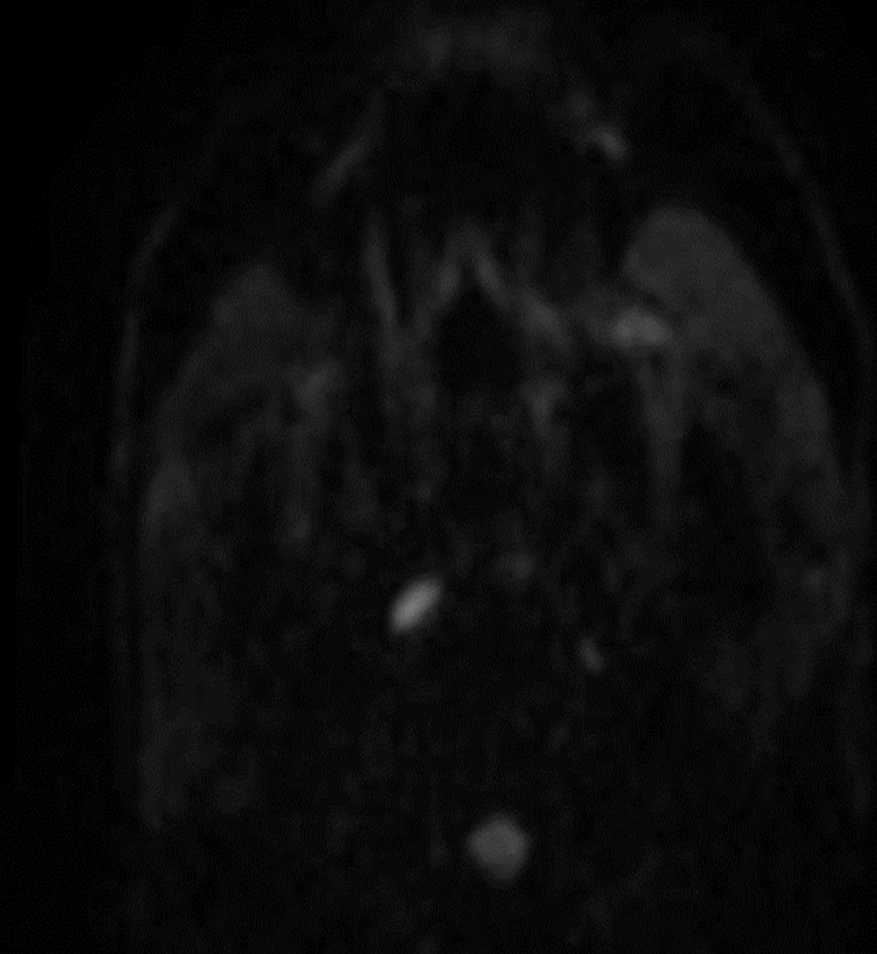
Case 1 57M right weakness

- Velocity microcatheter
- Synchro-2
- Soltaire stent-triever 4 x 40 mm



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Case 1 57M right weakness

- Post procedure exam:
 - Aphasic, nonsensical speech
 - PERRL
 - Face symmetric
 - RUE WD
 - LUE FC antigravity
 - RLE WD
 - LLE FC antigravity

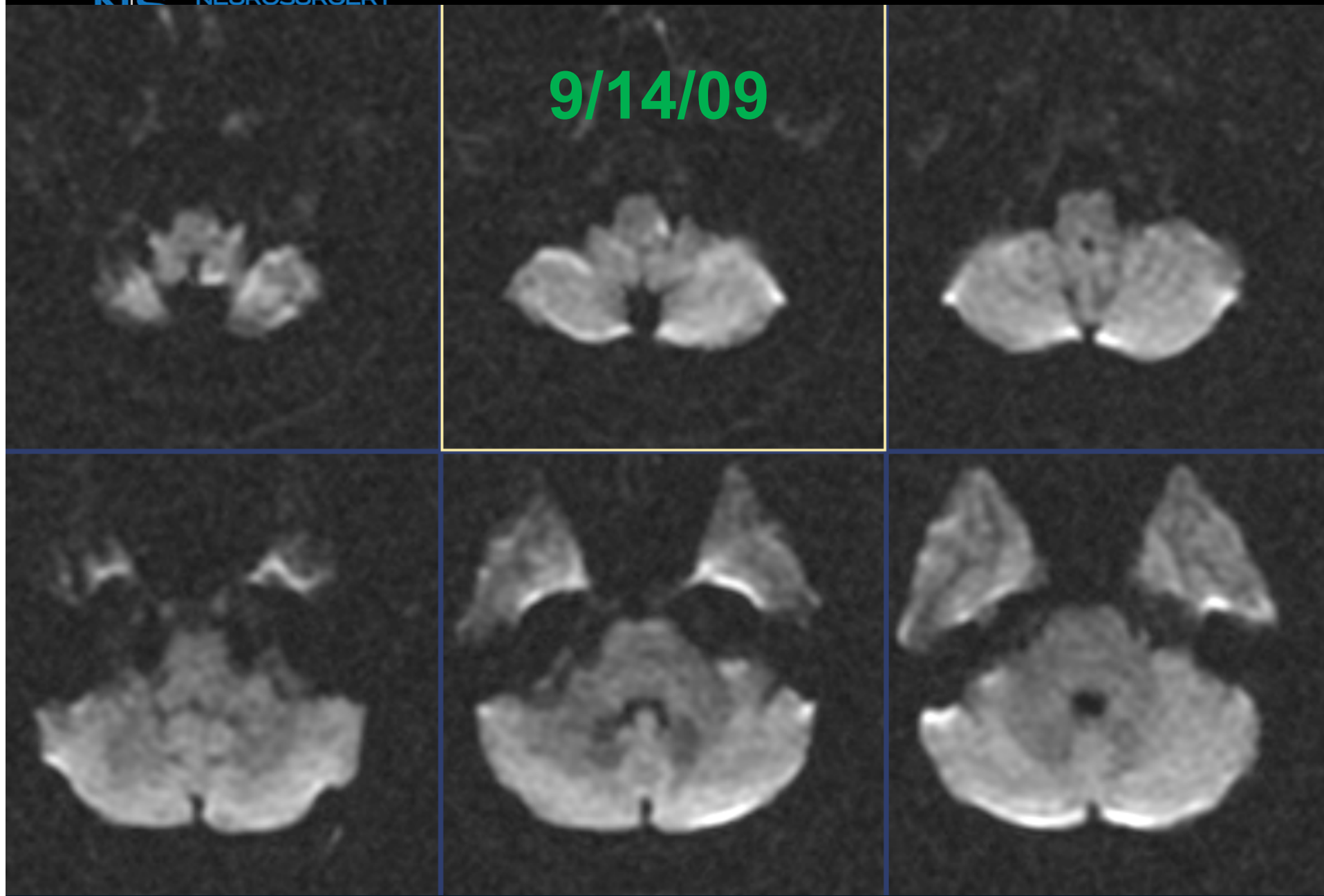
Case 1 57M right weakness

- DC Rehab PPD#9
 - Exam:
 - Orients but paucity of speech
 - LUE 5/5
 - RUE 3/5

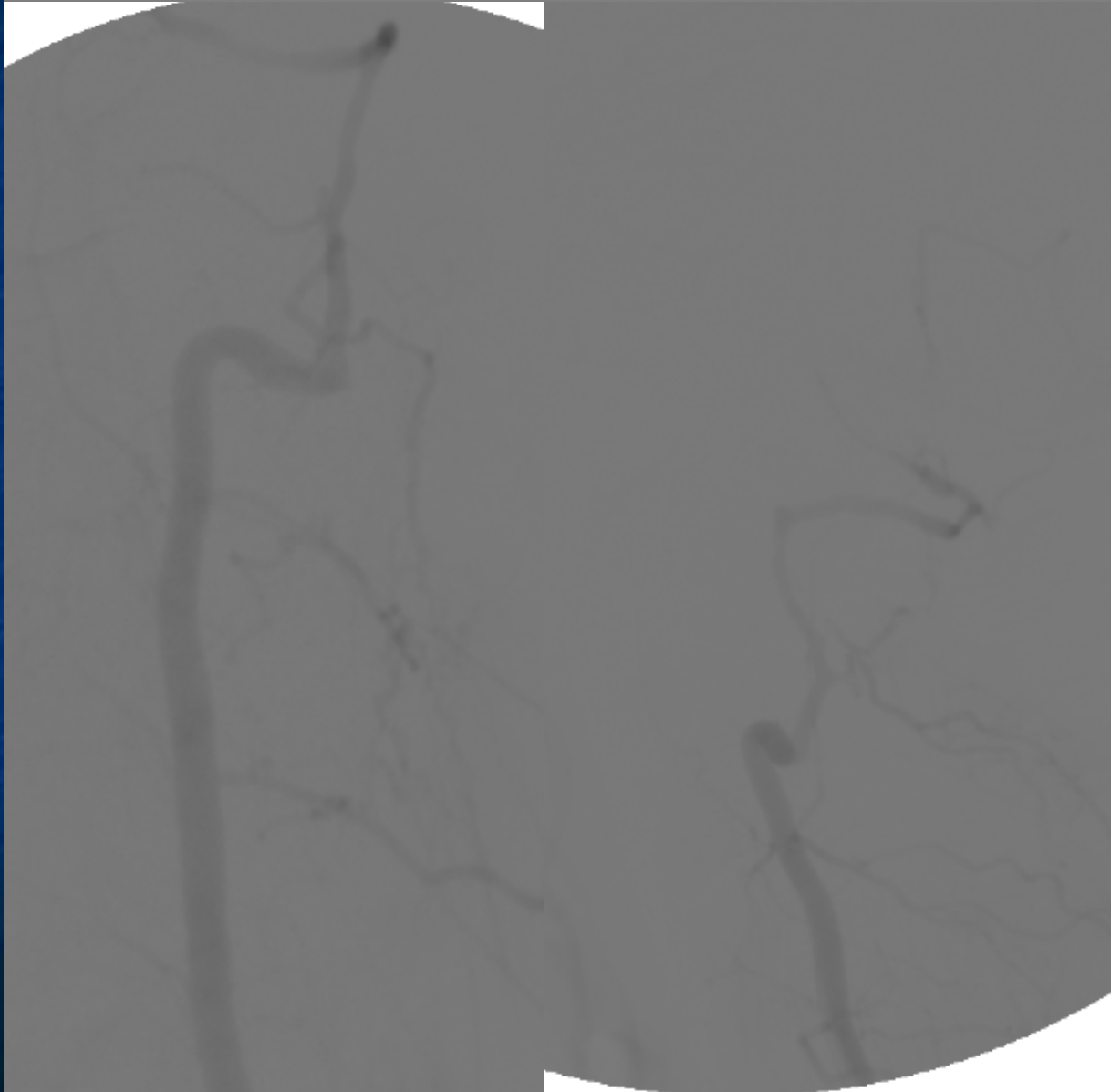
31 yo F

- **CC:** Presented outside with 2 days H/O dizziness, N/V → L neck pain + inability to ambulate.
- Outside CTA: small LVA thrombosis + questionable dissection → Started on ASA
- Transferred to MFG for management
- **PMH/PSH:** H/O migraine, Postpartum 2M, H/O knee surgery.
- **PE:** AAO, slight anisocoria R>L, No motor deficit
- **Imaging:**

9/14/09



LVA Injection (AP/Lat)



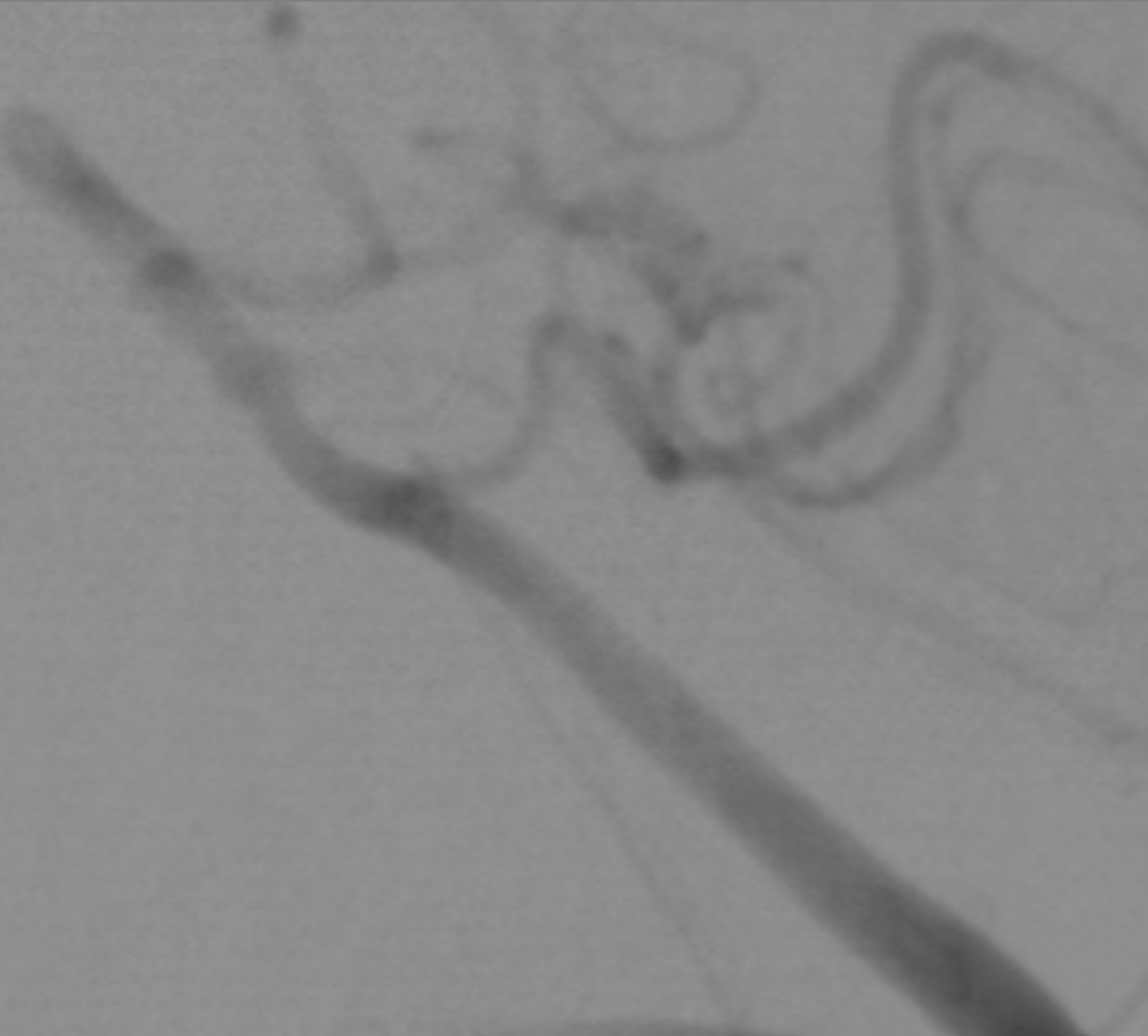
RVA Injection (AP/Lat)



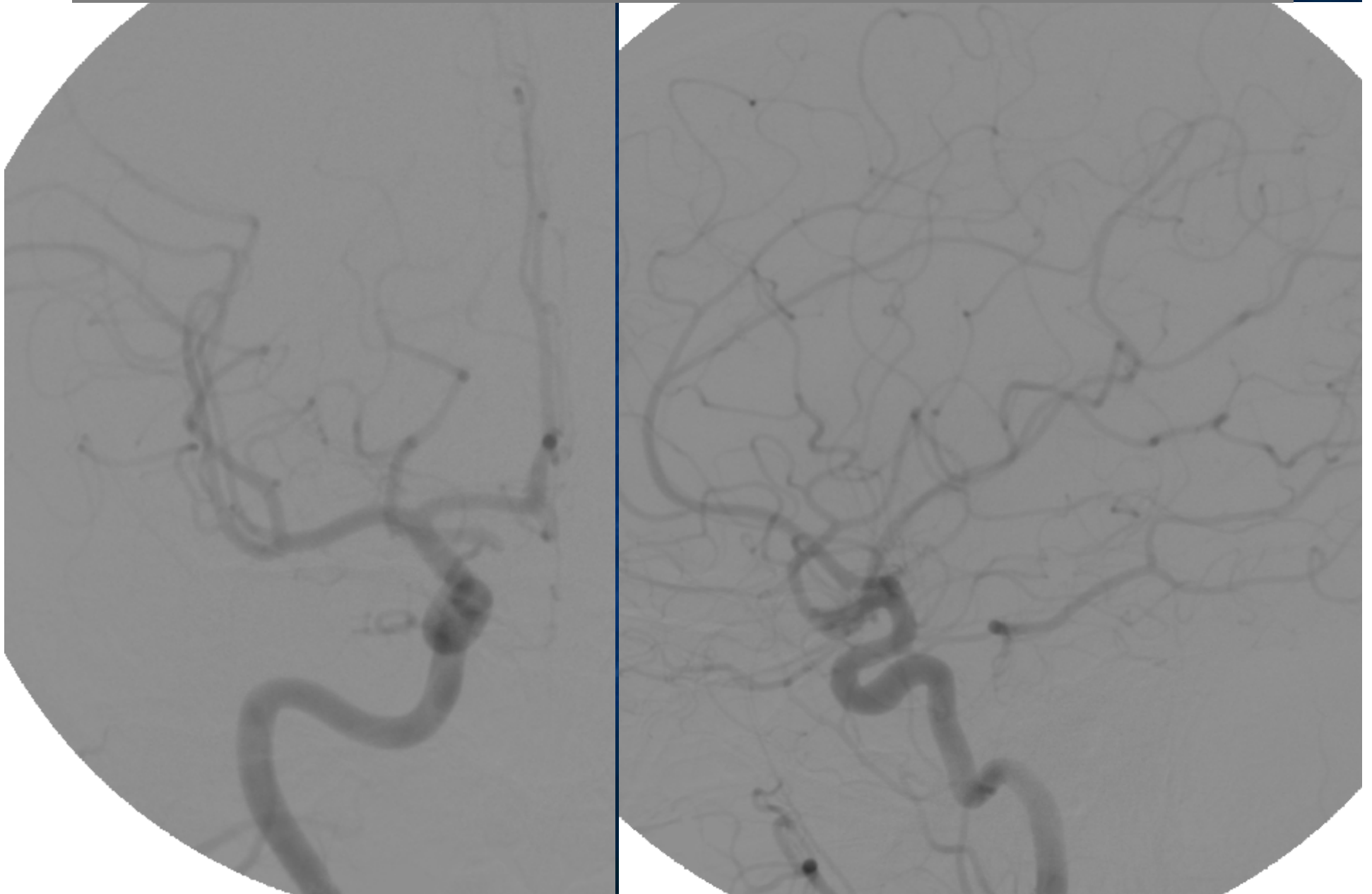
RVA Injection (AP)



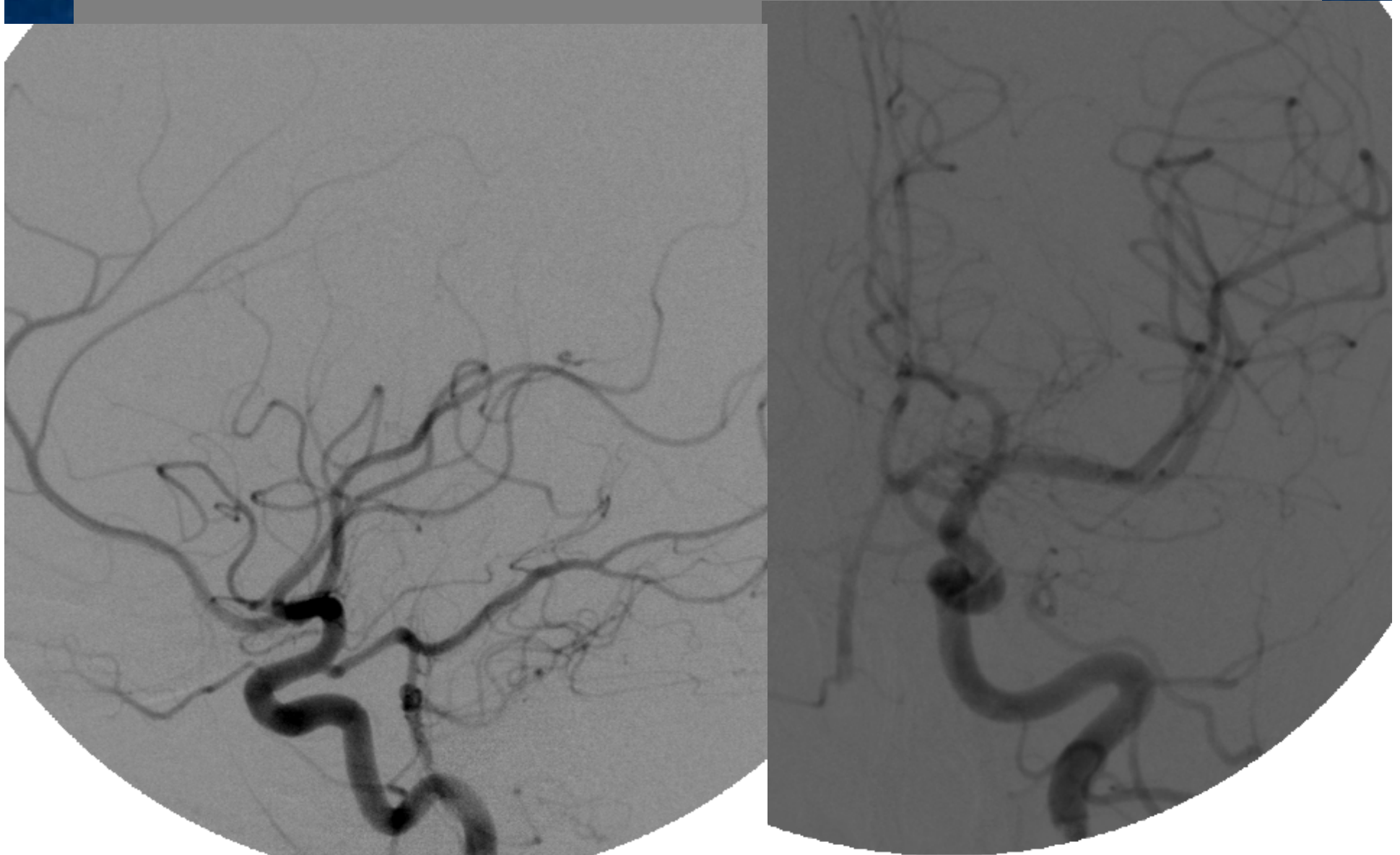
LVA Injection (Lat)



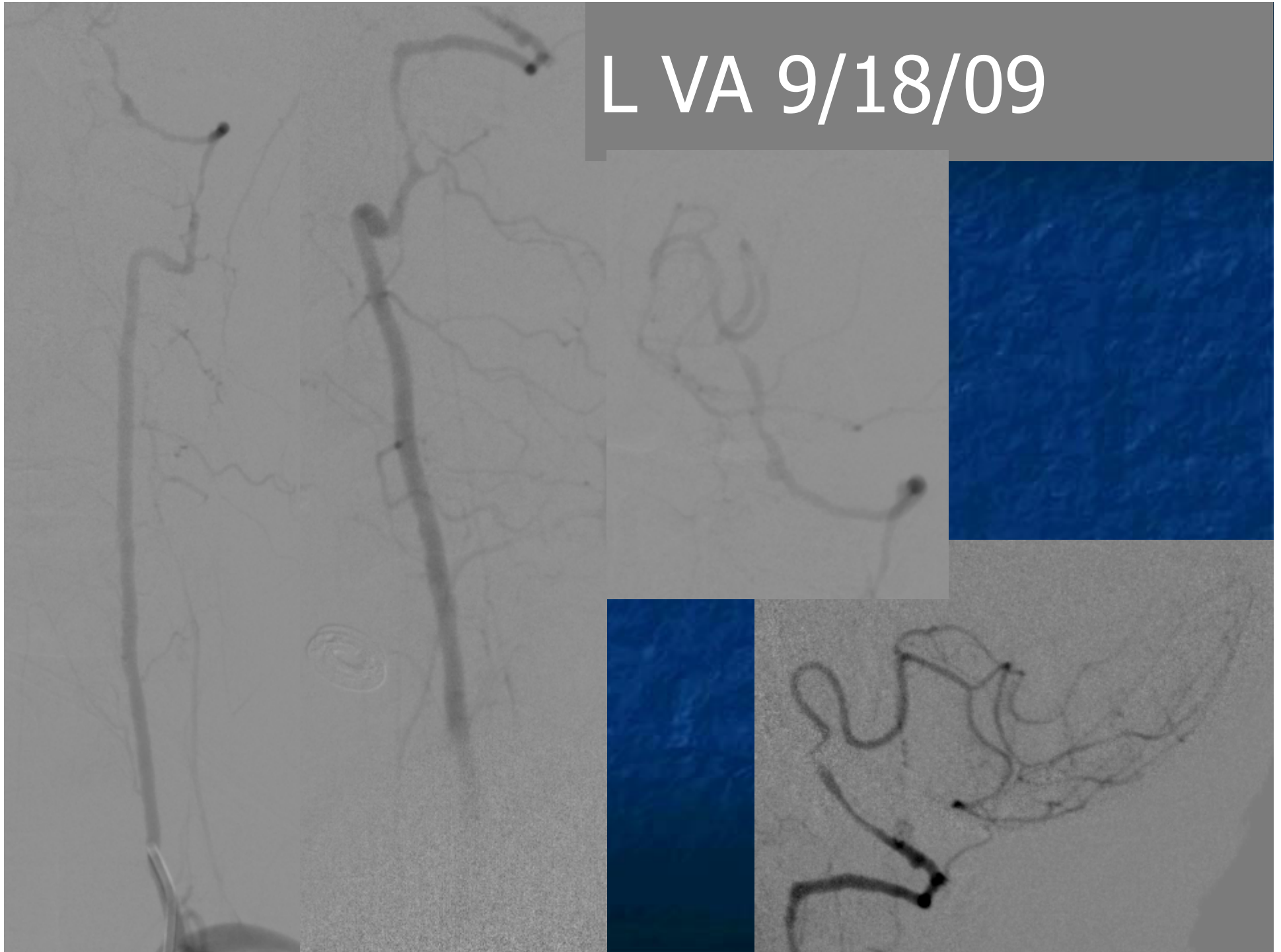
RICA (AP/Lat)



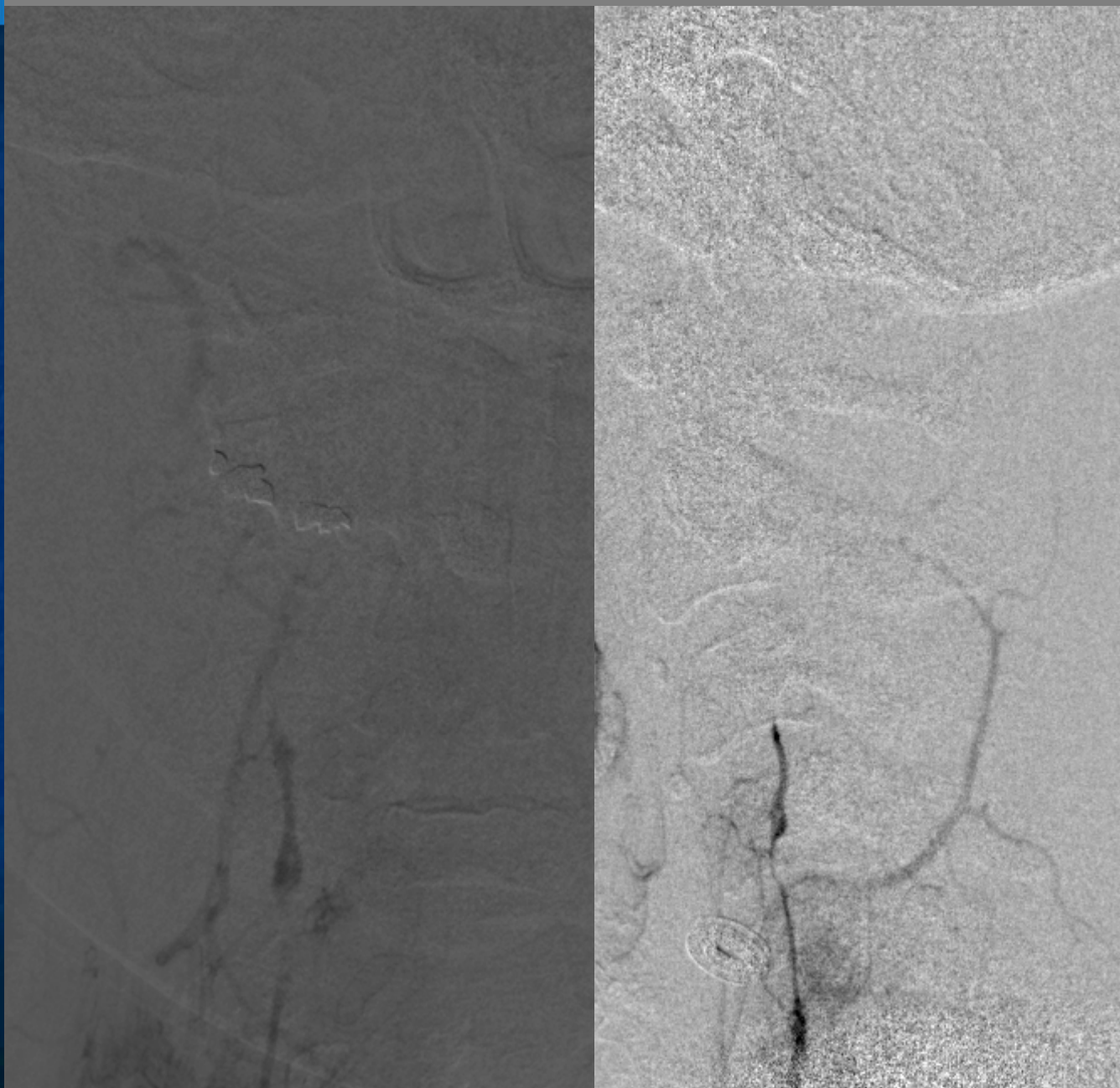
LICA AP/Lat



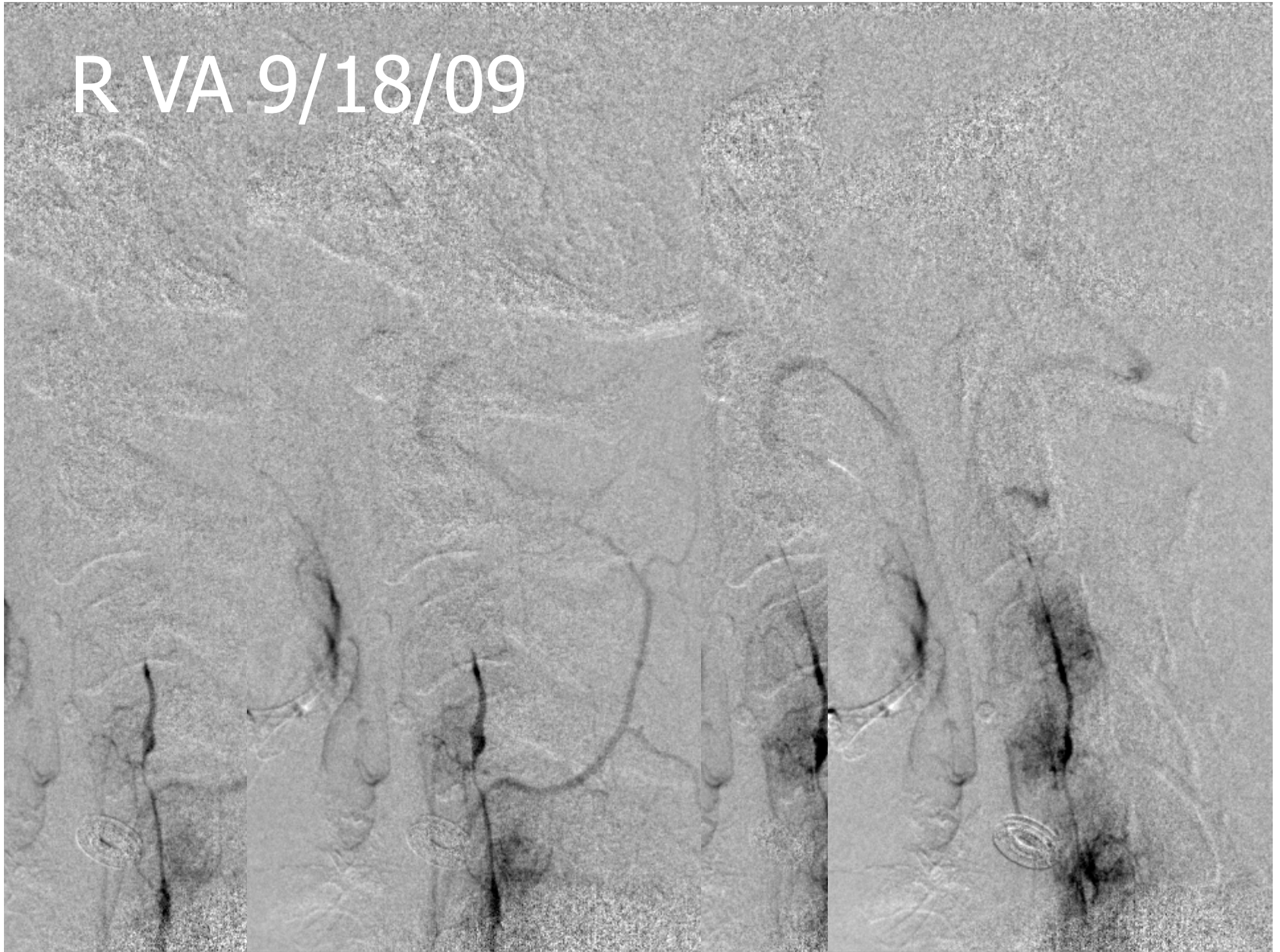
L VA 9/18/09



U R VA 9/18/09



R VA 9/18/09



LCCA 9/18/09

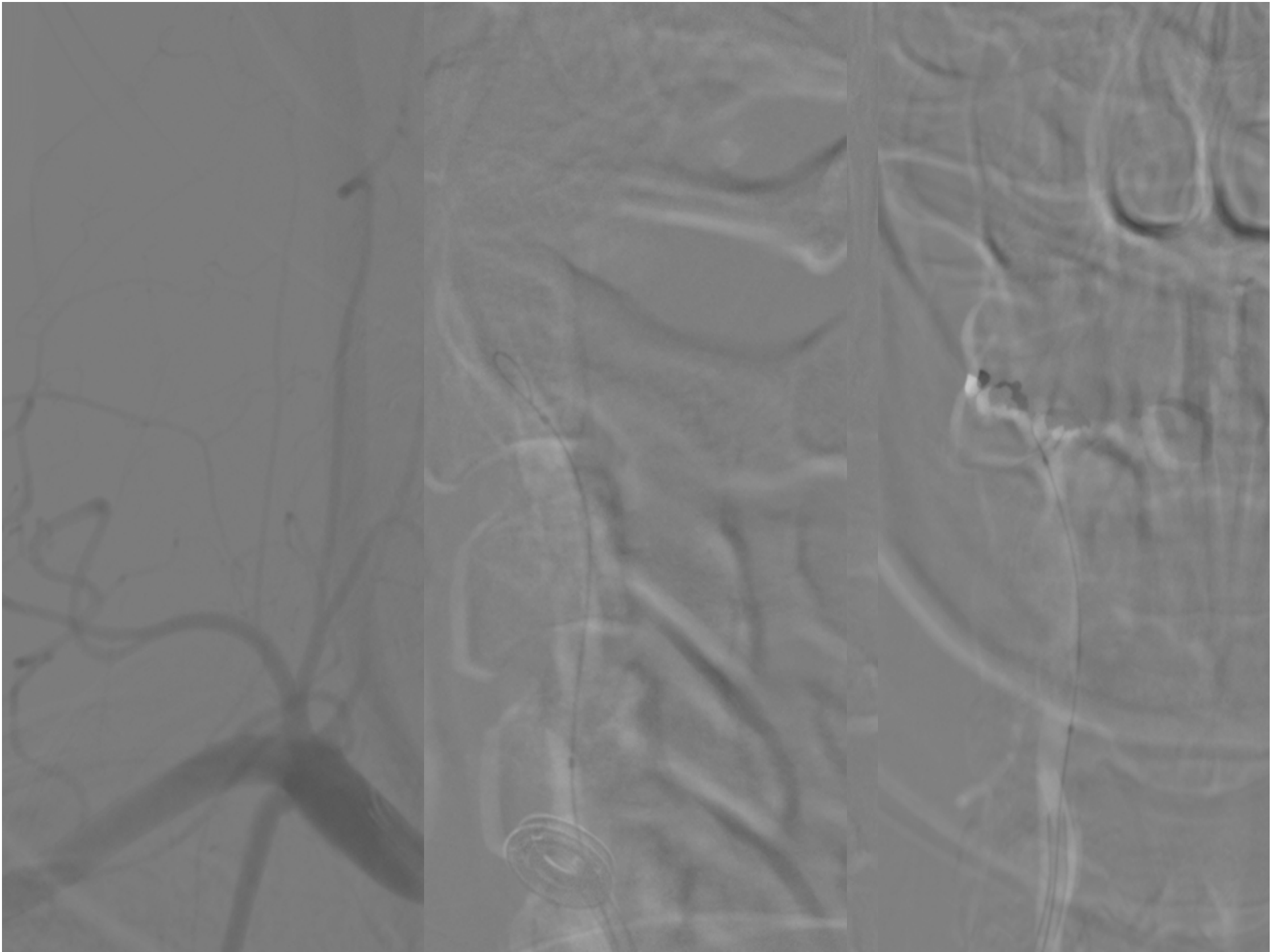


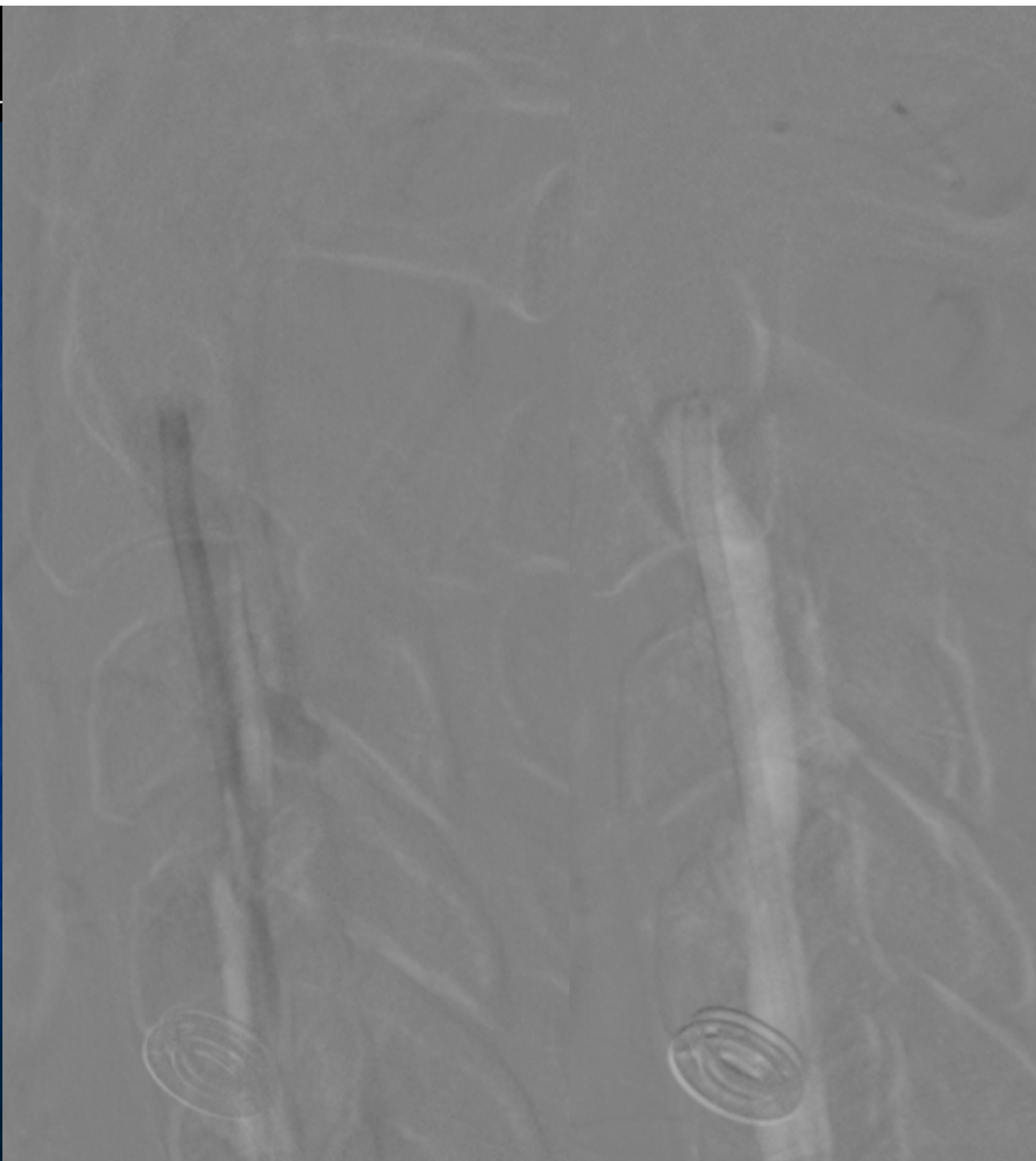
Plan?

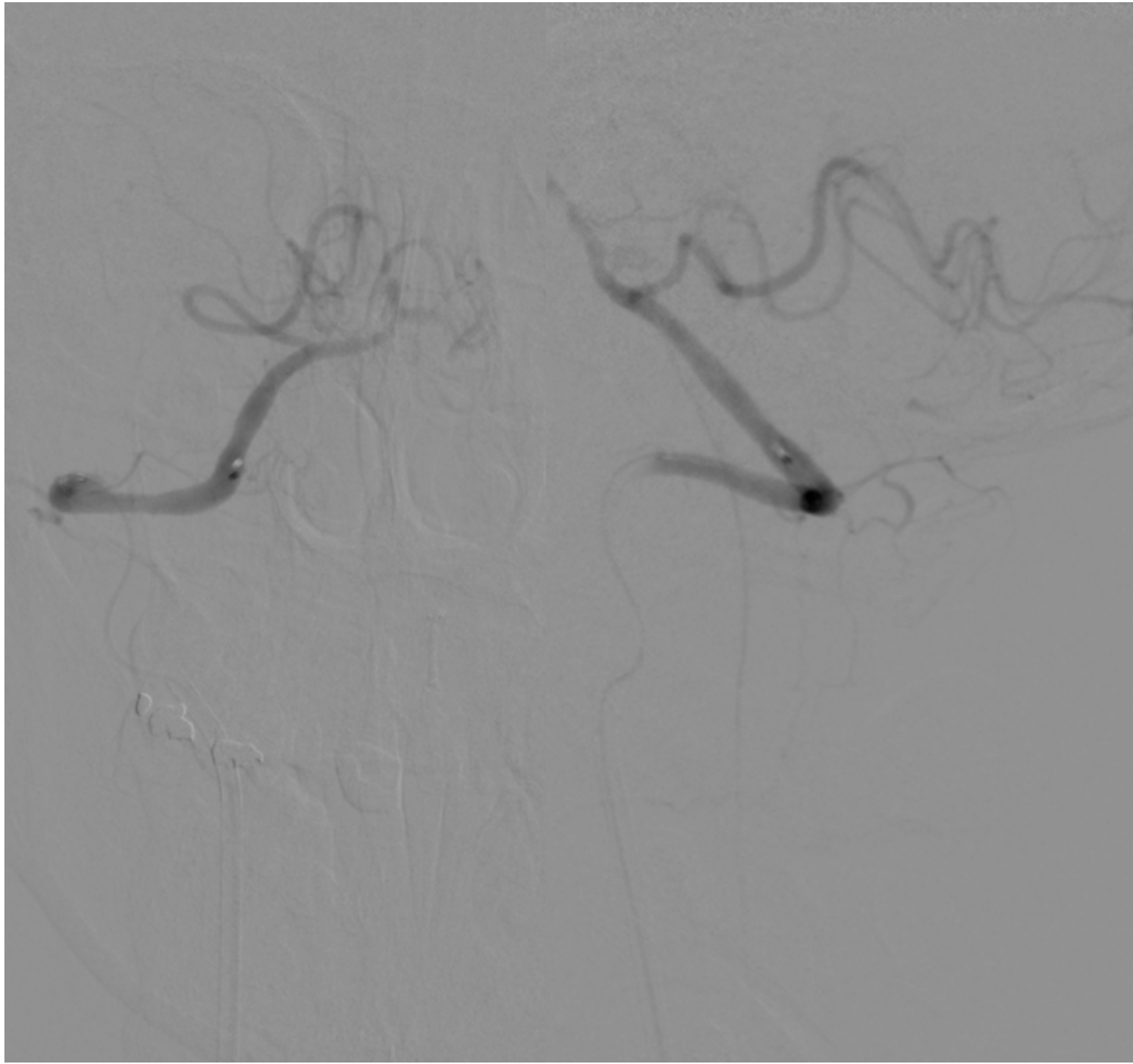
- Continue medical treatment-heparinization
- Stenting
 - Which vessels
 - ?RVA
 - ?LVA
 - Include basilar?

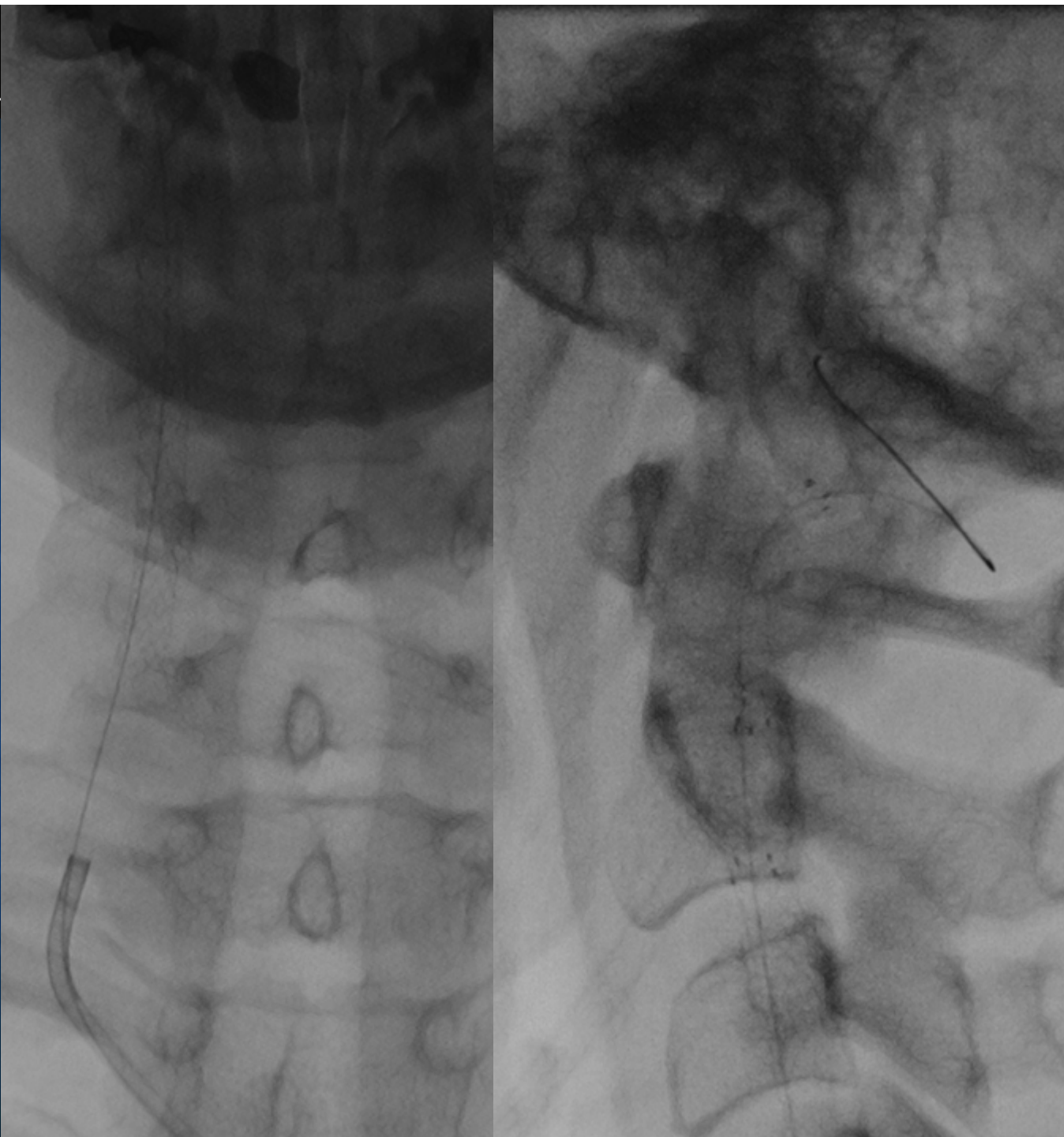
Devices Used:

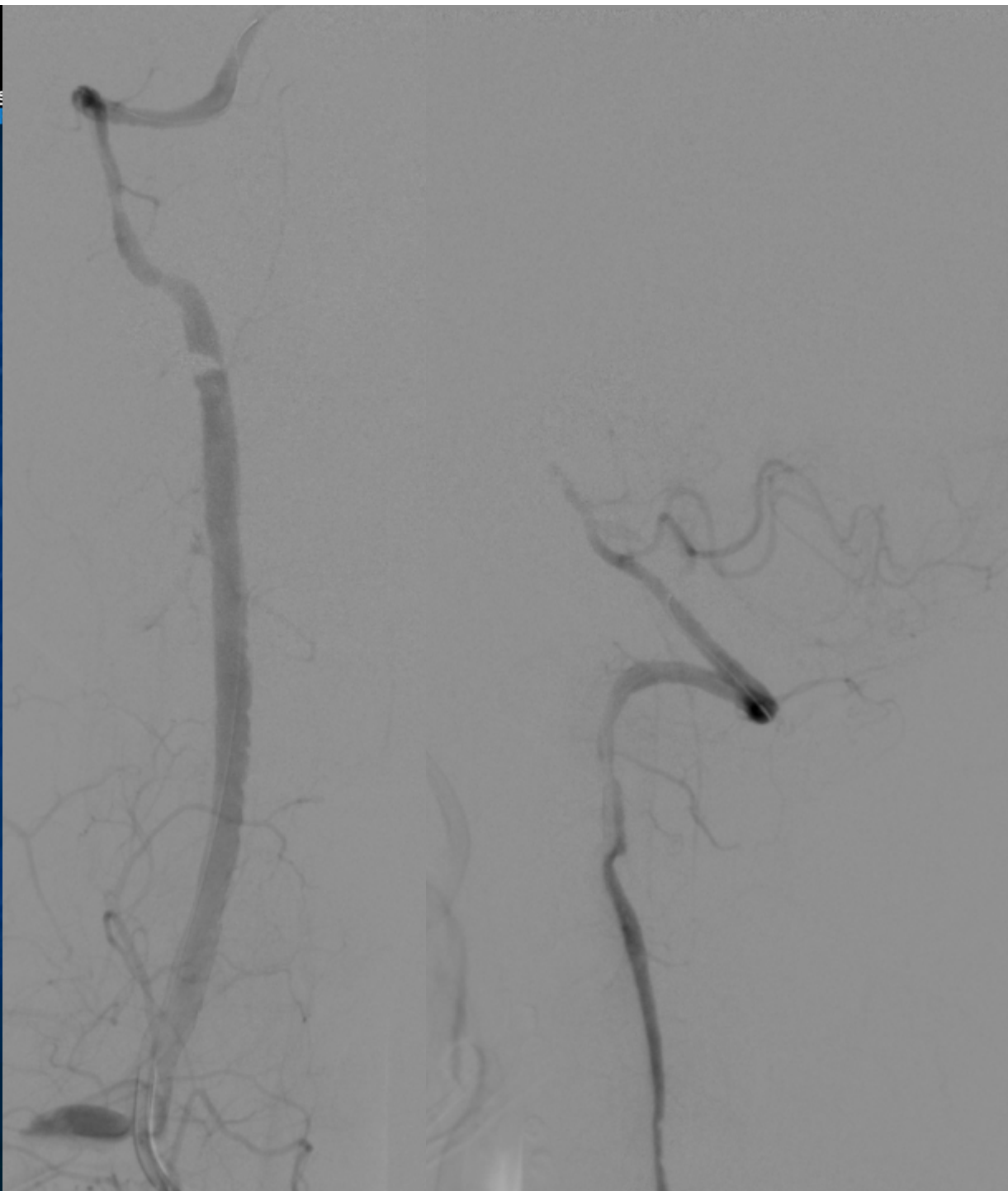
- 6 fr sheath
- Envoy 6 fr, 0.035 gw
- Heparin 4000/ACT 366
- Nautica/Goldtip
- Allstar
- Wingspan 4x20 & 4x15
- Xpert stents: 5x30, 5x30, & 5x20
- Retavase 2 Units
- Excelsior SL-10, Synchro2, V-18
- Sheath left in

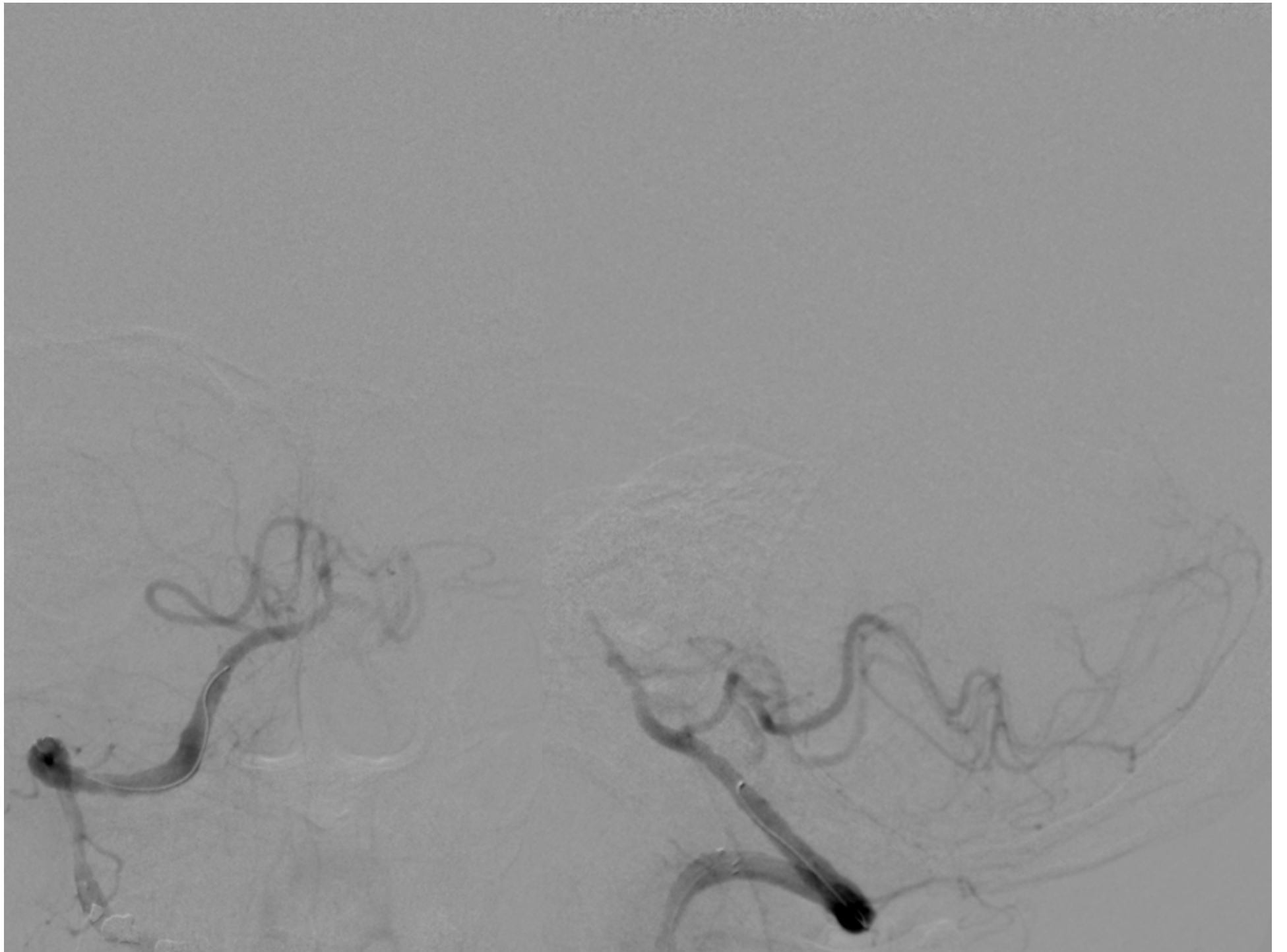




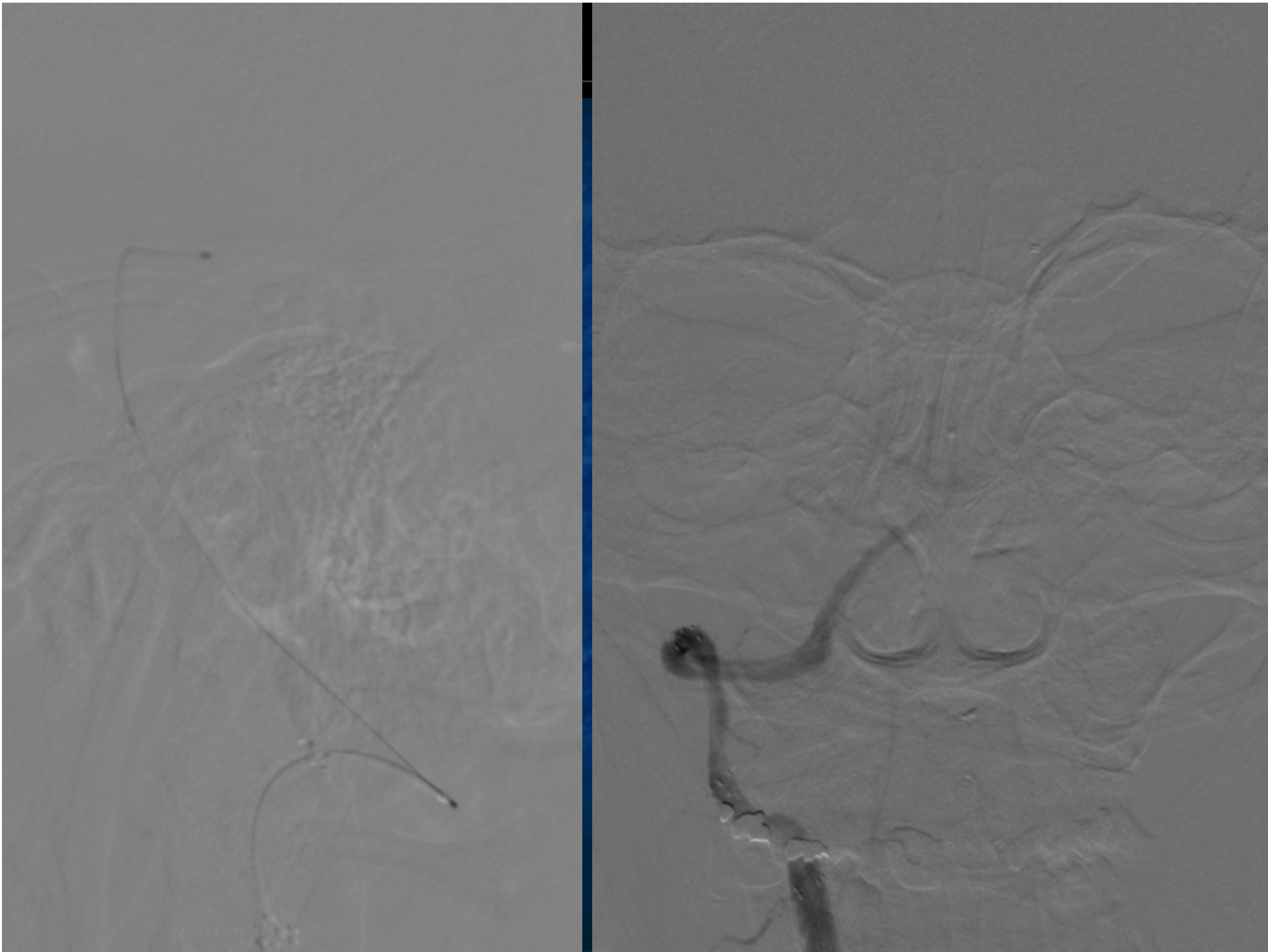










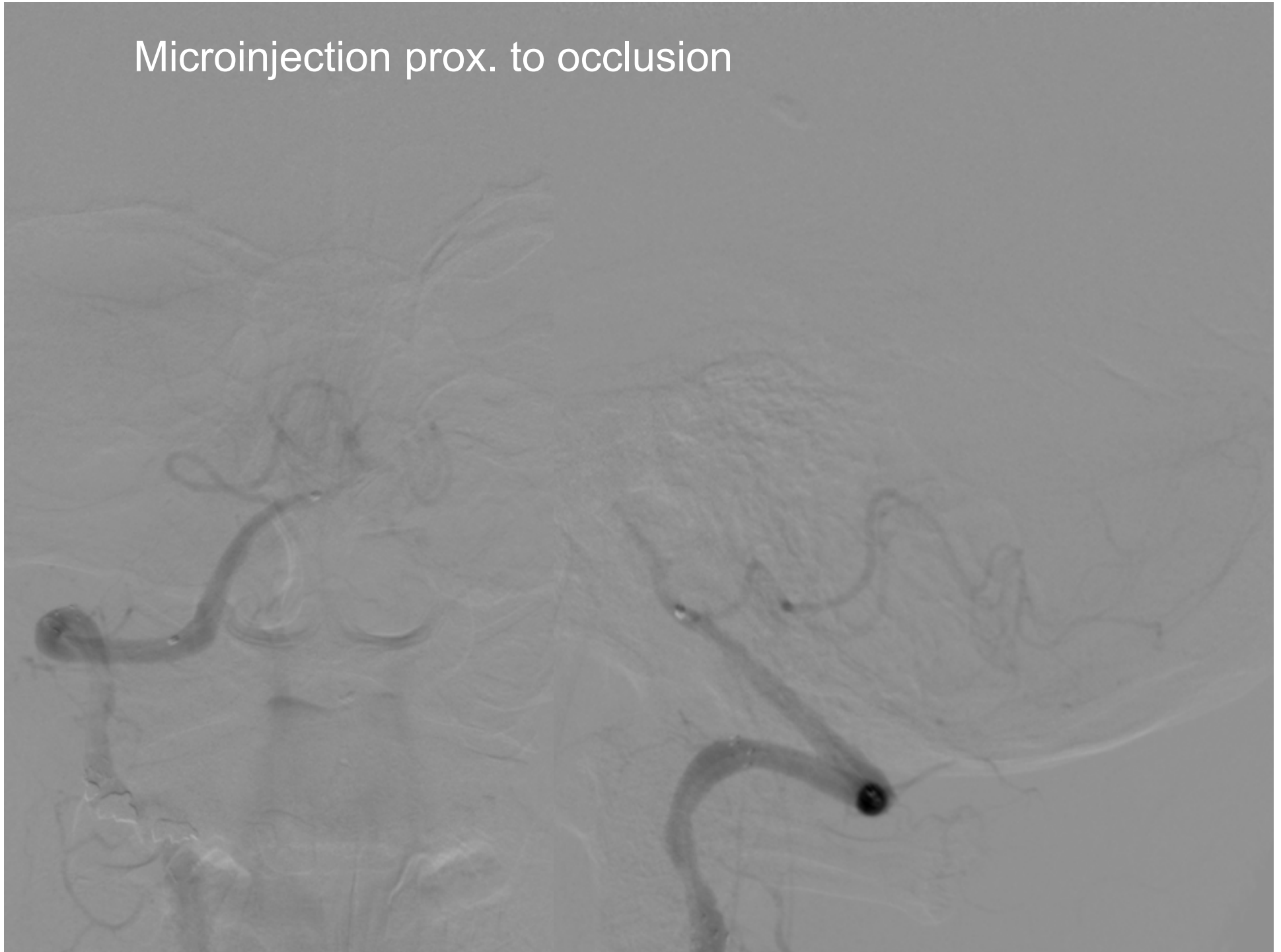


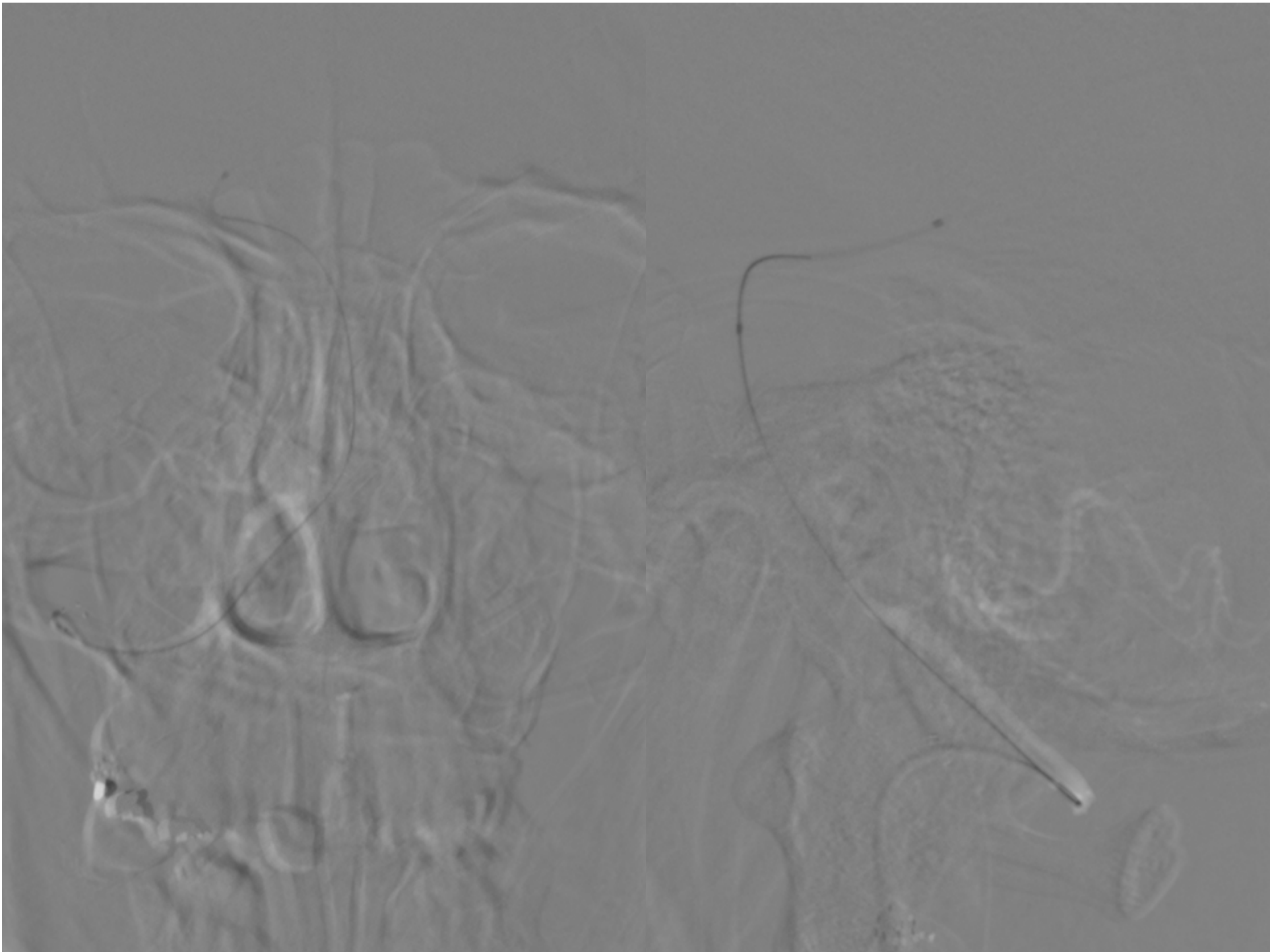


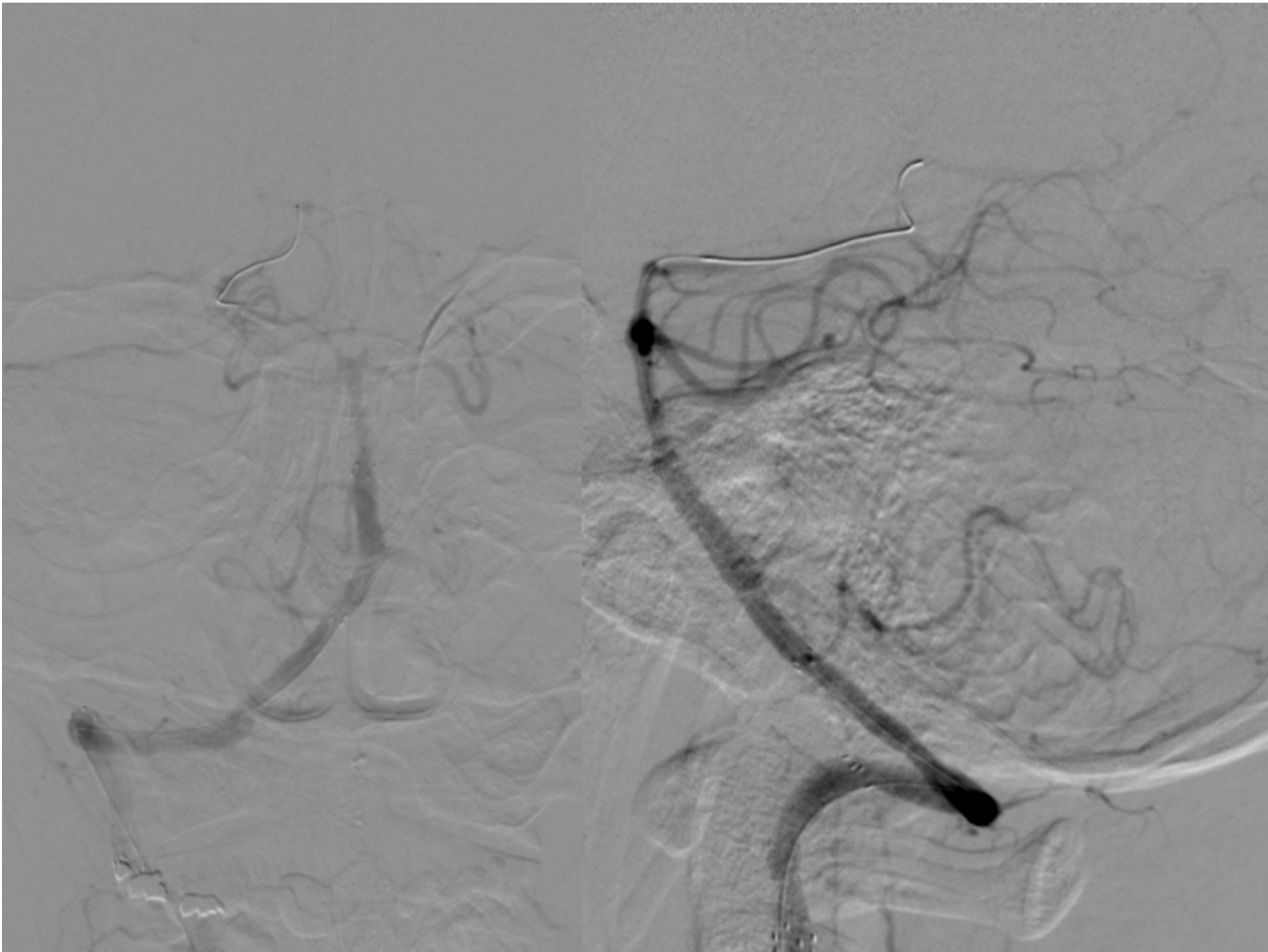
Dual Injection



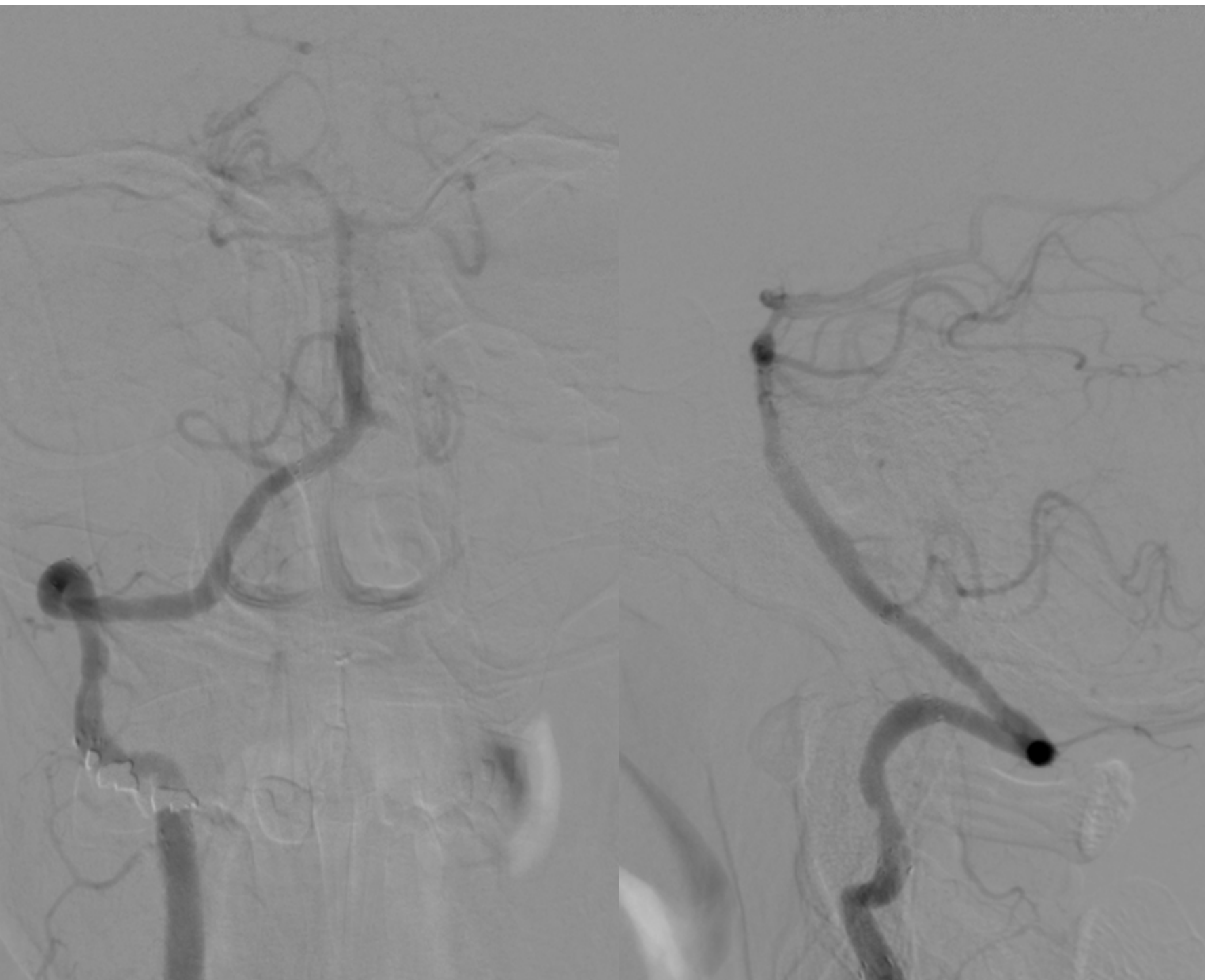
Microinjection prox. to occlusion



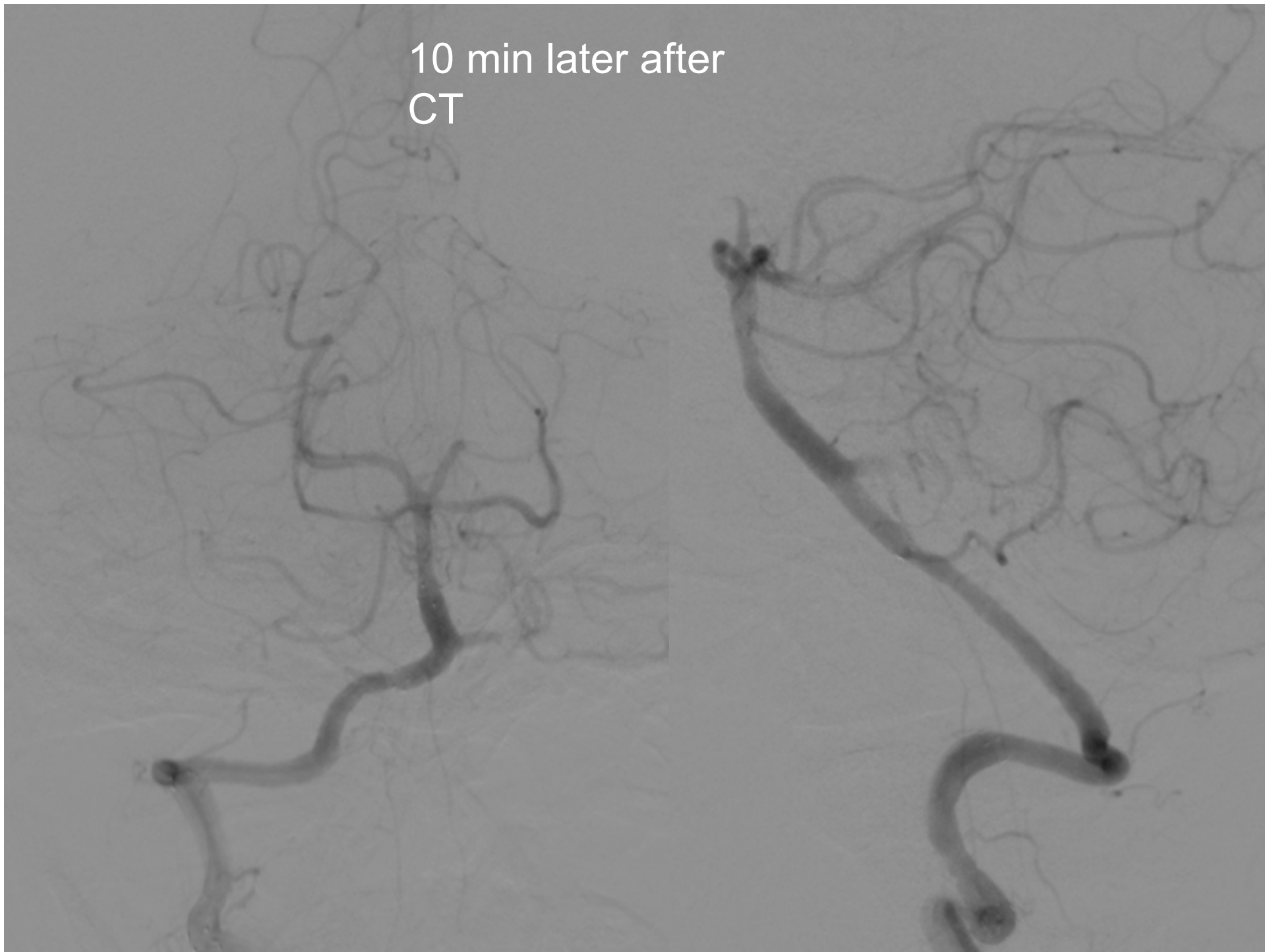




- Patient Started vomiting
- Subsequently, became unresponsive
- Intubated

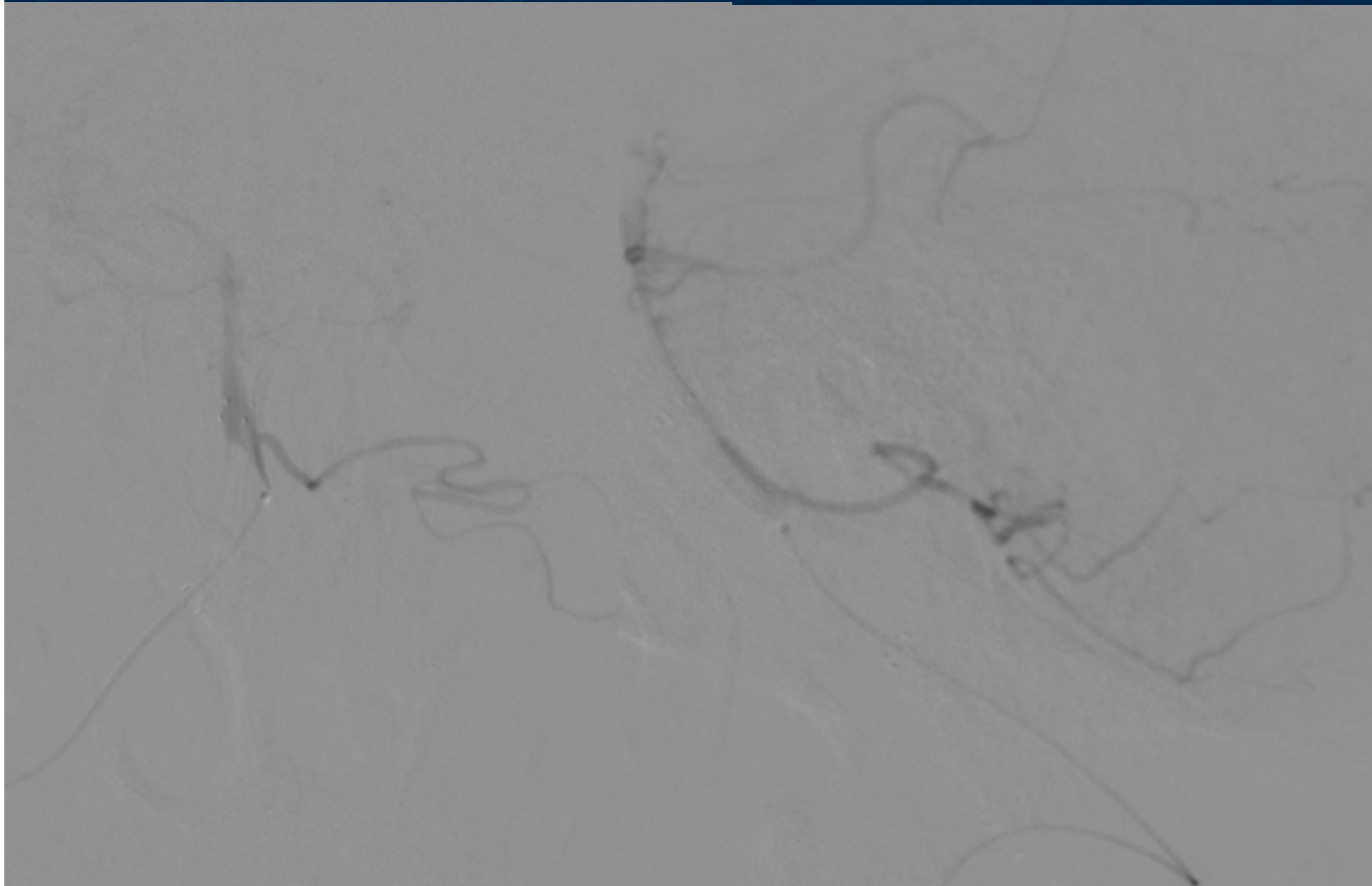


10 min later after
CT

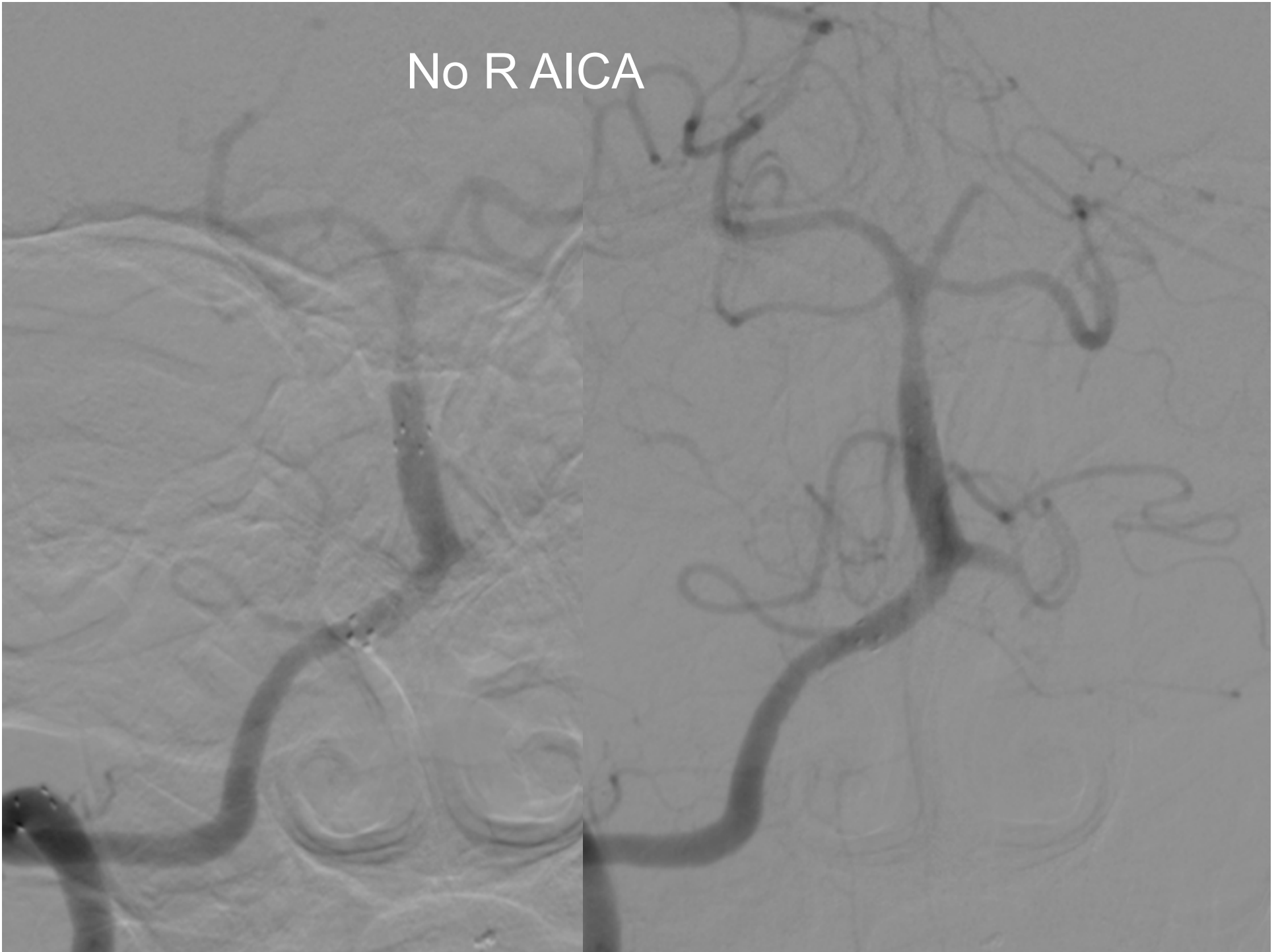




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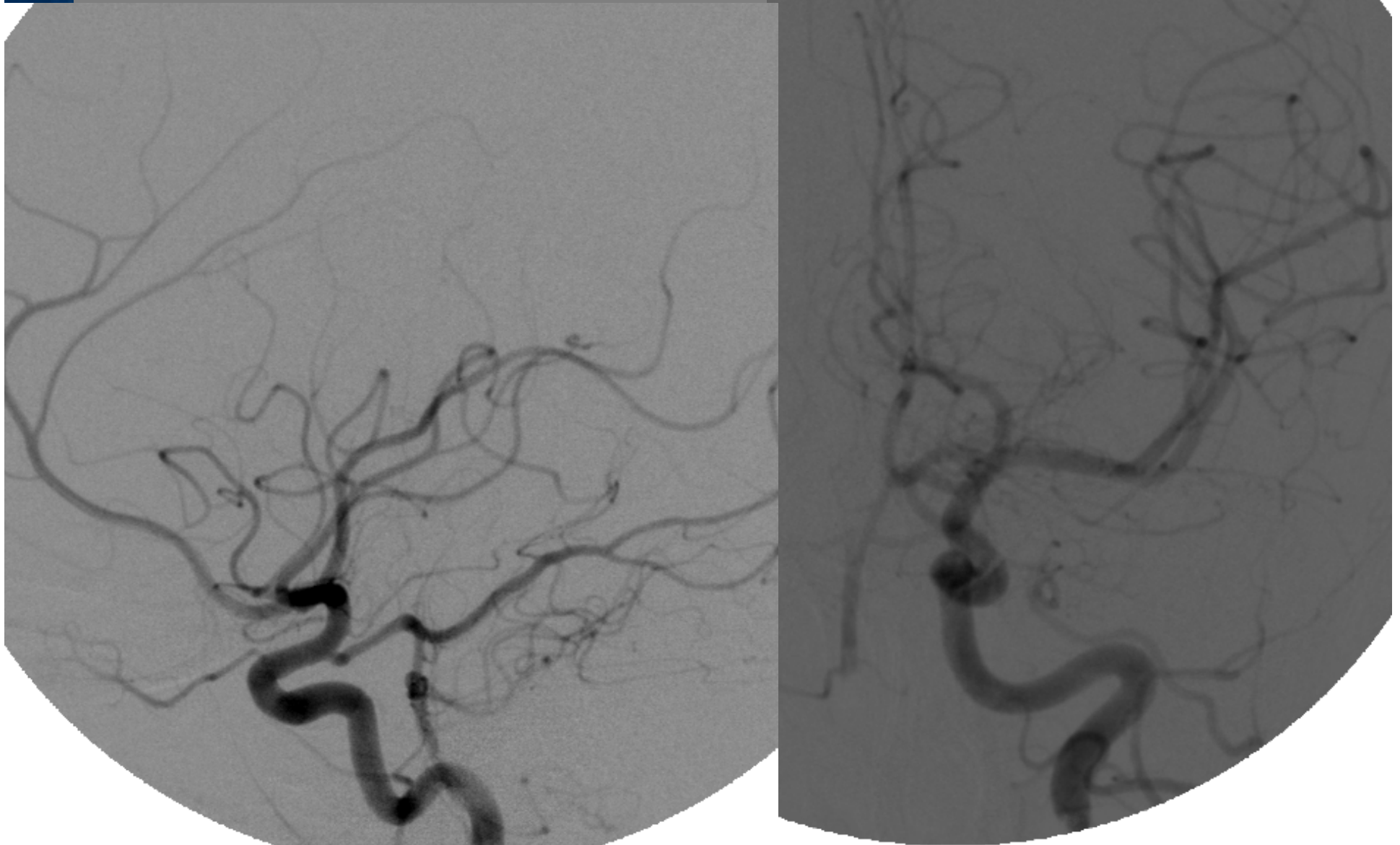
No R AICA



RVA Injection (AP) 9/14/09



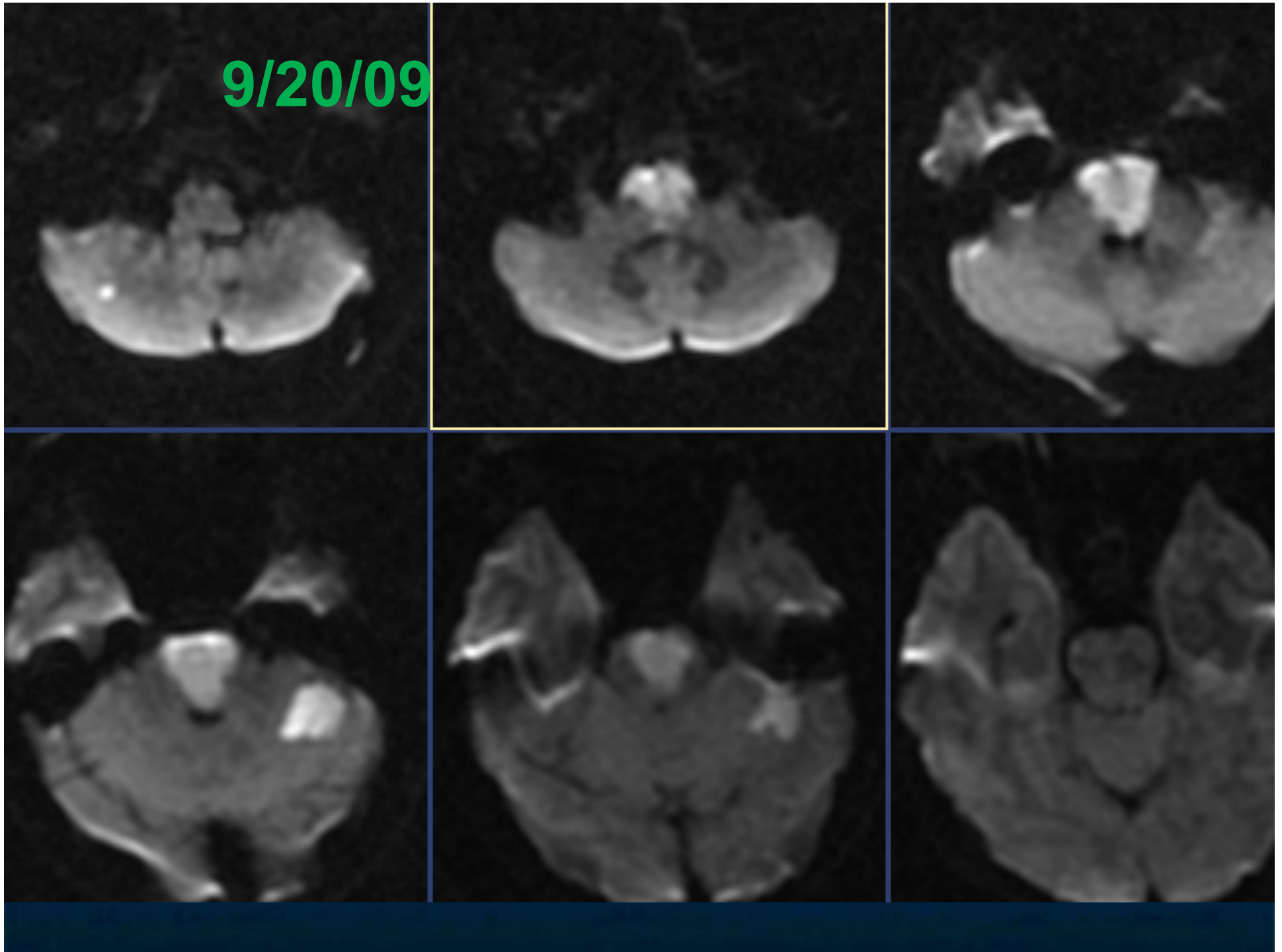
LICA 9/14/09



Summary of findings

- 31 yo F, who came in with L medullary stroke + B/L VA dissections
- Angiographic progression despite max med Rx
- Intimal flap in the proximal BA (flow limiting)
- BA filling from L PCOM
- Both PICAs filling from RVA

9/20/09



9 mo Follow-up

- Opens eyes, regards
- Non-verbal
- Follow commands with left arm and leg
- No movement RUE, minimal spontaneous RLE
- Trach closed, still requires PEG feeds
- Nursing home

*Welcome
to
Niagara
Falls*

Thank you!
Questions?

