

脳動脈瘤に対する血管内治療

- コイル塞栓術
- ステント併用コイル塞栓術 (Y, T stent)
- 各種フローダイバーターによる治療 (Pipeline, FRED)
- WEB(Woven Endobridge Device)による塞栓術
- 手術併用療法 バイパス + 親動脈閉塞

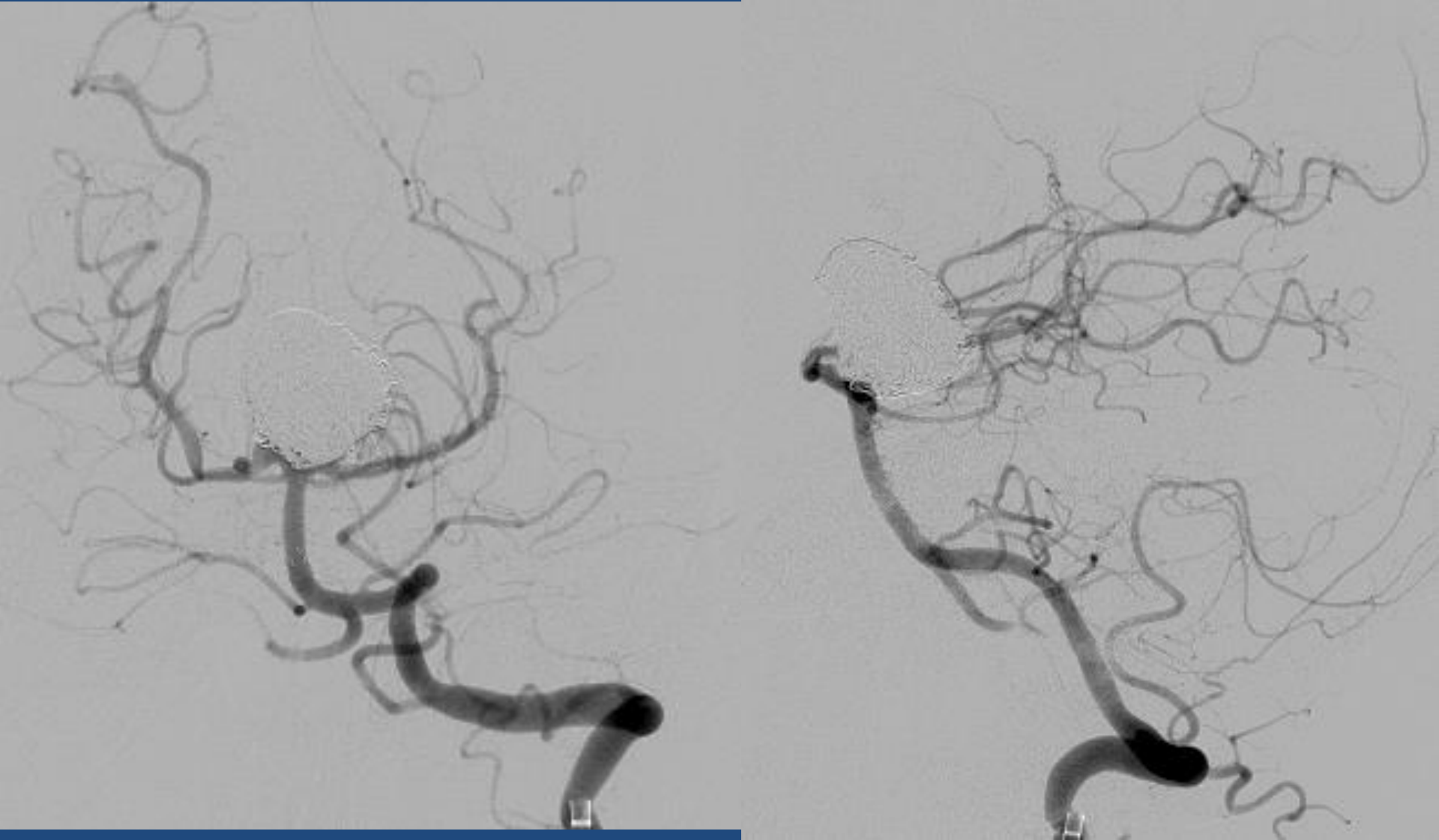
Rt-PCA Scepter, Lt-PCA Prowler select Coiling without stent deployment



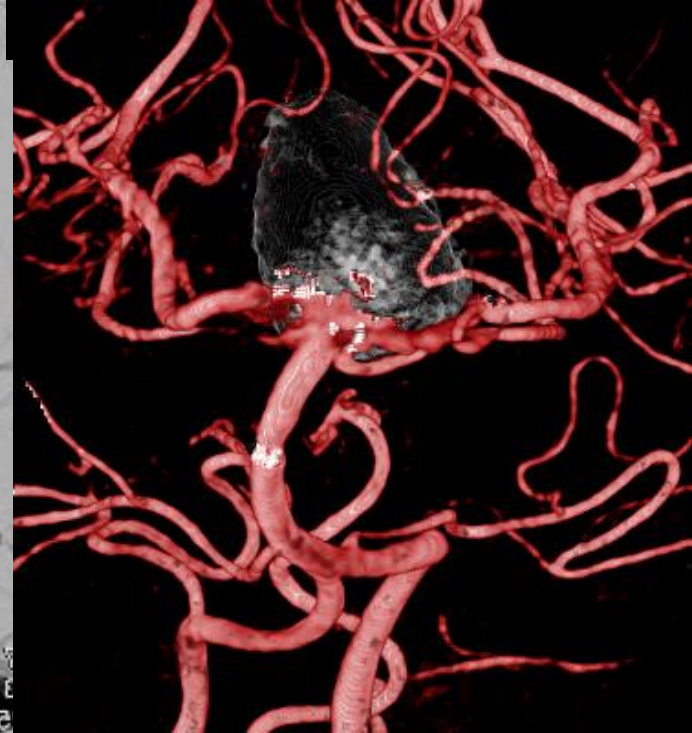
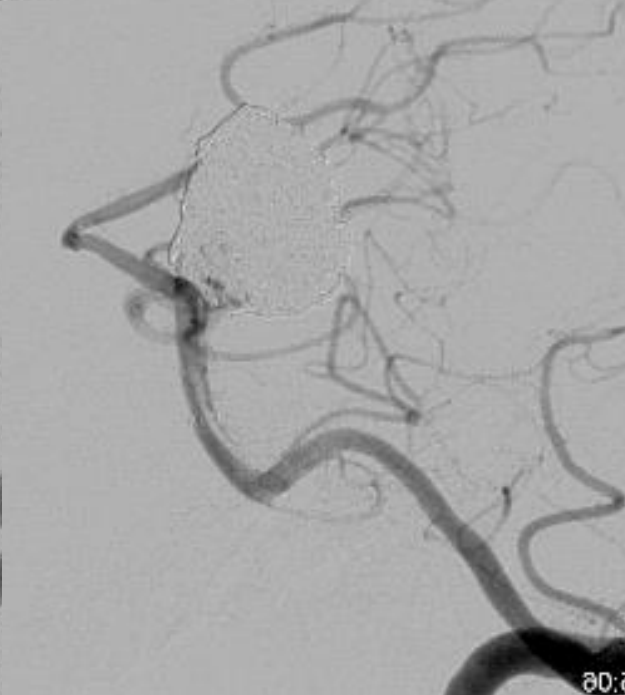
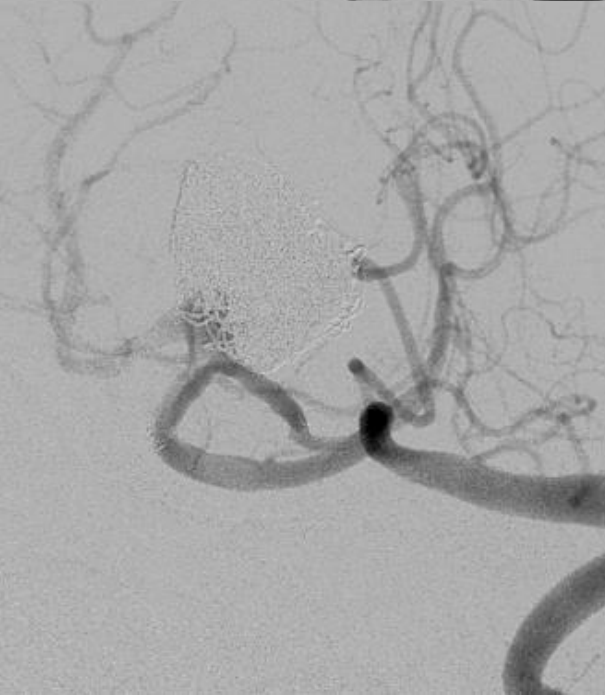
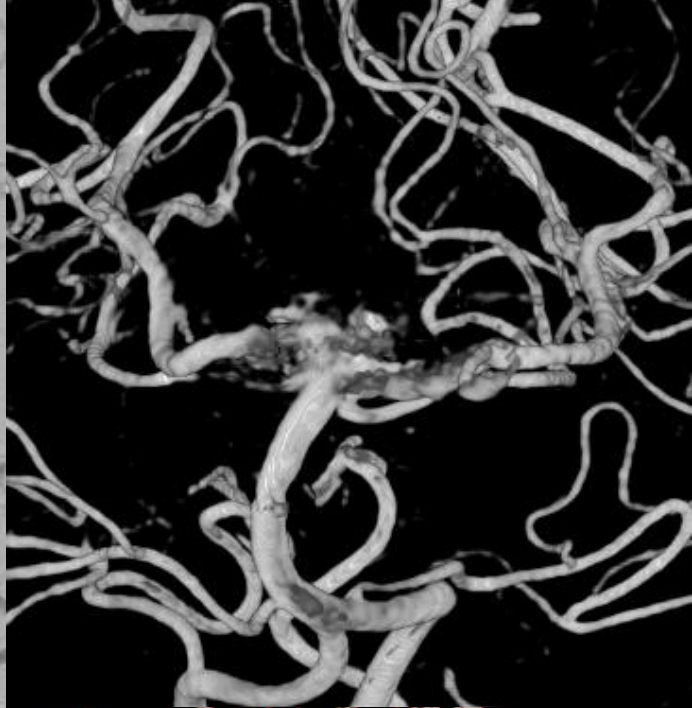
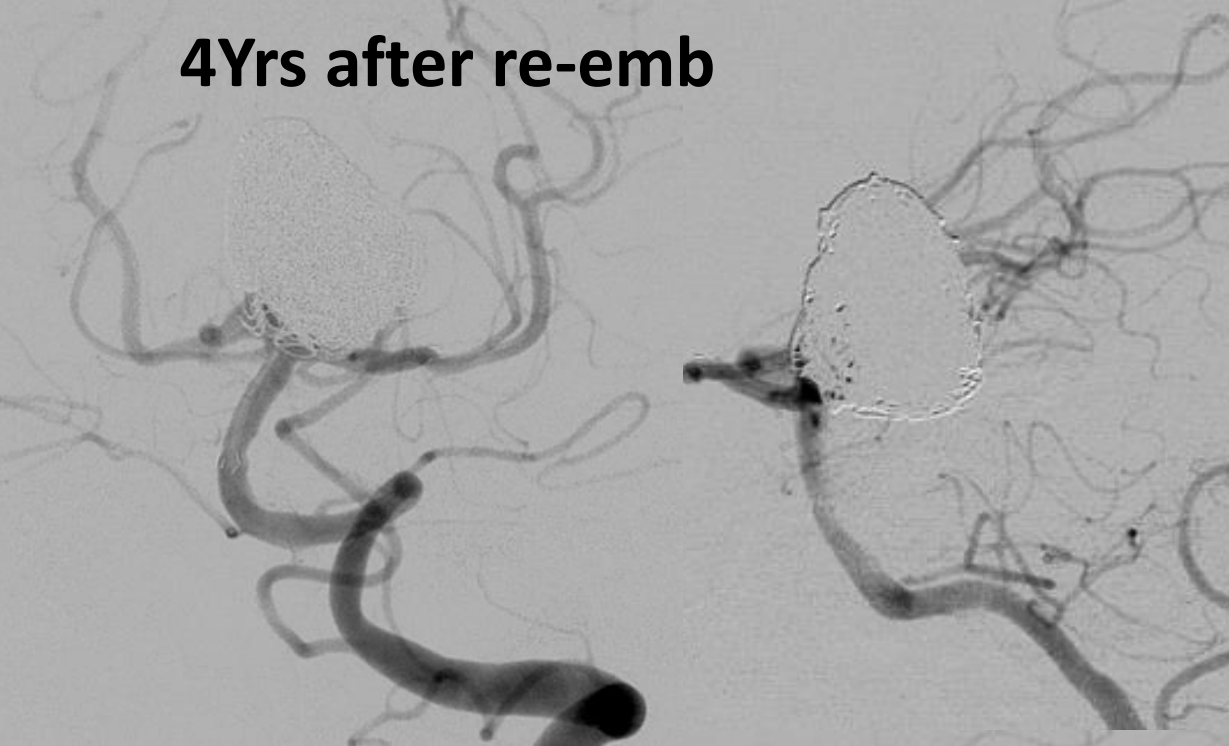
Stent deployment after insertion of the framing coil



Final Angiography 2015/5/13



4Yrs after re-emb



RECONSTRUCT

The Pipeline™ Device reconstructs the parent artery by providing a flexible yet supportive scaffolding across the aneurysm neck.

Controlled reconstruction

- Excellent vessel conformity even in tortuous anatomy achieved through optimized radial force and flexibility of a 75% cobalt chromium/25% platinum tungsten bimetallic design
- Uniform radiopacity throughout entire device
- Flow diversion provided by dense, 48-strand braided construction

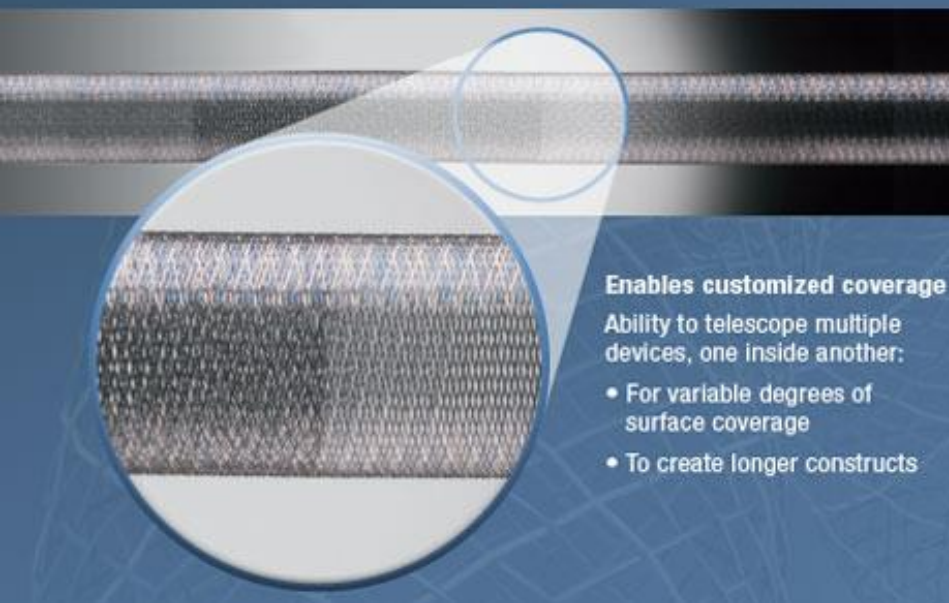


REMODEL

The Pipeline™ Device remodels the parent artery by providing a scaffold that promotes endothelial repavement, excluding the aneurysm from the original, natural circulation.

Curative remodeling

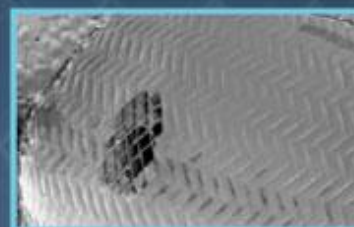
- Flow diversion
 - 3- to 5-fold increase in surface coverage compared to intracranial stents¹
 - 30% to 35% surface coverage ratio to divert flow from the aneurysm. Designed to also keep perforators and/or side branch vessels patent²
 - 85% reduction of blood circulation within aneurysm, which induces thrombosis¹
- Endothelial repavement
 - After flow into the aneurysm is eliminated, the construct becomes endothelialized, forming a permanent biological seal across the segmentally diseased parent artery⁴



Enables customized coverage

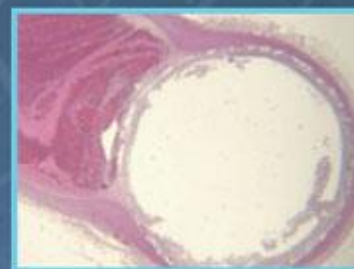
Ability to telescope multiple devices, one inside another:

- For variable degrees of surface coverage
- To create longer constructs



PRECLINICAL STUDIES

Scanning electron microscopy (SEM) of rabbit vertebral artery showing the aneurysmal neck was completely occluded with neointima. The lumbar arteries, vertebral artery, and other branches were all patent.²



A photomicrograph of an embolized aneurysm at 1 month after implantation in a rabbit model. The neointima along the device struts; the neointima runs completely across the aneurysm neck.³

FRED

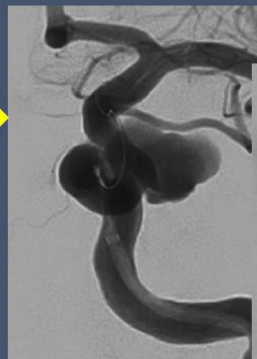


女性

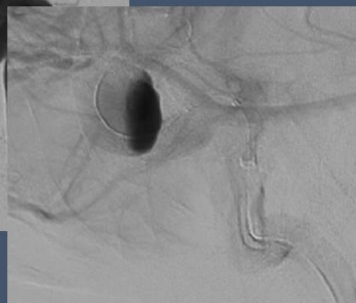
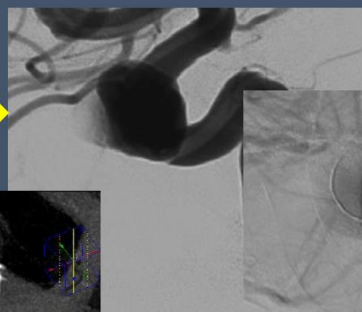
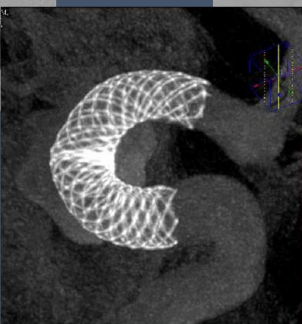
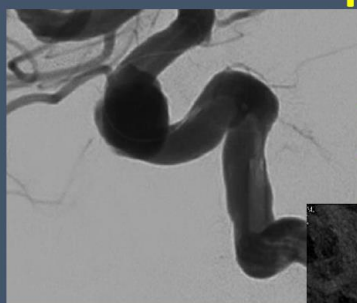
右眼視野狭窄精査にてLt.IC AN指摘。自覚症状のみで眼科的検査異常なし。



FD留置



6か月後

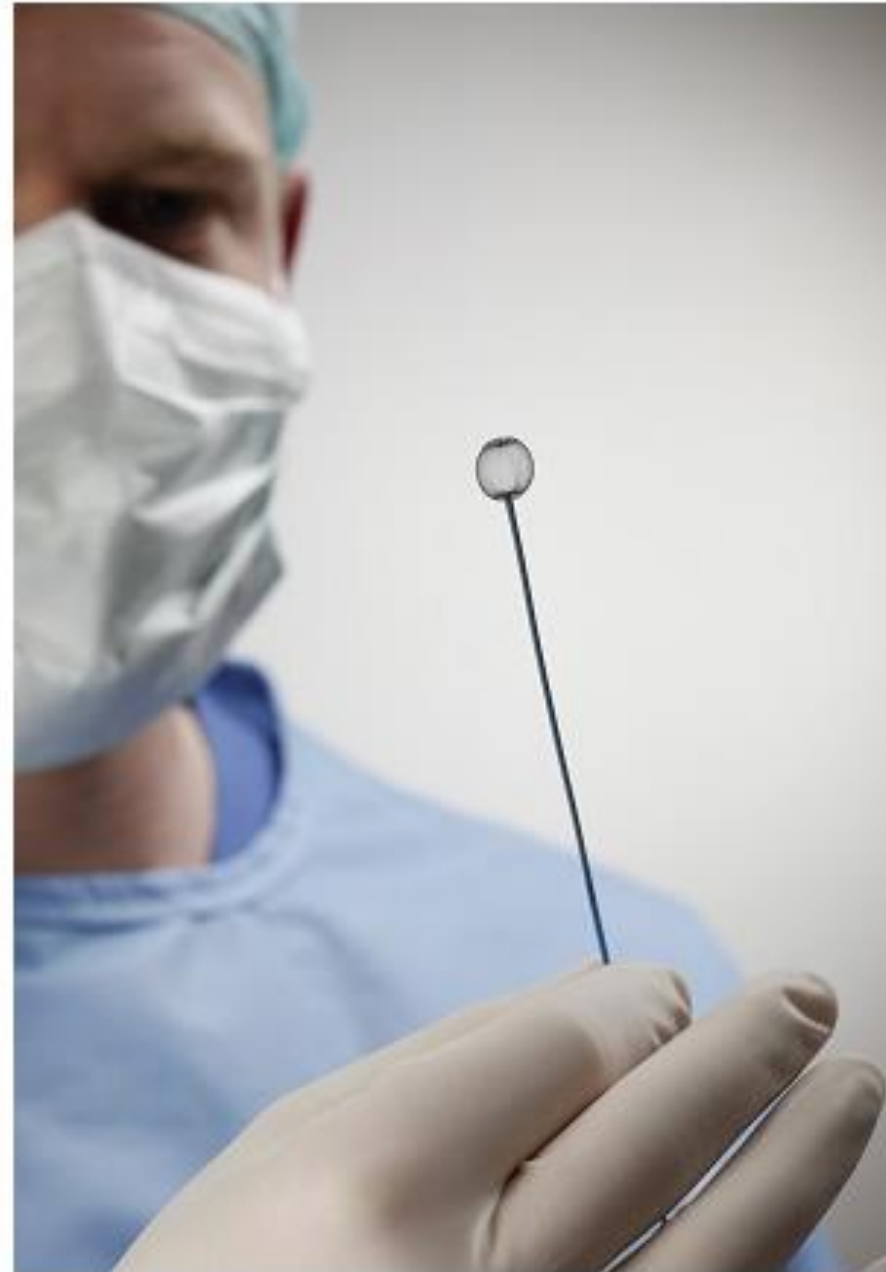


6か月後フォローにて瘤消失、ステント拡張良好を確認

WEB: Woven EndoBridge device



W-EB留置イメージ

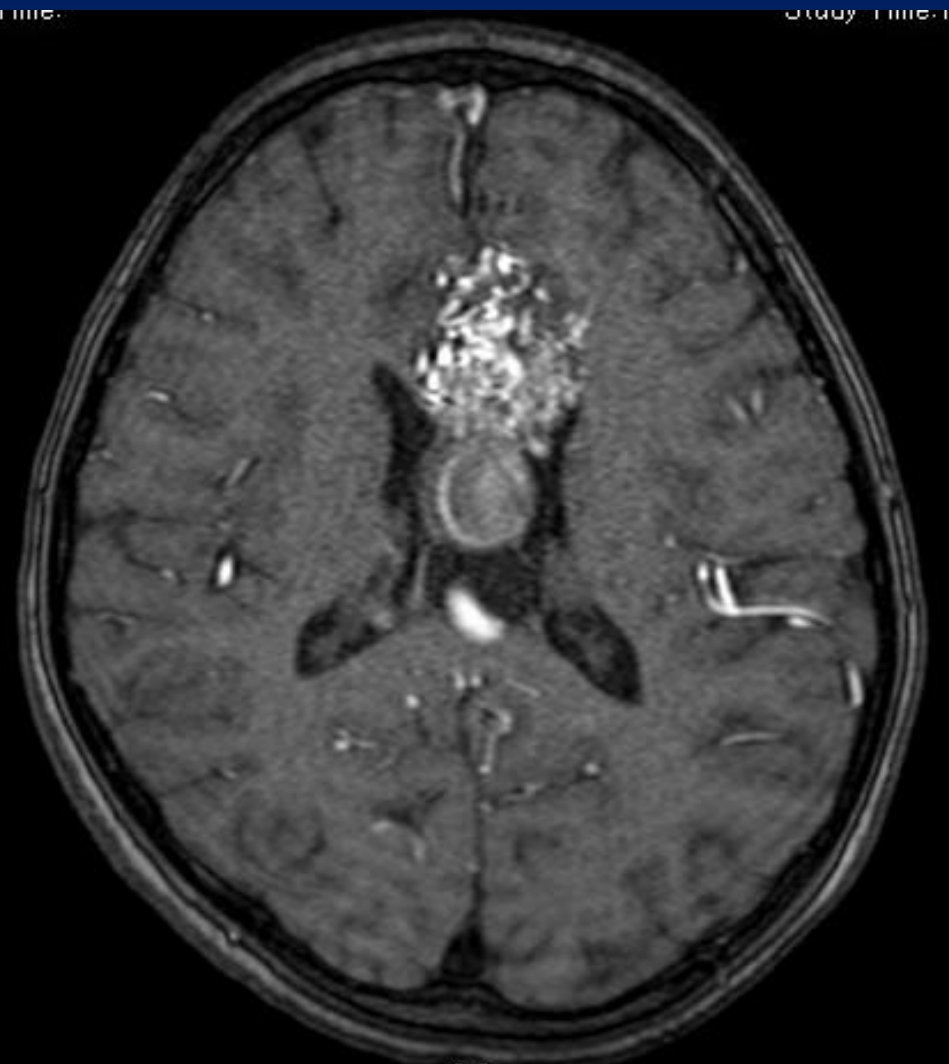
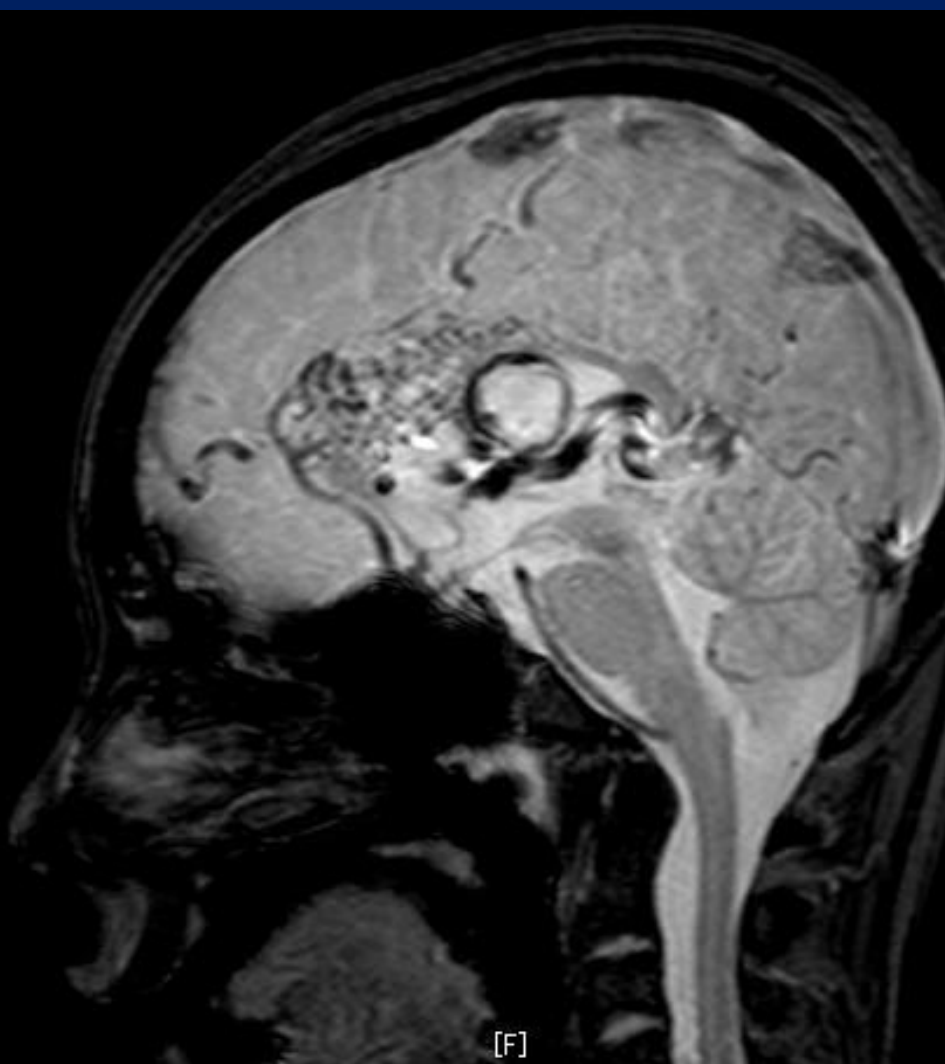




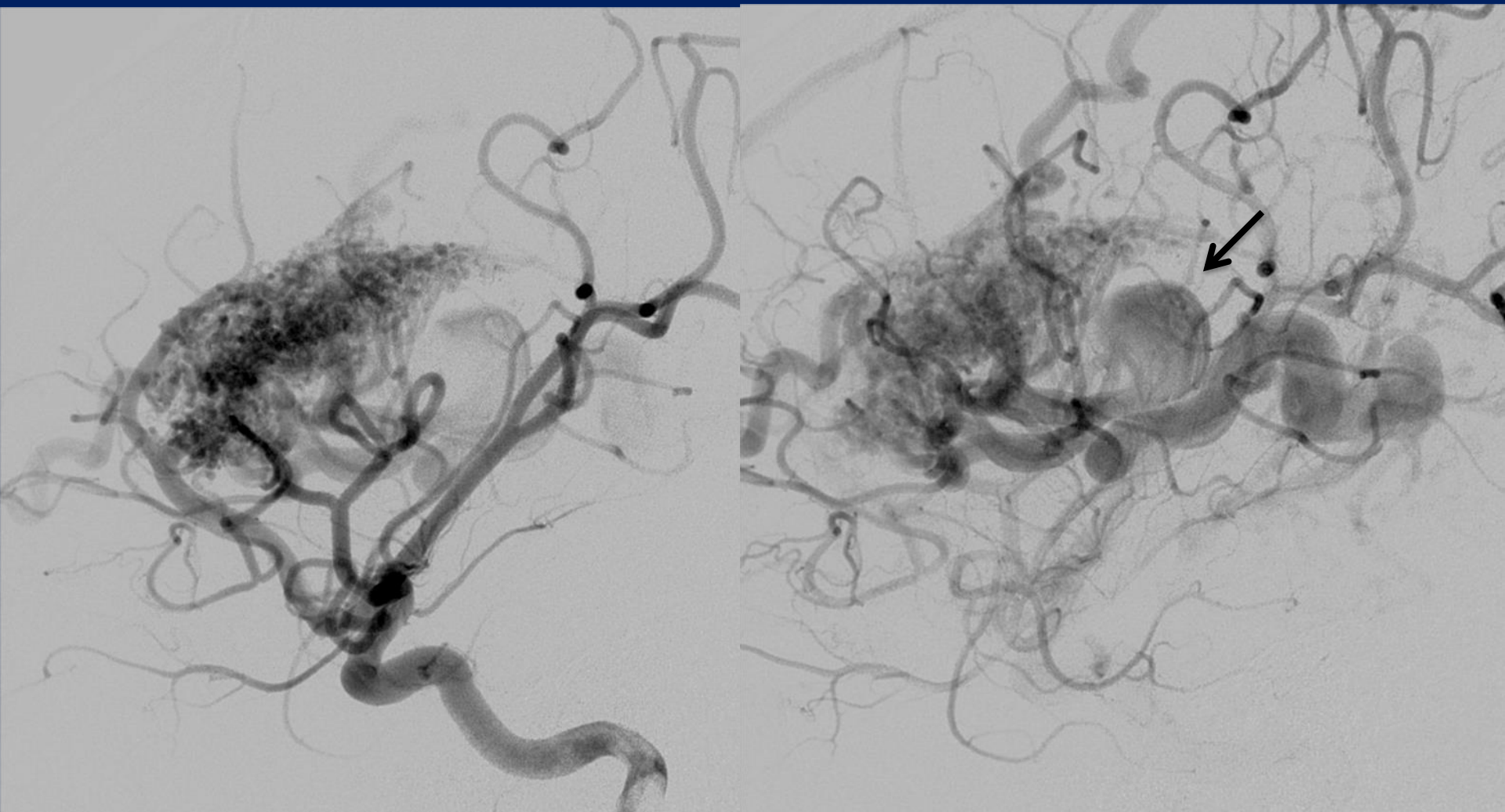
脳動静脈奇形に対する血管内治療

- ONYX、NBCAを用いた塞栓術(経動脈的、経静脈的)で根治的塞栓術を目指す。
- 塞栓術で根治できない場合は、ガンマナイフ、摘出術を組み合わせ根治を目指す。

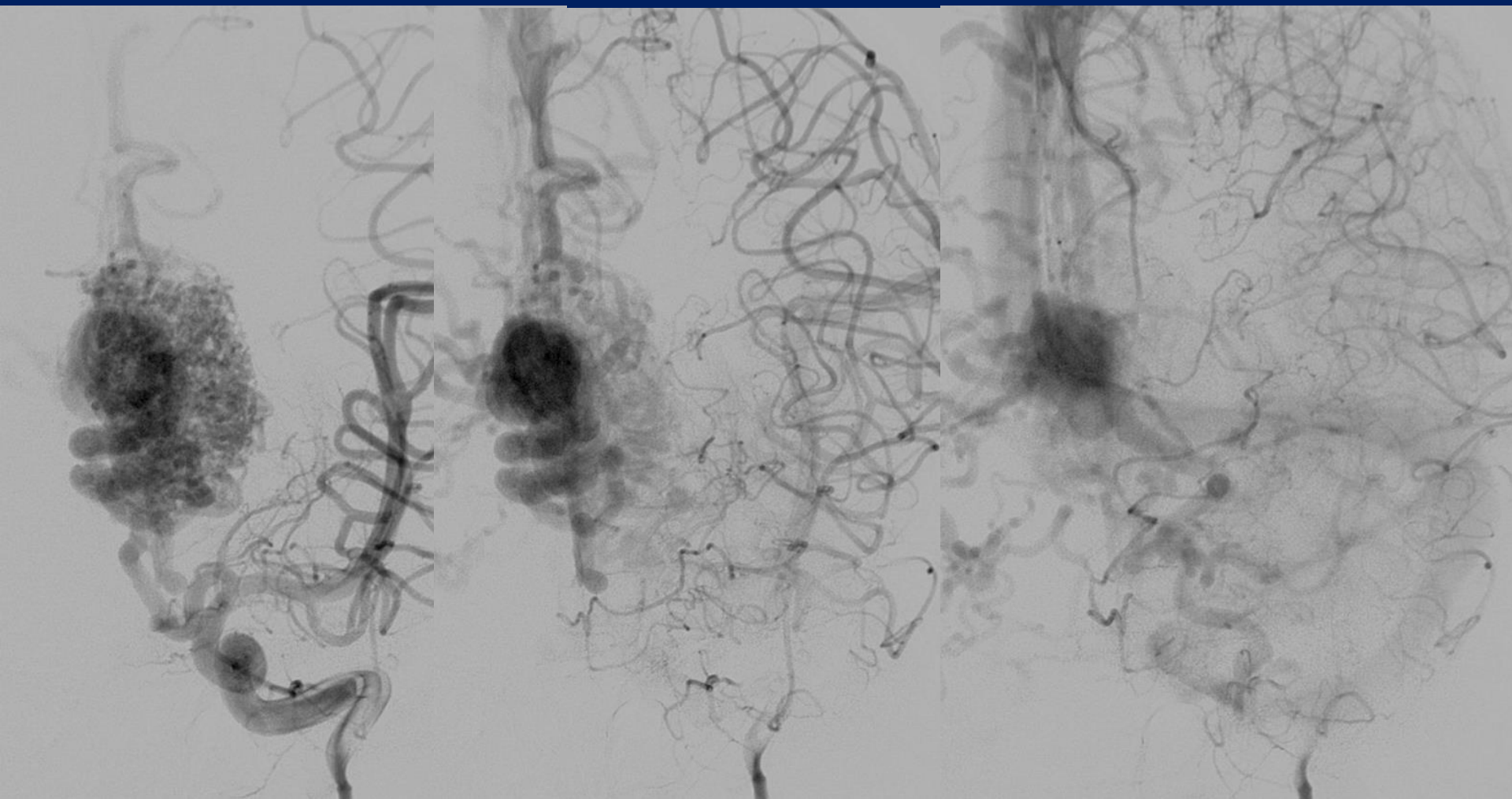
MRI pre-treatment



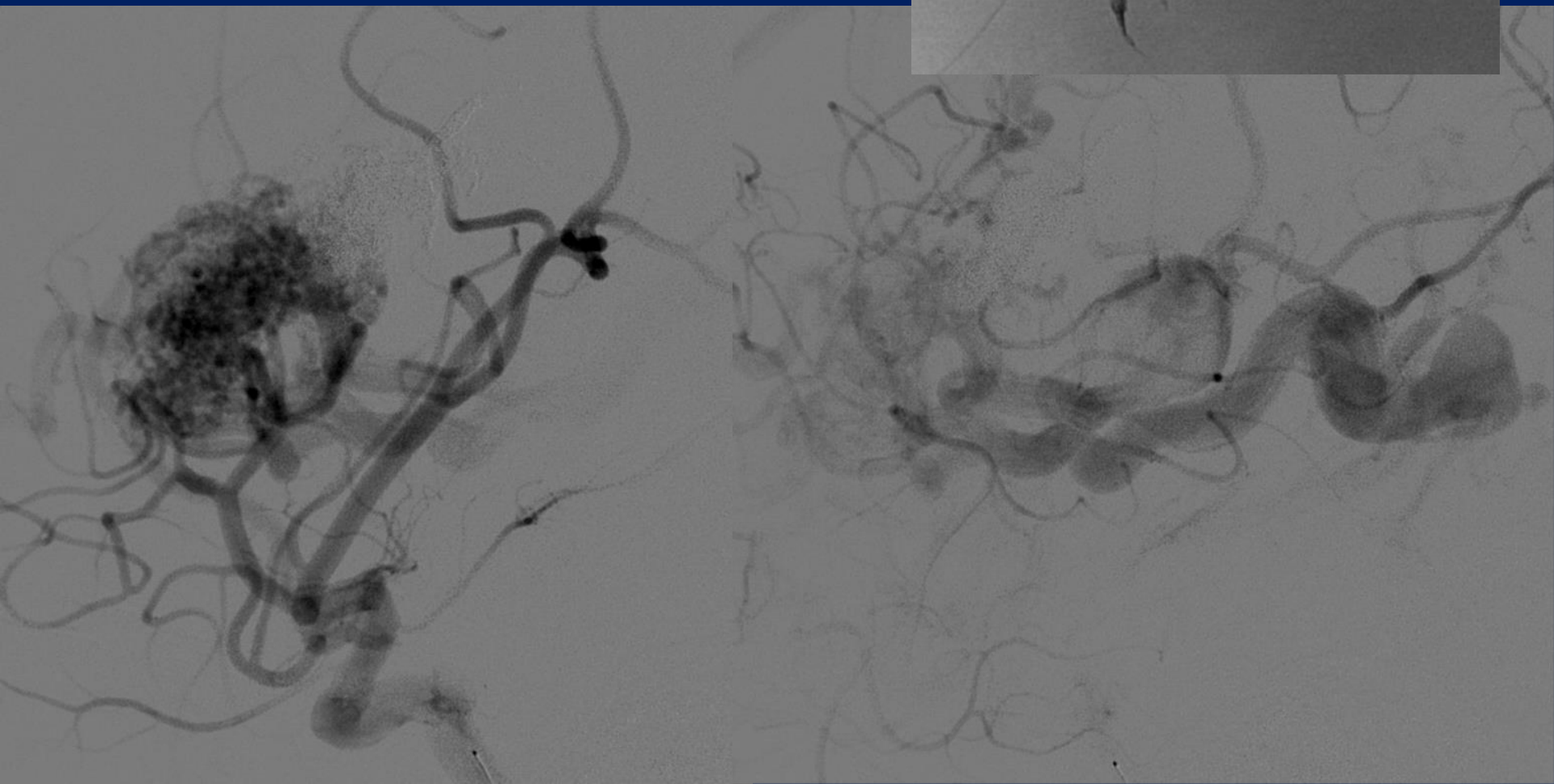
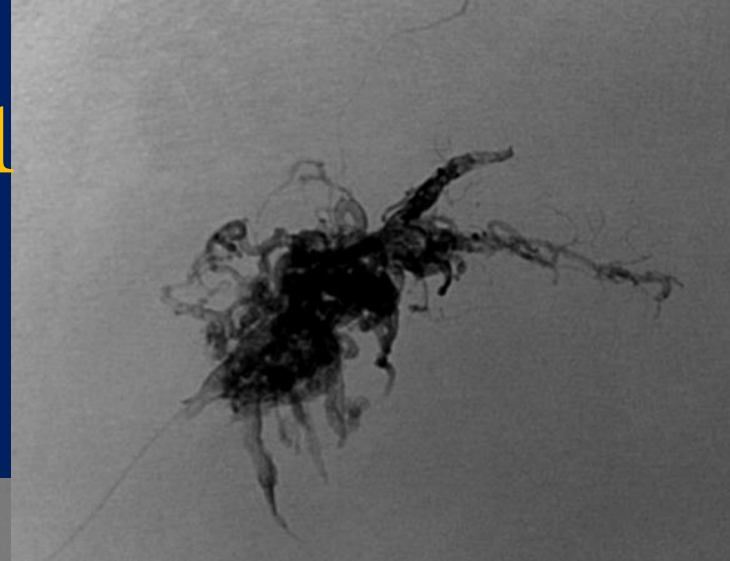
左内頸動脈側面像



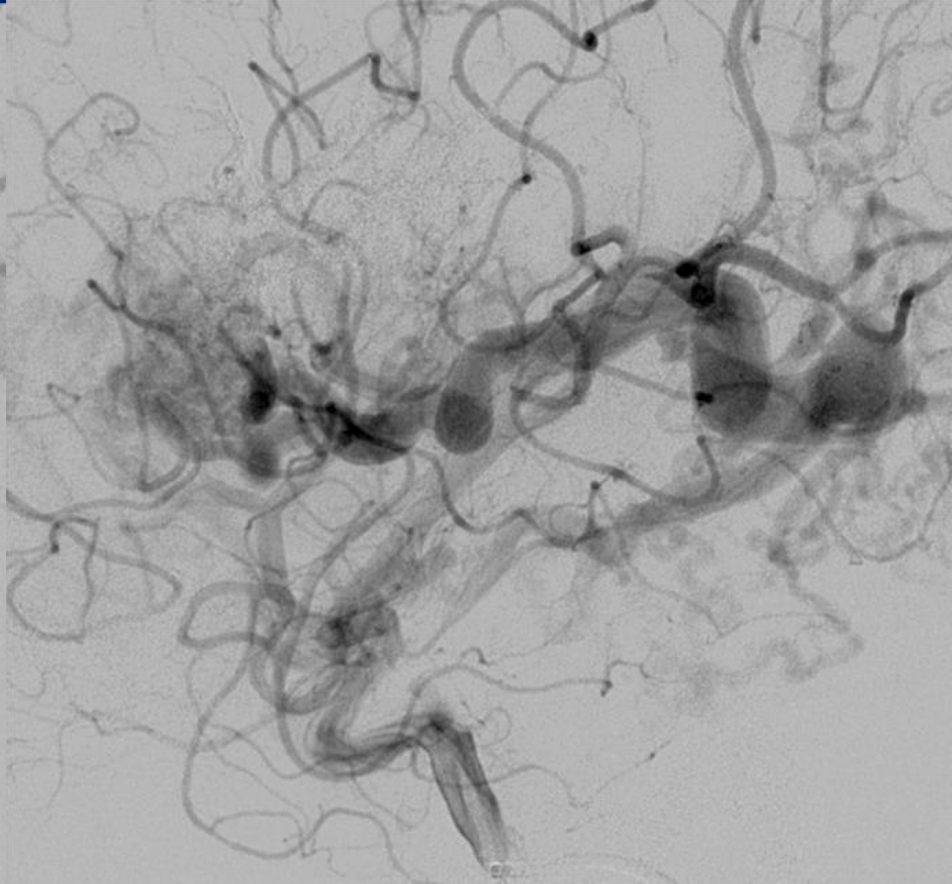
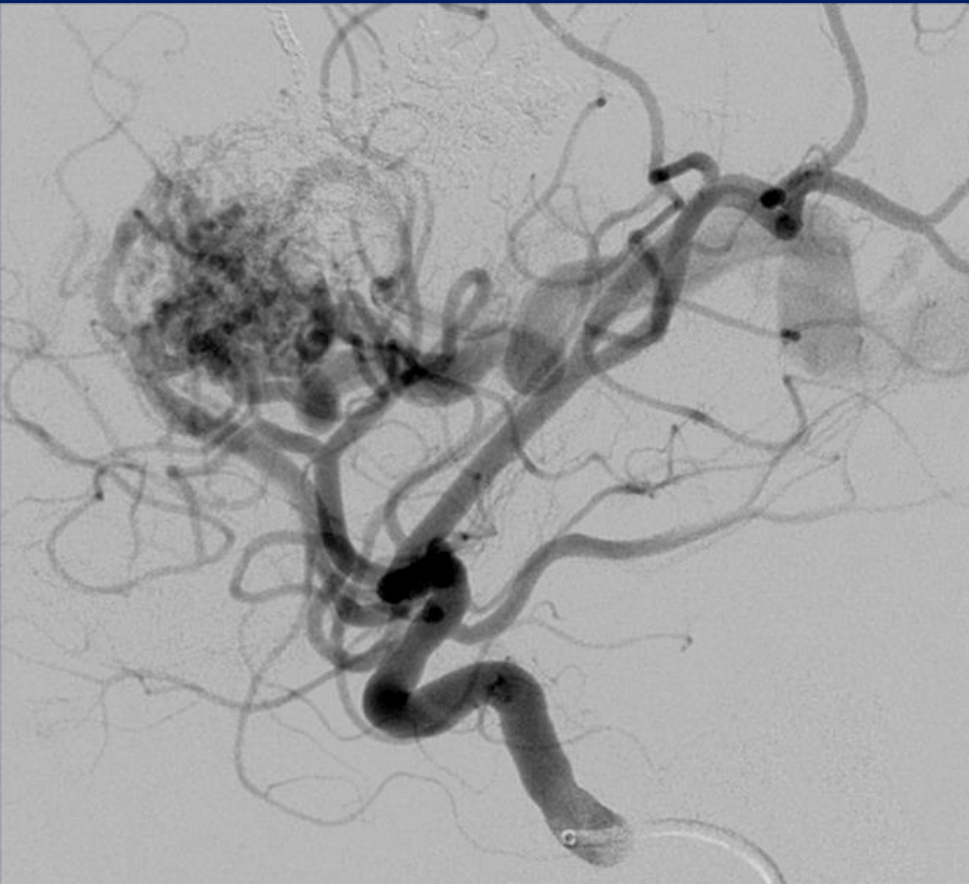
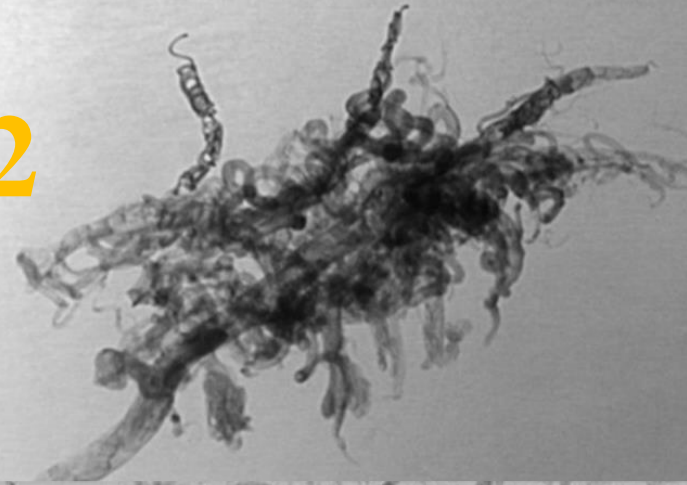
左内頸動脈撮影 正面



Lt-CAG post ONYX emb.1



Lt-CAG lat post ONYX2

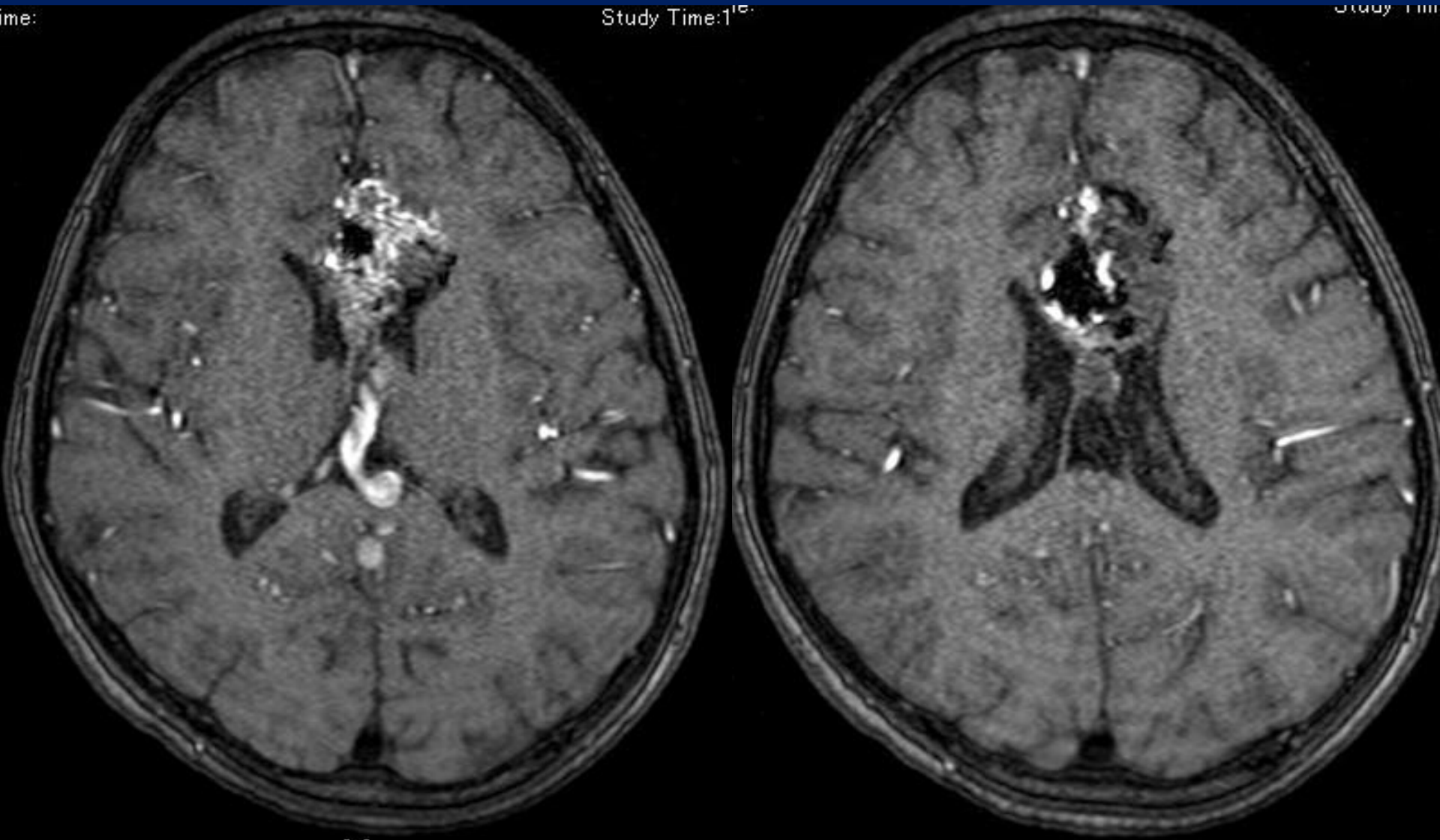


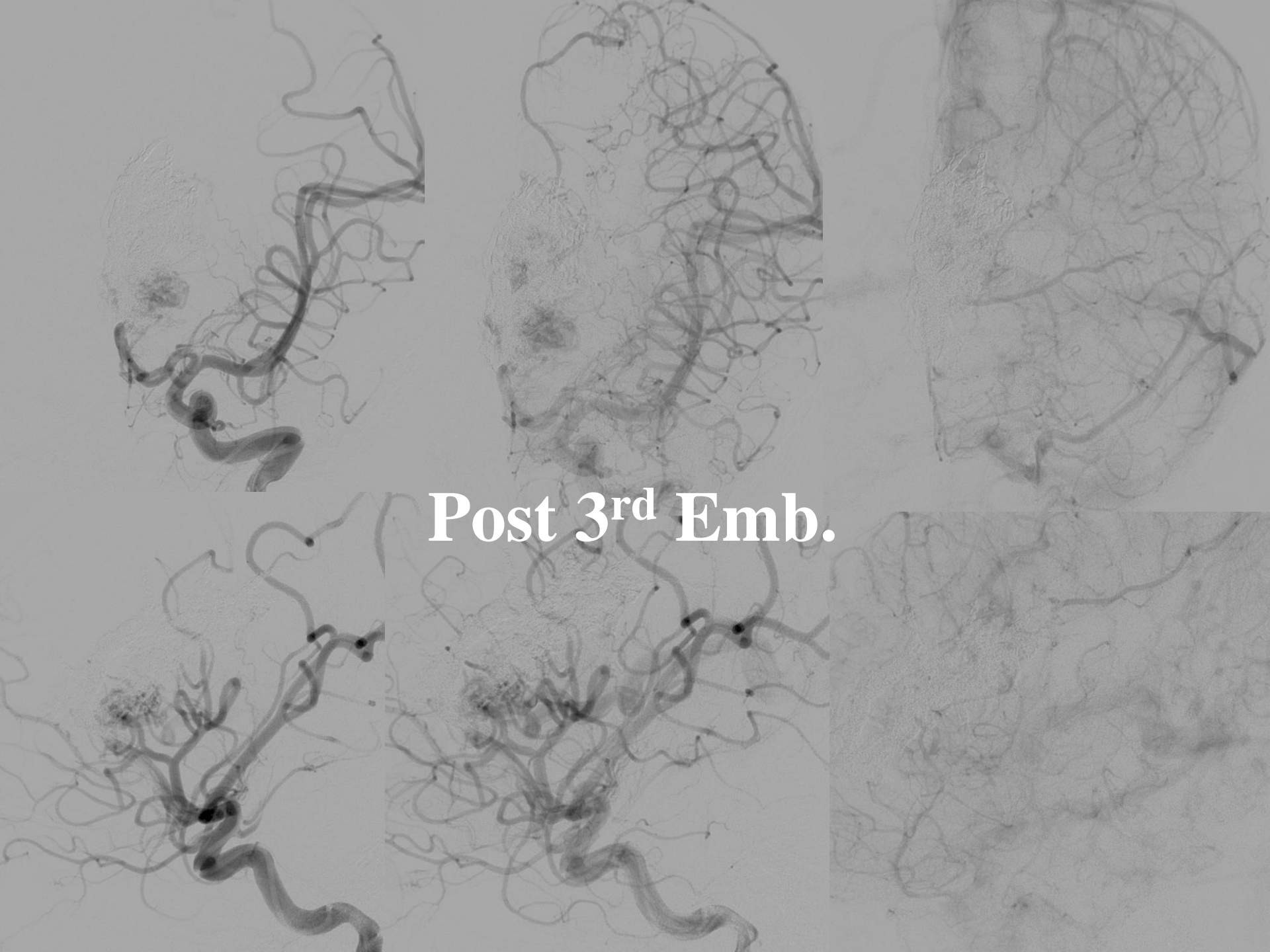
Post emb 2

Time:

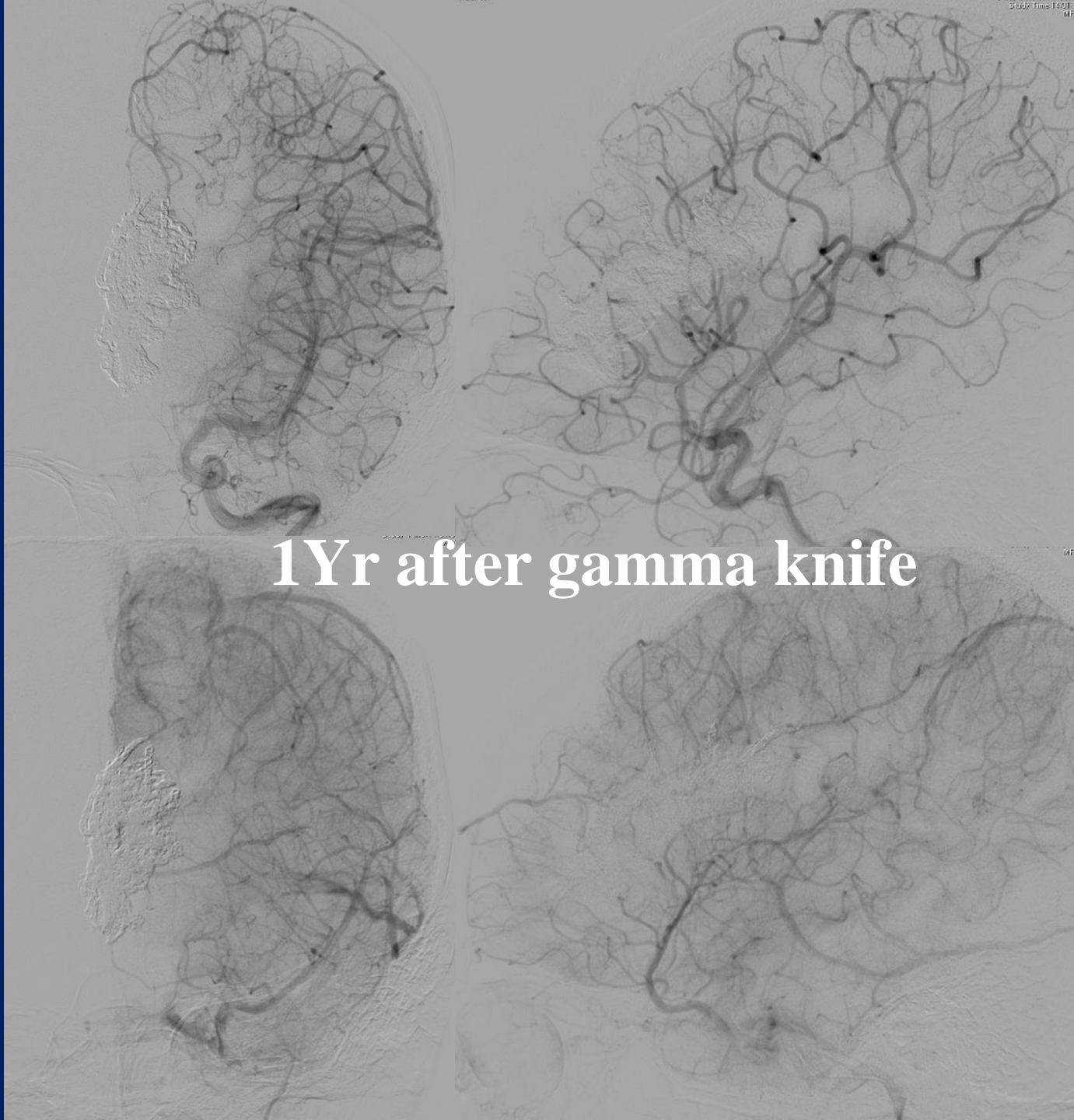
Study Time: 1'5"

Study Time





Post 3rd Emb.



1Yr after gamma knife

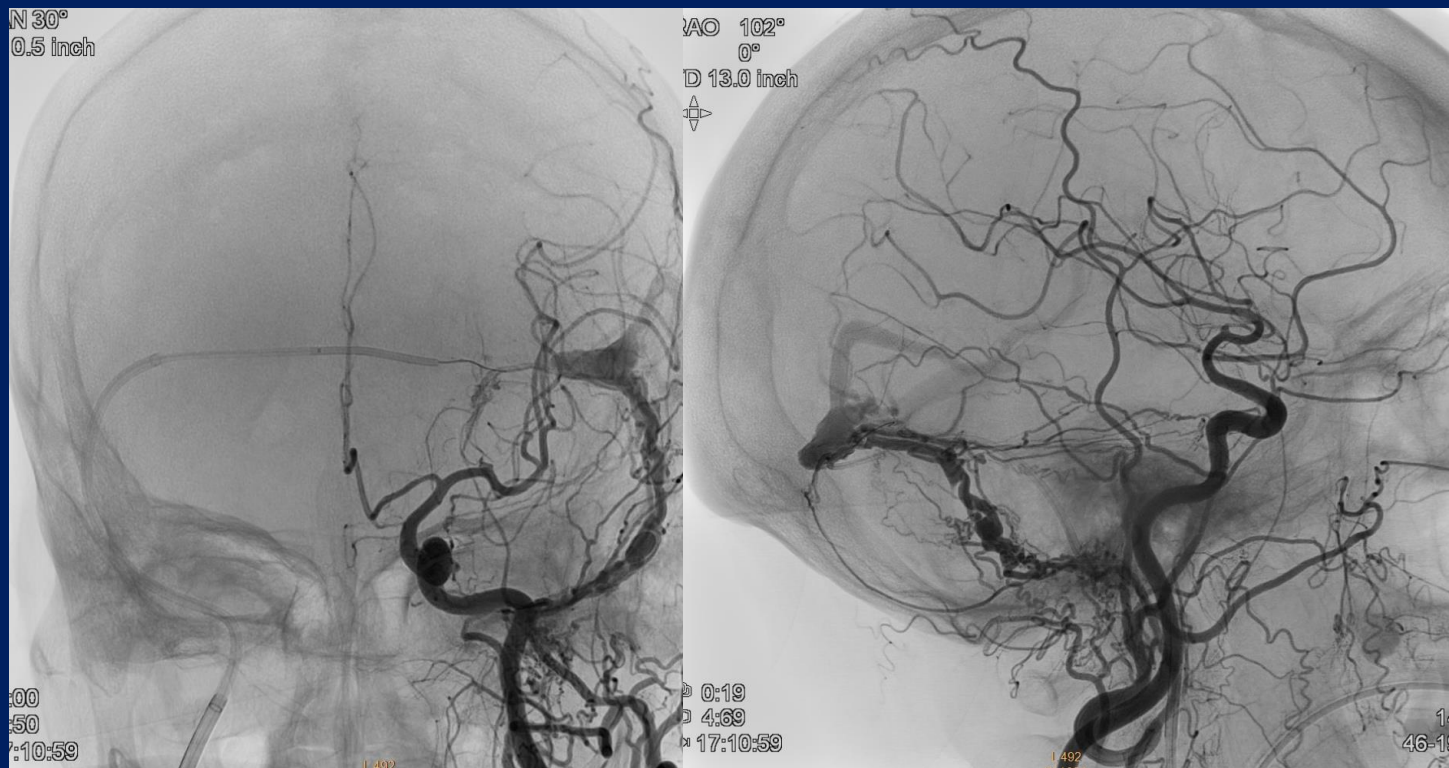
硬膜動静脈瘻（シャント）

- 拍動性耳鳴り、結膜充血、複視（物が2重に見える）、眼痛、脳出血、麻痺、しびれ等で発症
- 脳以外に脊髄にも発症します。頭、頸部にできた動静脈シャント、動静脈奇形も治療します。
- 静脈洞を温存しシャント部分のみを選択的にコイルまたはONYXで閉塞。
- 90%以上の確率で血管内治療で根治できます。

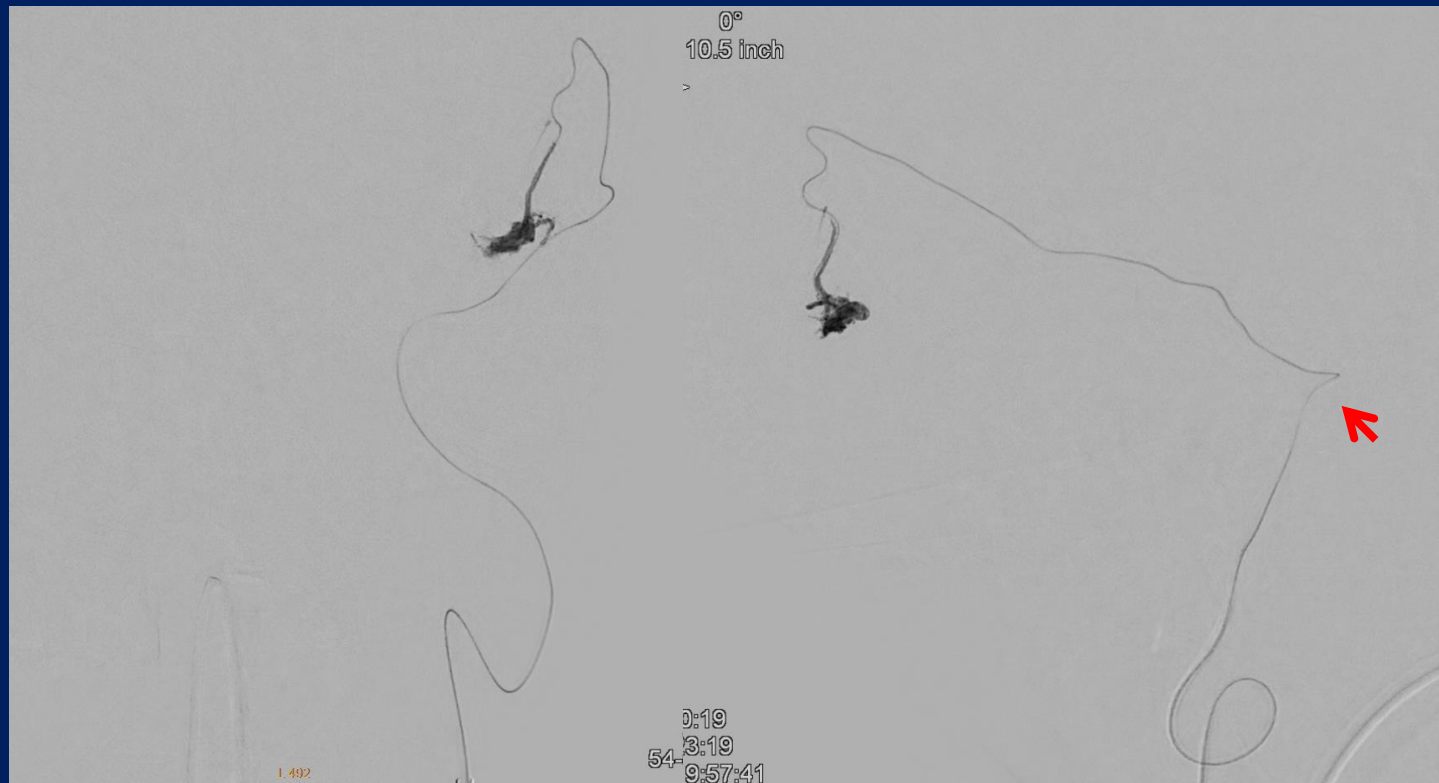
X + 3/F lt-TS-SS dAVF with venous infarction and hemorrhage



Transvenous approach



ONYX 18 injection from the It-MMA



AO 90°
0°
D 10.5 inch

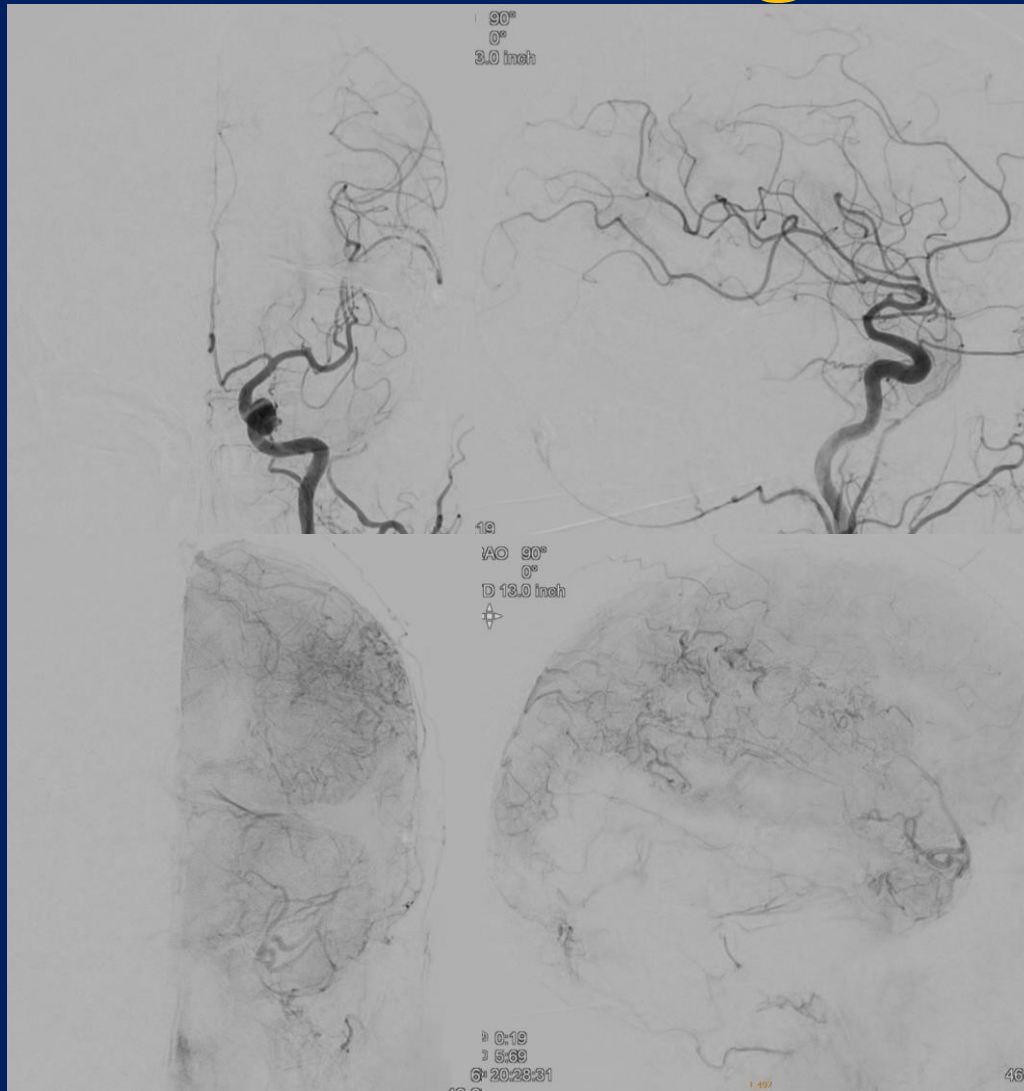


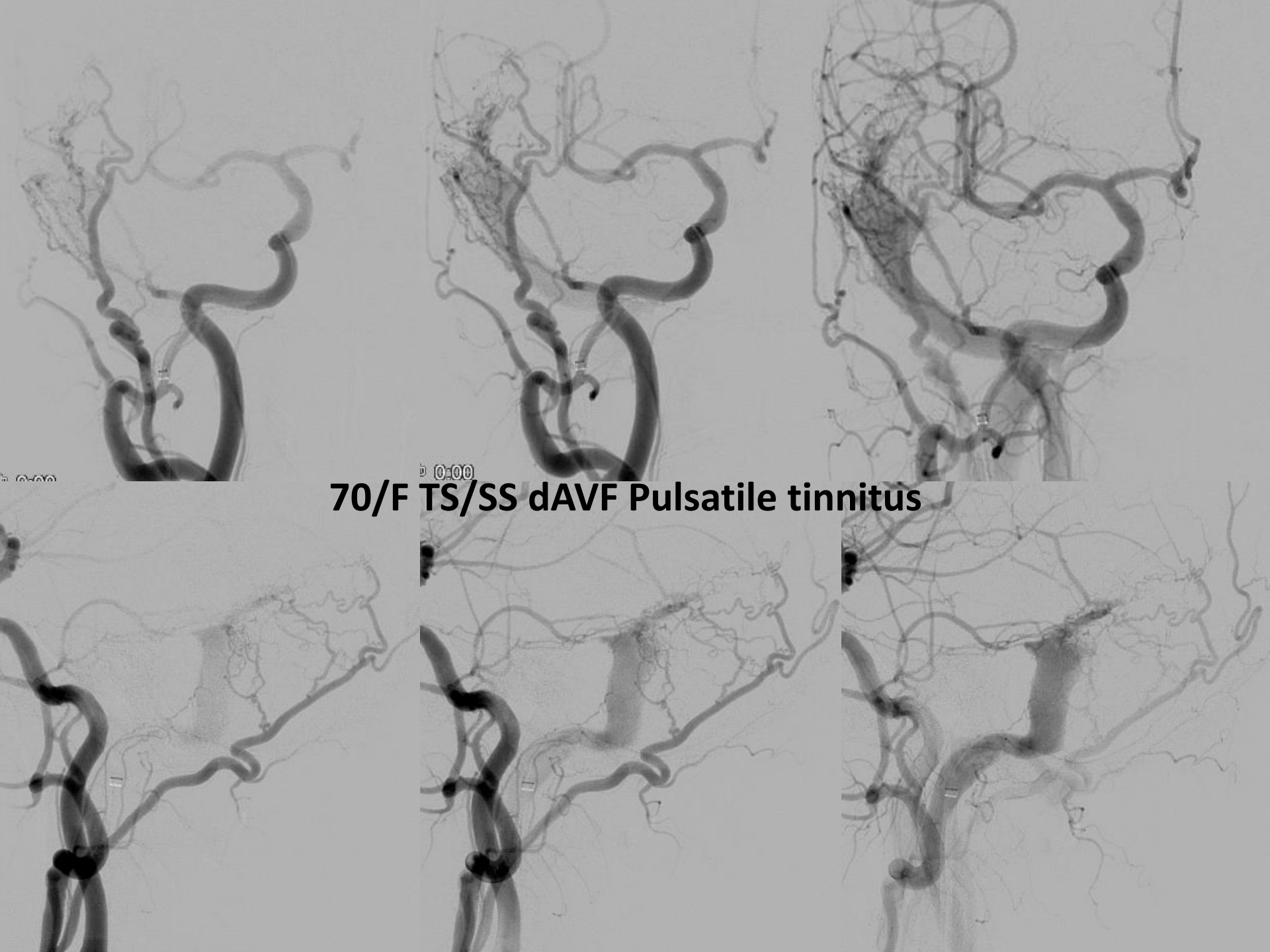
0:03
0:03
20:19:32

L512

1

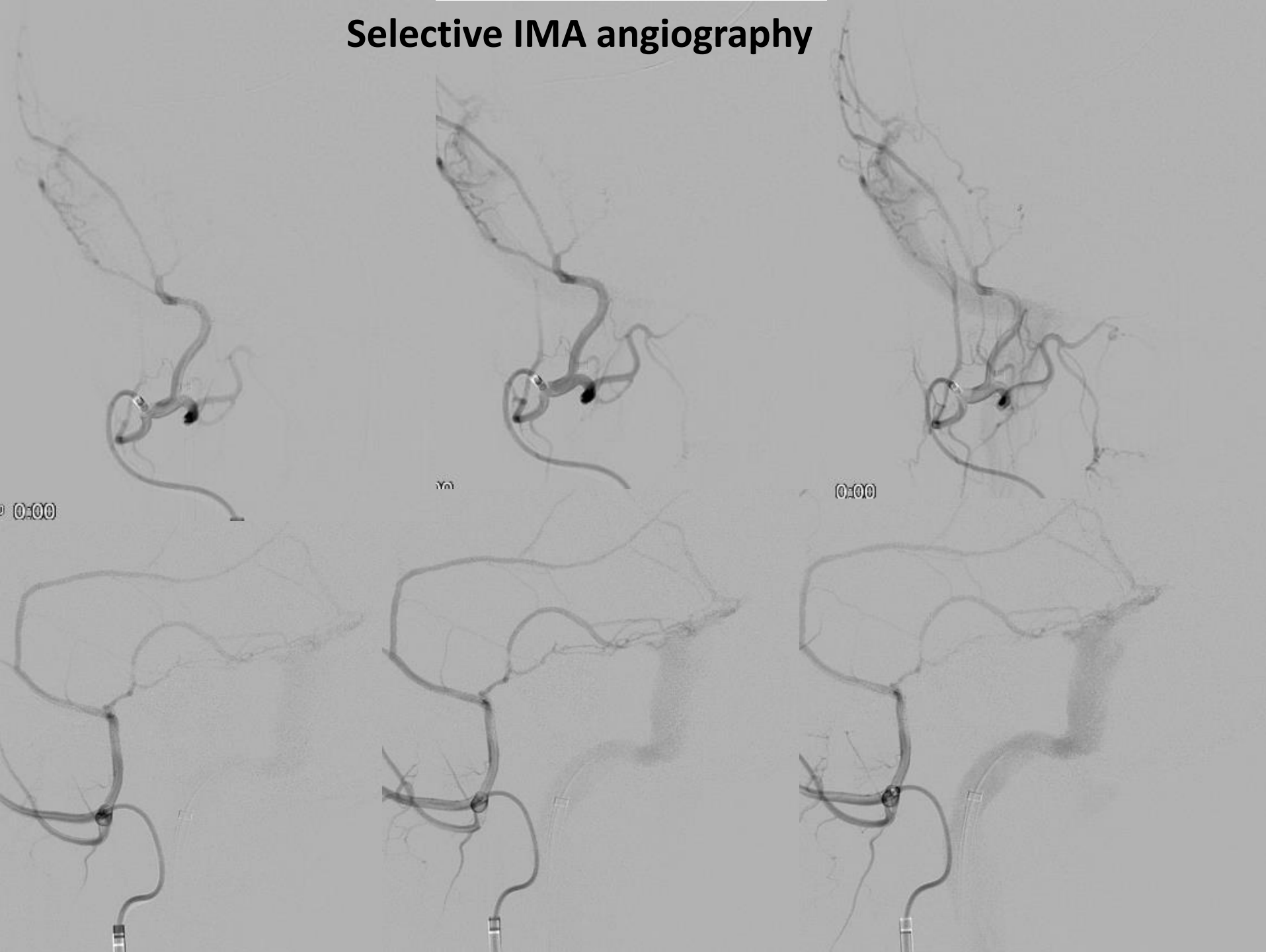
Post embolization using ONYX 18



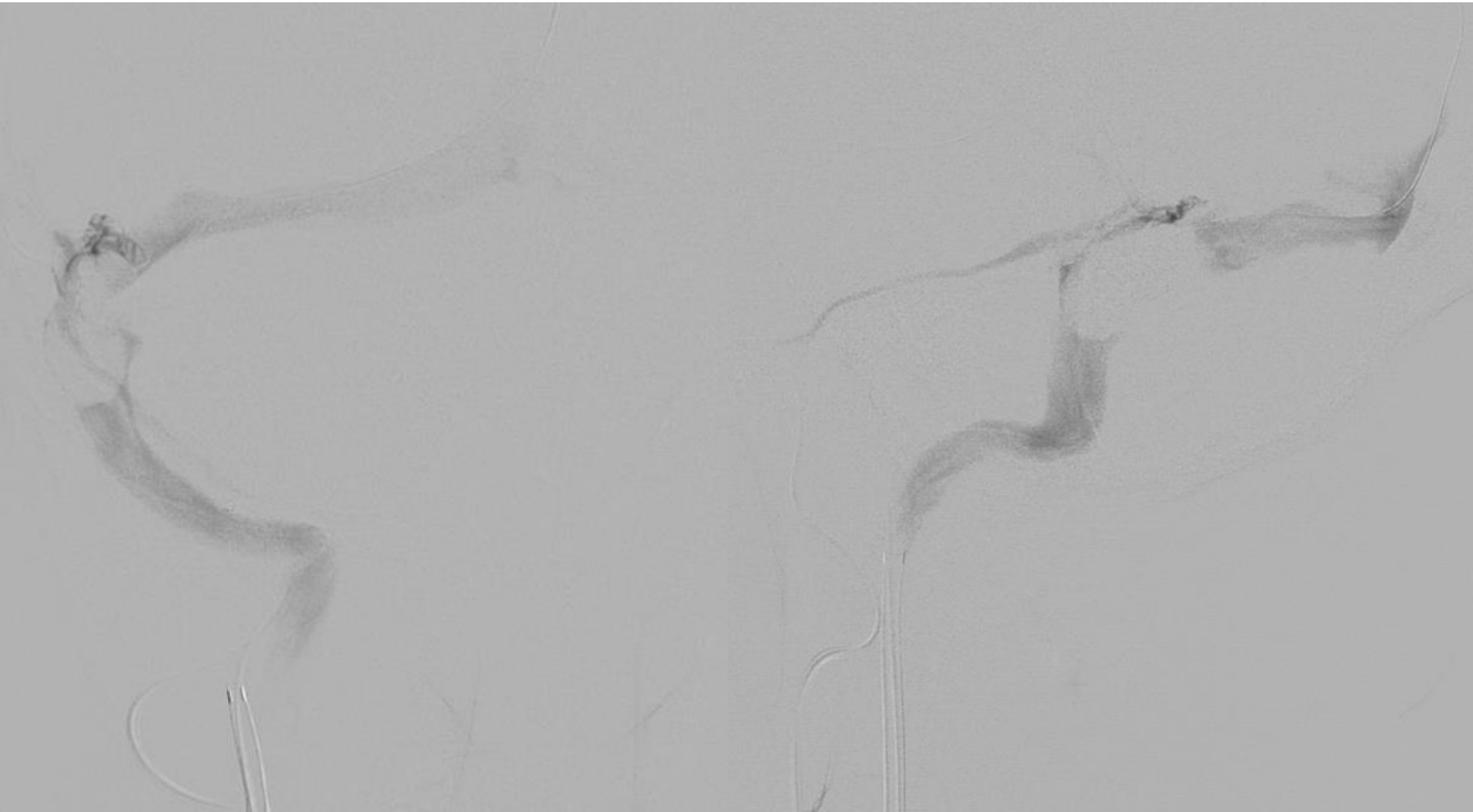


70/F TS/SS dAVF Pulsatile tinnitus

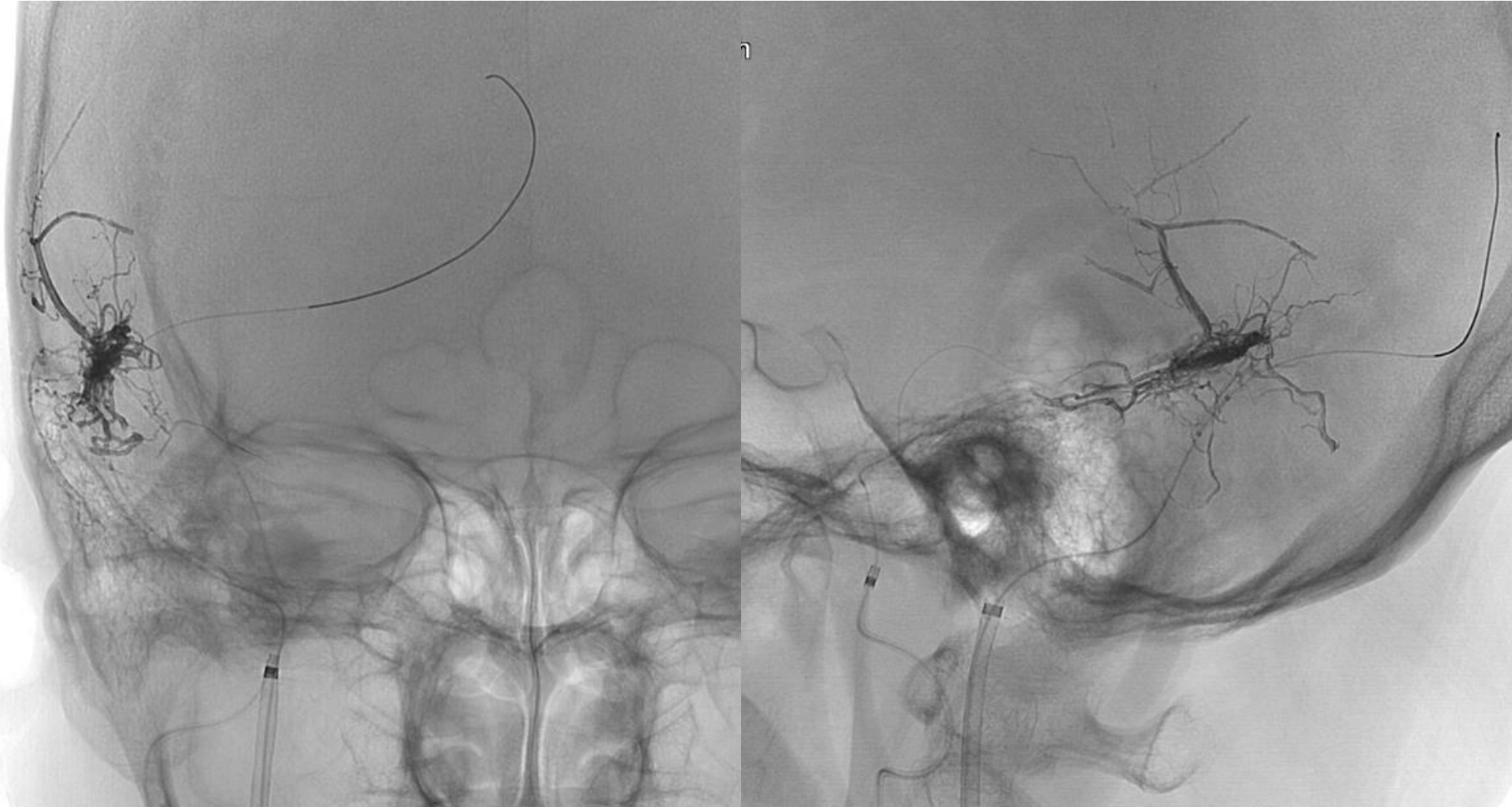
Selective IMA angiography

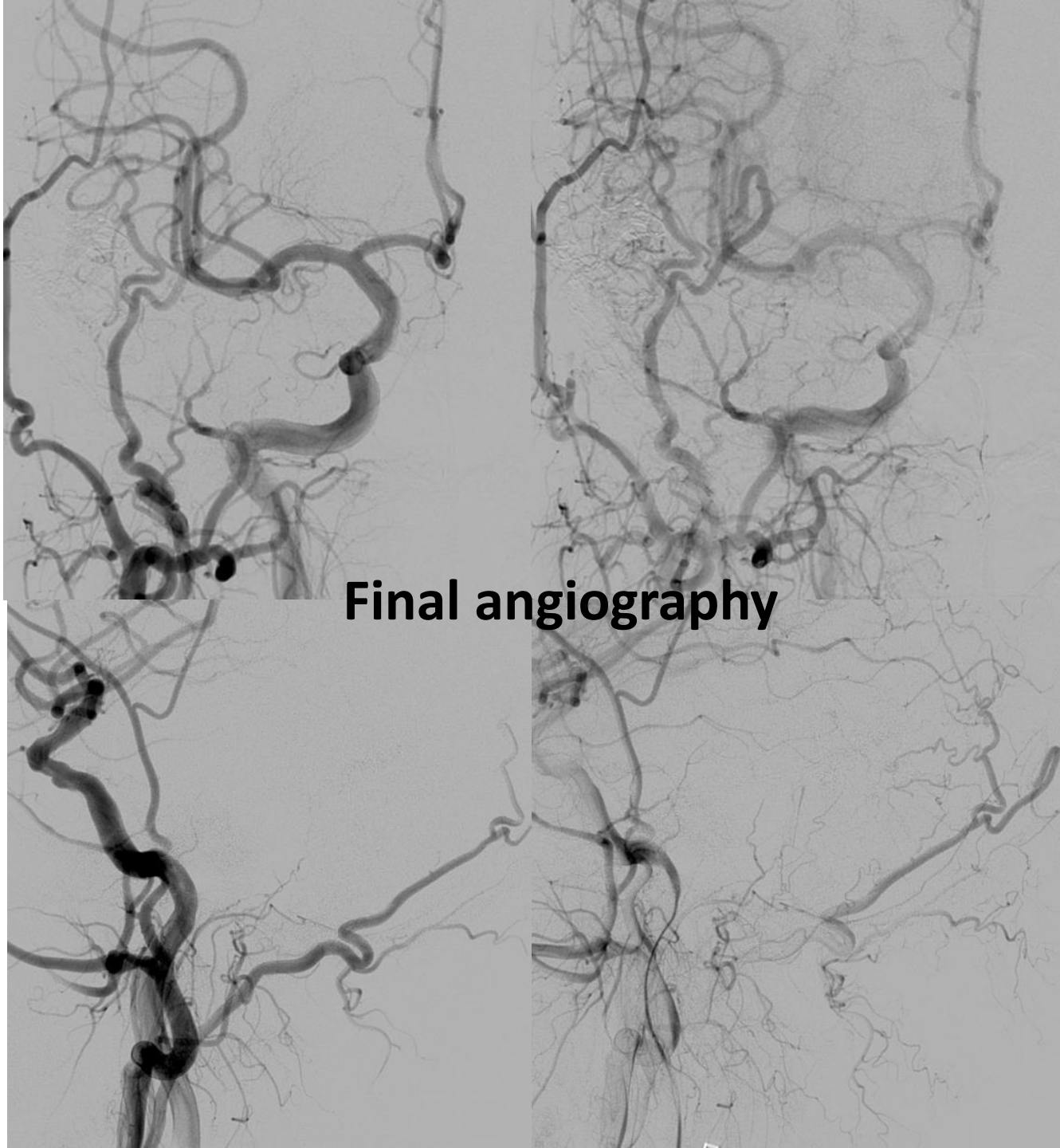


Balloon occlusion of the It-TS-SS corner



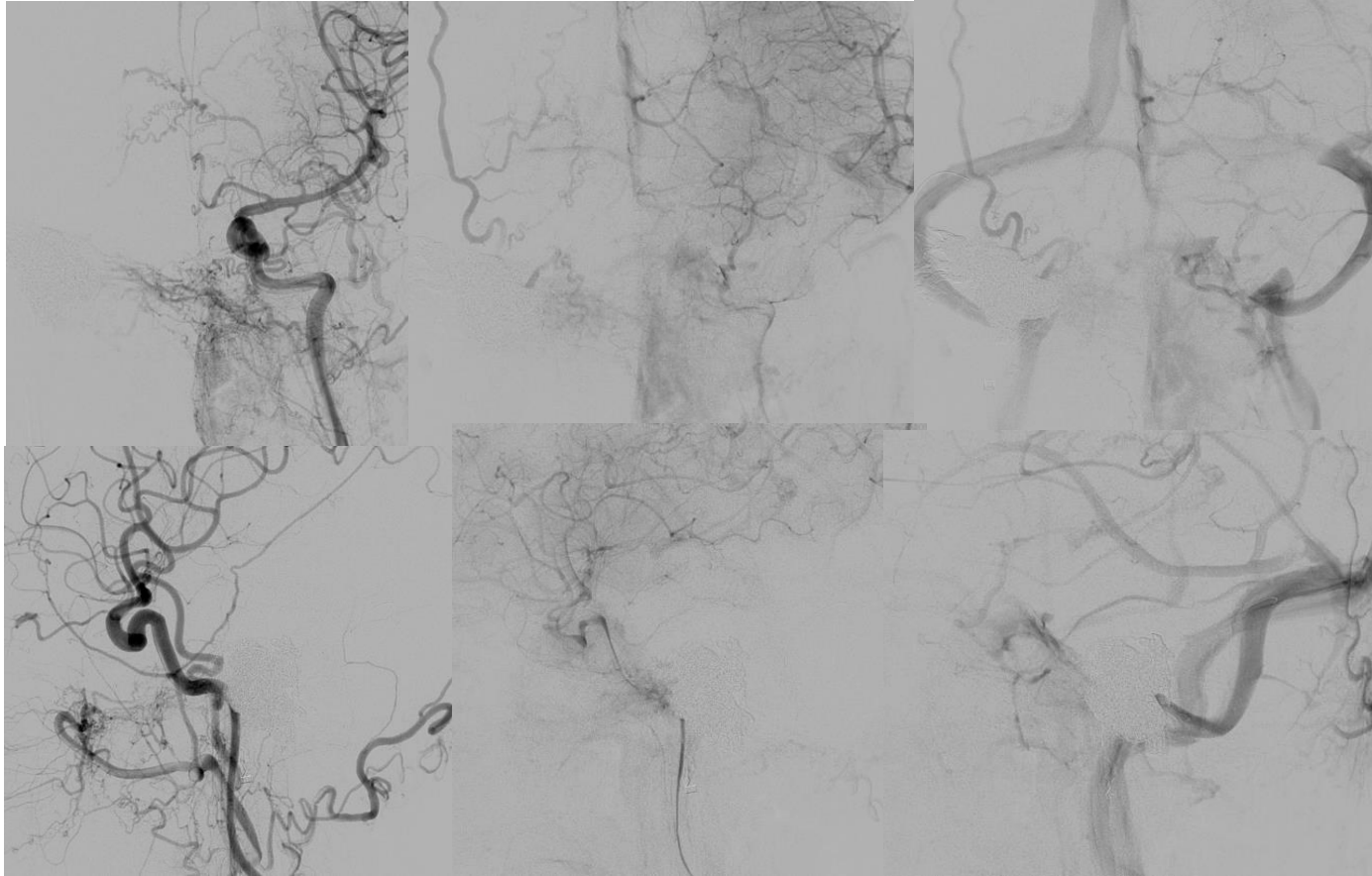
PCG after ONYX injection





Final angiography

Lt-CCAG after TVE



虚血性脳血管障害

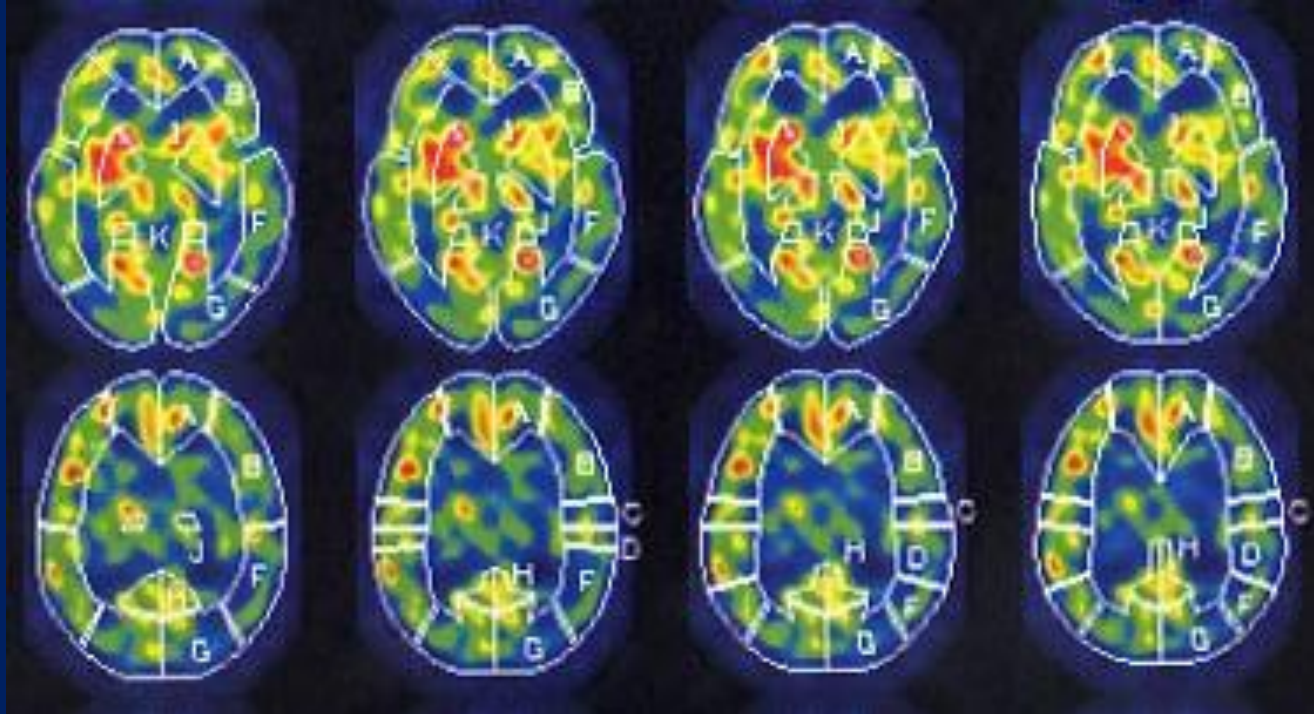
- 頸部内頸動脈閉塞、狭窄症
- 頭蓋内脳主幹動脈閉塞、狭窄症
- 鎖骨下動脈狭窄症
- 椎骨動脈狭窄症

に対して経皮的血管拡張術、ステント留置術で対応します。

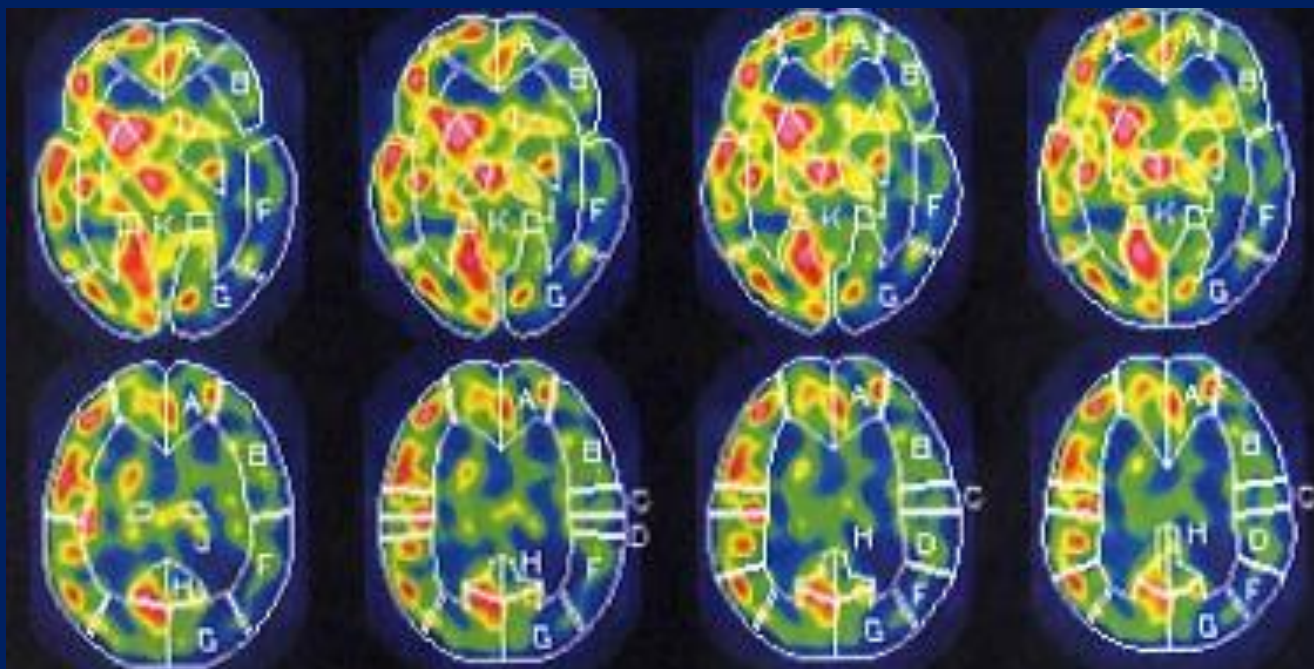
**Asymptomatic ICA 60% stenosis –3 Mo later
ICA occlusion**



ECD at rest



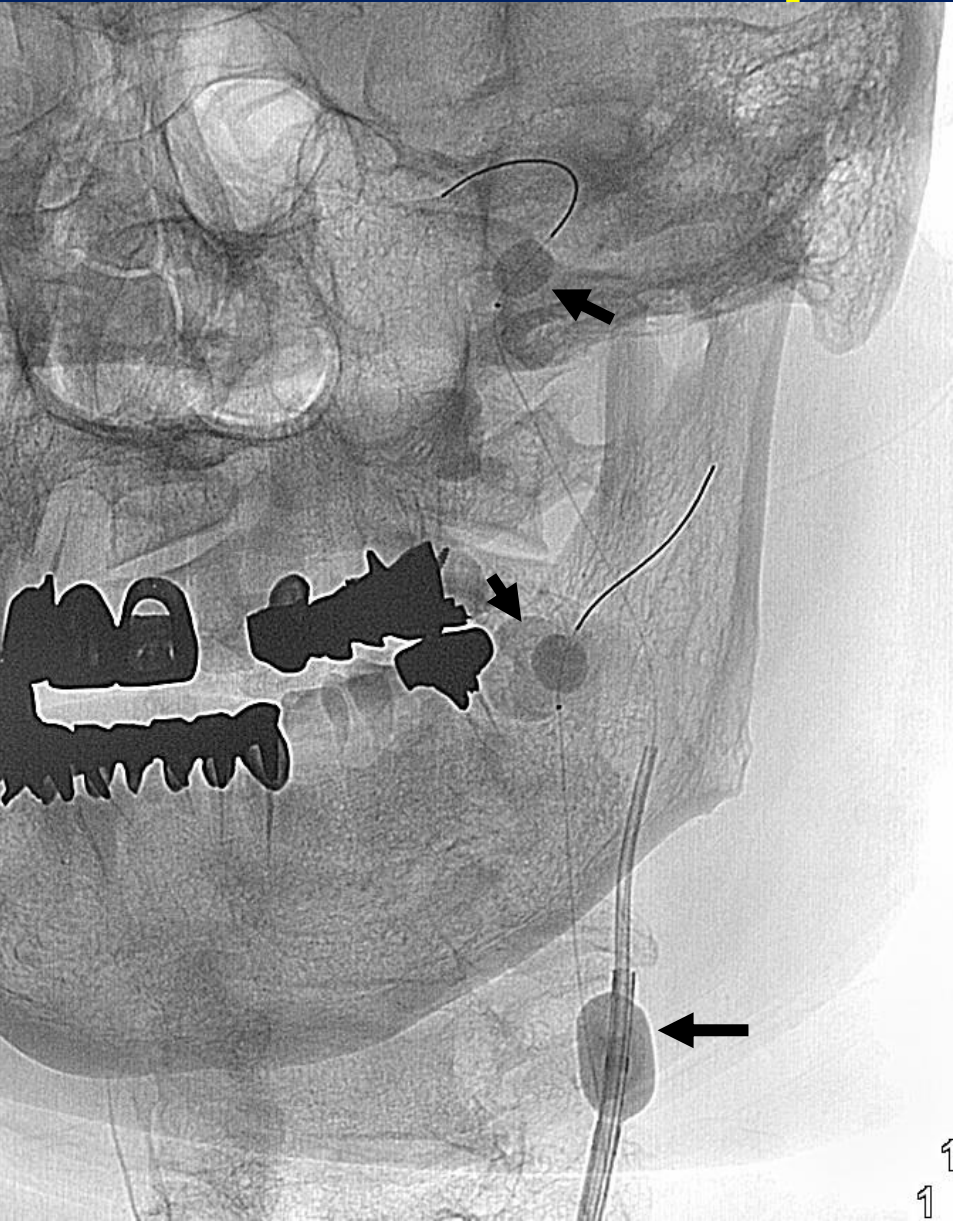
ECD diamox



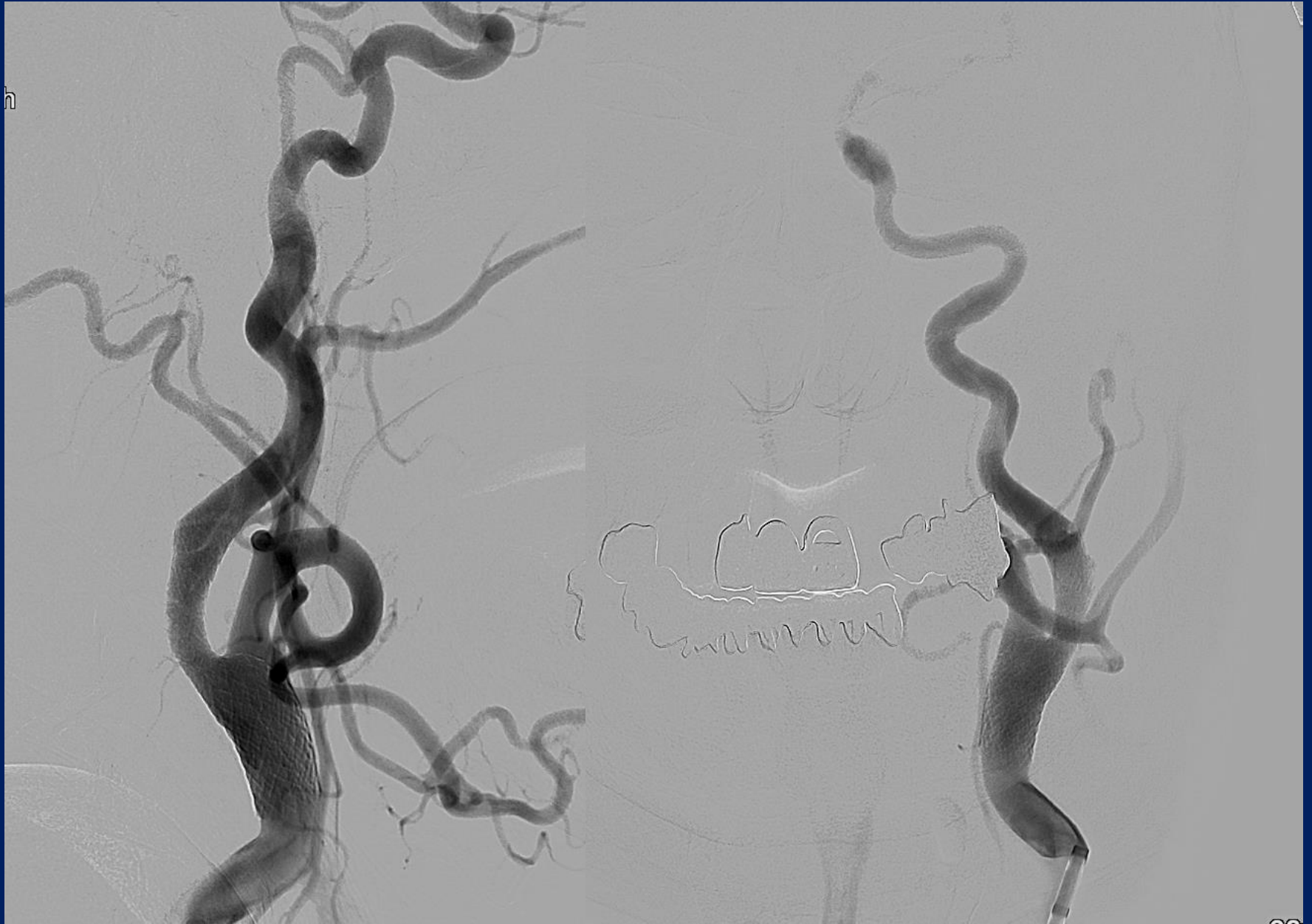
2 days after initial angiography



CAS using Parodi's method and distal protection



Final Angiography

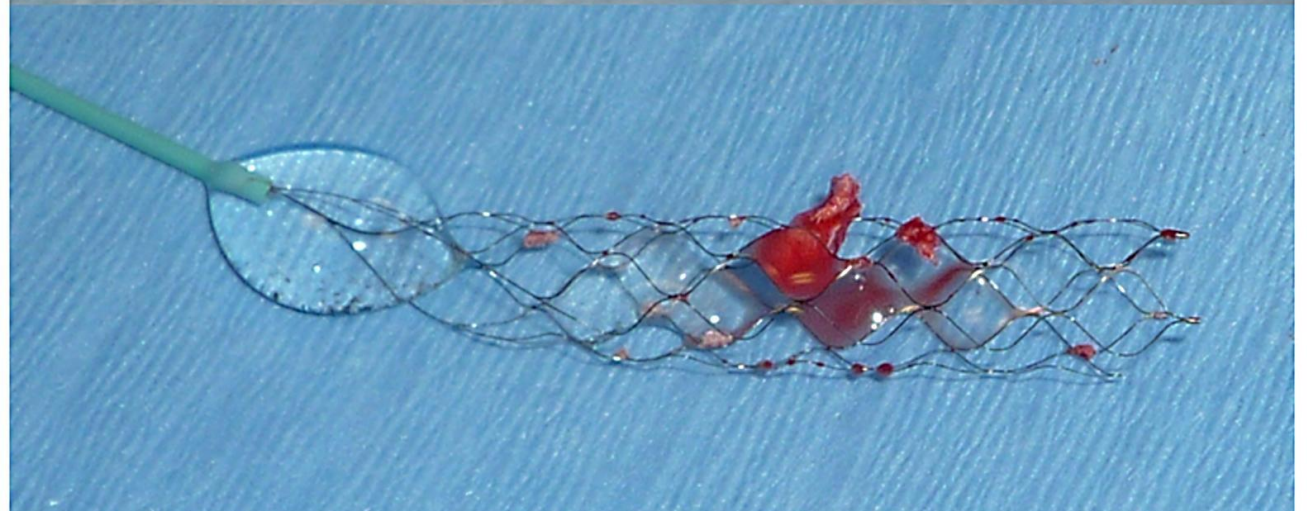
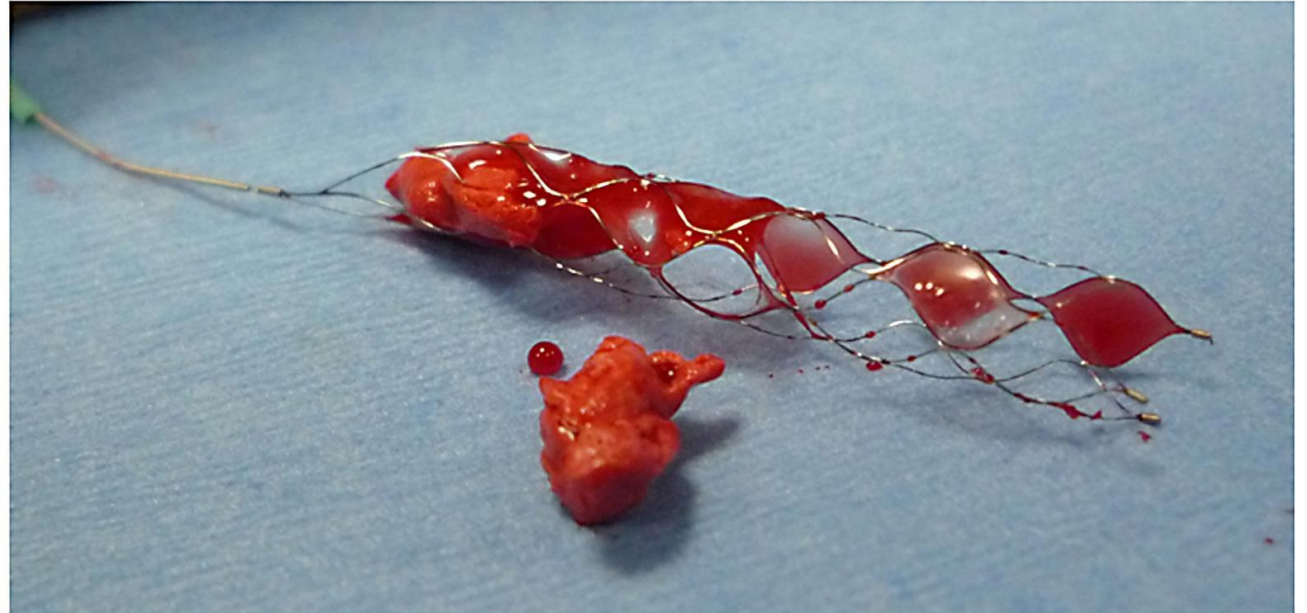
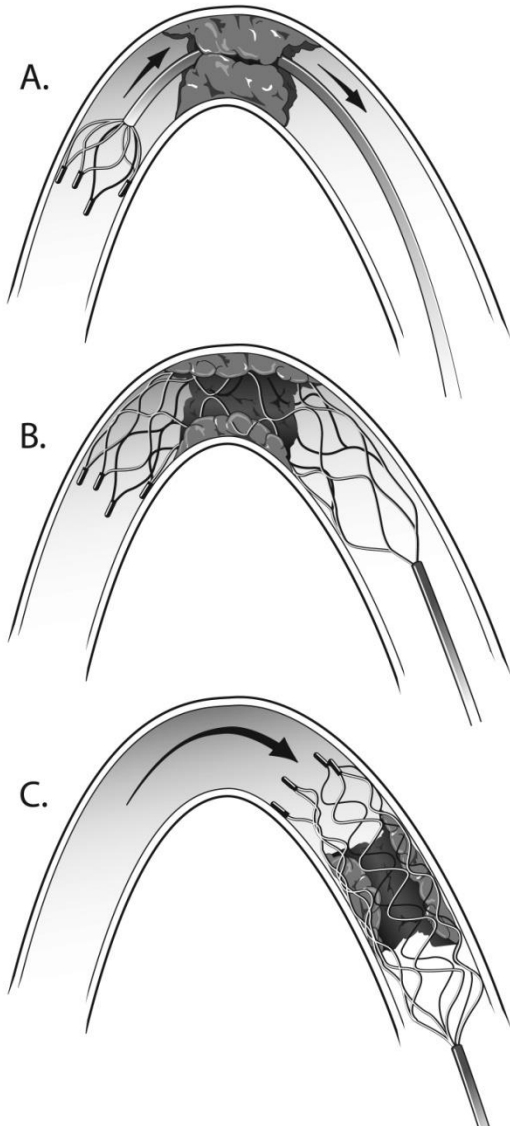


超急性期脳主幹動脈閉塞症

- できるだけ早く救急受診してください。
- 血管撮影を行い、閉塞部位の血栓を吸引カテーテルやステントリトリーバーで回収し血管を再開通させます！！

Retrievable, detachable stent-platform-based thrombectomy device (Solitaire TM FR) for acute stroke

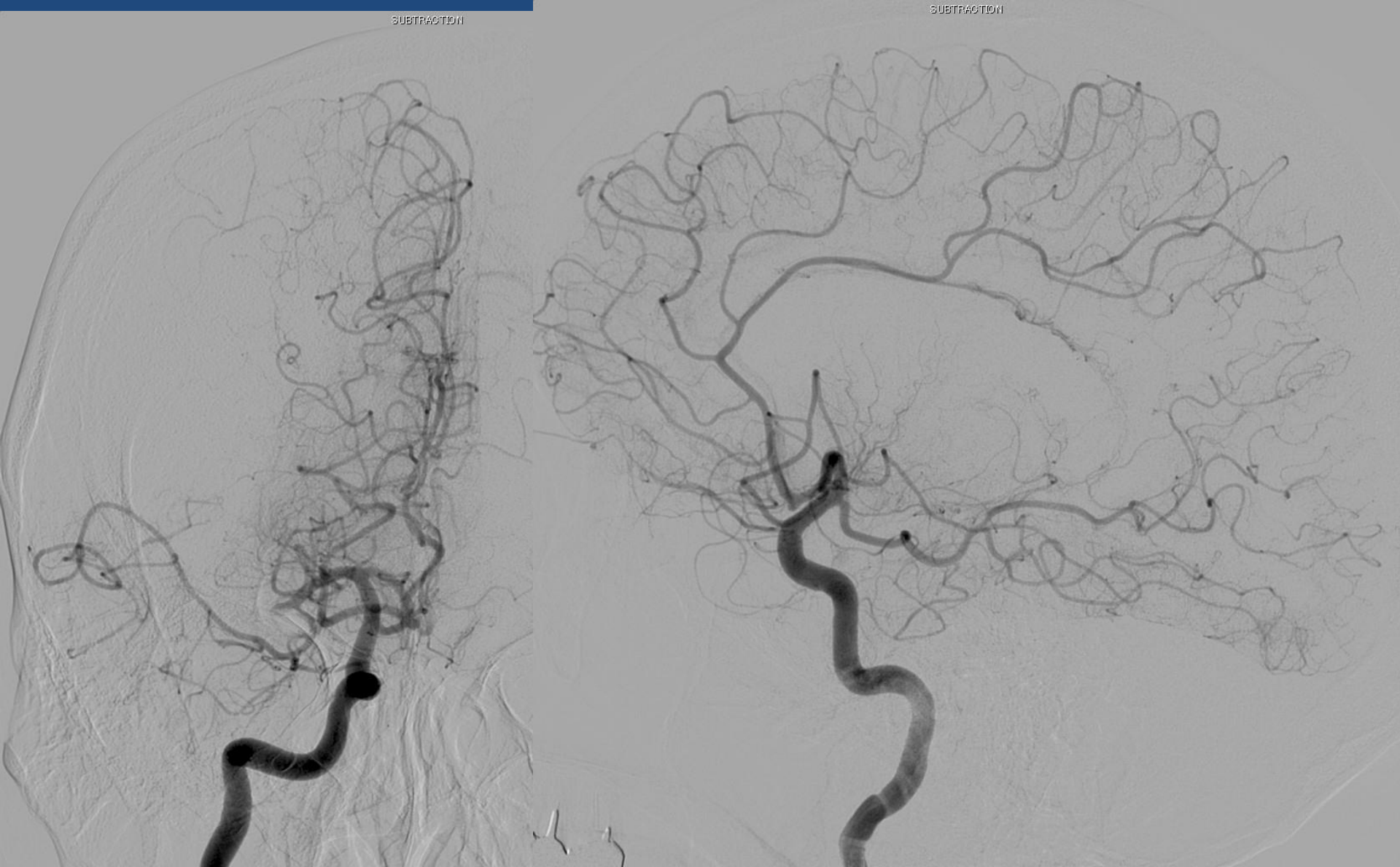
Natarajan SK et al. E-newsletter May 6, 2010

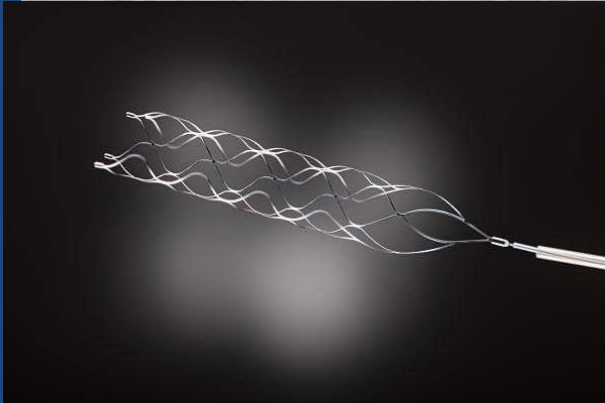


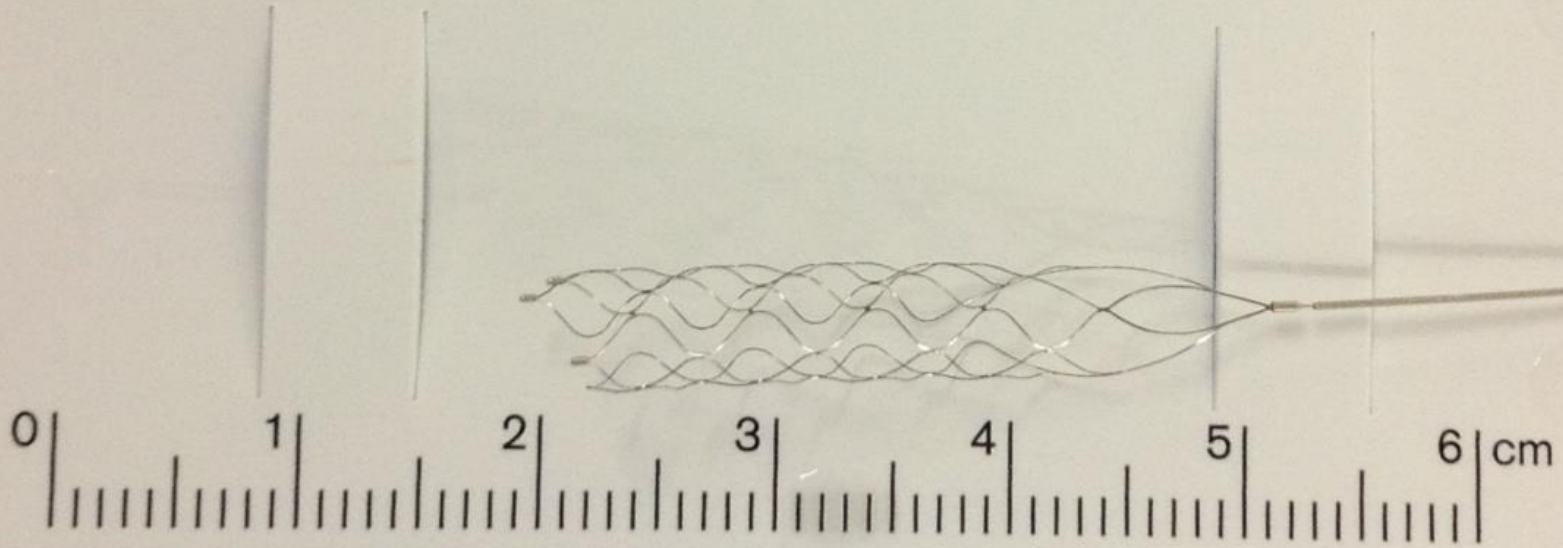
術前血管攝影

SUBTRACTION

SUBTRACTION

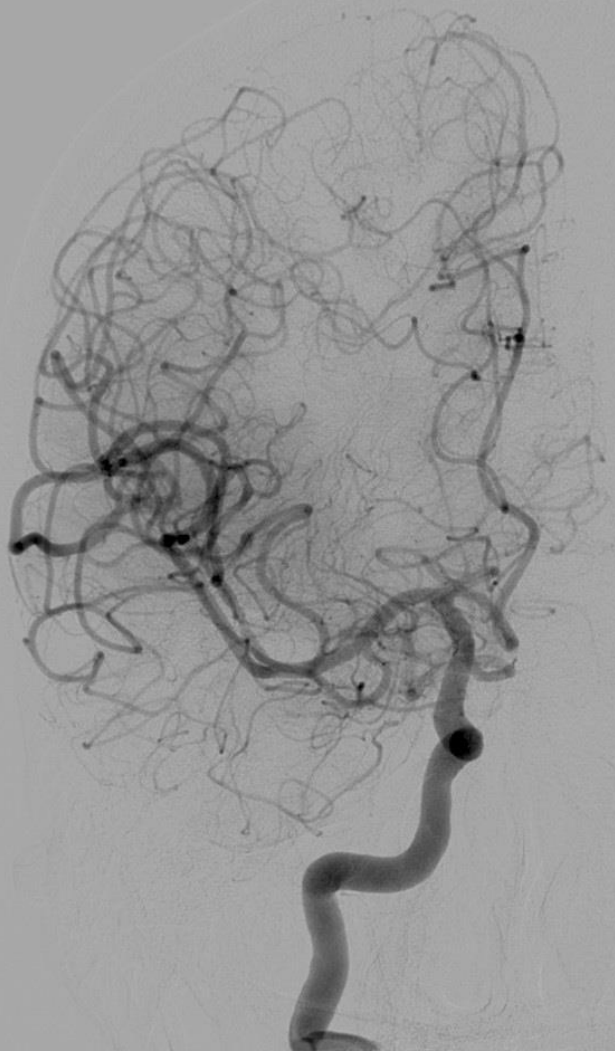






術後血管攝影

SUBTRACTION



SUBTRACTION

