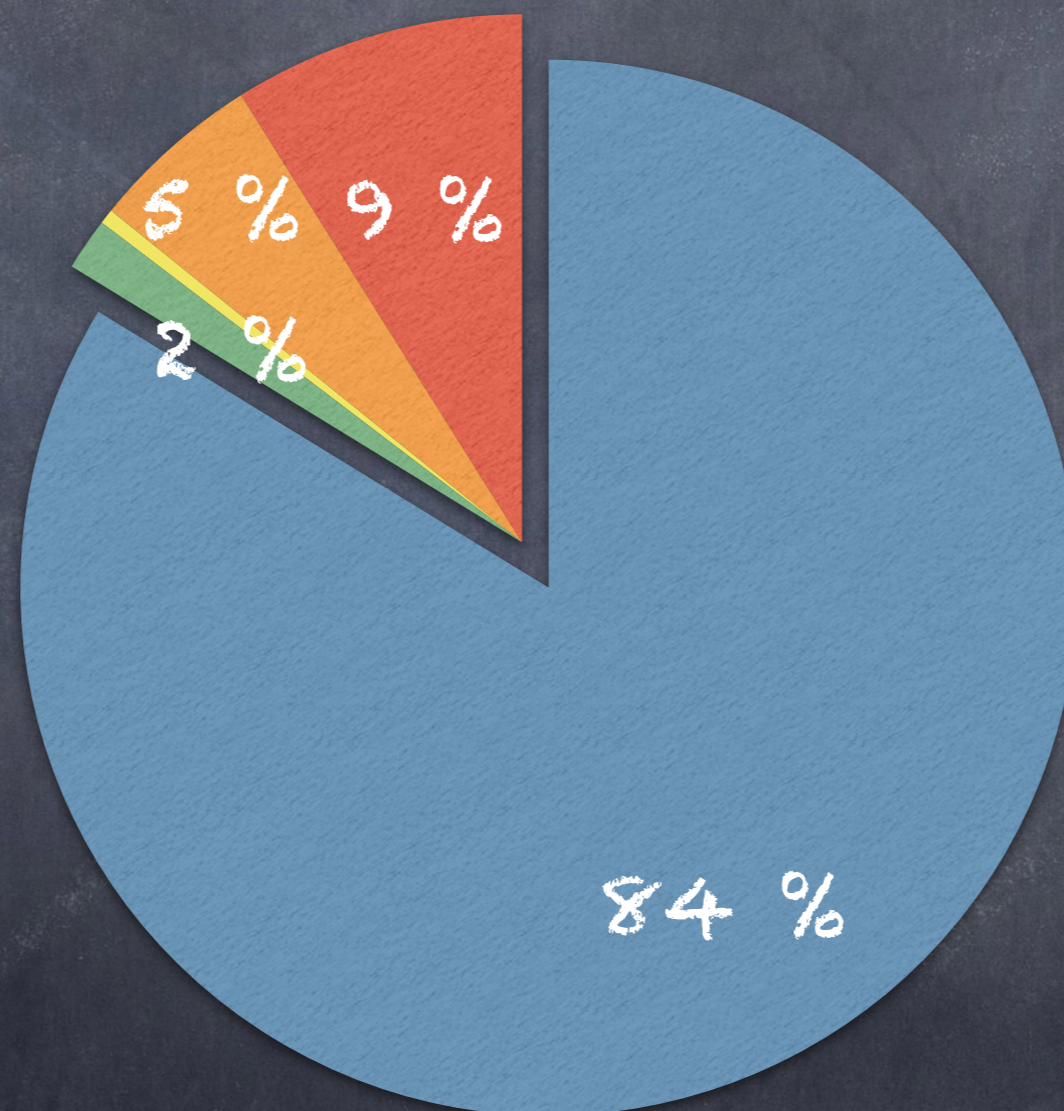


# Comment Gérer les Complications

S. Saleme, Forestier G, A. Rouchaud, C. Mounayer  
Service de Neuroradiologie Interventionnelle  
CHU de Limoges

# Complication Immédiate

ASTER 2 J Neurointerv Surg. 2020 May;12(5):471-476



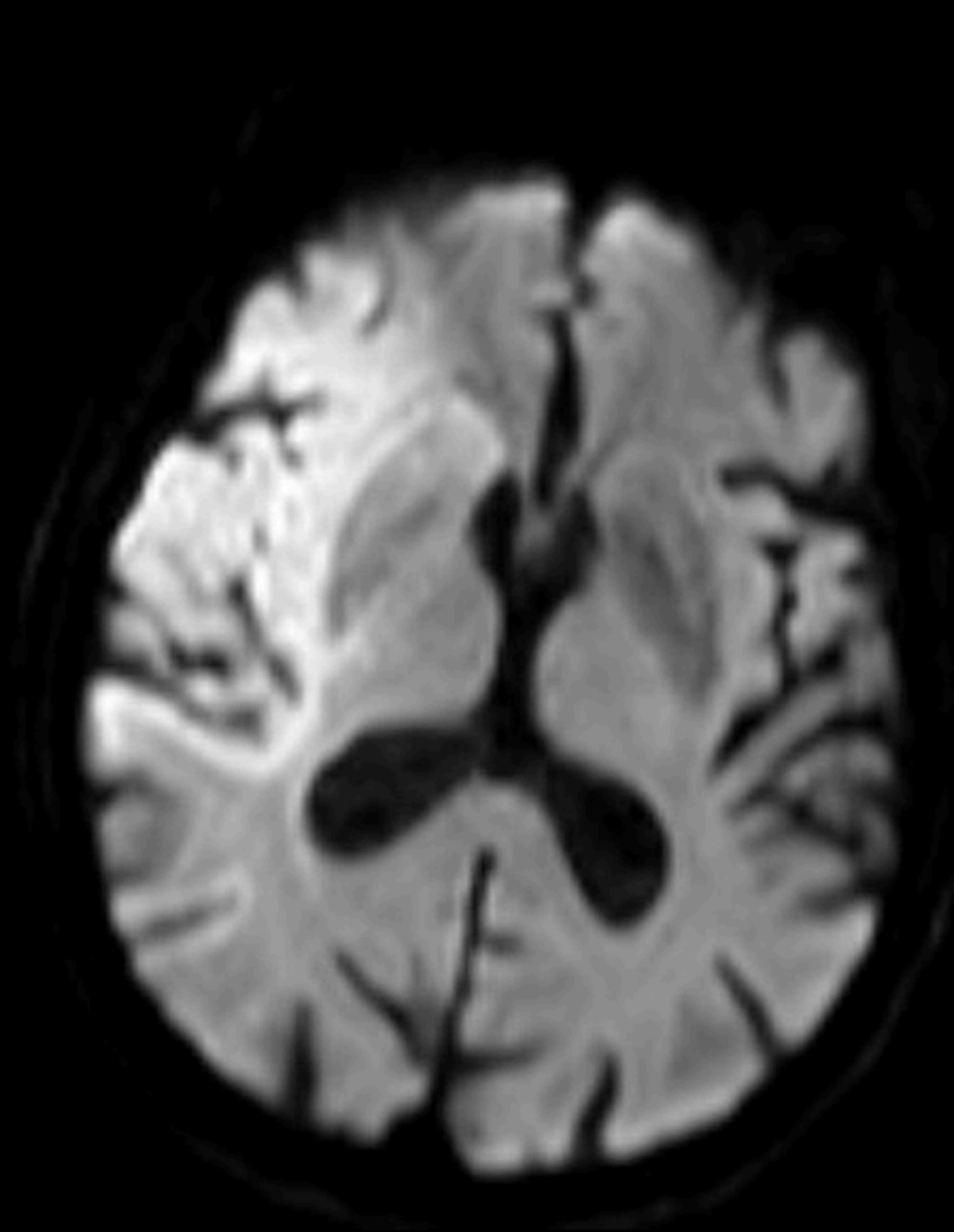
- Aucune
- Perforation
- Vasospasm
- Dissection
- Fragmentation/Migration

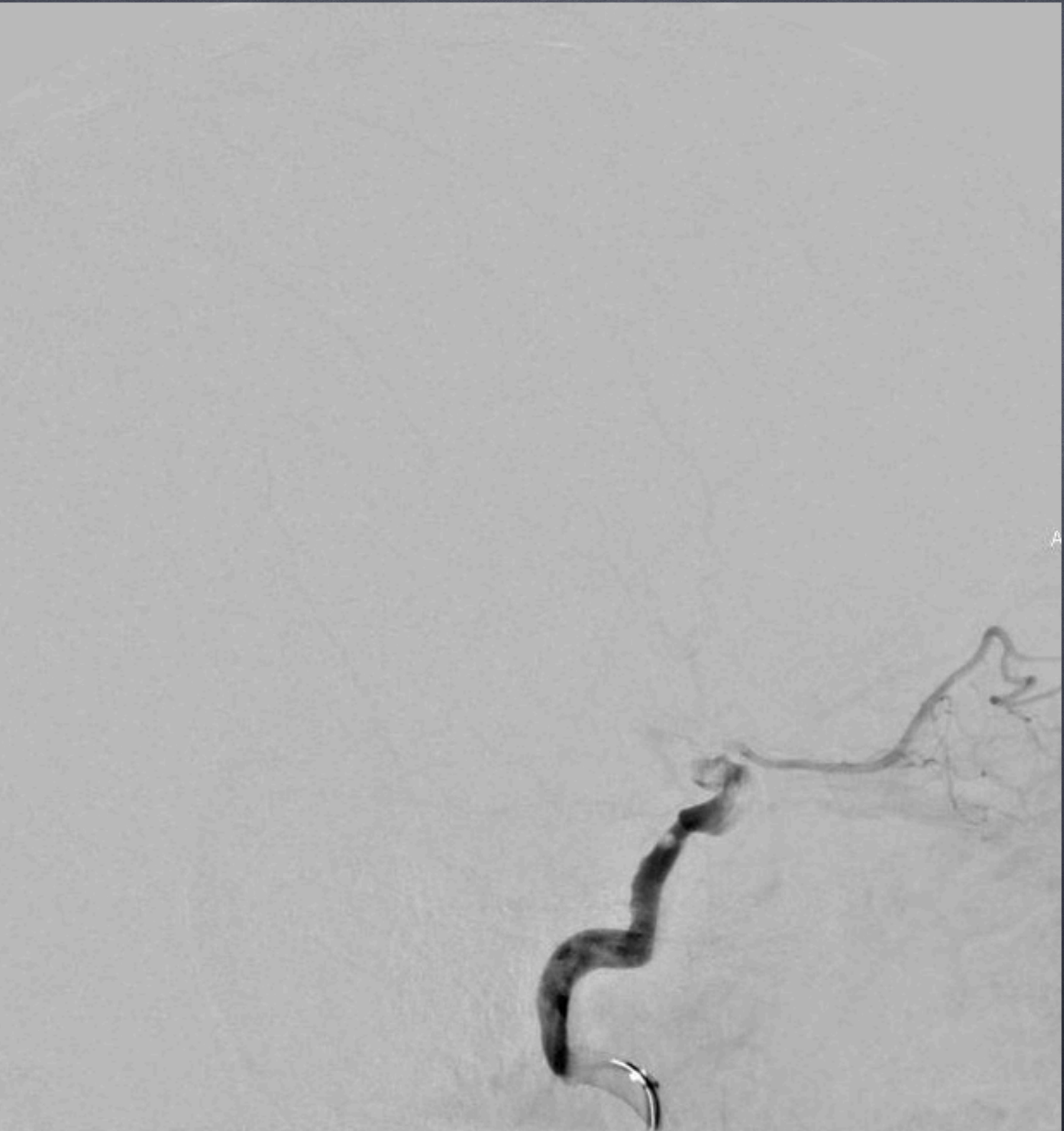
# Complications

- Héorragique
- Ischémique
- Autres

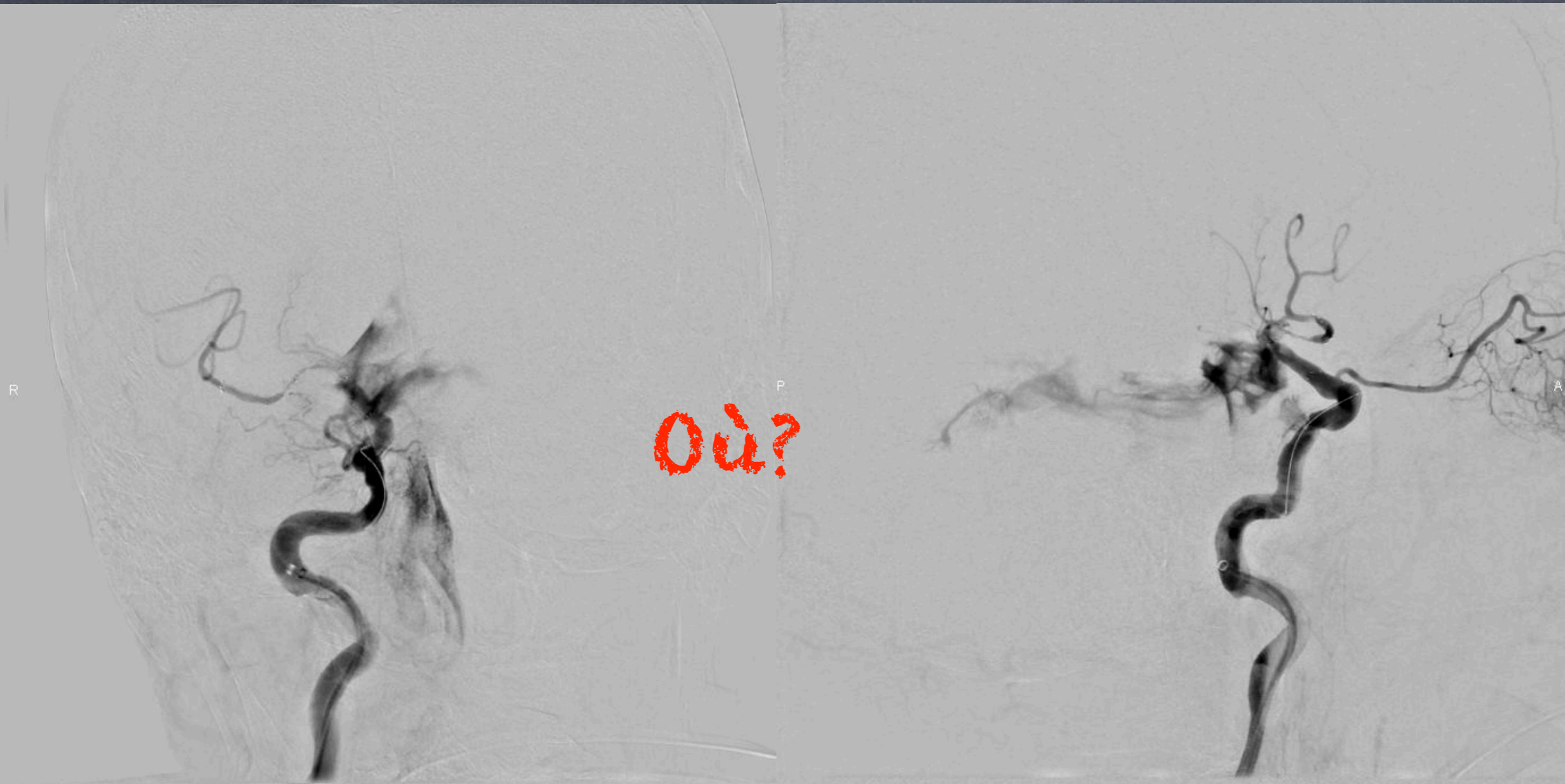
# Complication Hémorragique

- Perforation pendant la navigation
- Navigation distale
- Traumatisme stent retriever
- Injection de contraste

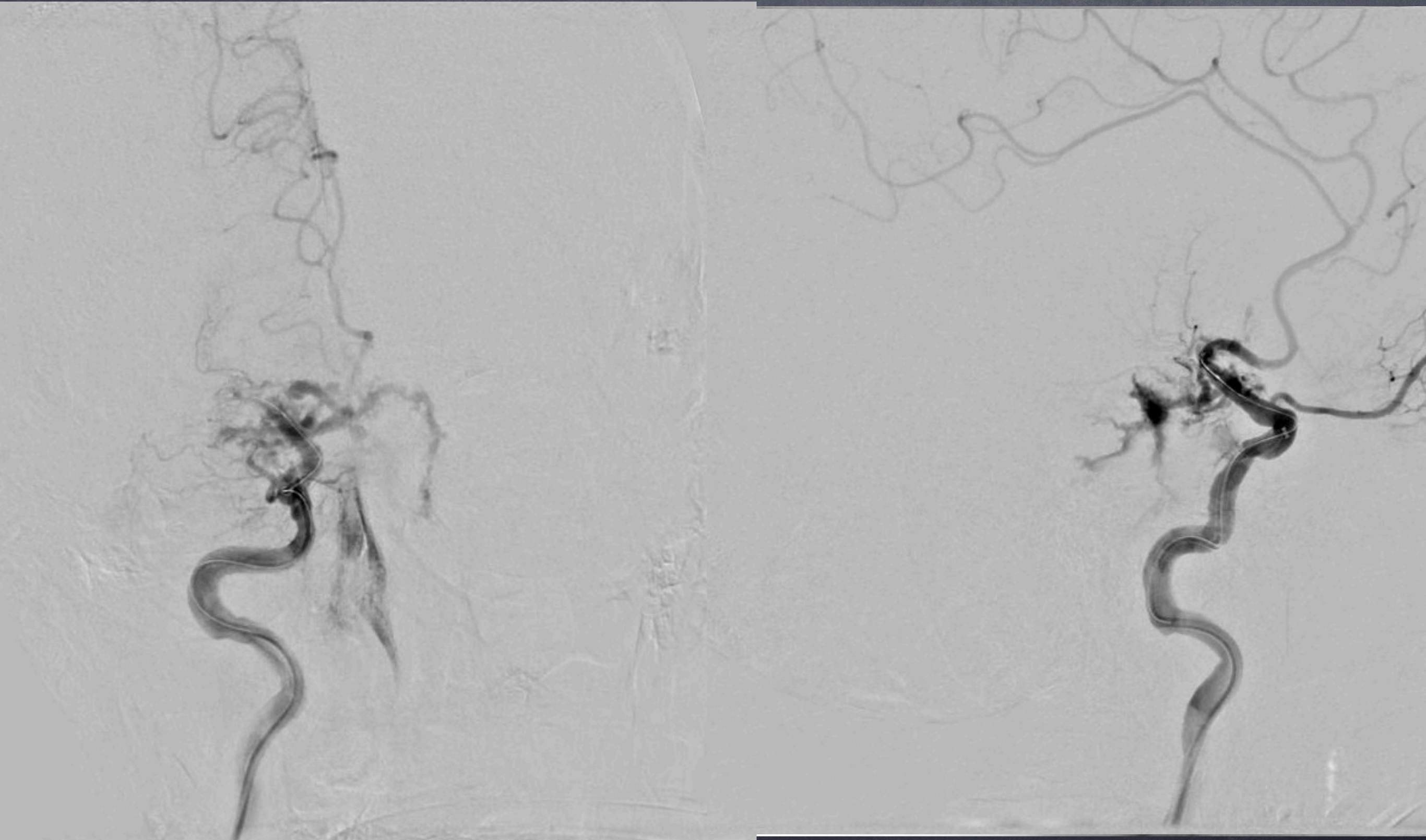




# Perforation x Dissection

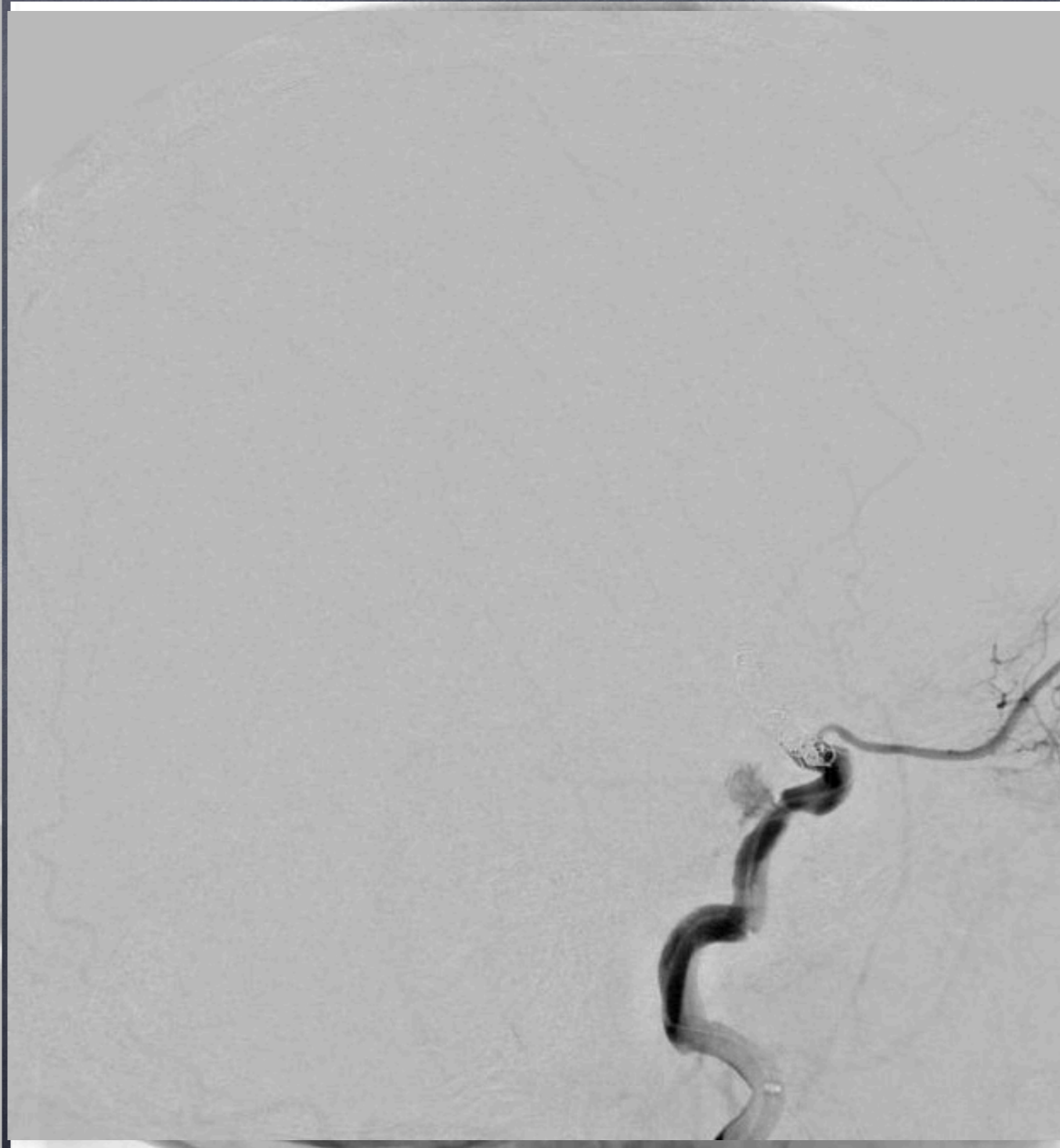


3 Min





# Perforation x ~~Dissection~~

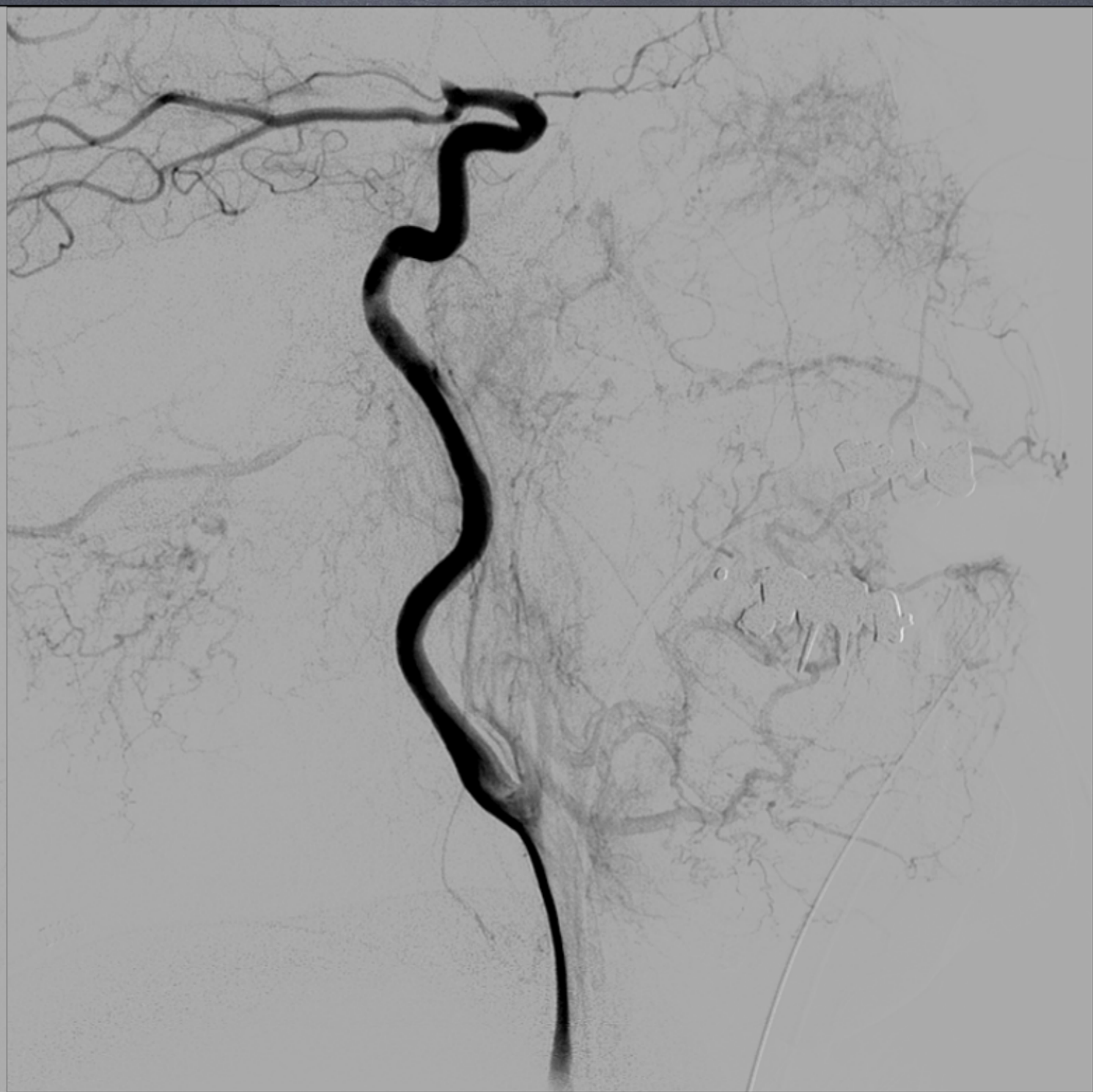


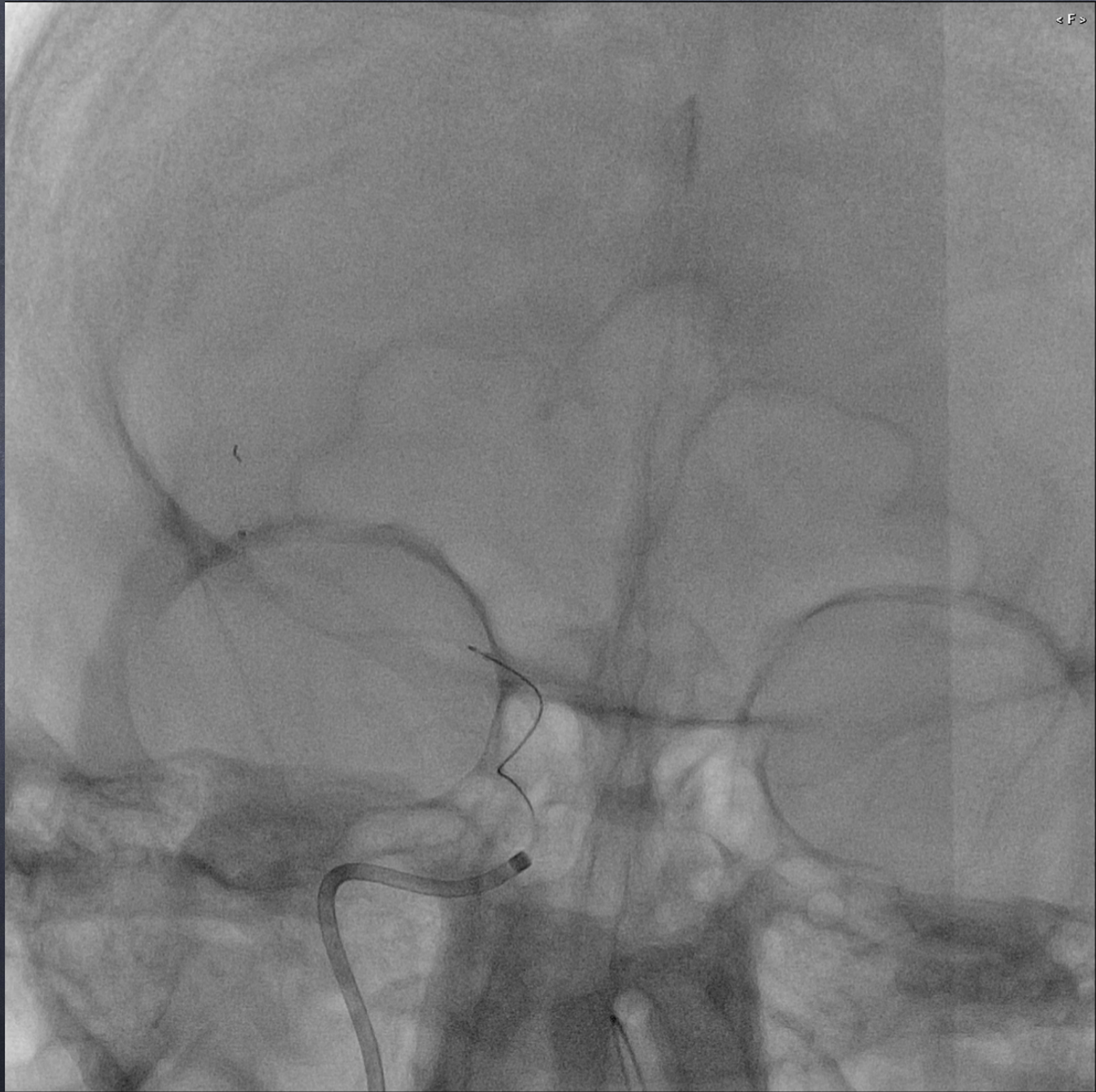


R

L

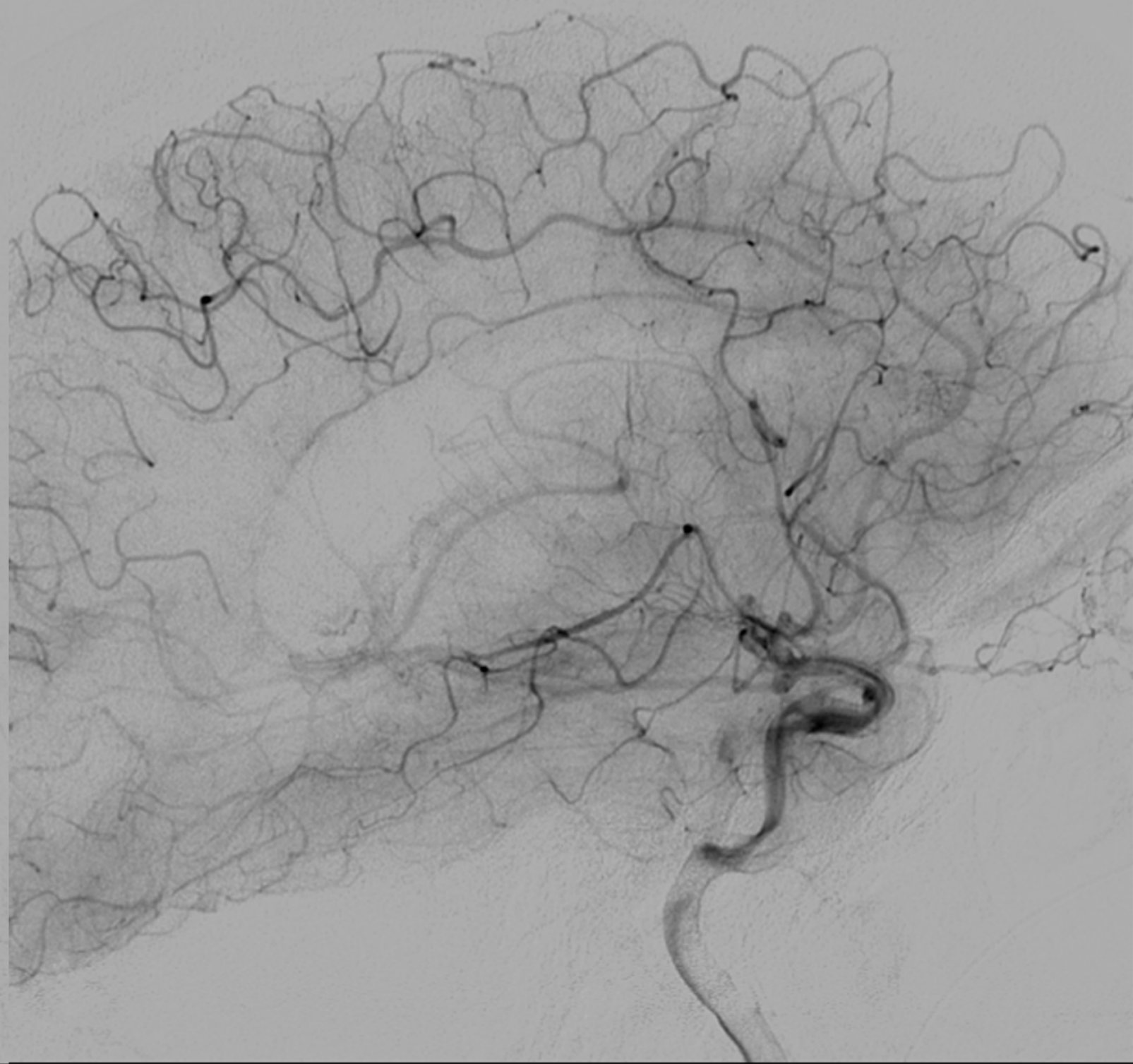
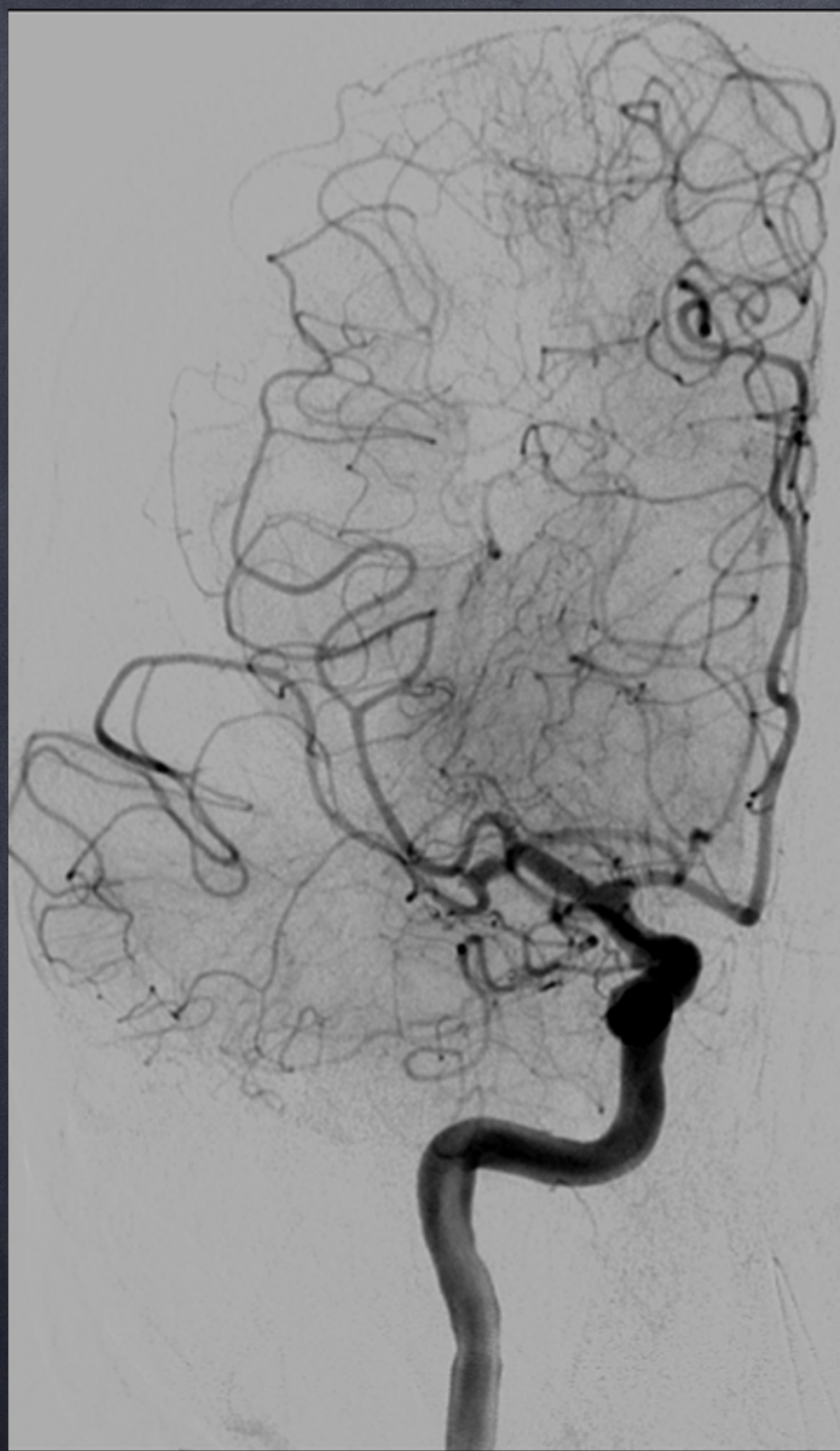
- F, 85 ans
- NIHSS 18, Aspect 6
- Début de thrombolyse IV (9h15) à Brive et transport sur Limoges
- Arrivée au CHU à 10h30, pas de récupération clinique, bloc NRI





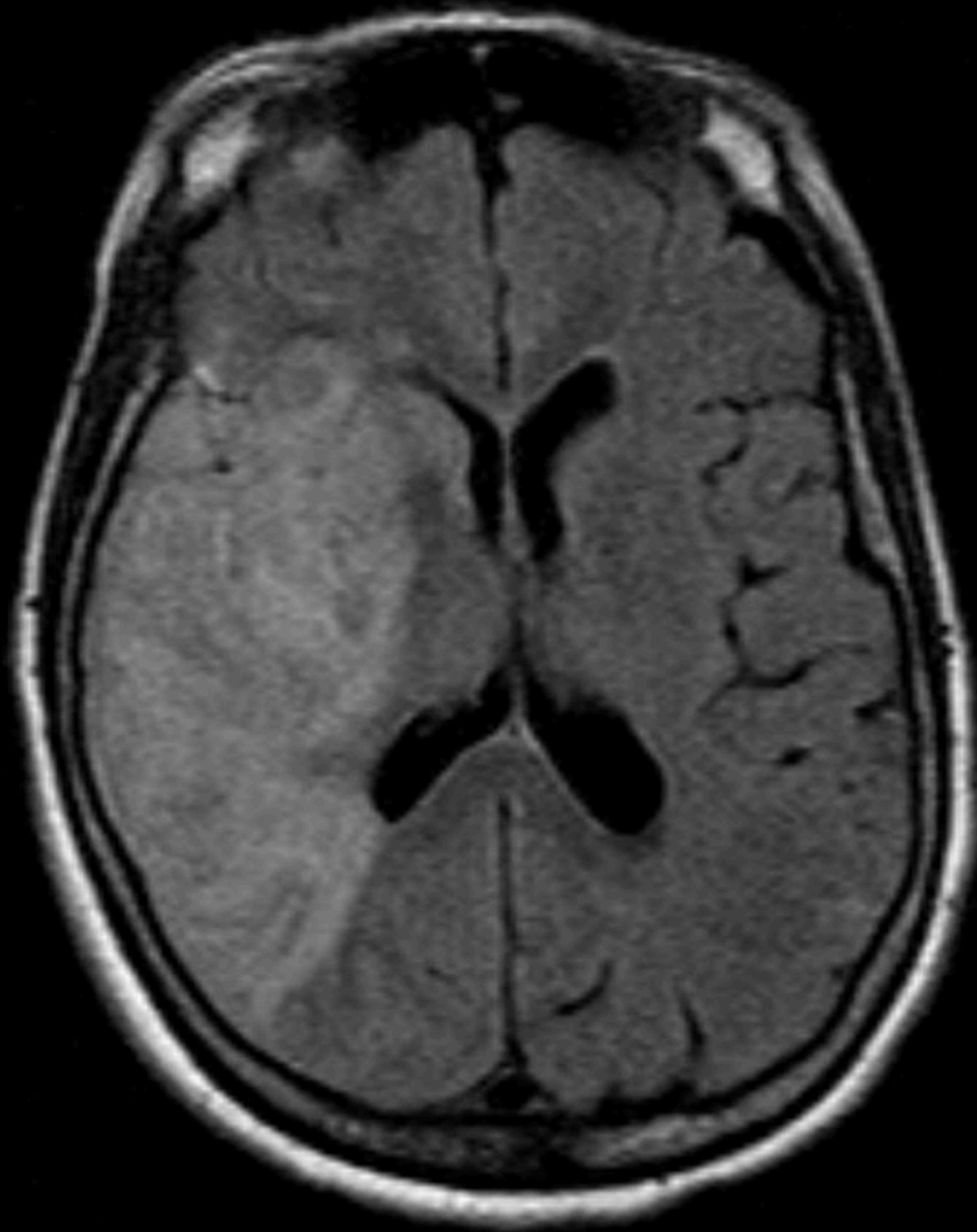




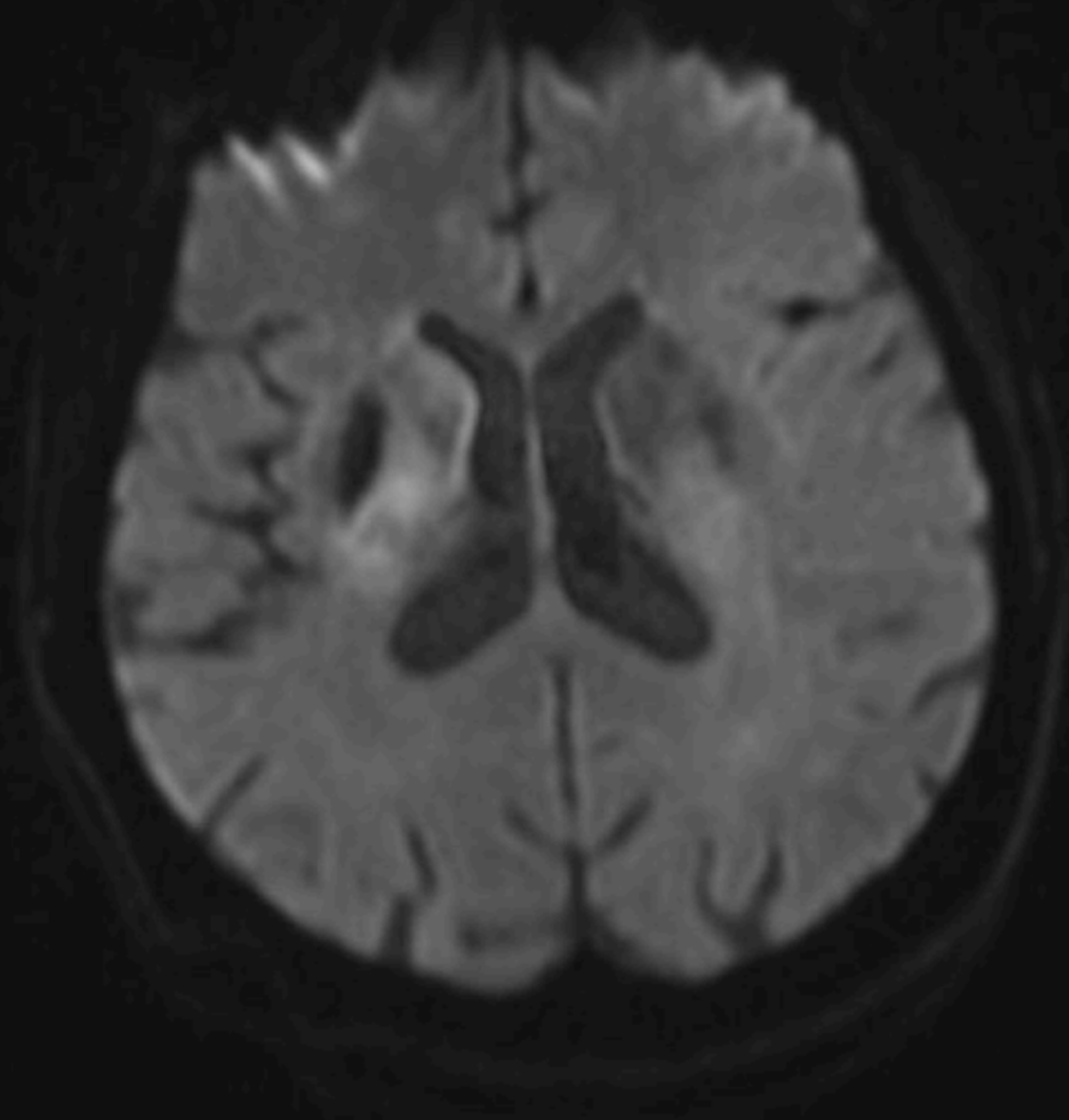




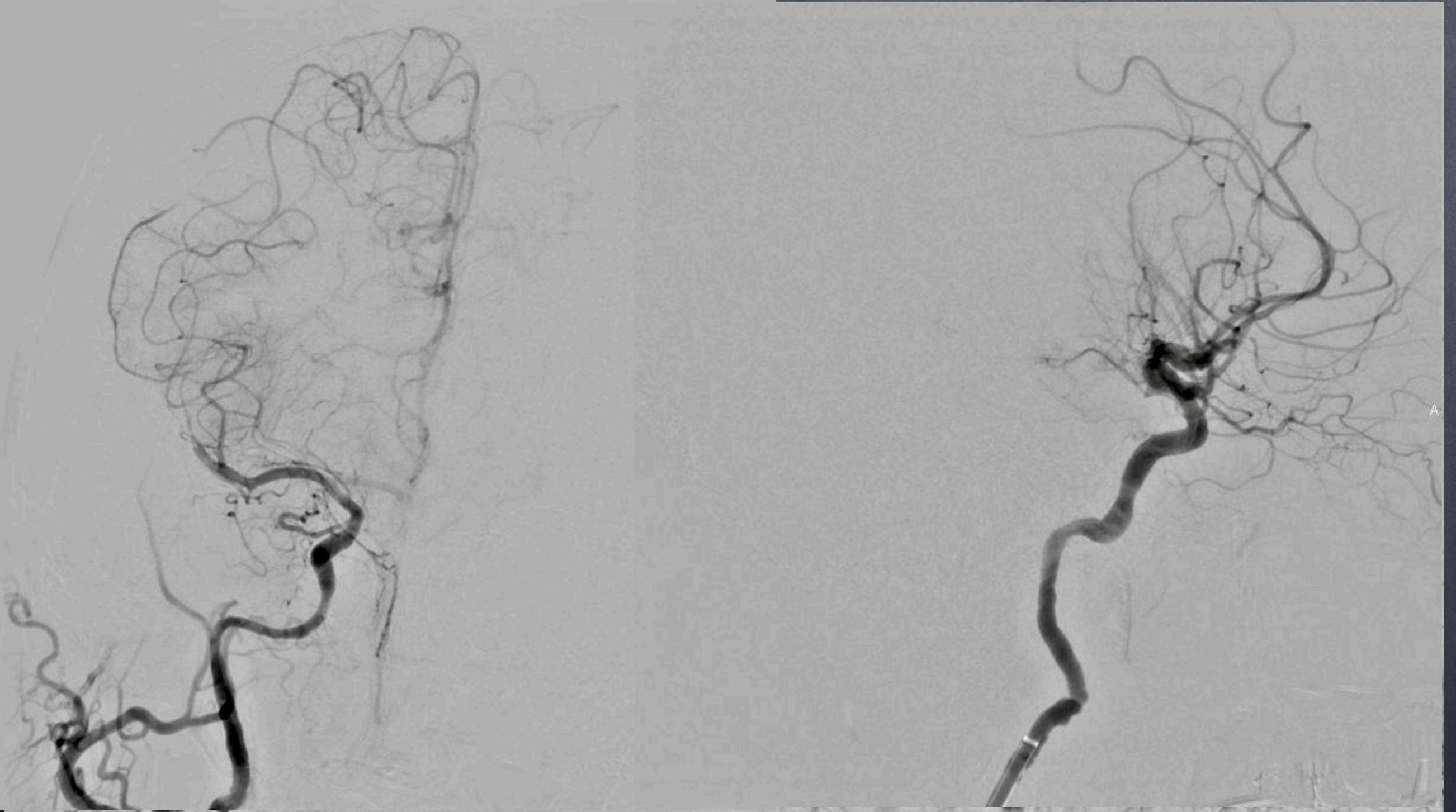
02



P



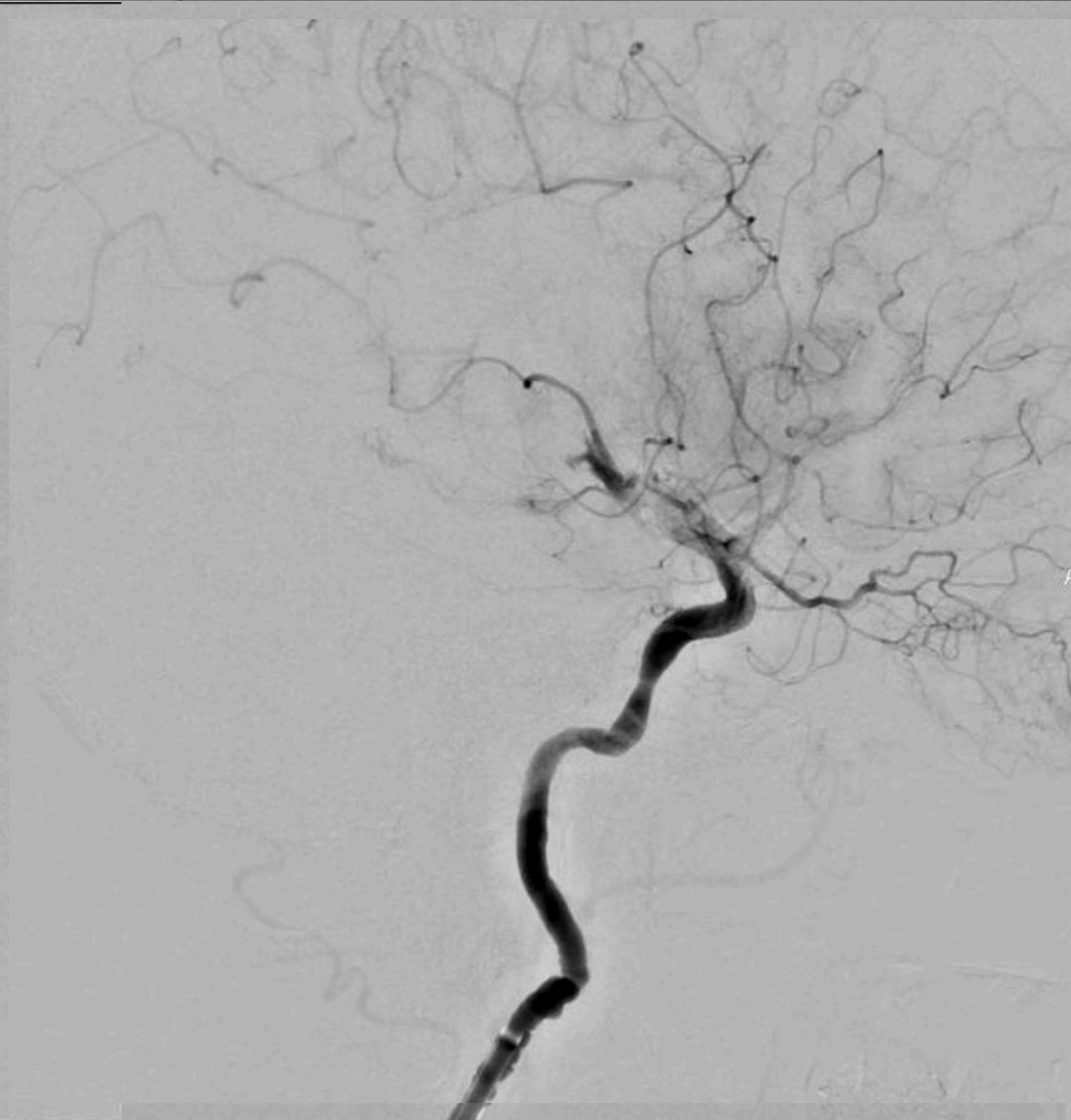
# 1er Passage

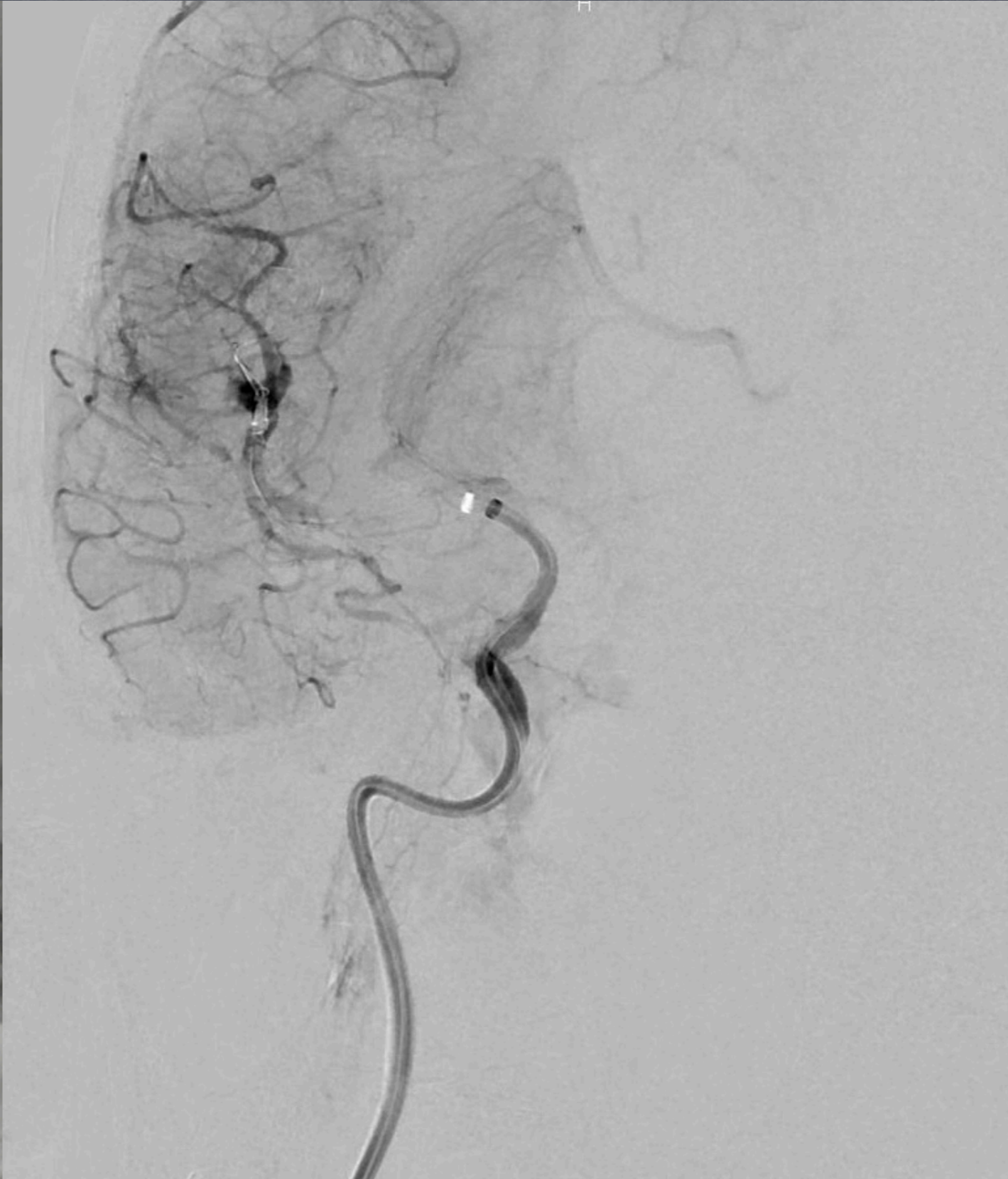


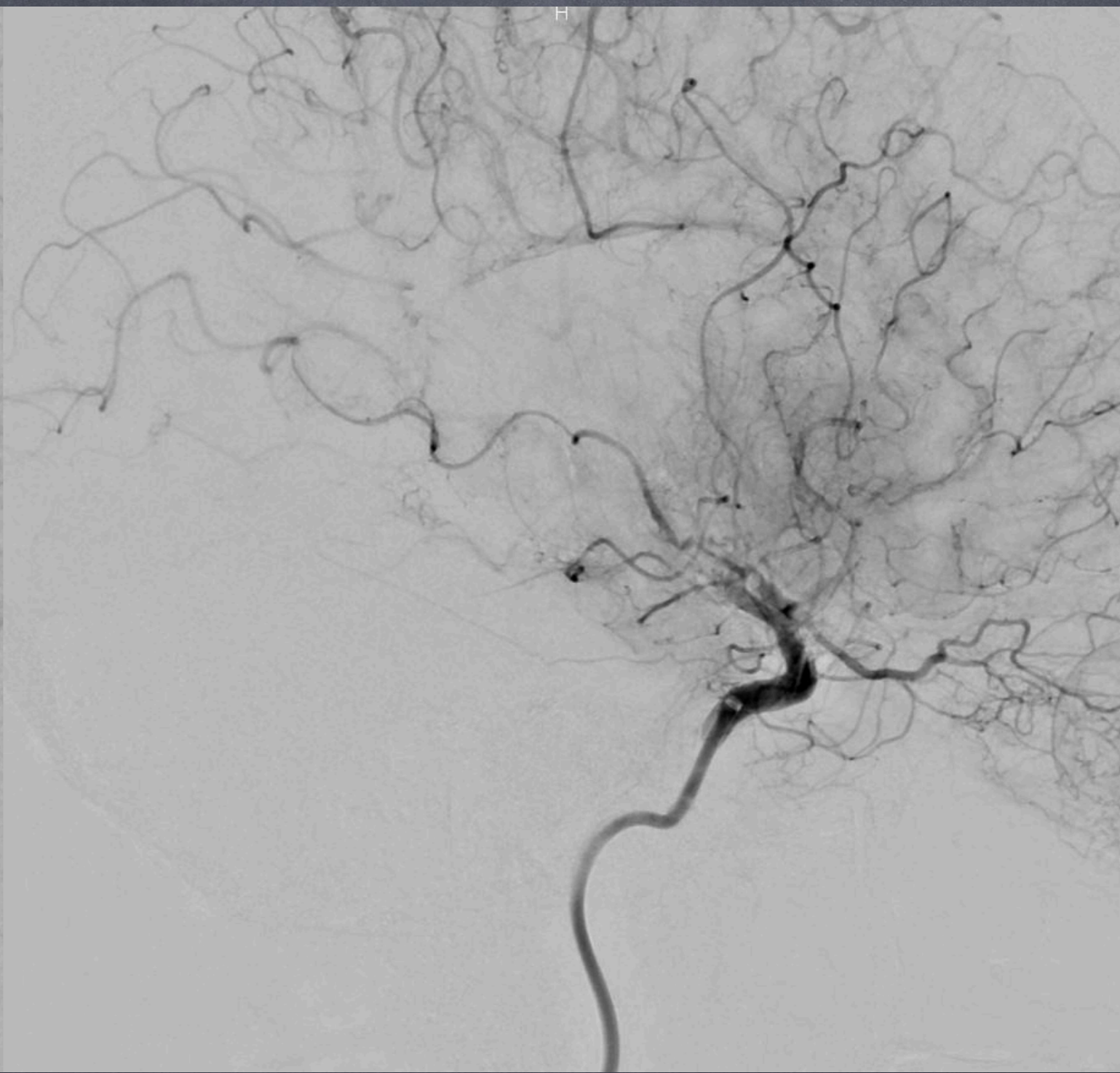
# 2ème Passage



# 3ème Passage

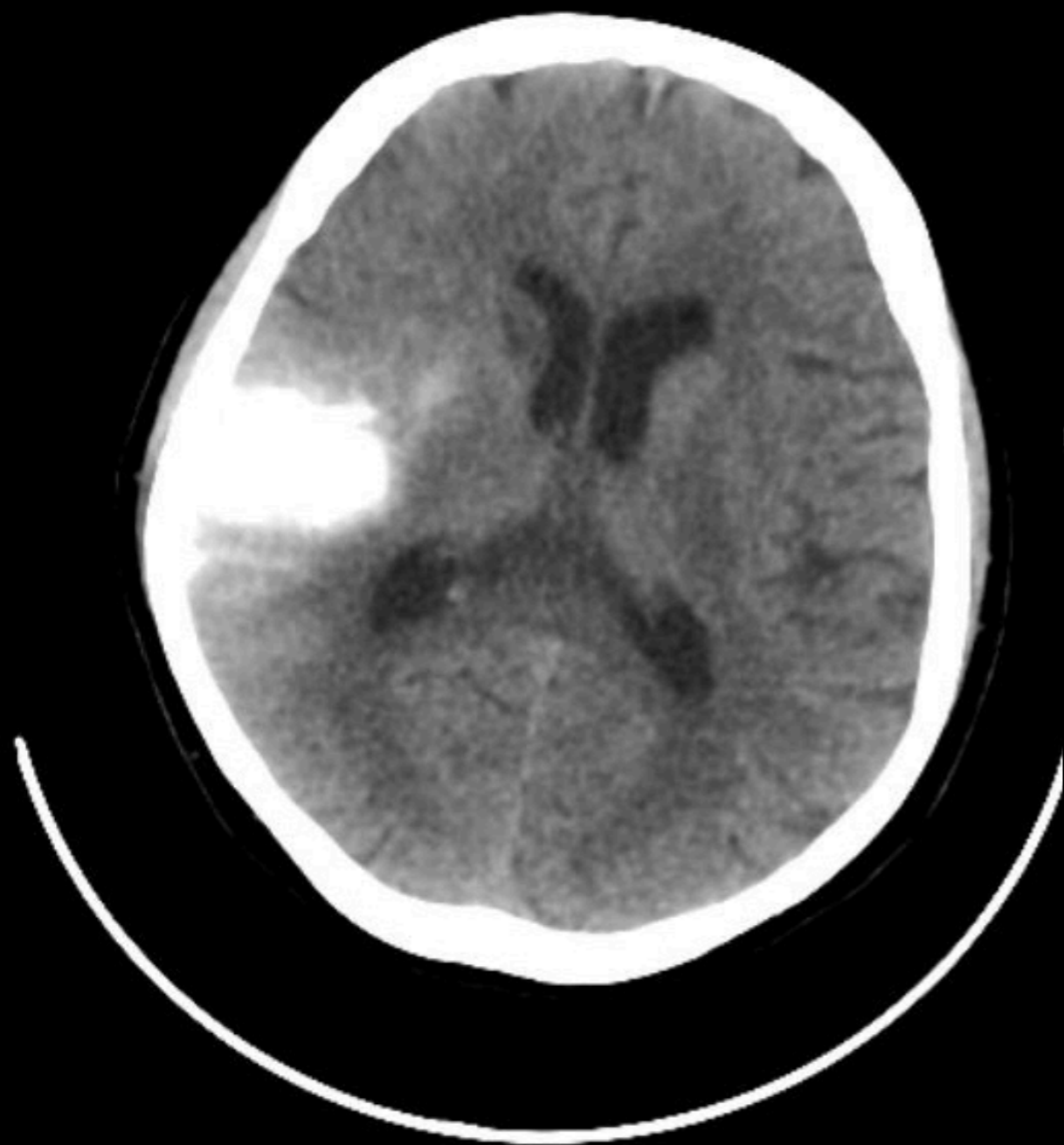




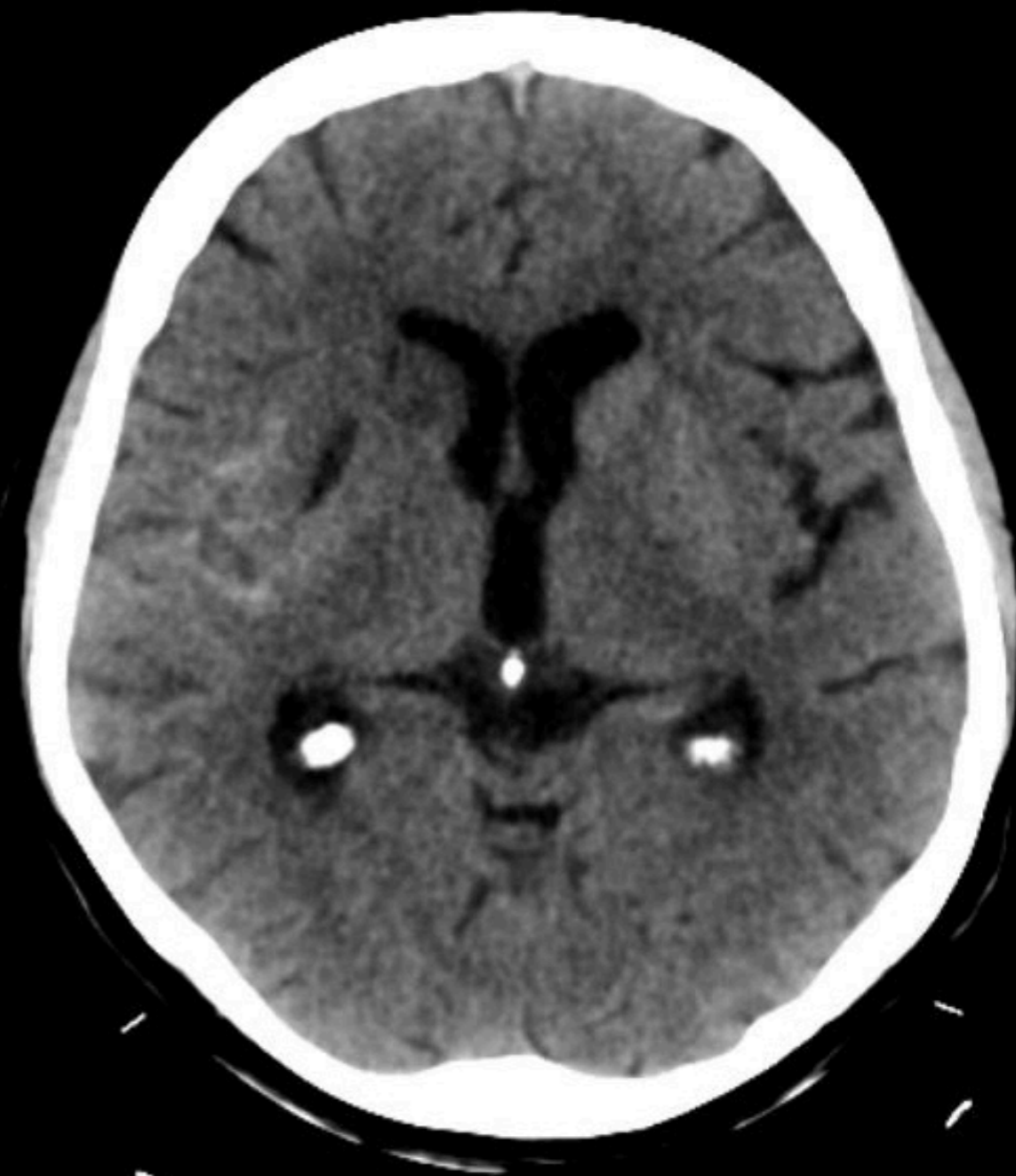


01

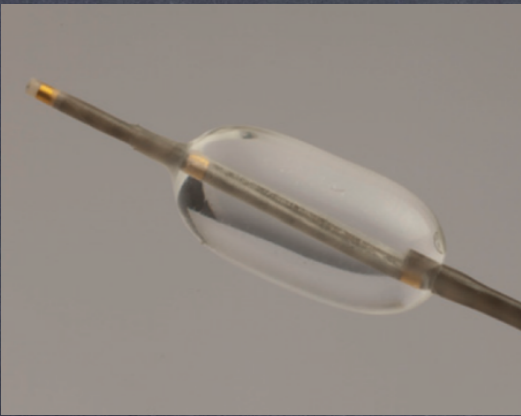
05



R







Ballon

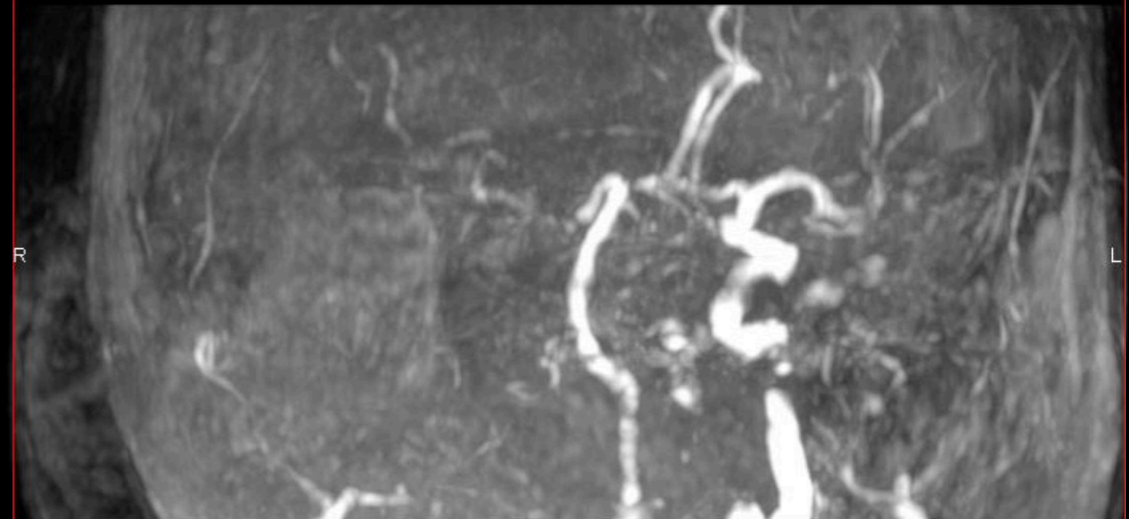
- Assure l'occlusion contrôlée de l'artère
- Temps de préparation
- Temps de navigation

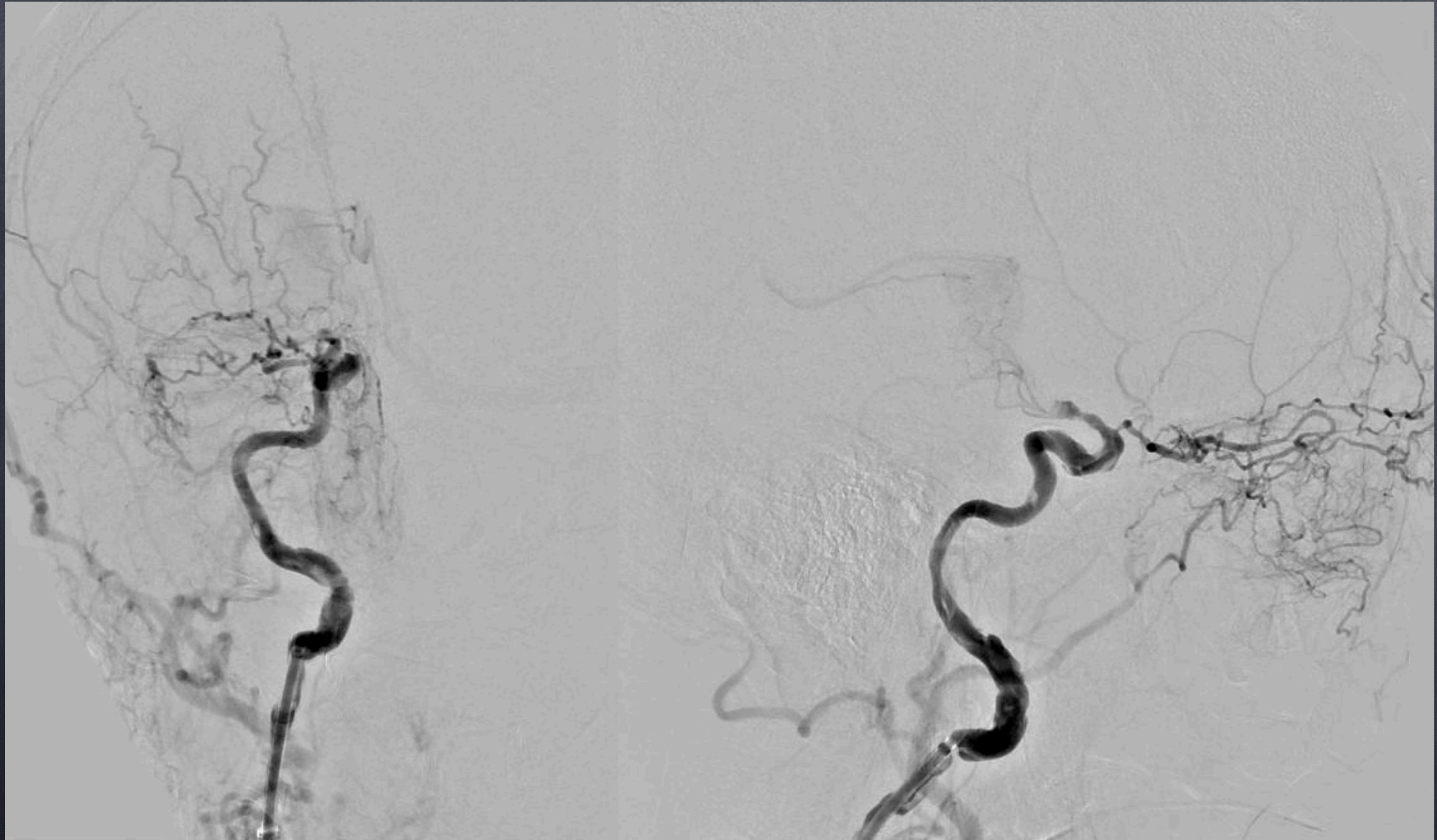


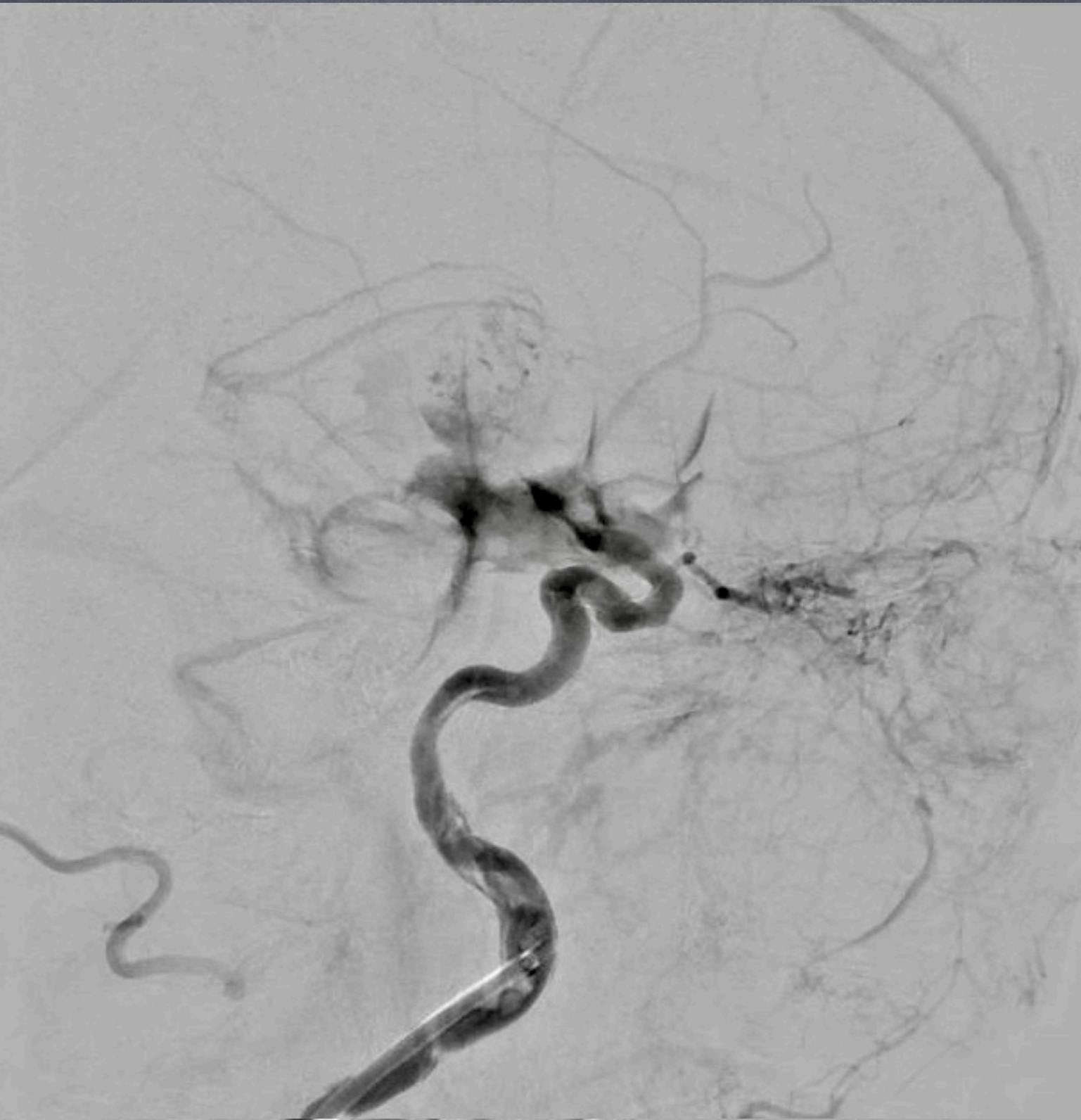
Coils

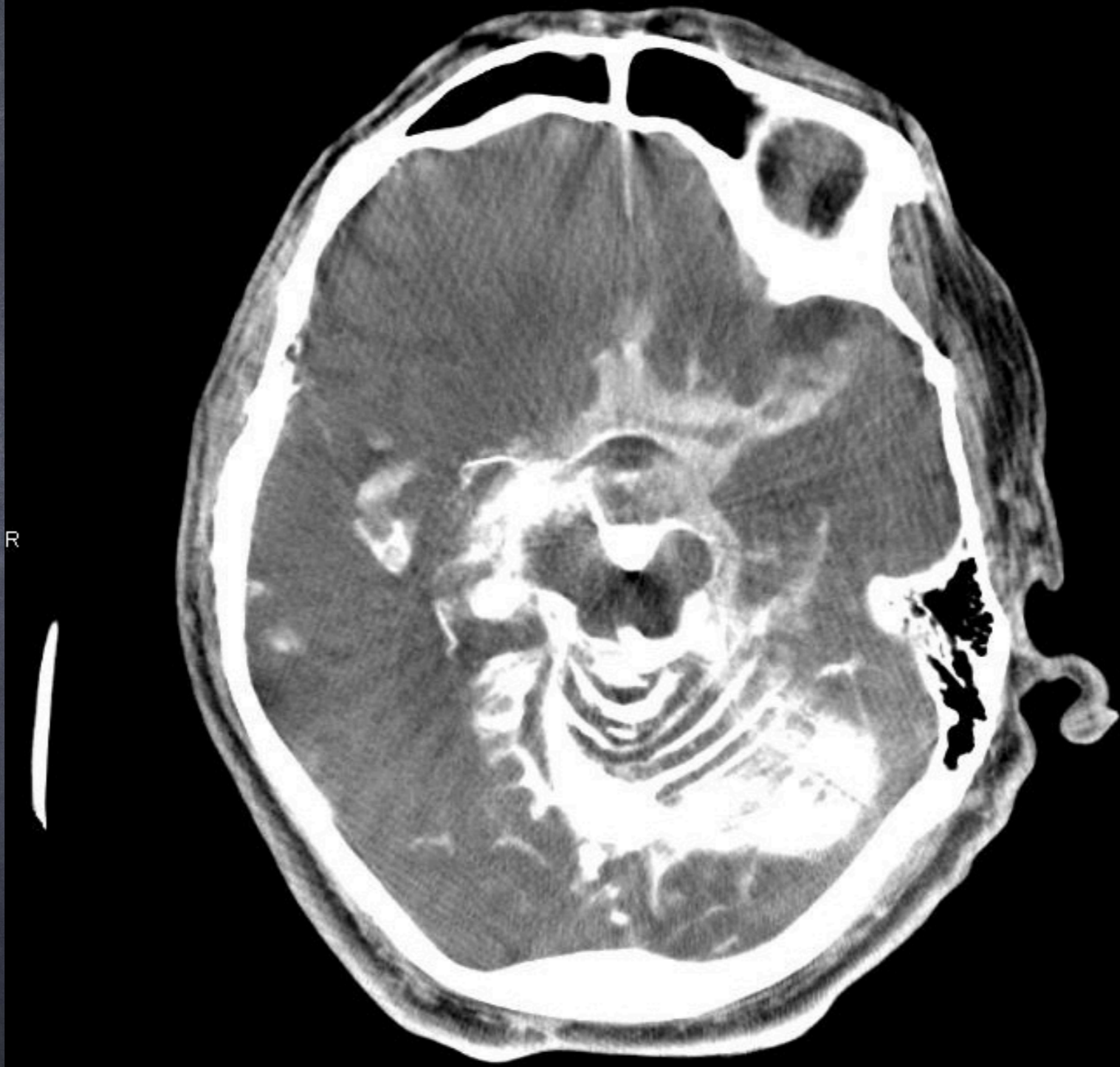
- Rapide
- Branches distales
- Occlusion incomplète
- Stretching

A NE PAS OUBLIER







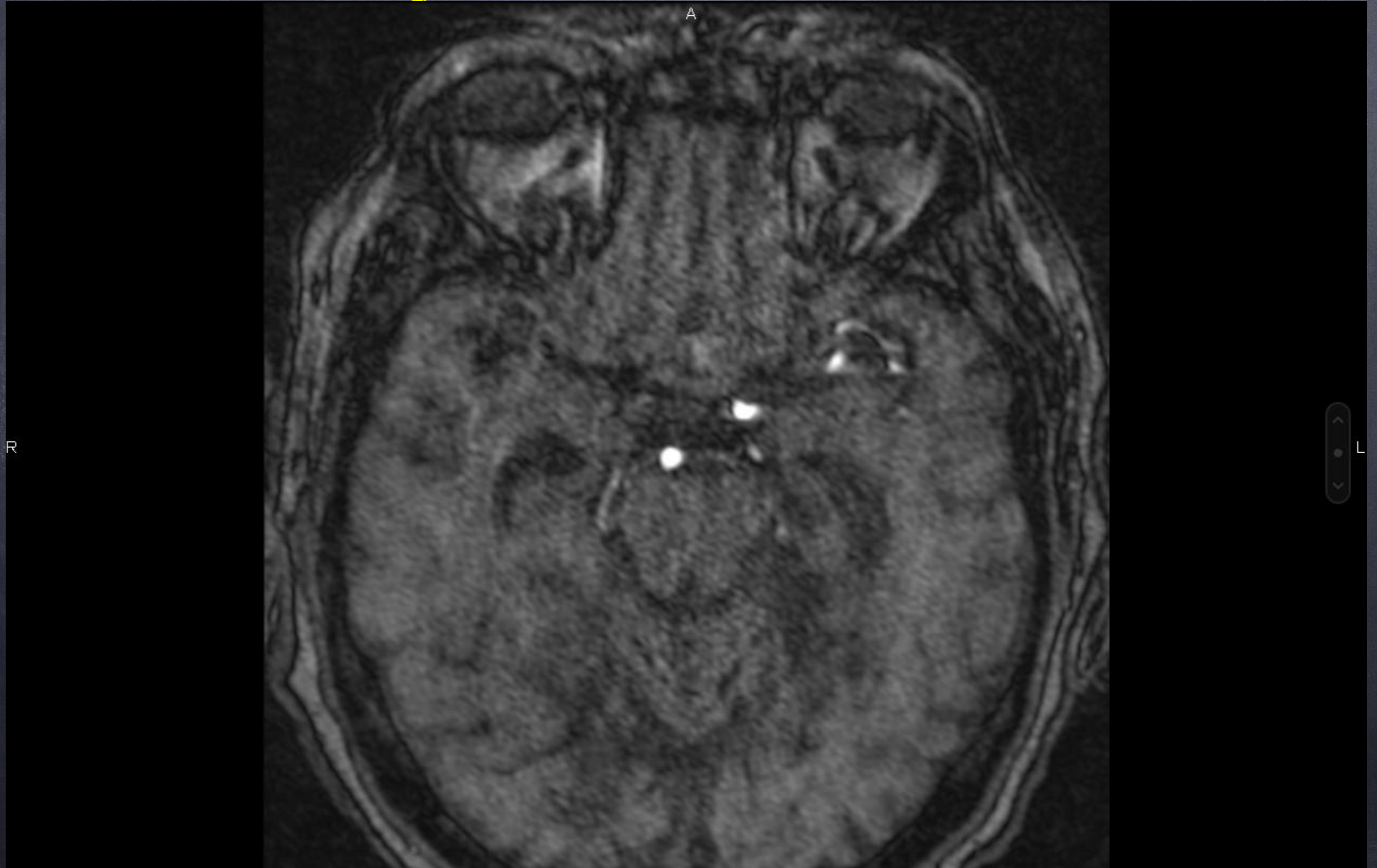


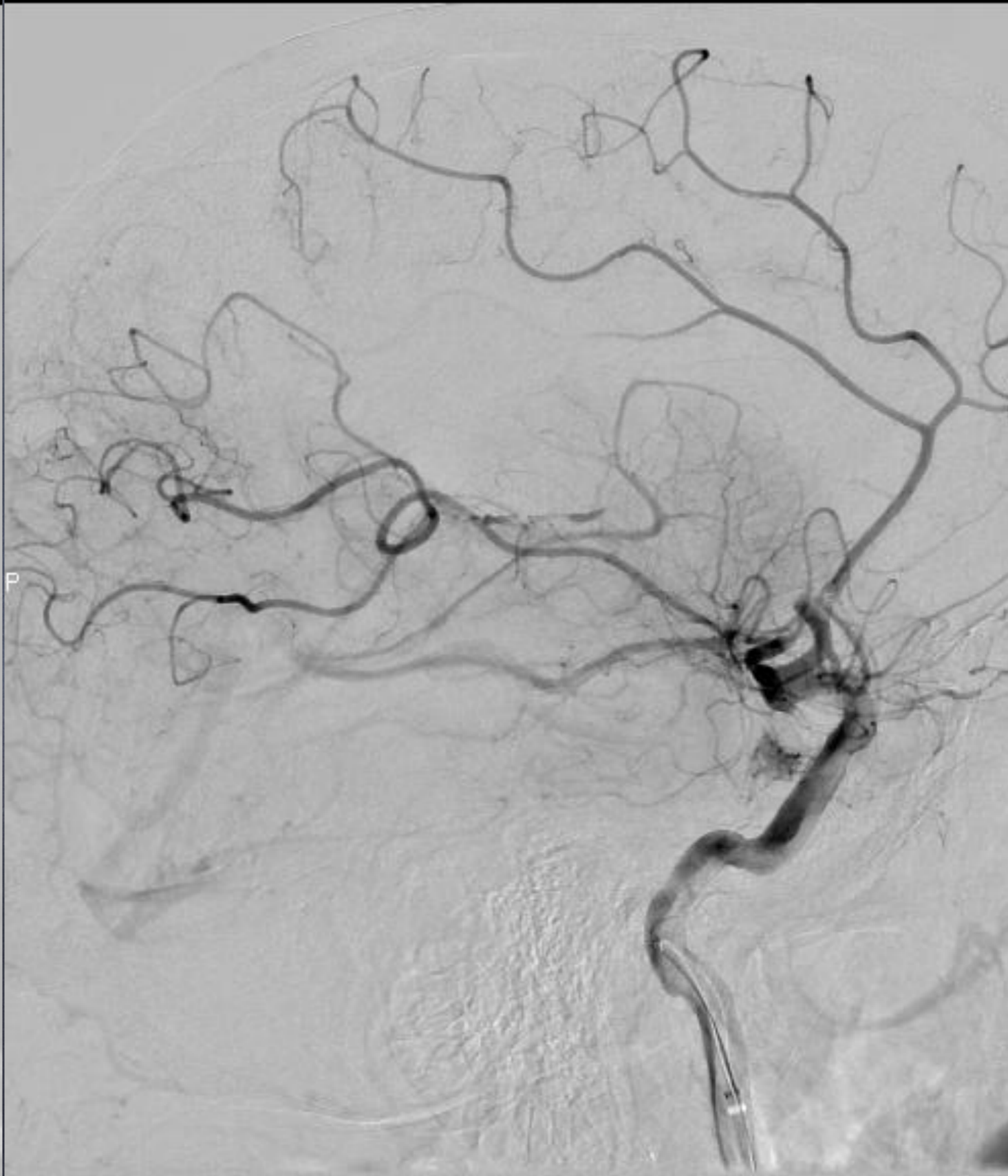
# Complication Ischémique

- Fragmentation distale du thrombus:
  - Après thrombolyse IV
  - Pendant navigation
  - Pendant retrait
- Migration d'embolies dans des nouveaux territoires:
  - Pendant retrait

# Fragmentation

- Thrombolyse IV







# Fragmentation

## • Cathéterisme



# Fragmentation

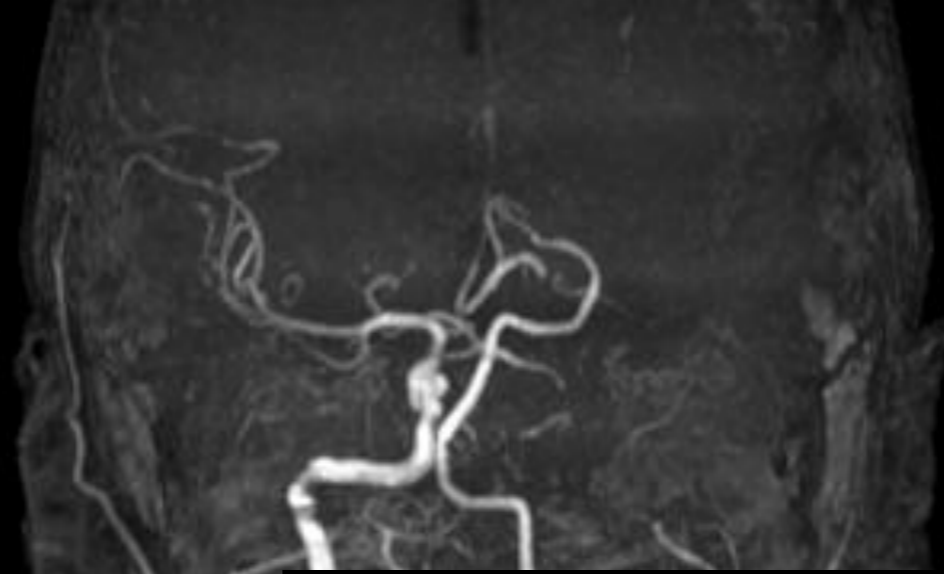
- Retrait du caillot



- M, 85 ans
- Hospitalisé en Cardio pour problème de rythme, anti-coagulant
- Déficit brutal de l'hémicorps gauche à 12:30
- NIHSS 26

IRM  
13:40

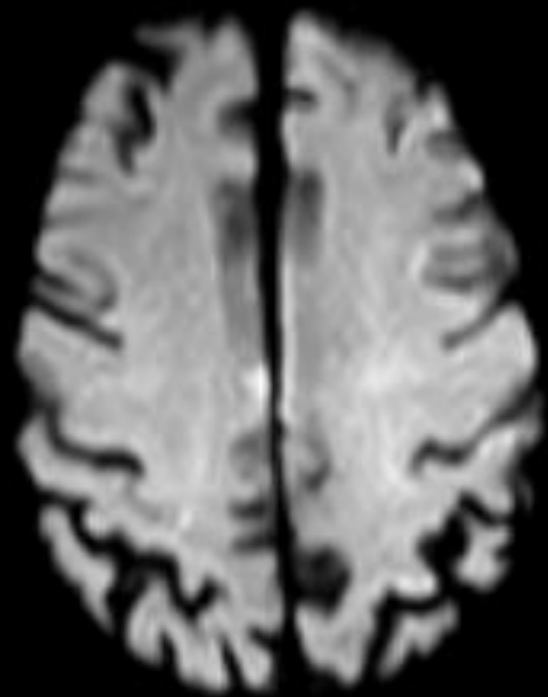
R



L

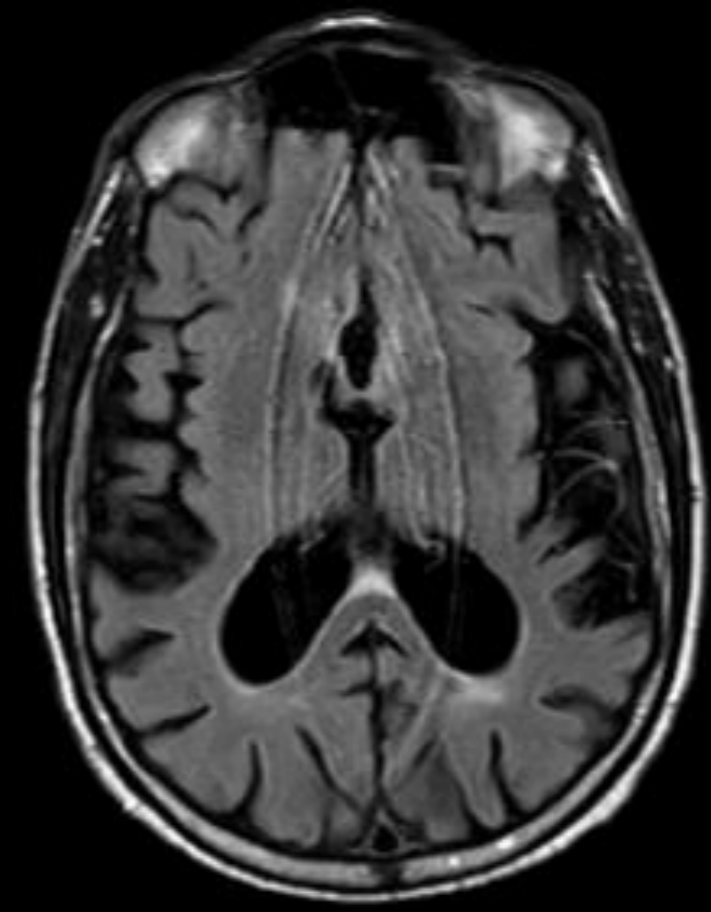
A

A



R

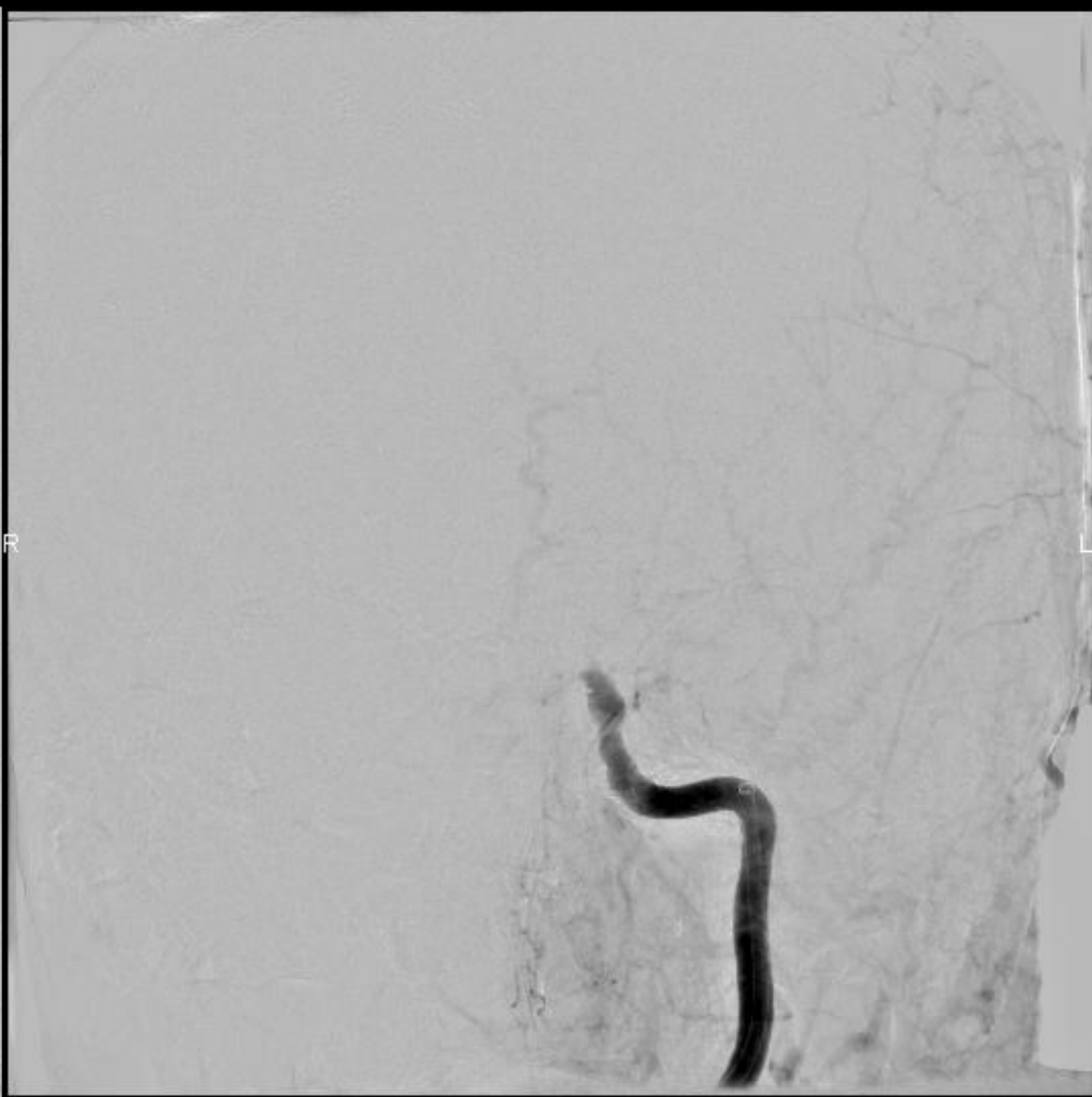
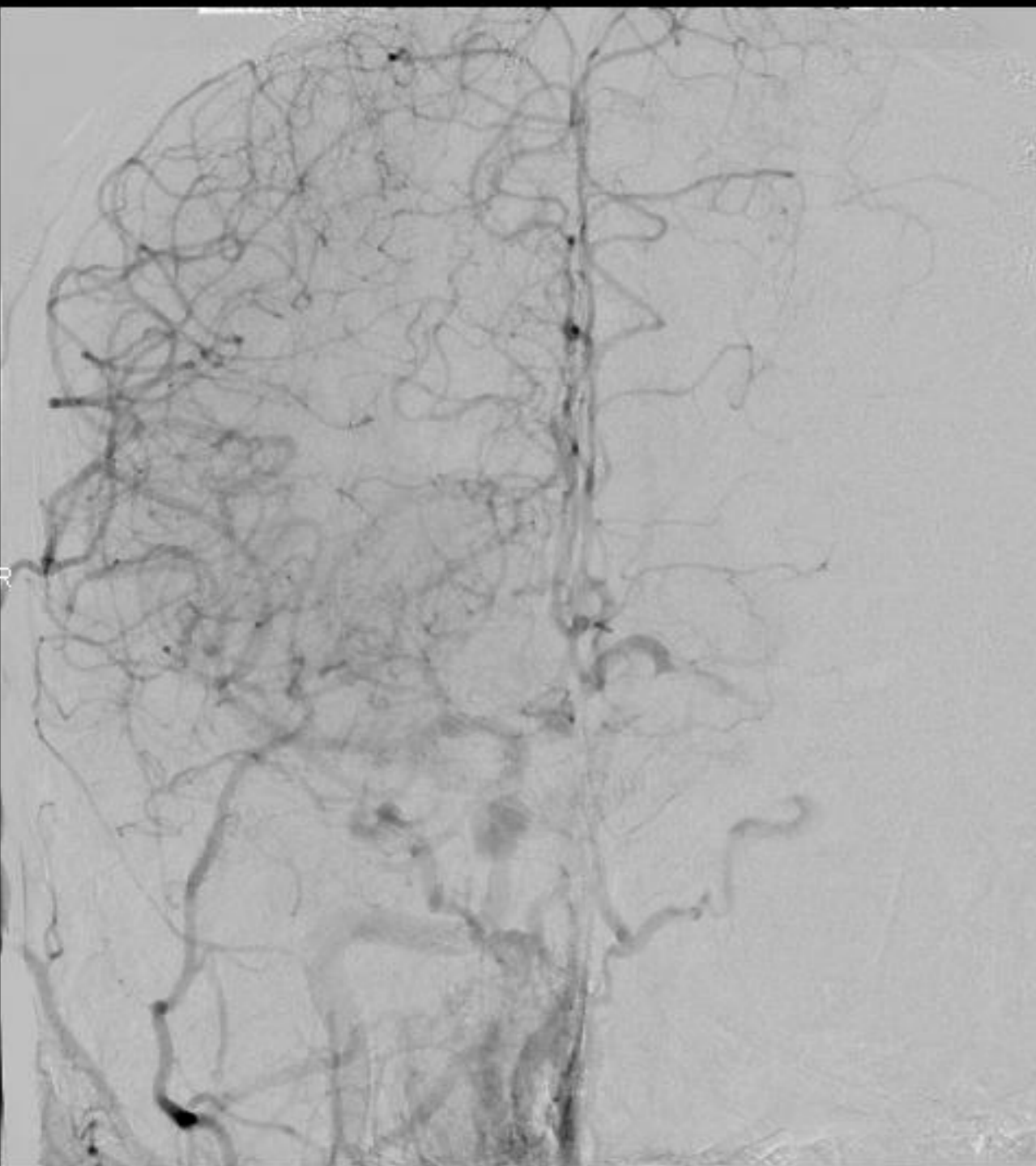
P



P

ASPECT 9

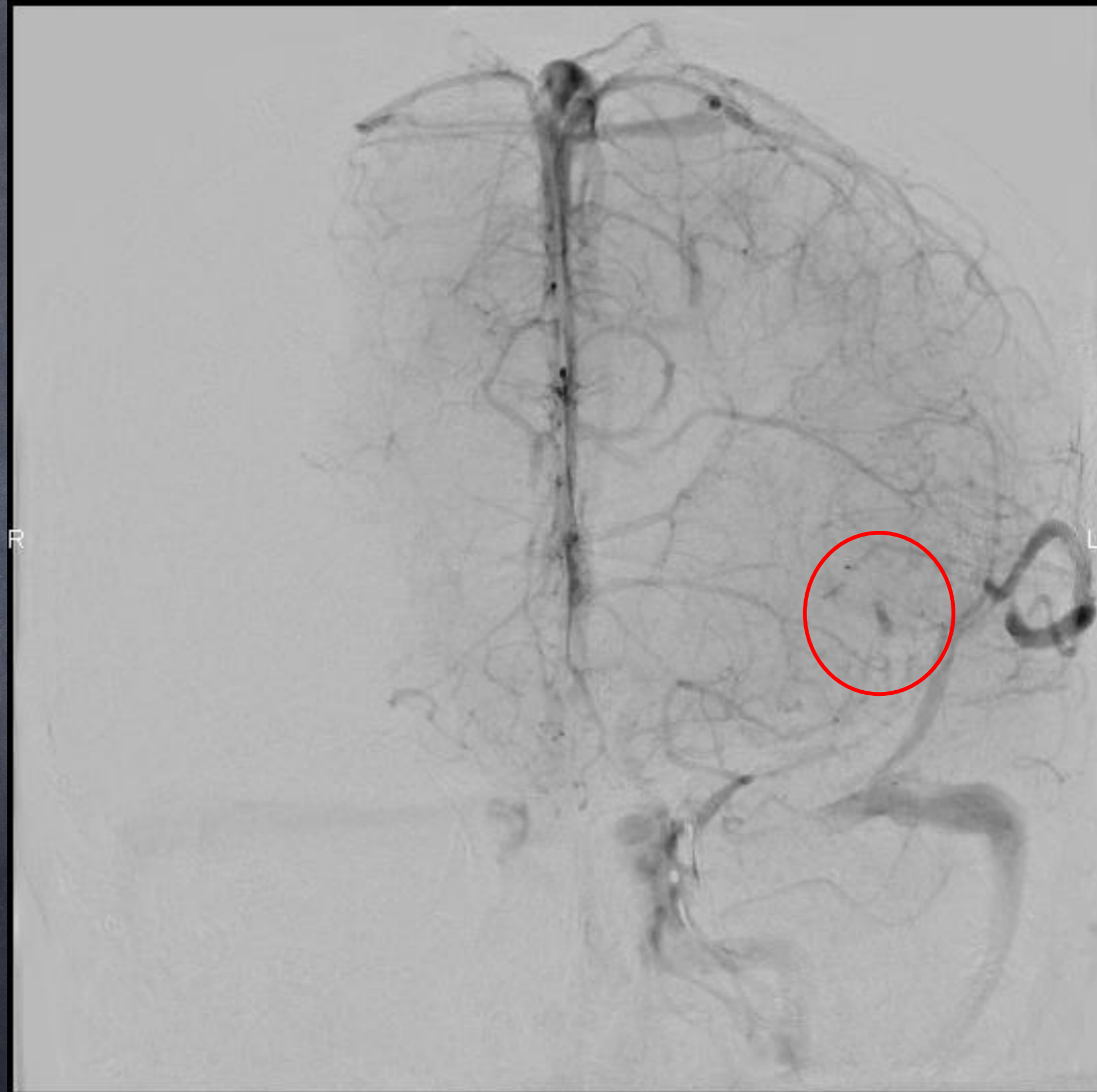
Bloc NRI 14:00



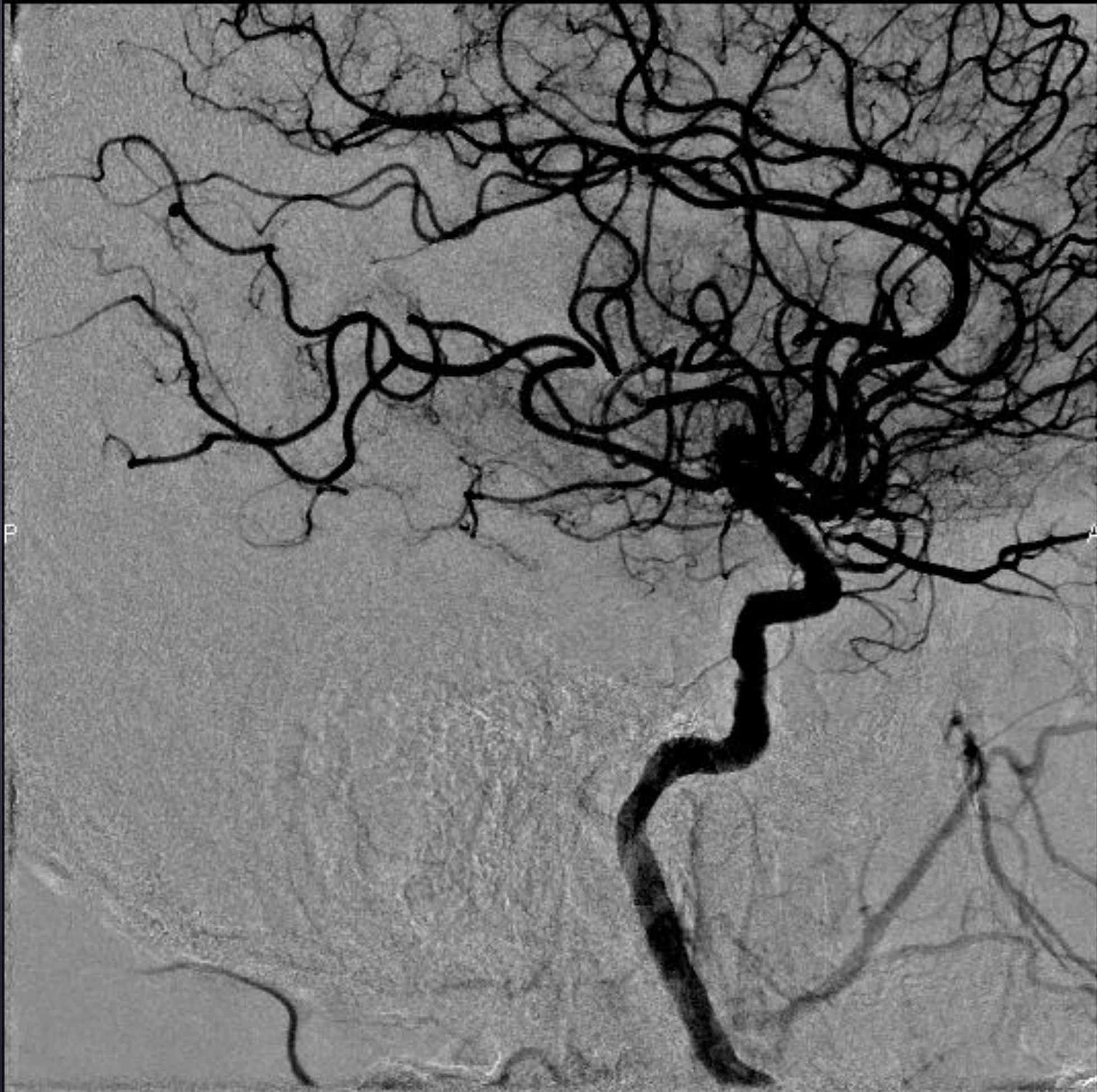
F

F

Sofia +  
Velocity  
Solitaire 6x40



R

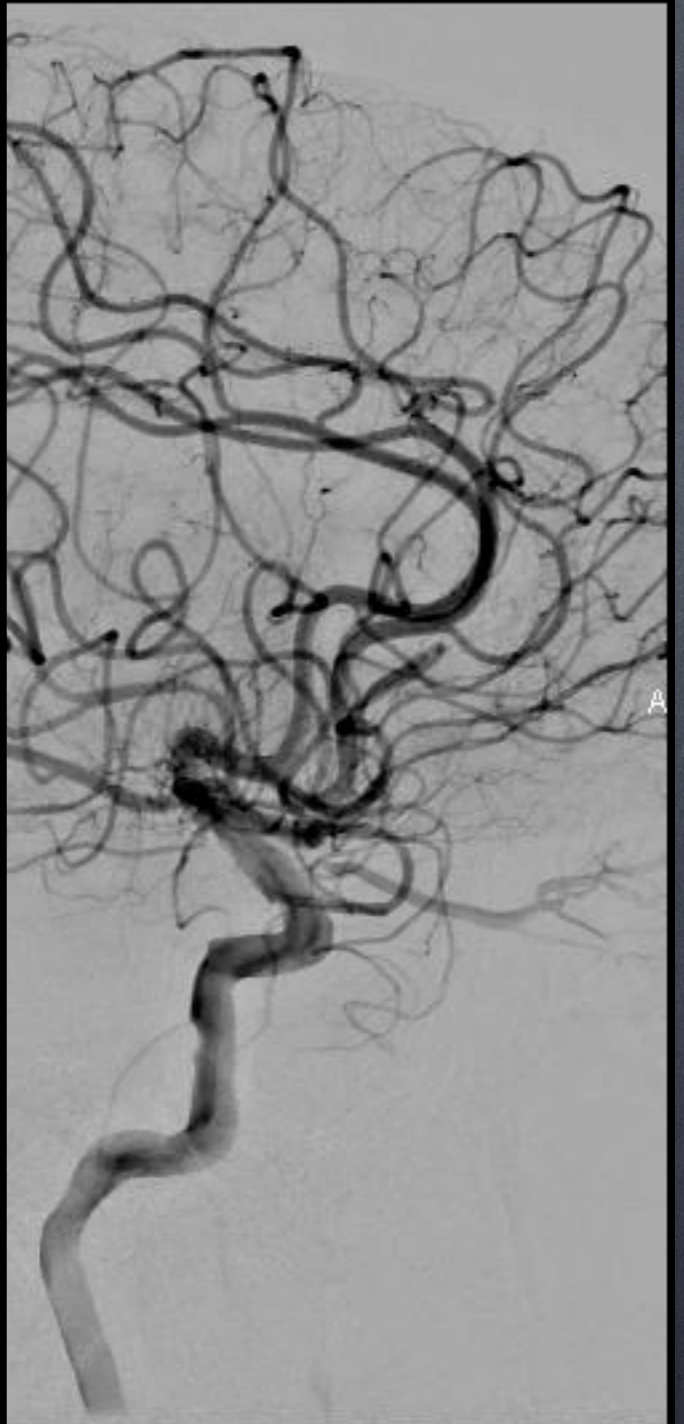
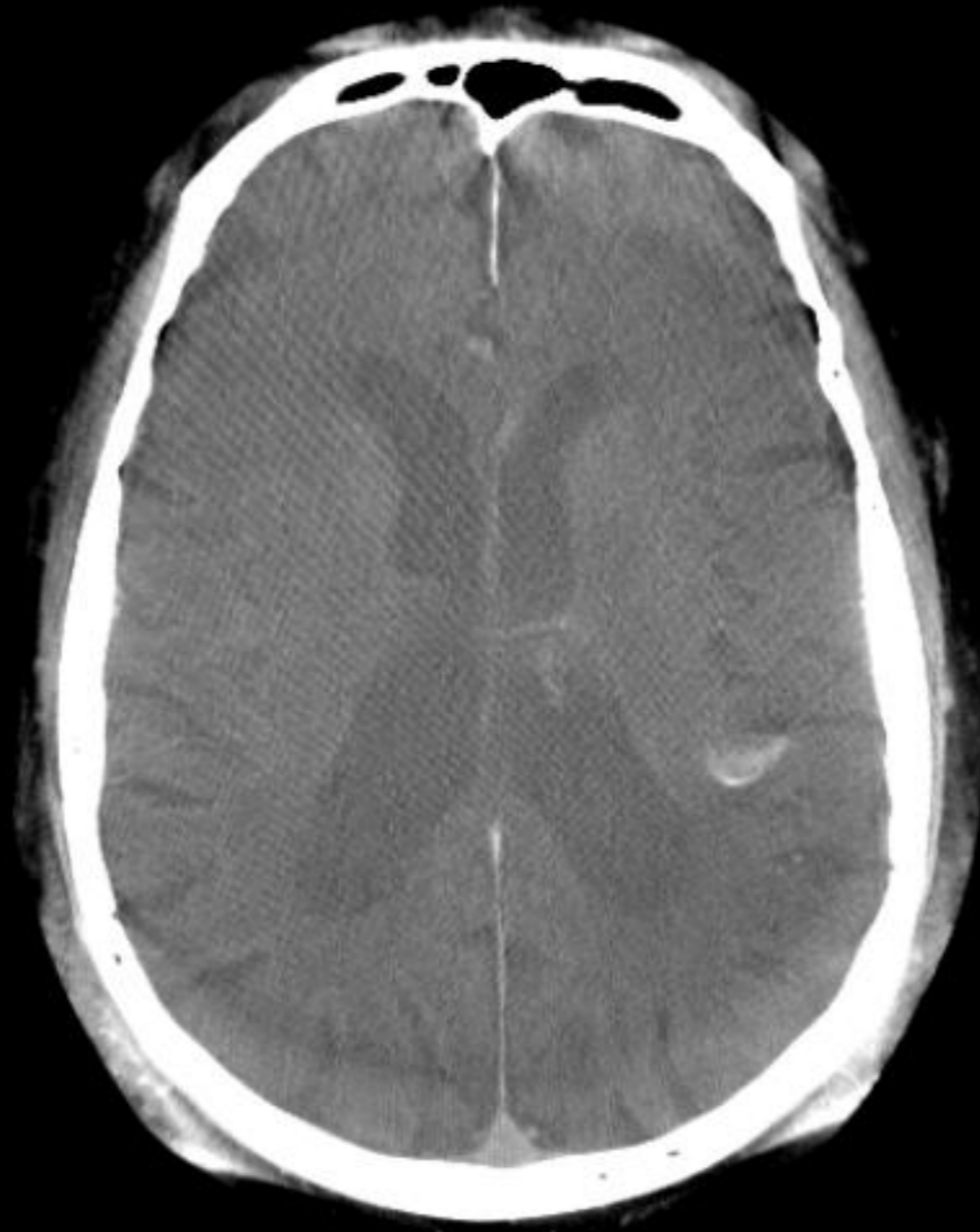




Sofia +  
Velocity  
Eric 3x20



A



L

A



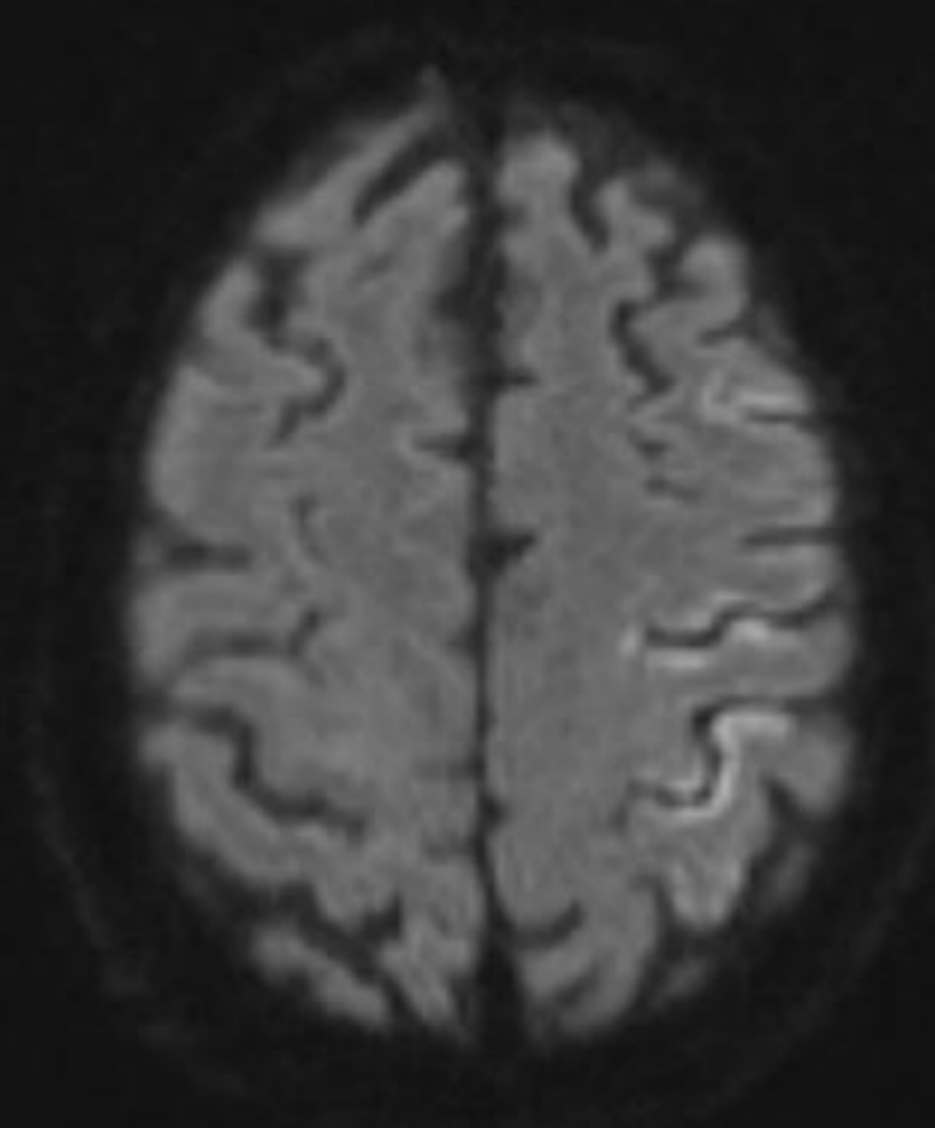
R

F

NIHSS 24H

8

R



L

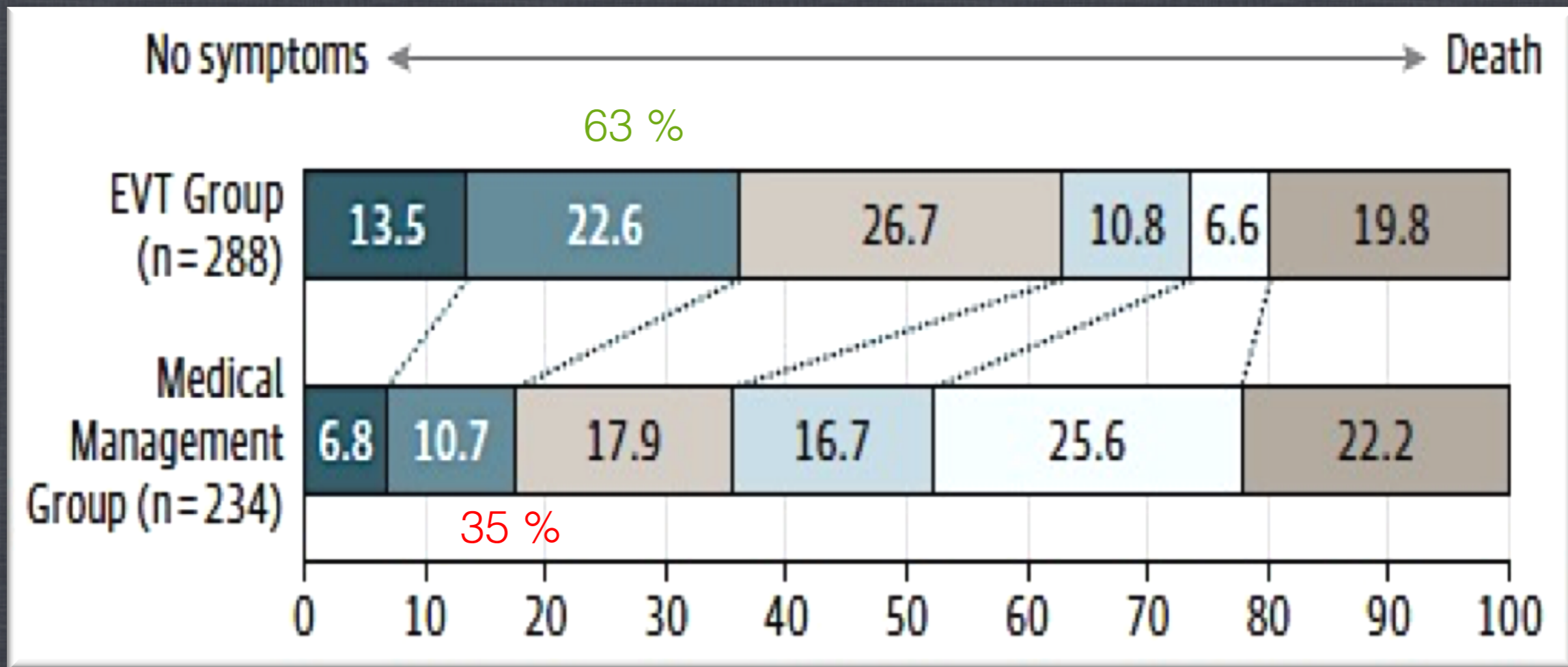
# OCCLUSIONS DISTALES

M2!



JAMA Neurol. 2016 Nov 1;73(11):1291-1296. doi: 10.1001/jamaneurol.2016.2773.

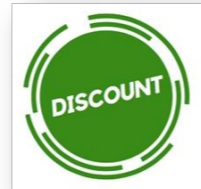
## Endovascular Therapy for Acute Ischemic Stroke With Occlusion of the Middle Cerebral Artery M2 Segment.



Évaluation de la thrombectomie mécanique dans le traitement des accidents vasculaires cérébraux ischémiques aigus liés à l'occlusion artérielle distale : un essai randomisé contrôlé.

## DISCOUNT

Modification substantielle n°2



stryker

balt

phenox

abmedica®  
about people about health

MIVI  
NEUROSCIENCE

Penumbra



V1-0 du 12/12/2022

• M2 distal, M3, PCA, ACA

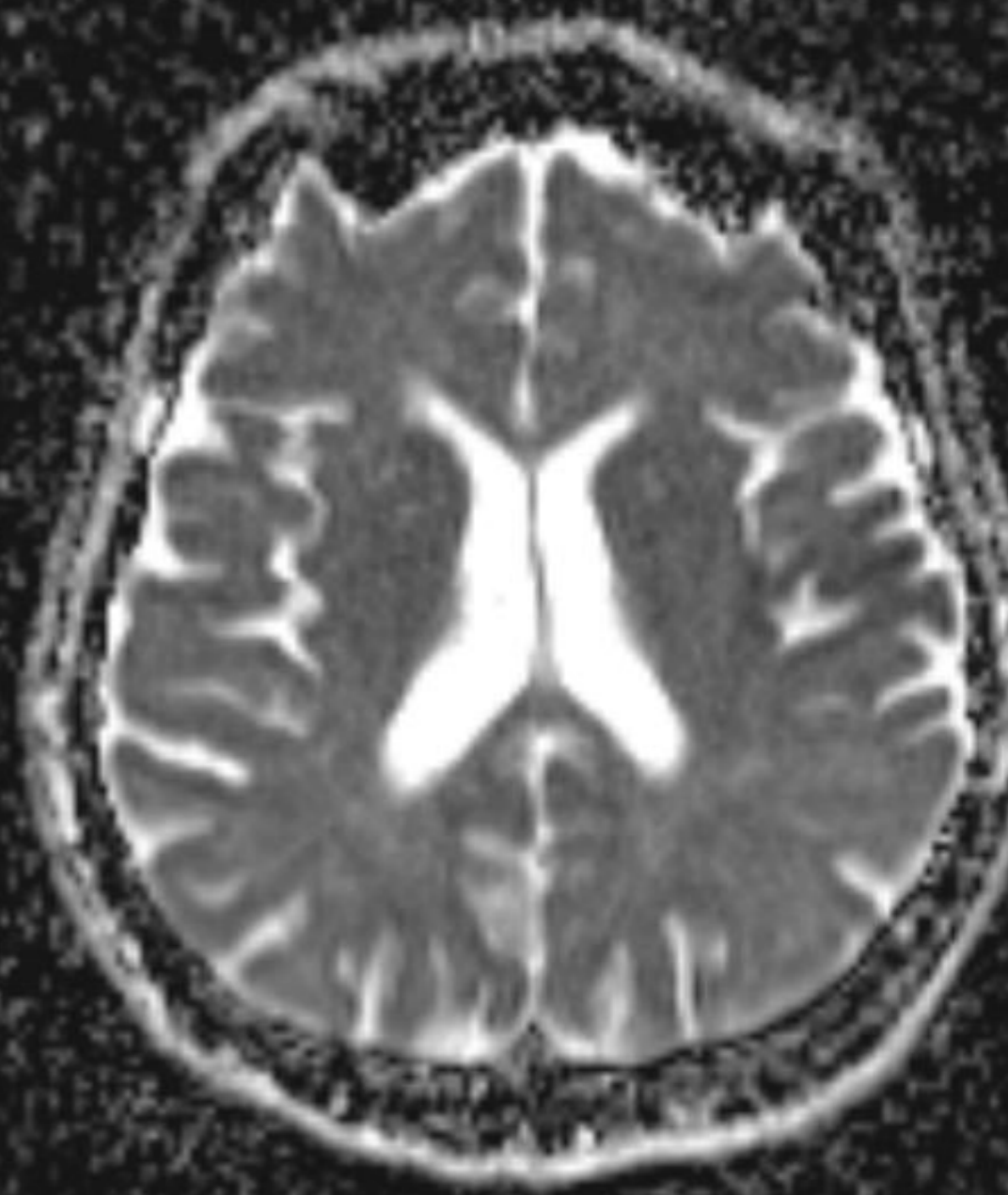
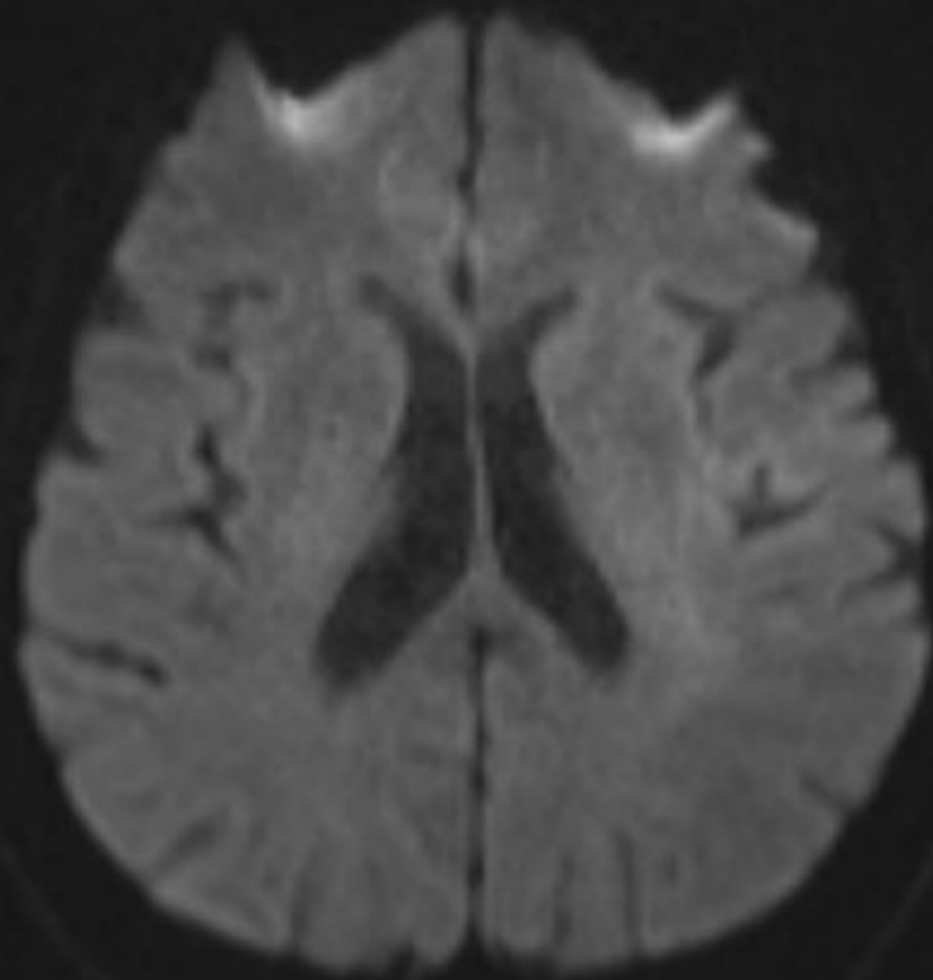
- F, 79 ans

- Aphasie à 13h30

- NIHSS 8

IRM

1H



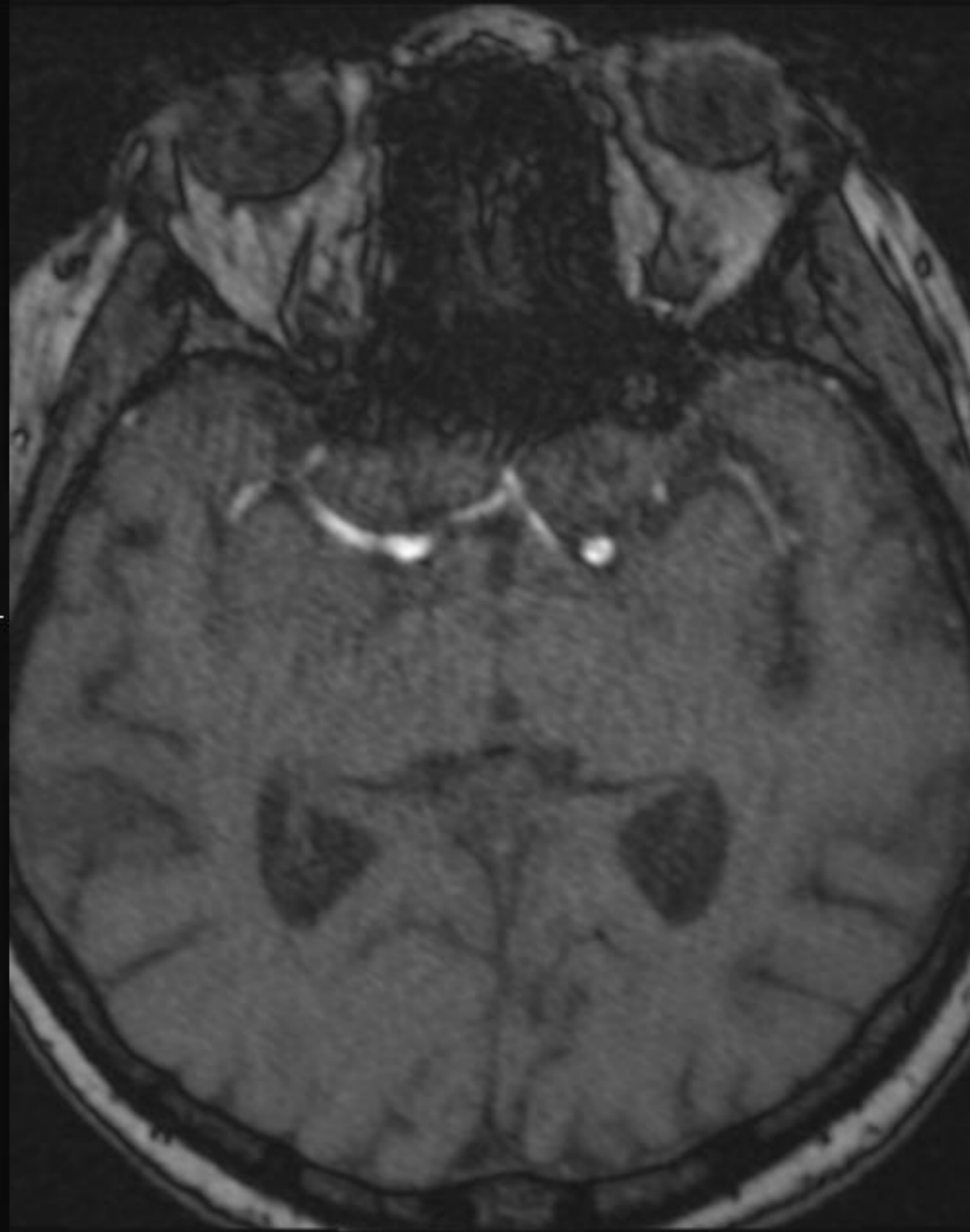
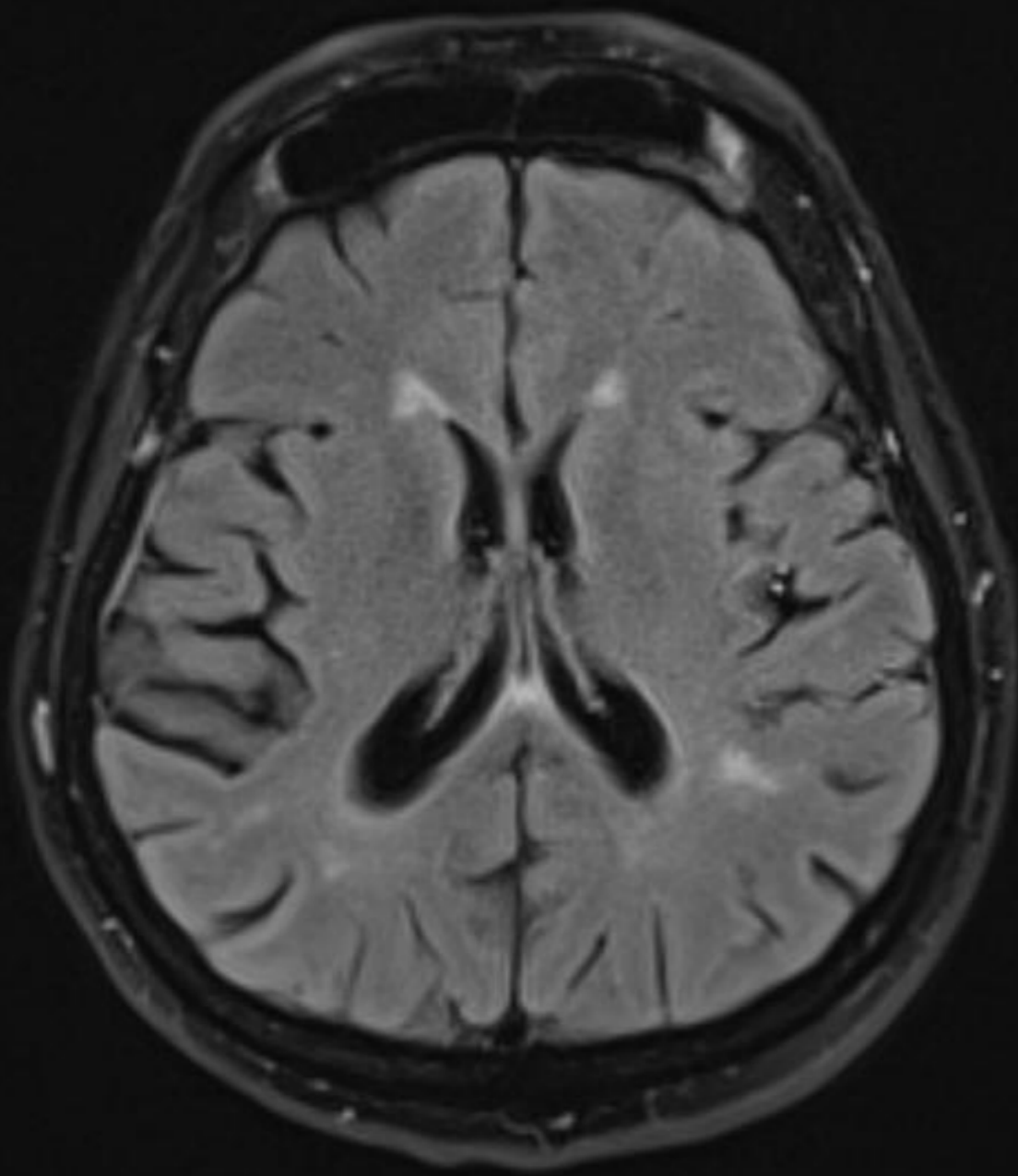
R

P

P

A

A



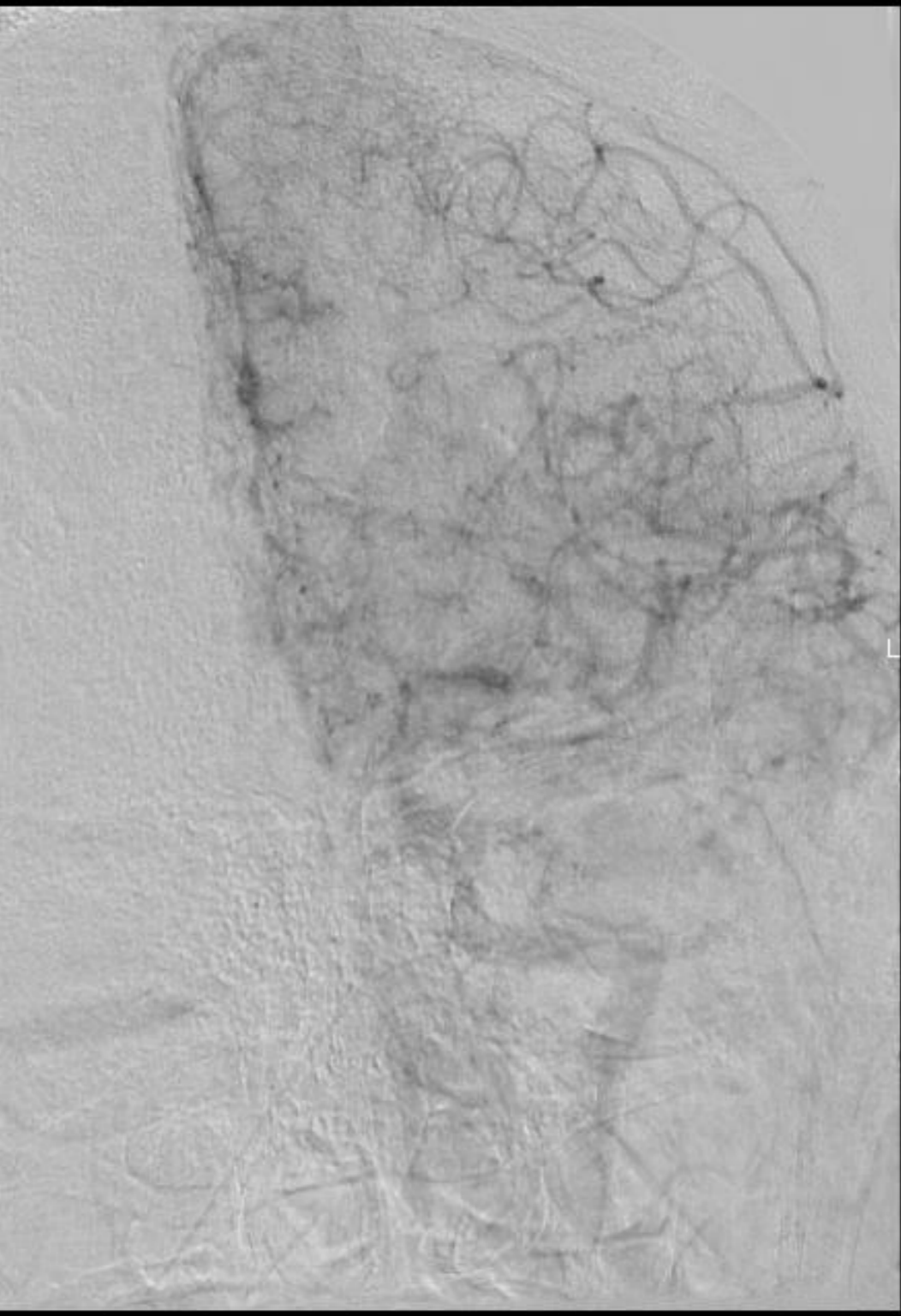
P

P



H

H



LP

A

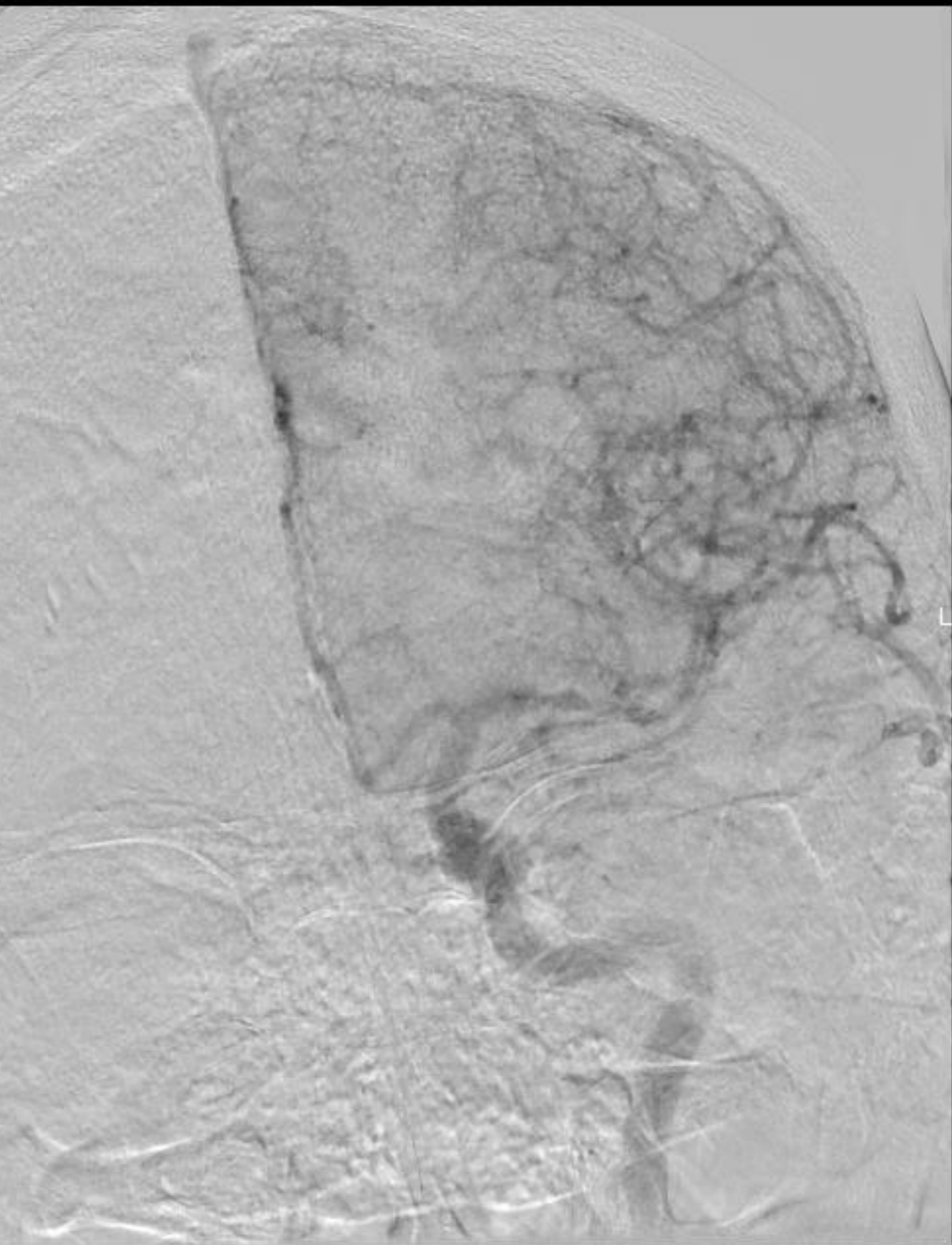
F

F

Sofia +  
Vasco 10 +  
Catch Mini

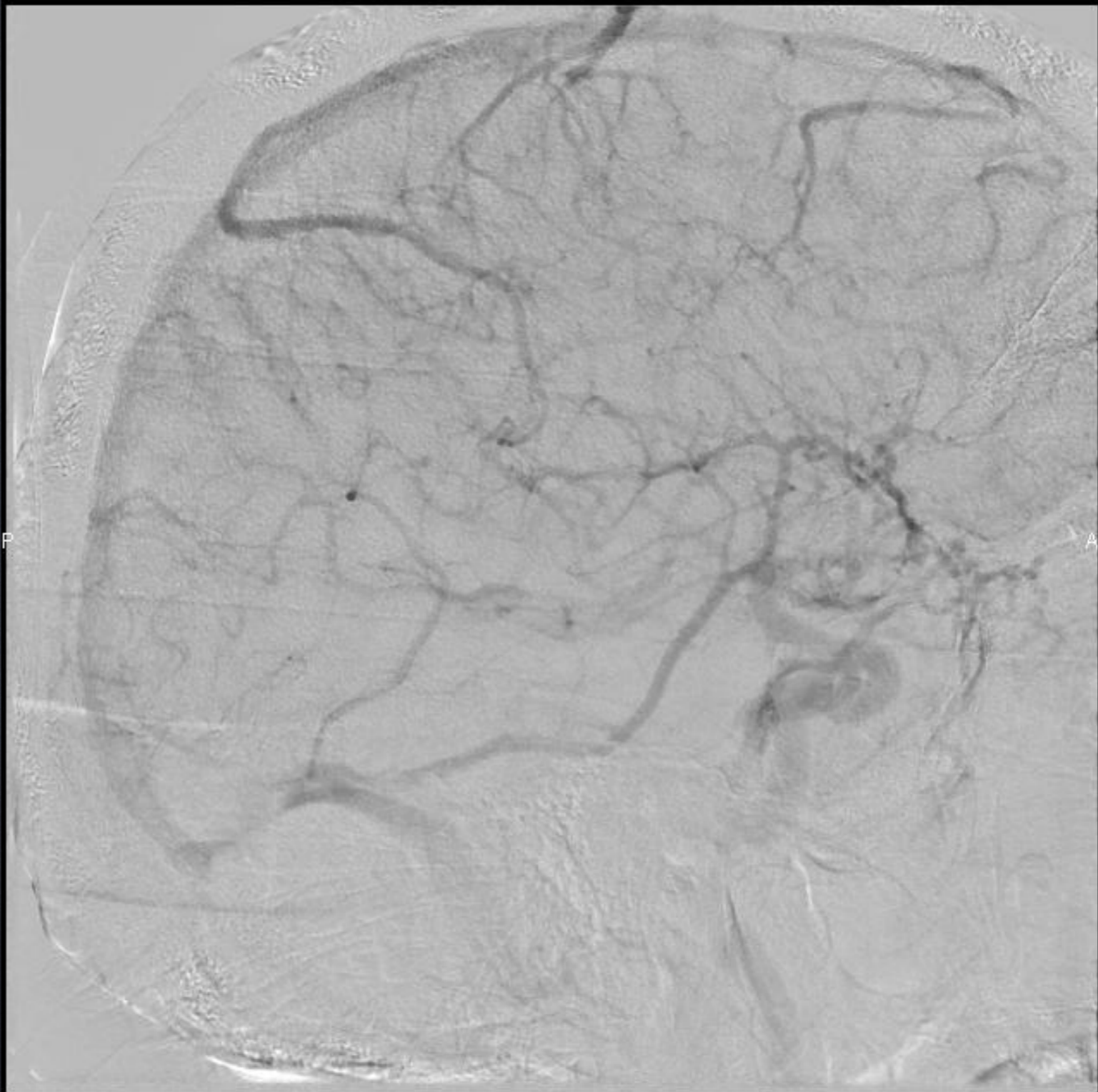


H



F

H

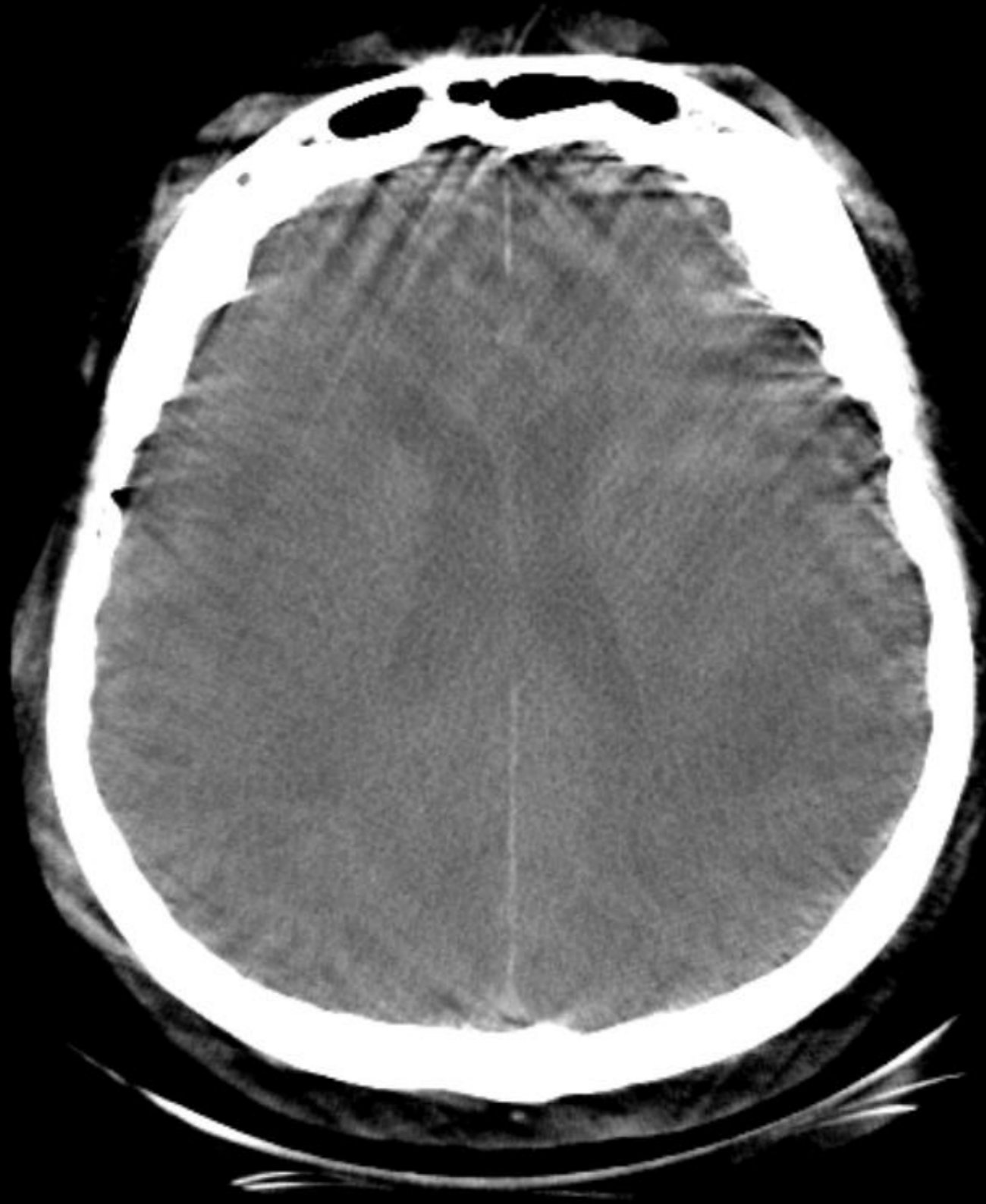


F

L P

R A

A



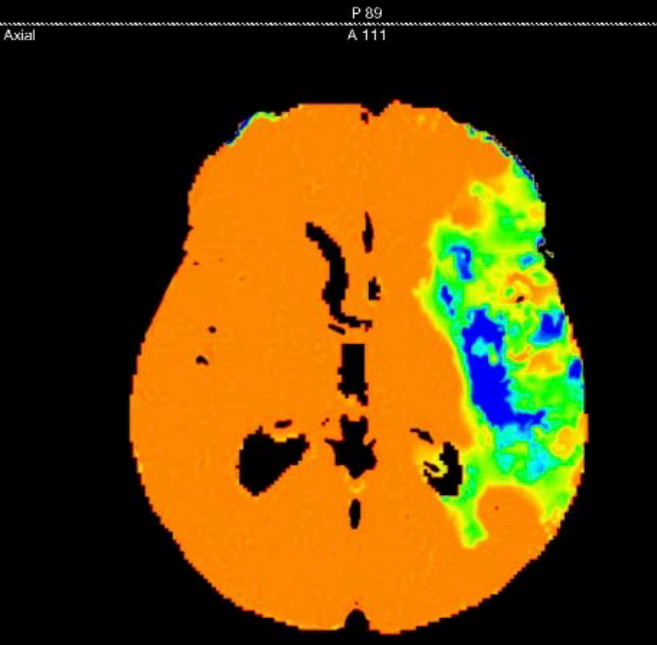
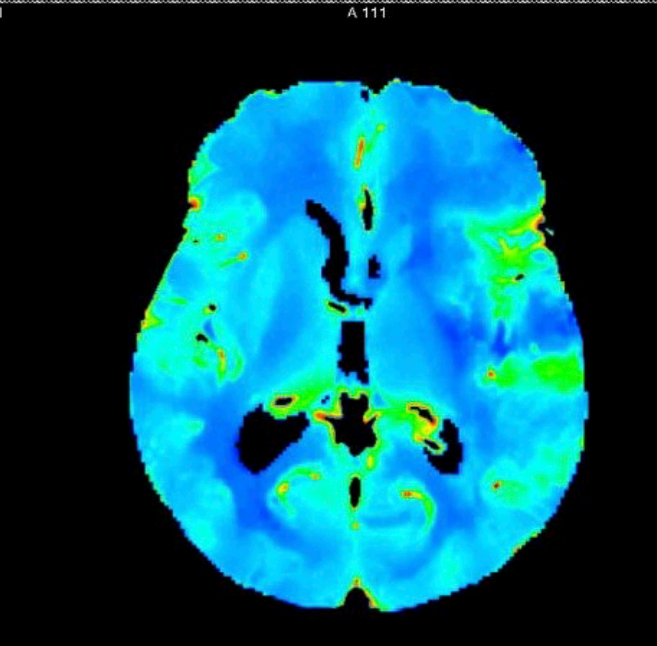
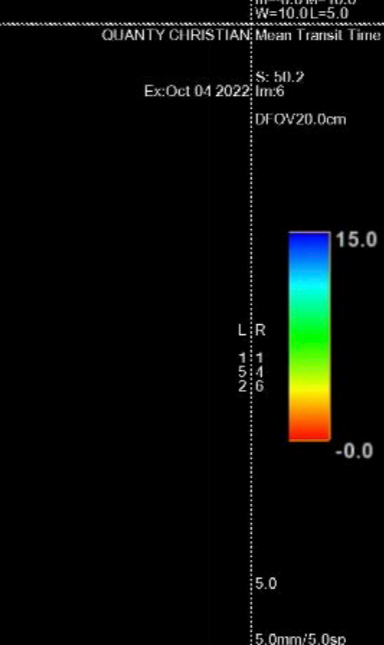
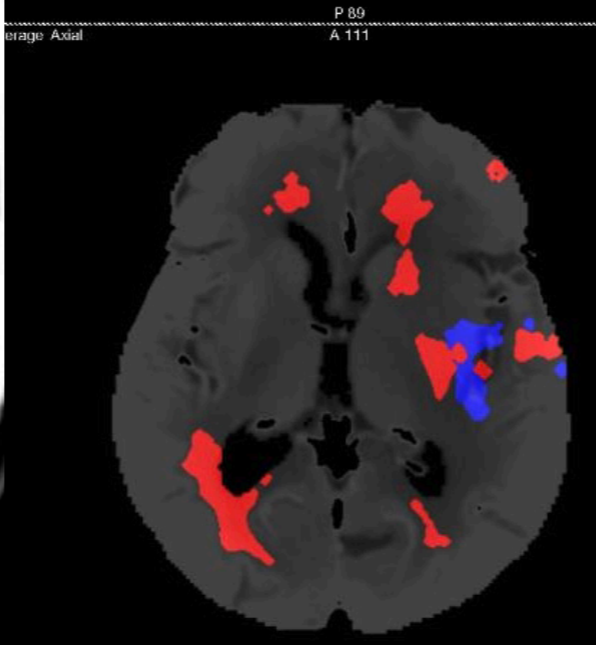
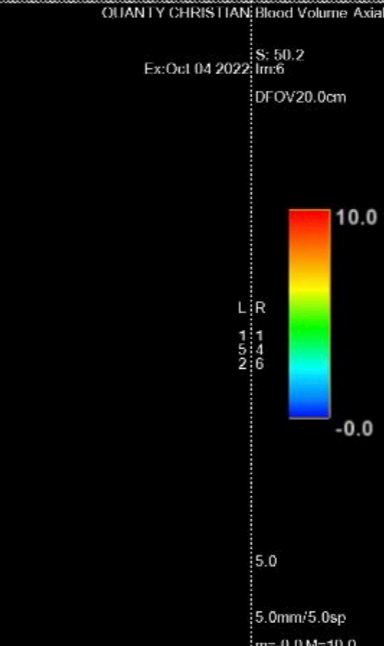
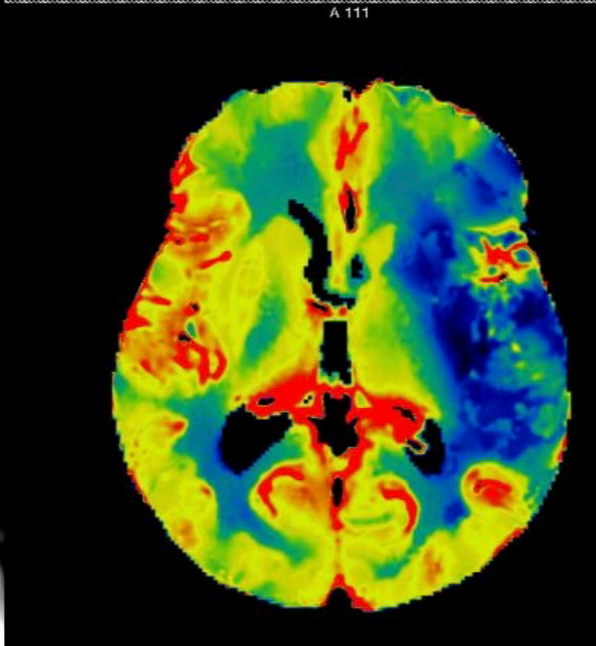
P

R

L

A

A



P

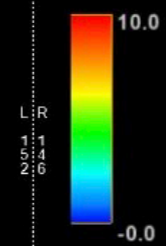
P

A 111

QUANTY CHRISTIAN Blood Volume Axial

A 111

S: 50.2  
Ex: Oct 04 2022  
Im: 6  
DFOV: 20.0cm



5.0  
5.0mm/5.0sp

m: -0.0 M: 10.0  
W: 10.0 L: 5.0

P 89

P 89

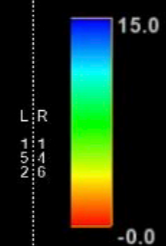
erage Axial

A 111

QUANTY CHRISTIAN Mean Transit Time Axial

A 111

S: 50.2  
Ex: Oct 04 2022  
Im: 6  
DFOV: 20.0cm



5.0  
5.0mm/5.0sp

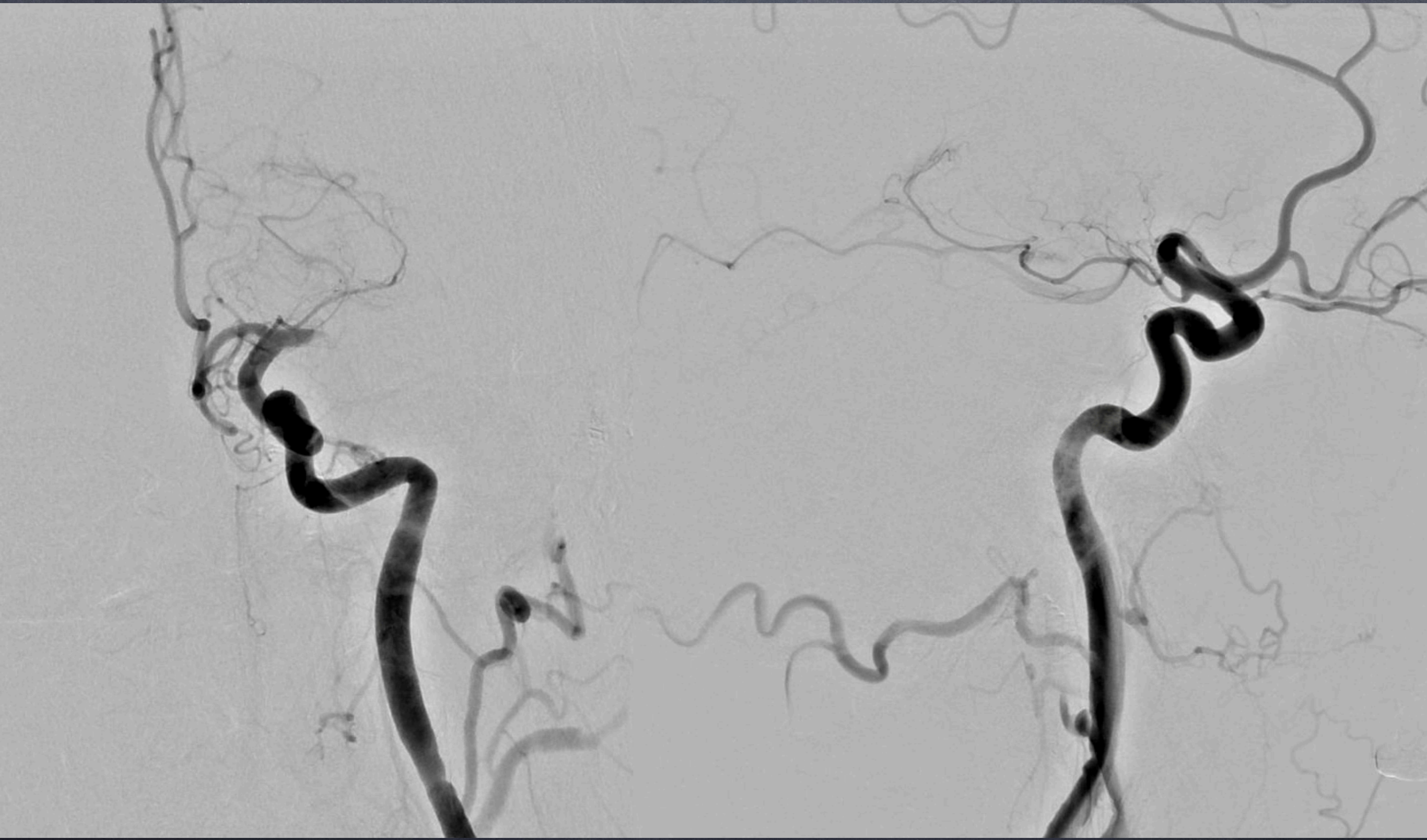
m: -0.0 M: 15.0  
W: 15.0 L: 7.5

P 89

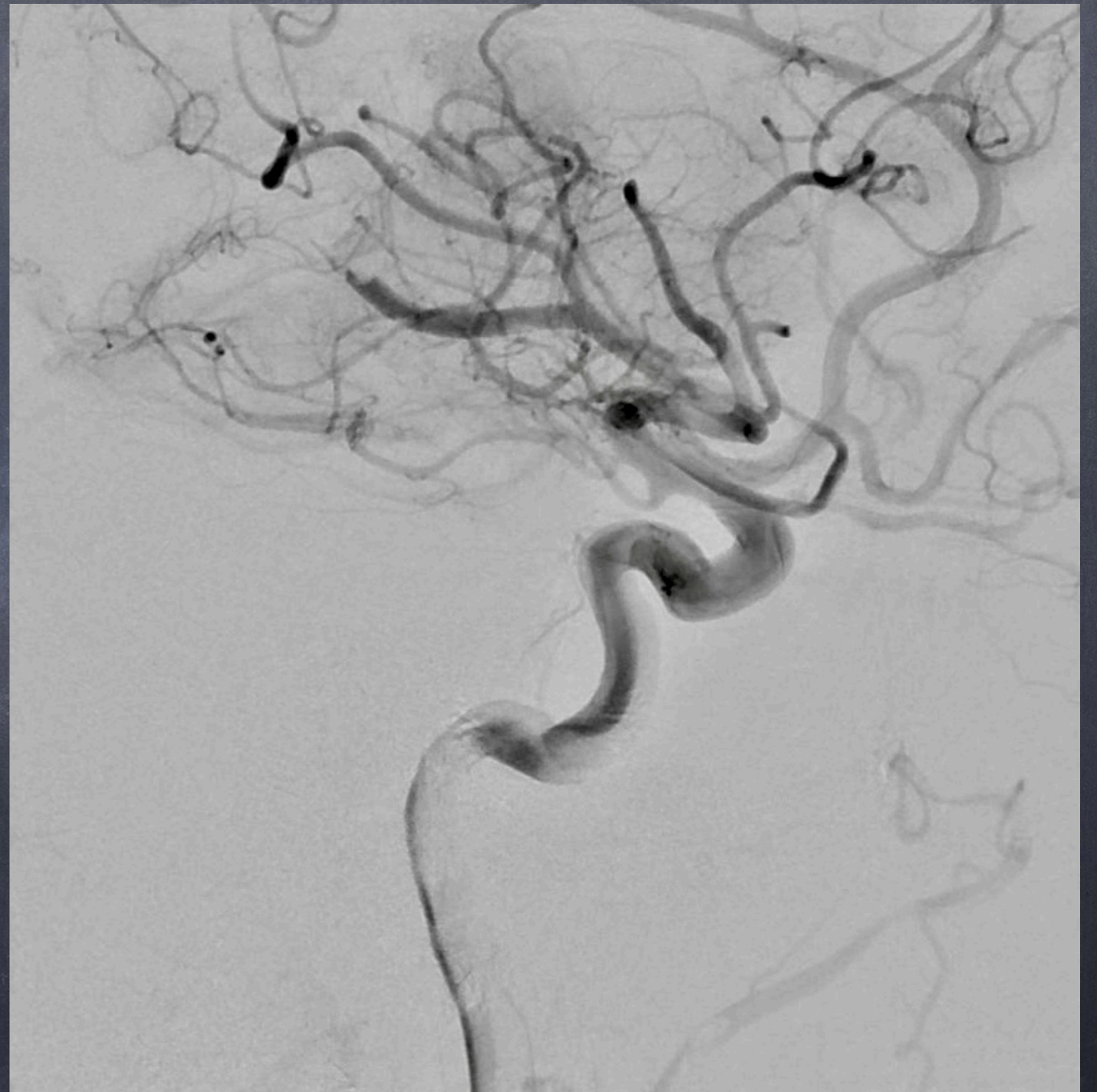
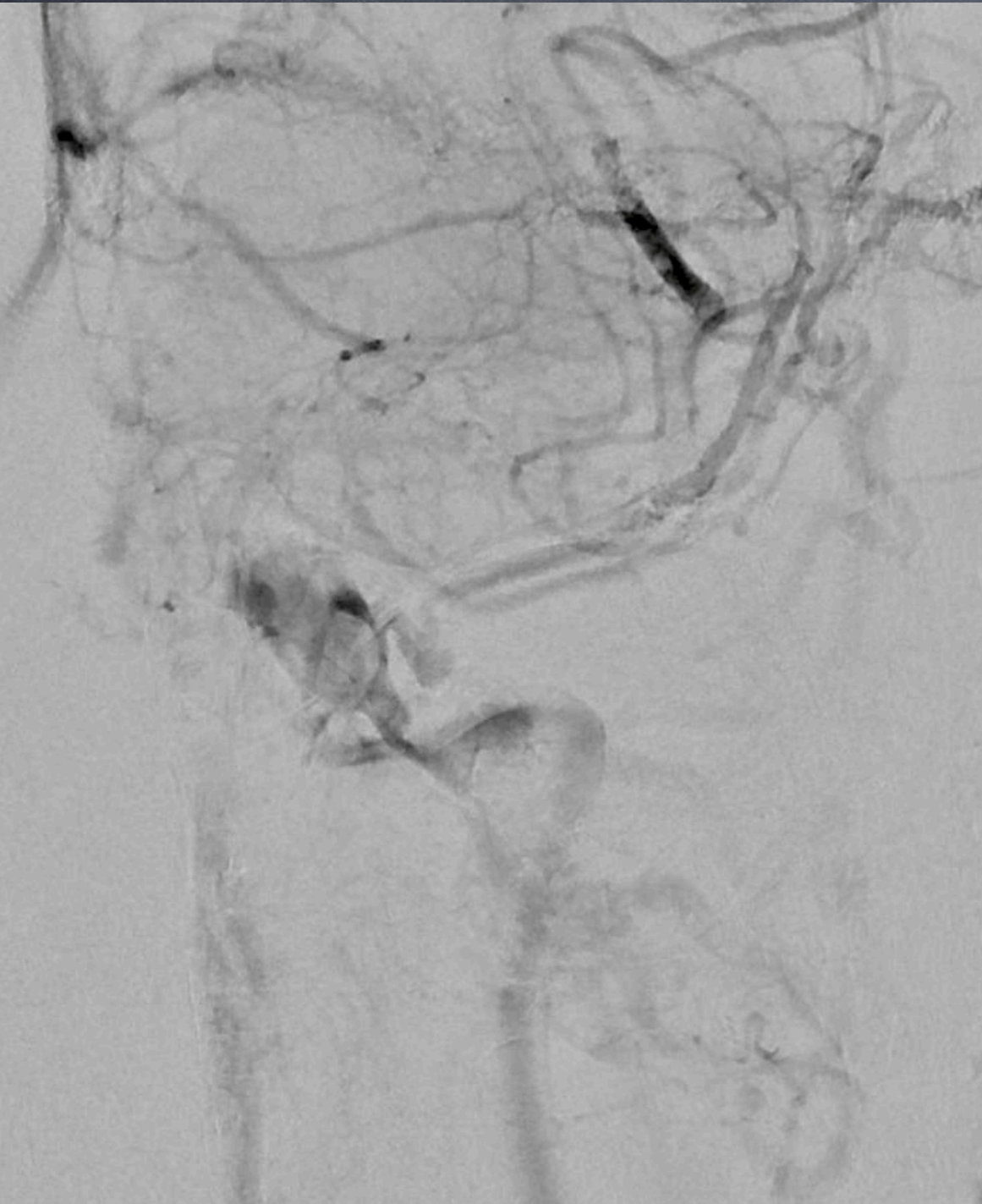
P 89

# 1er Passage



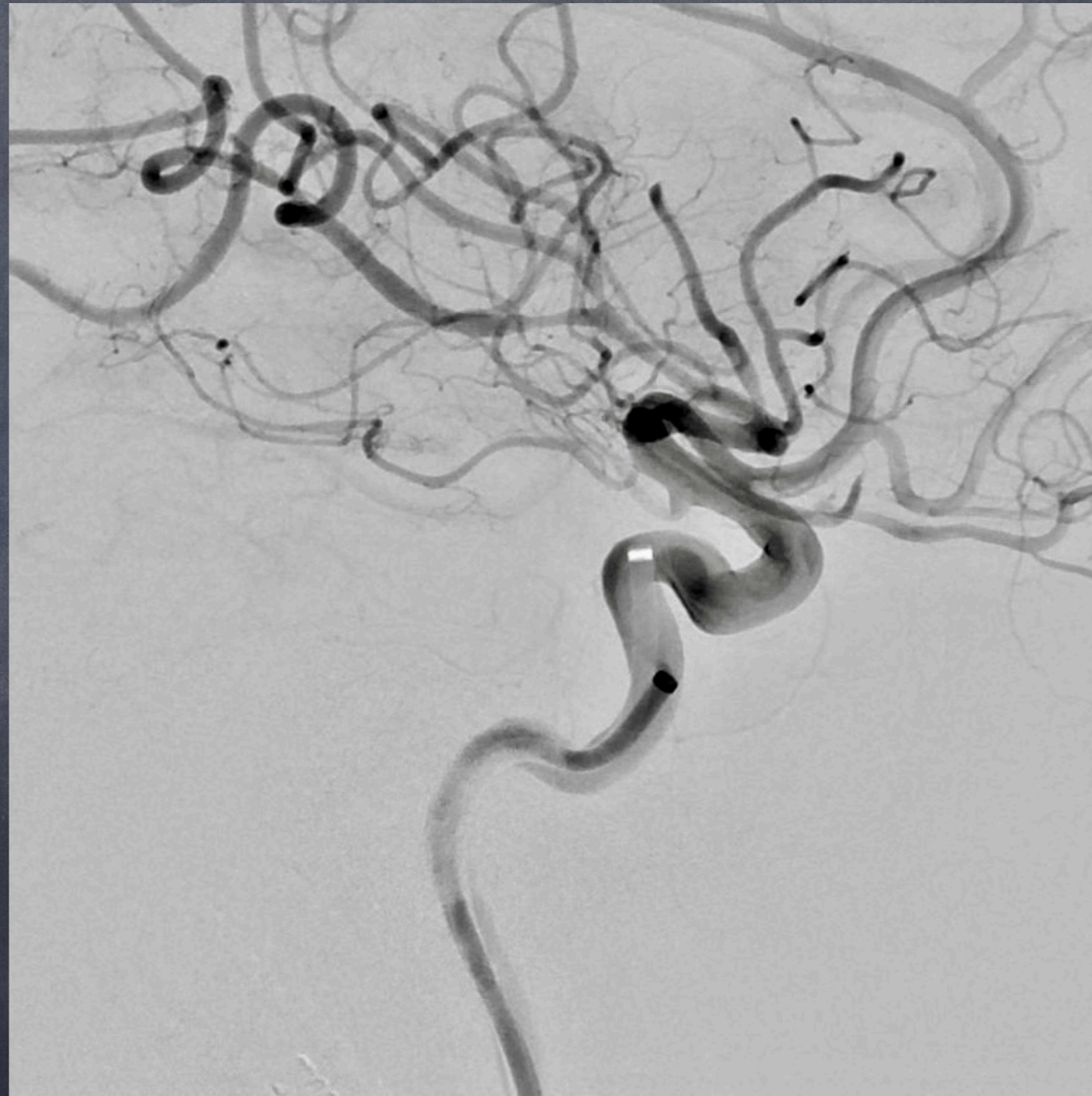


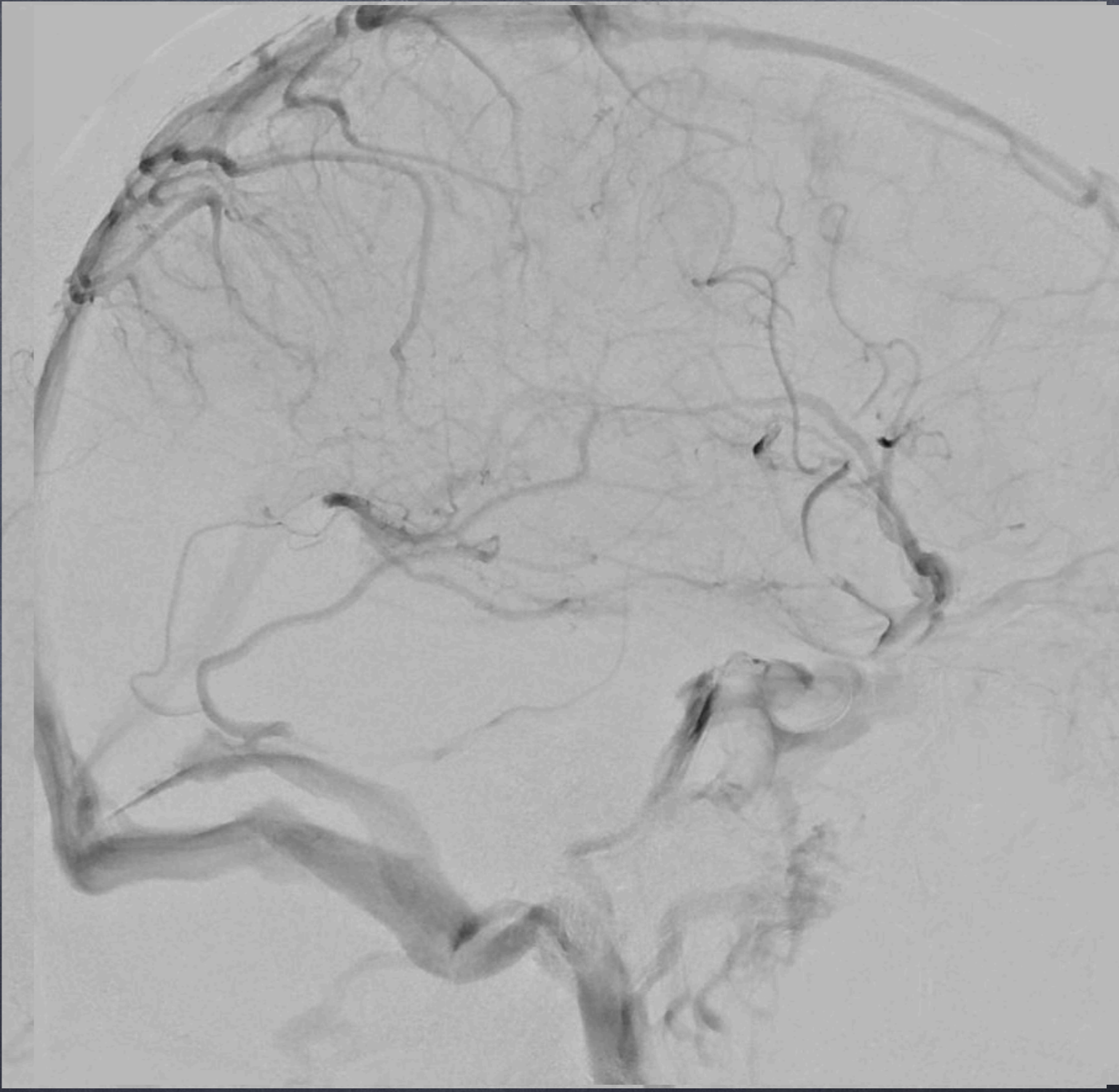
# 2ème Passage



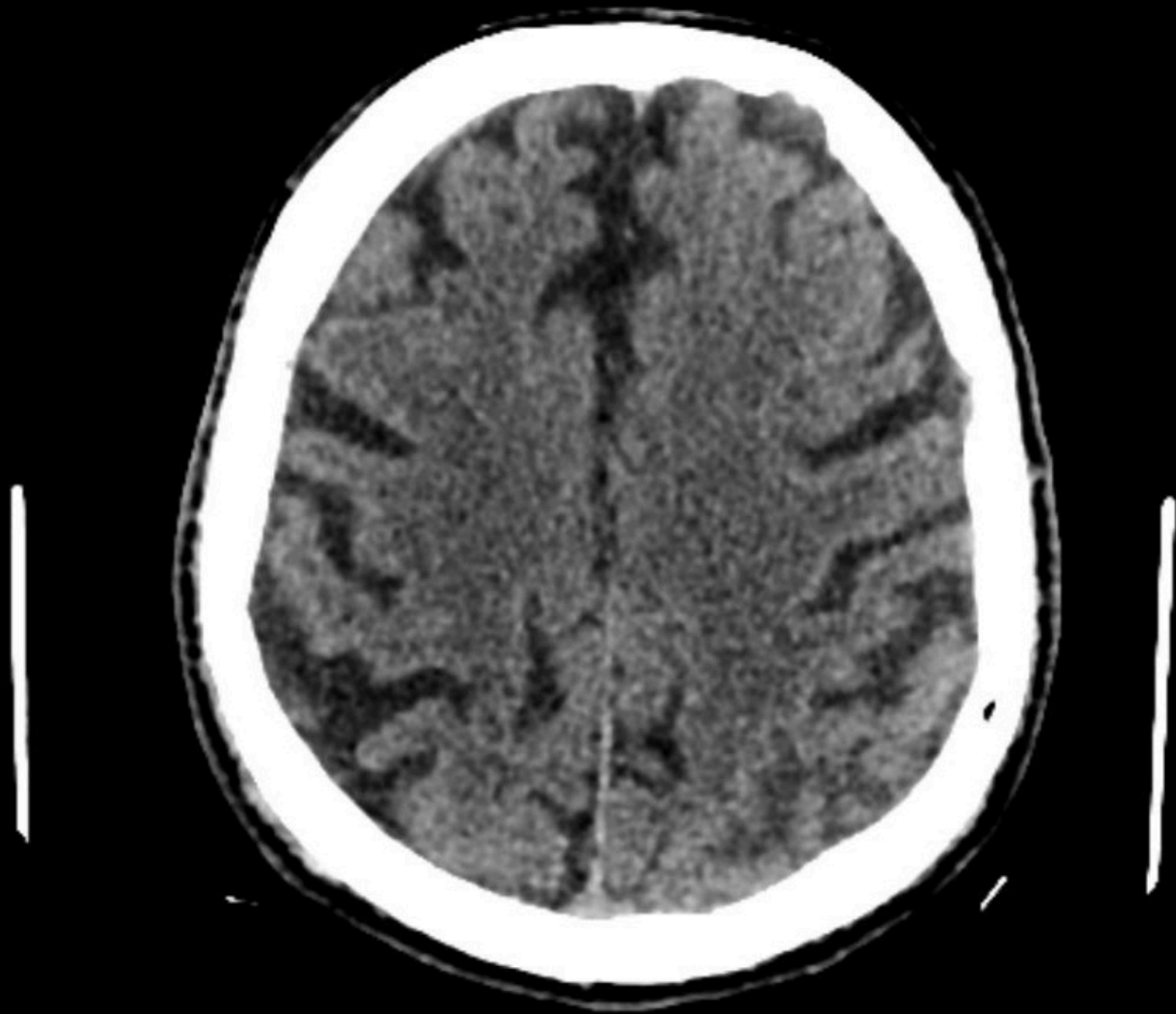


# 3ème Passage





A



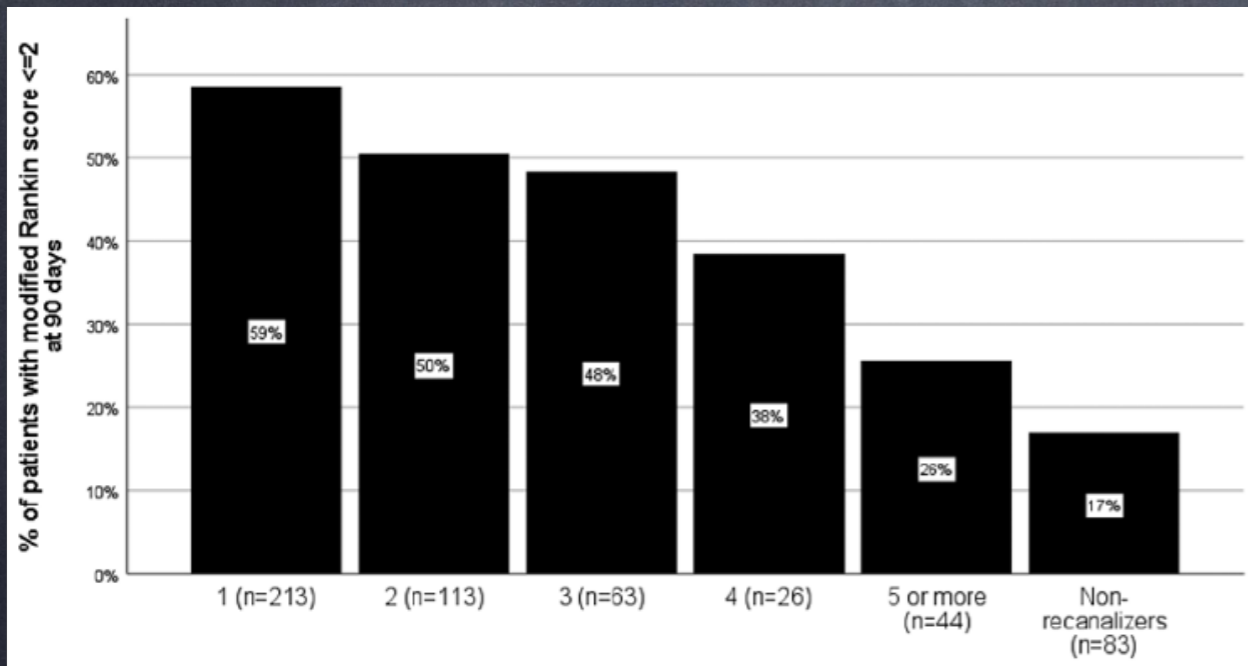
P

# When to Stop

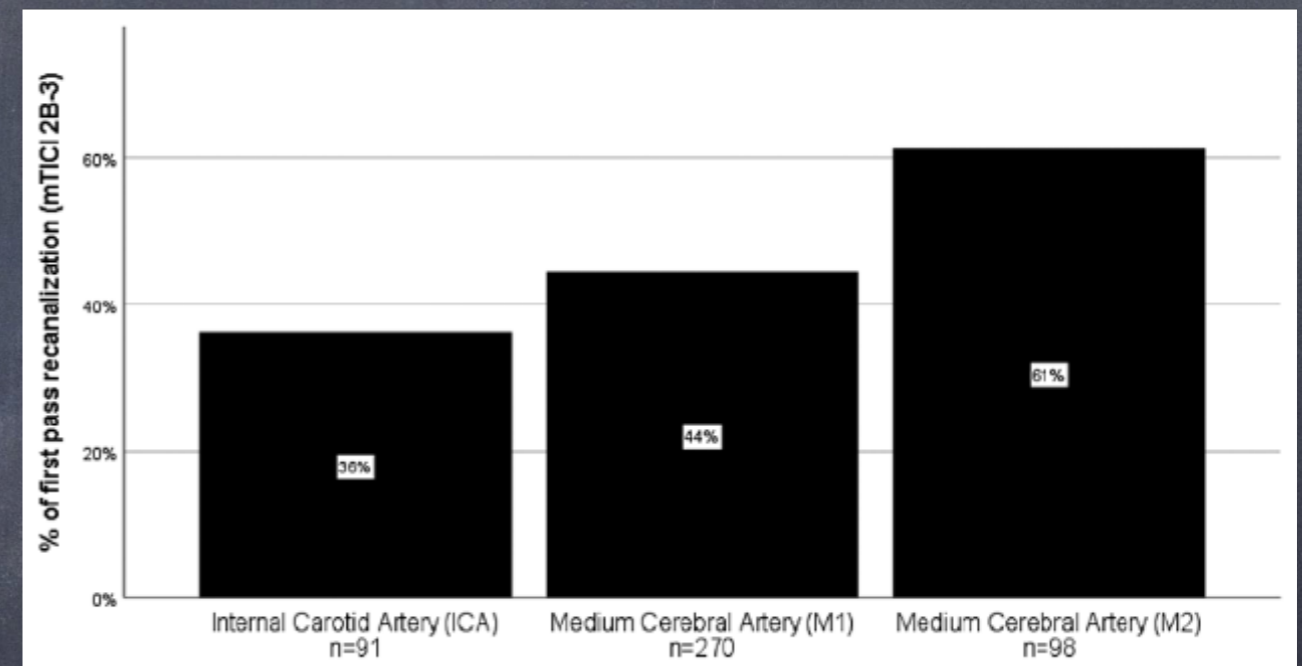
## Detrimental Effect of Device Passes in Acute Ischemic Stroke Secondary to Large Vessel Occlusion

García-Tornel, A et al. Stroke. 2019;50:00-00.

542 consecutive patients



Functional outcome at 90 d depending on number of passes.



First pass recanalization depending on occluded vessel

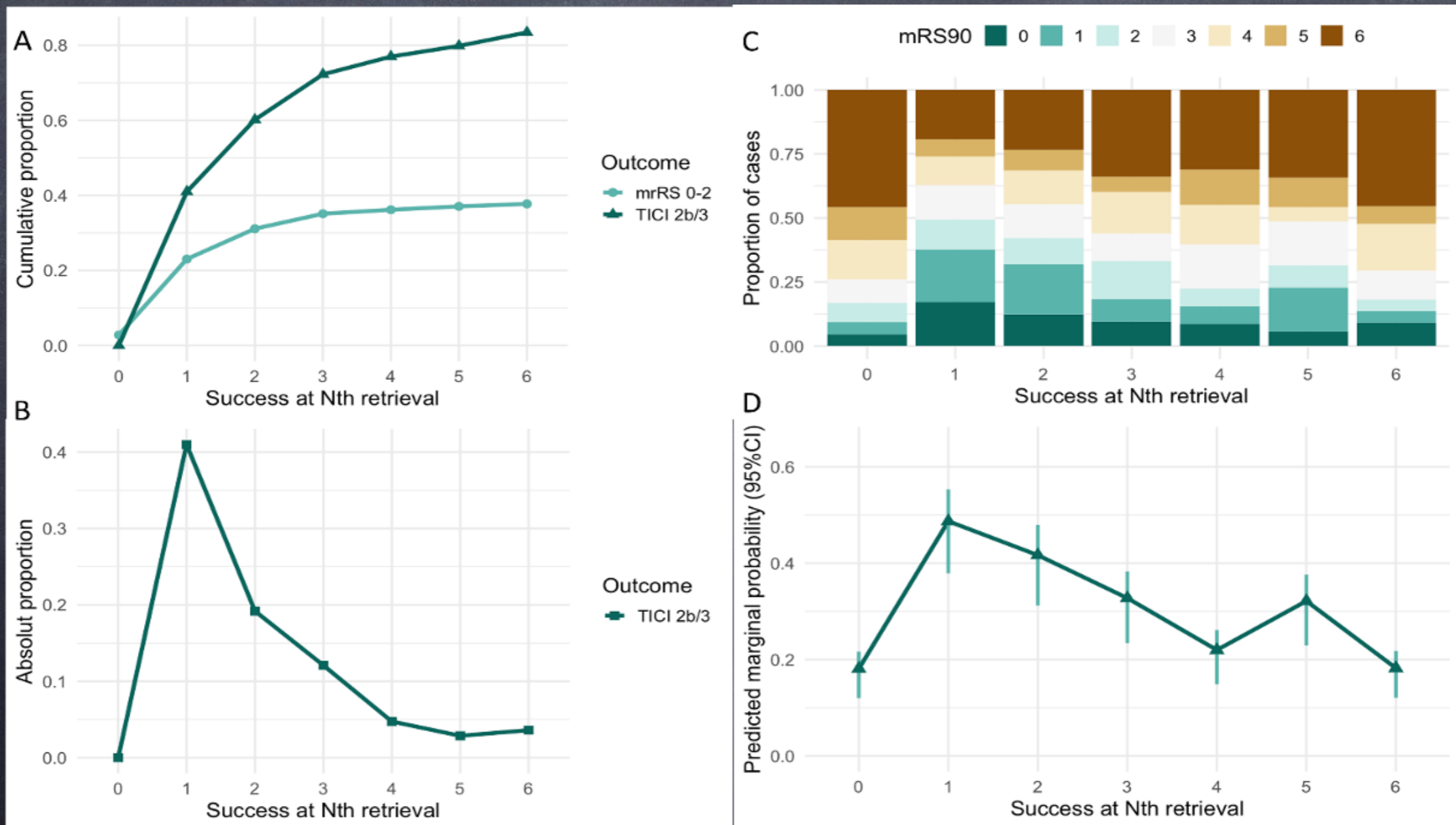
Patients with complete recanalization had worse outcomes for each device pass needed to achieve complete recanalization (P<0.01)

# Good Clinical Outcome Decreases With Number of Retrieval Attempts in Stroke Thrombectomy

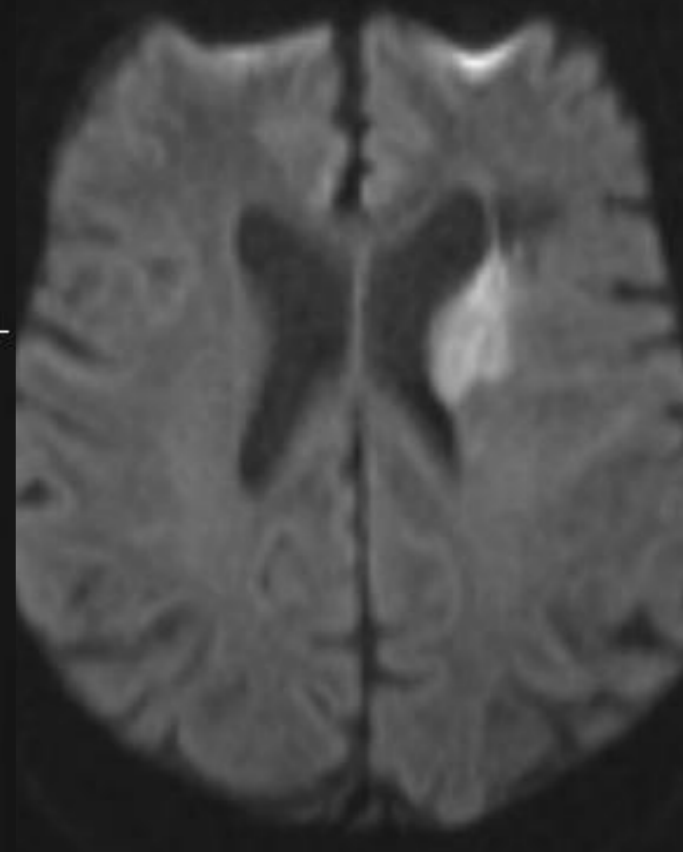
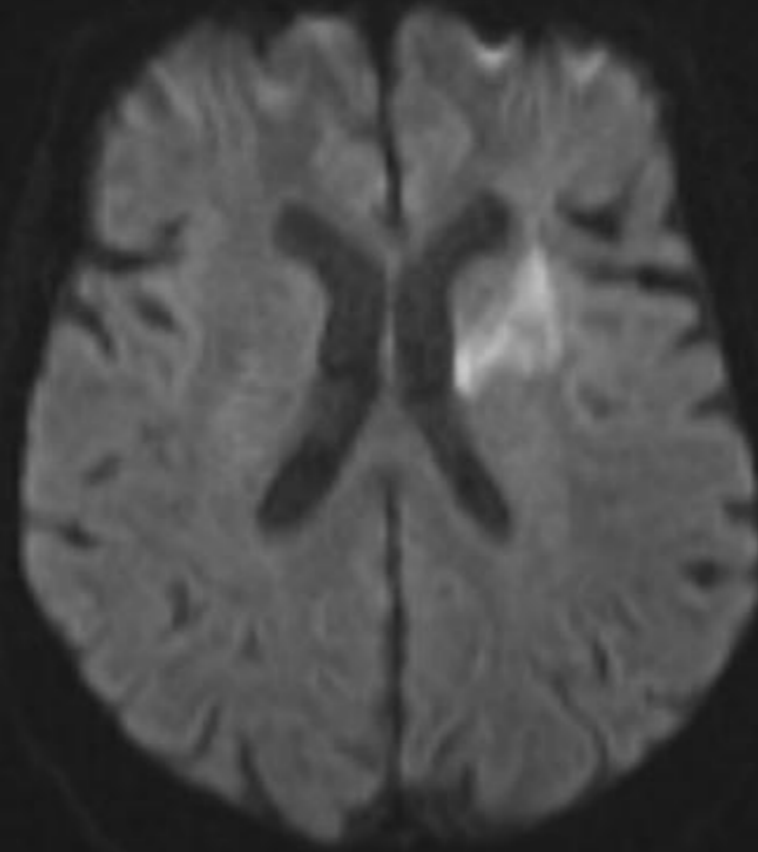
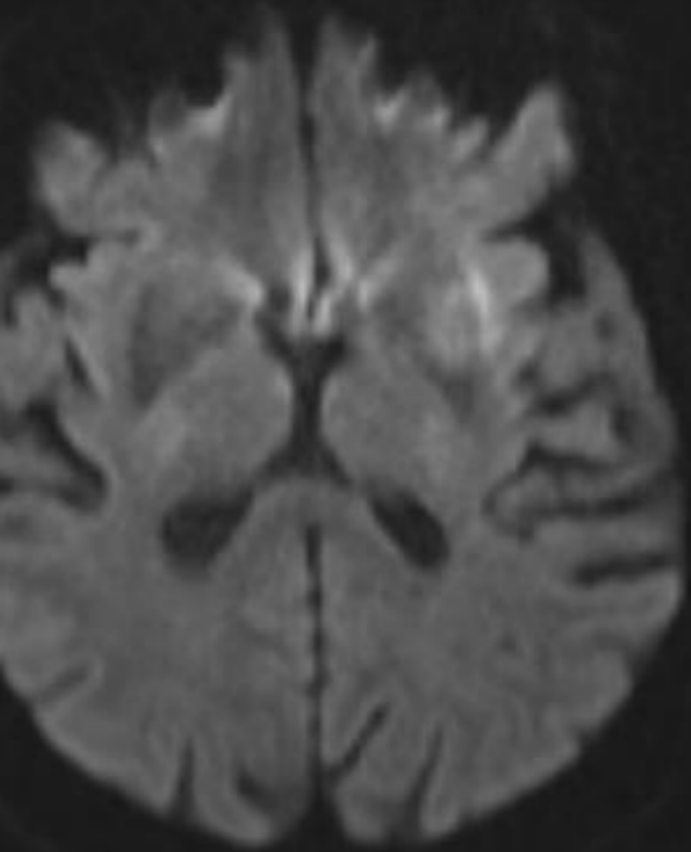
## Beyond the First-Pass Effect

Fabian Flottmann<sup>1</sup>, MD; Caspar Brekenfeld, MD; Gabriel Broocks<sup>2</sup>, MD; Hannes Leischner, MD, PhD; Rosalie McDonough, MD; Tobias D. Faizy<sup>3</sup>, MD; Milani Deb-Chatterji, MD; Anna Alegiani<sup>4</sup>, MD; Götz Thomalla, MD; Anastasios Mpotsaris<sup>5</sup>, MD; Christian H. Nolte<sup>6</sup>, MD; Jens Fiehler, MD; Máté E. Maros<sup>7</sup>, MD, MSc; for the GSR investigators\*

Stroke. 2021 Jan;52(2):482-490



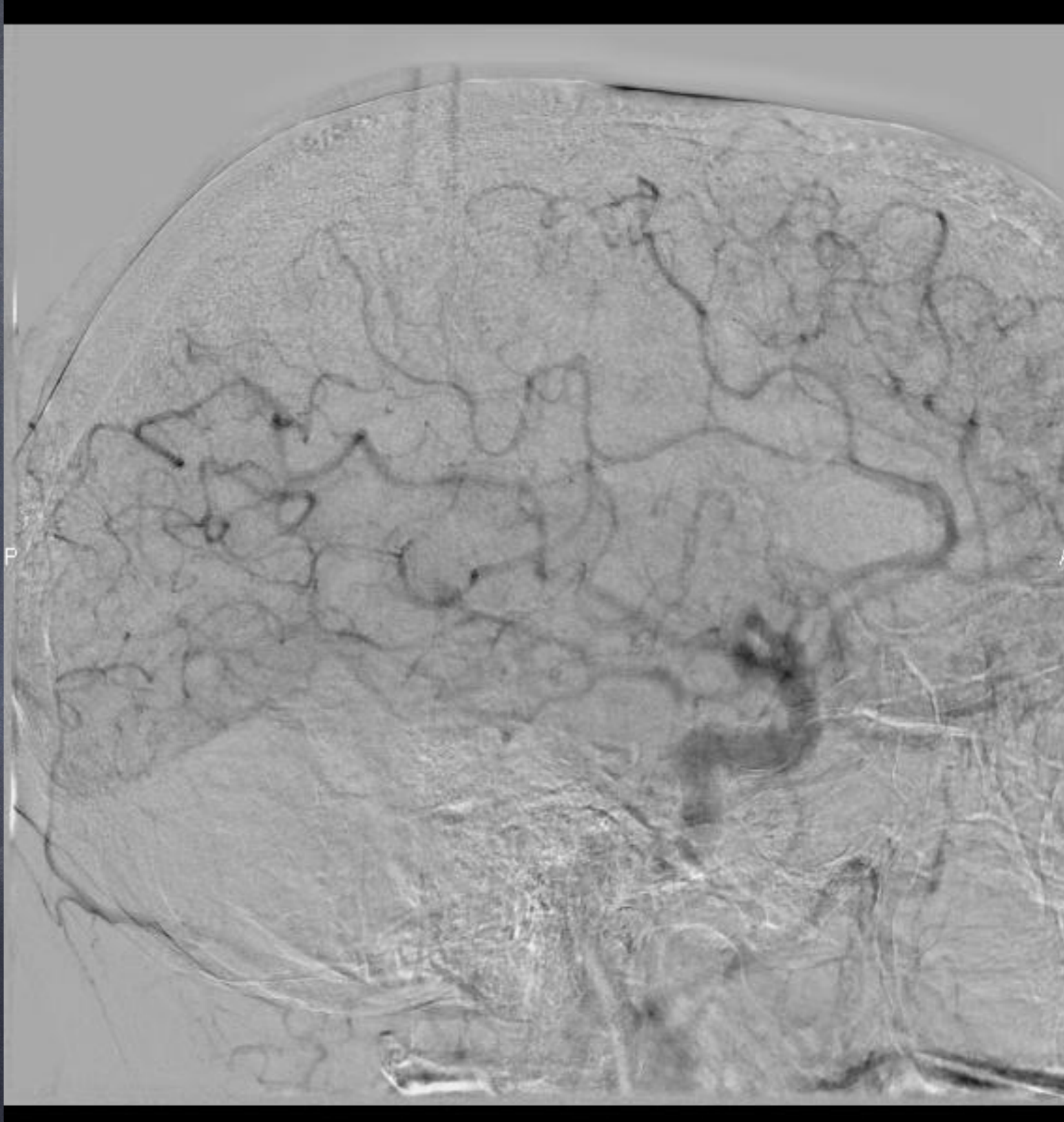
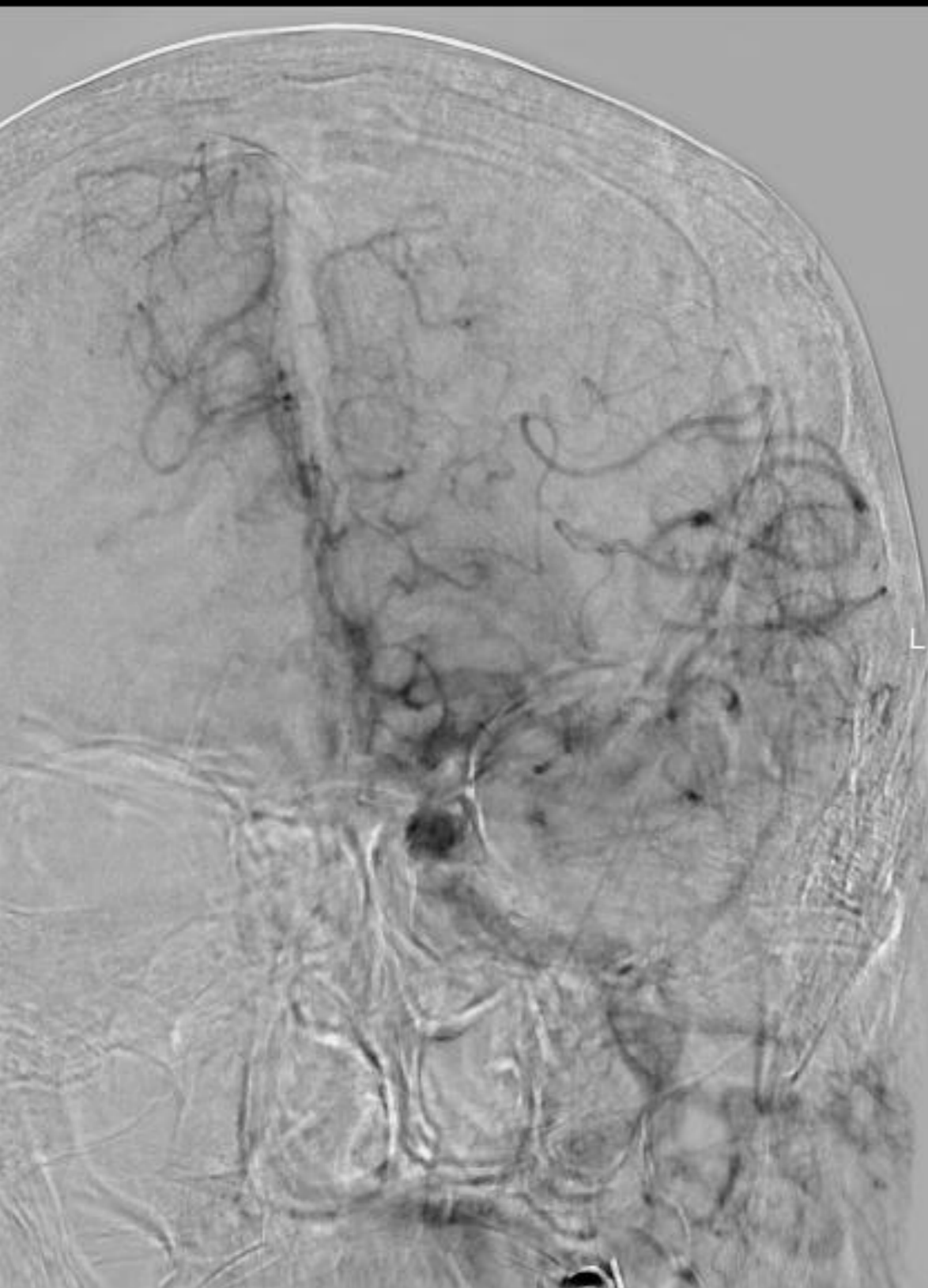
# Migration



P

P

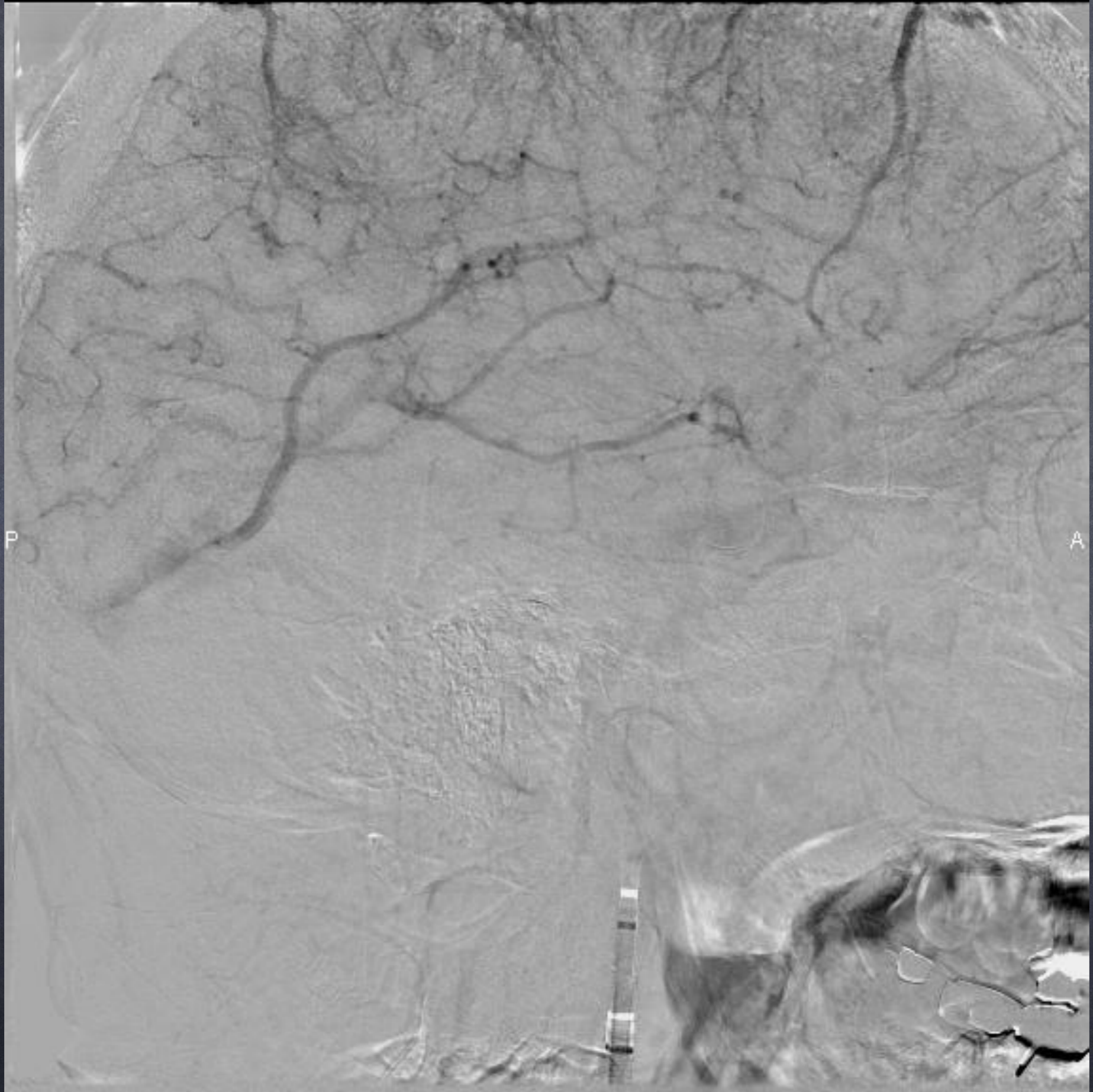
P



Merci 9F  
Sofia+  
Trevo 4

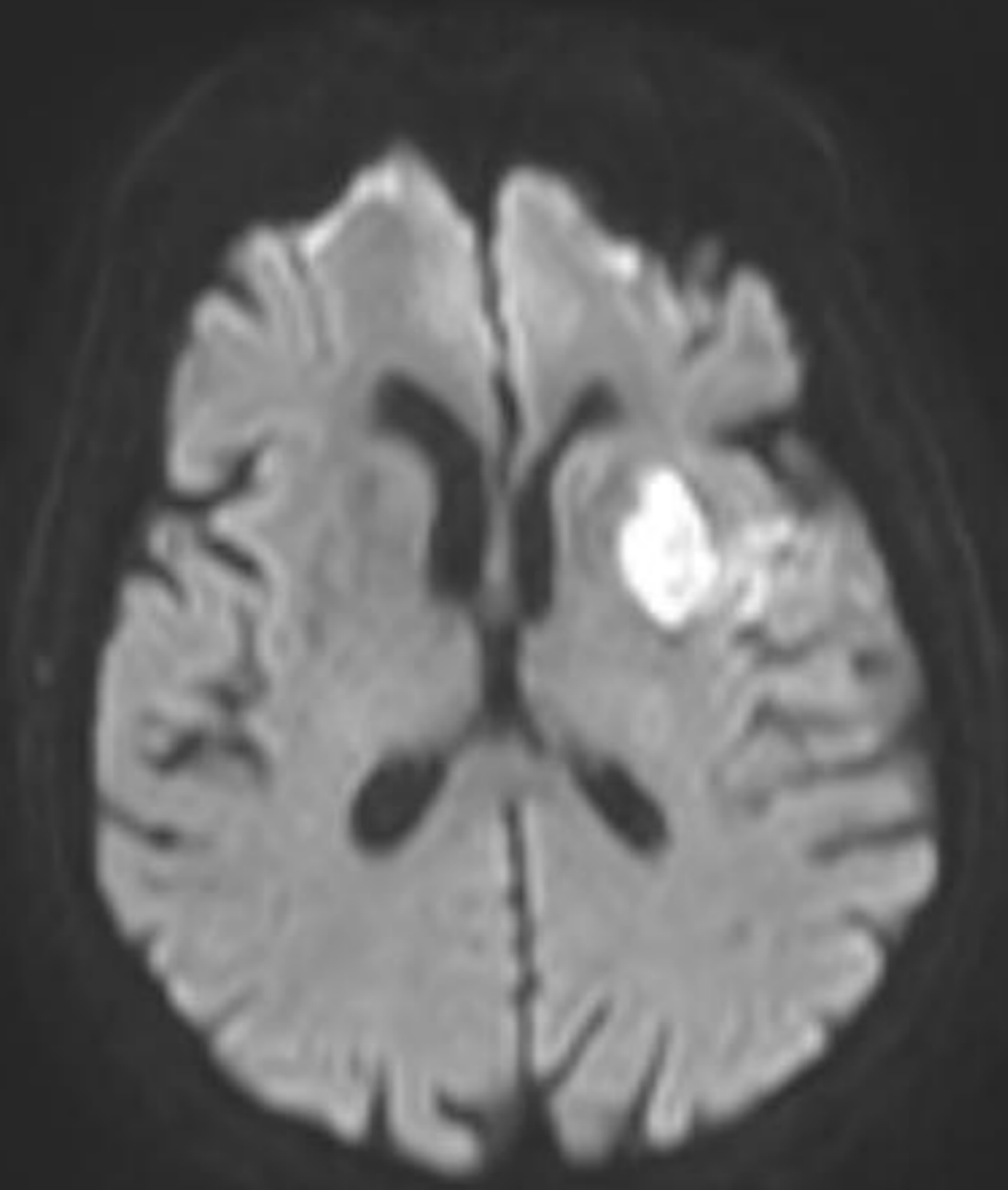






NIHSS 2  
9

R



L

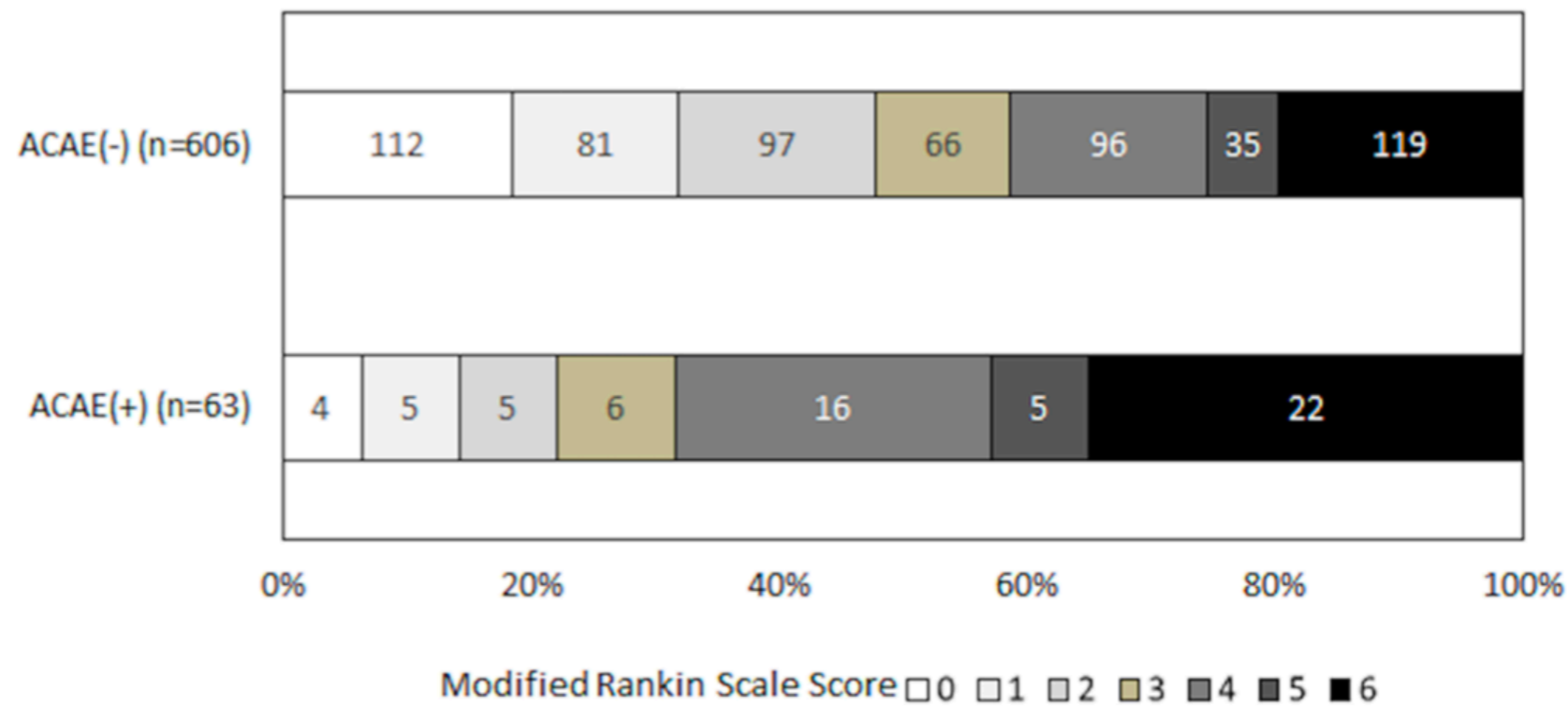
## ORIGINAL RESEARCH

# Anterior cerebral artery embolism during thrombectomy increases disability and mortality

Vanessa Chalumeau,<sup>1</sup> Raphaël Blanc,<sup>1</sup> Hocine Redjem,<sup>1</sup> Gabriele Ciccio,<sup>1</sup> Stanislas Smajda,<sup>1</sup> Jean-Philippe Desilles,<sup>1</sup> Daniele Botta,<sup>1</sup> Simon Escalard,<sup>1</sup> William Boisseau,<sup>1</sup> Benjamin Maïer,<sup>1</sup> Julien Labreuche,<sup>2</sup> Mickaël Obadia,<sup>3</sup> Michel Piotin,<sup>1</sup> Mikael Mazighi<sup>1,4,5,6</sup>

- 700 patients AVC circ. antérieur
- Incidence globale de 9,4%
- Tandem (19%), T carot (15%), M1 (5%)
- Aspiration seule (6%), stent seul (14%)
- Pas de difference si catheter à ballon

90-mRs



- Réduction de moitié des résultats favorables
- Double de complications hémorragiques et taux de mortalité
- Même si recanalisation, moins bons résultats cliniques à 90 jours

# Dissection / Vasospasme

- ⊙ Pendant la navigation
- ⊙ Patient jeune
- ⊙ Traumatisme stent retriever

A

H



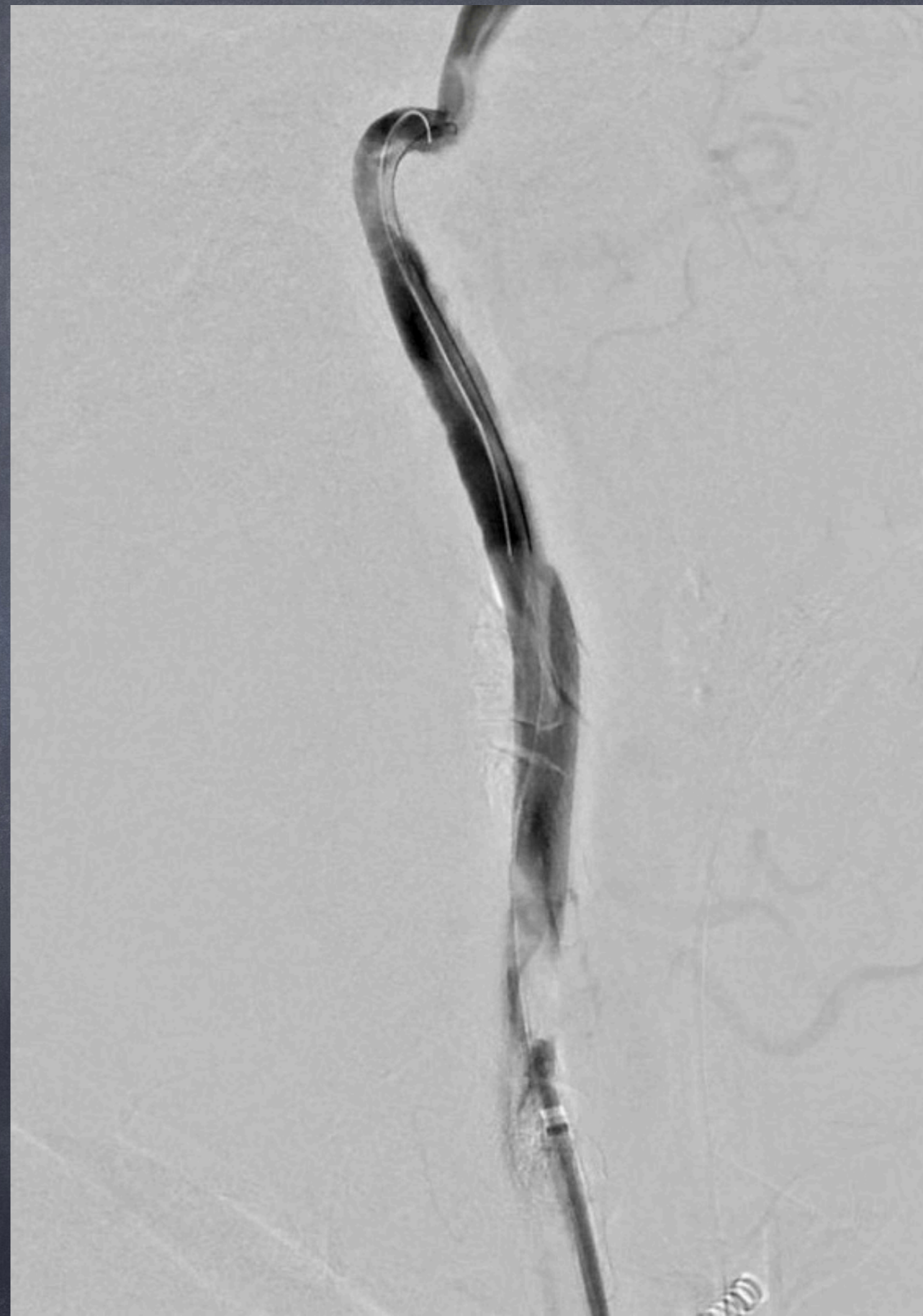
F

P

H

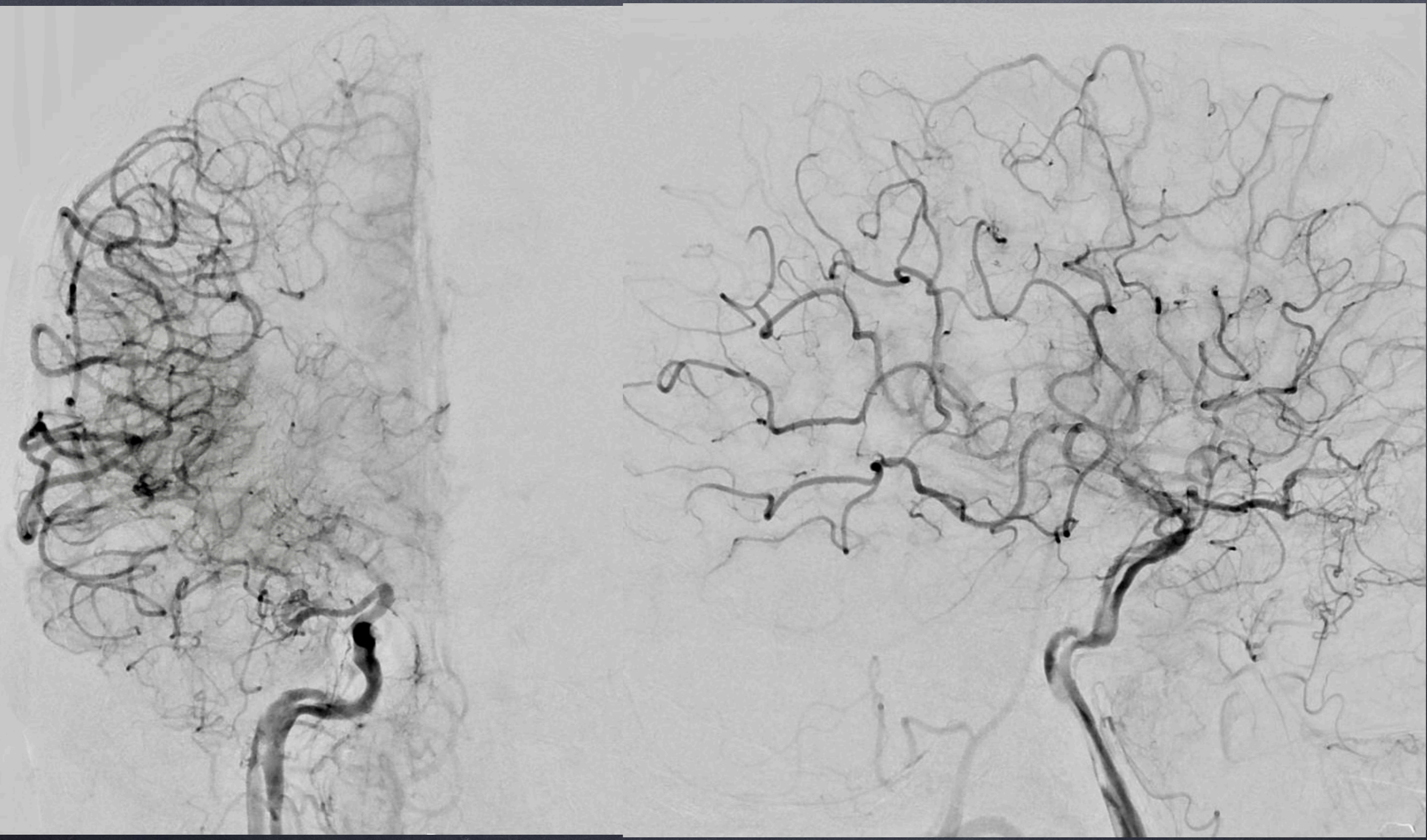


F

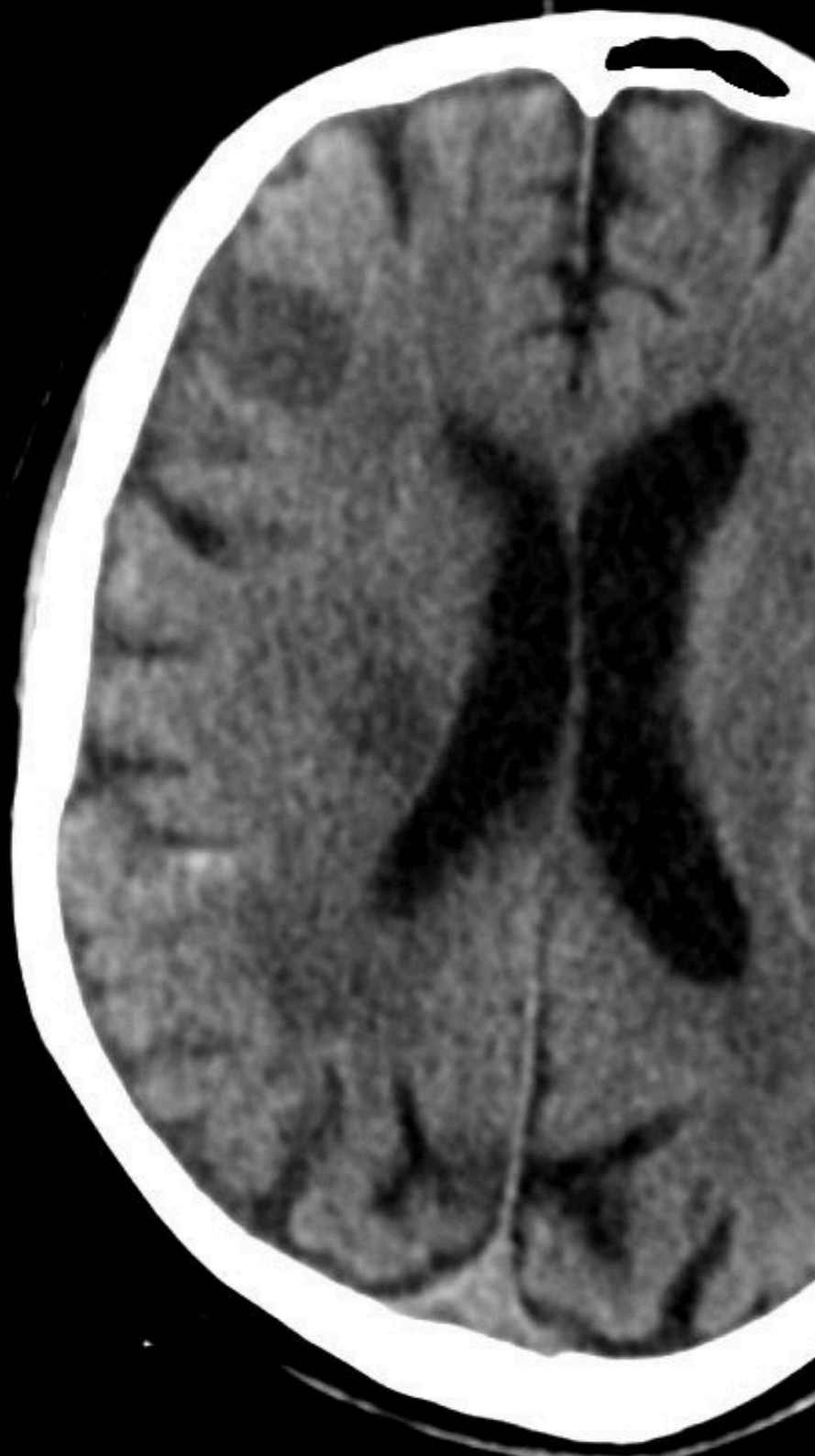






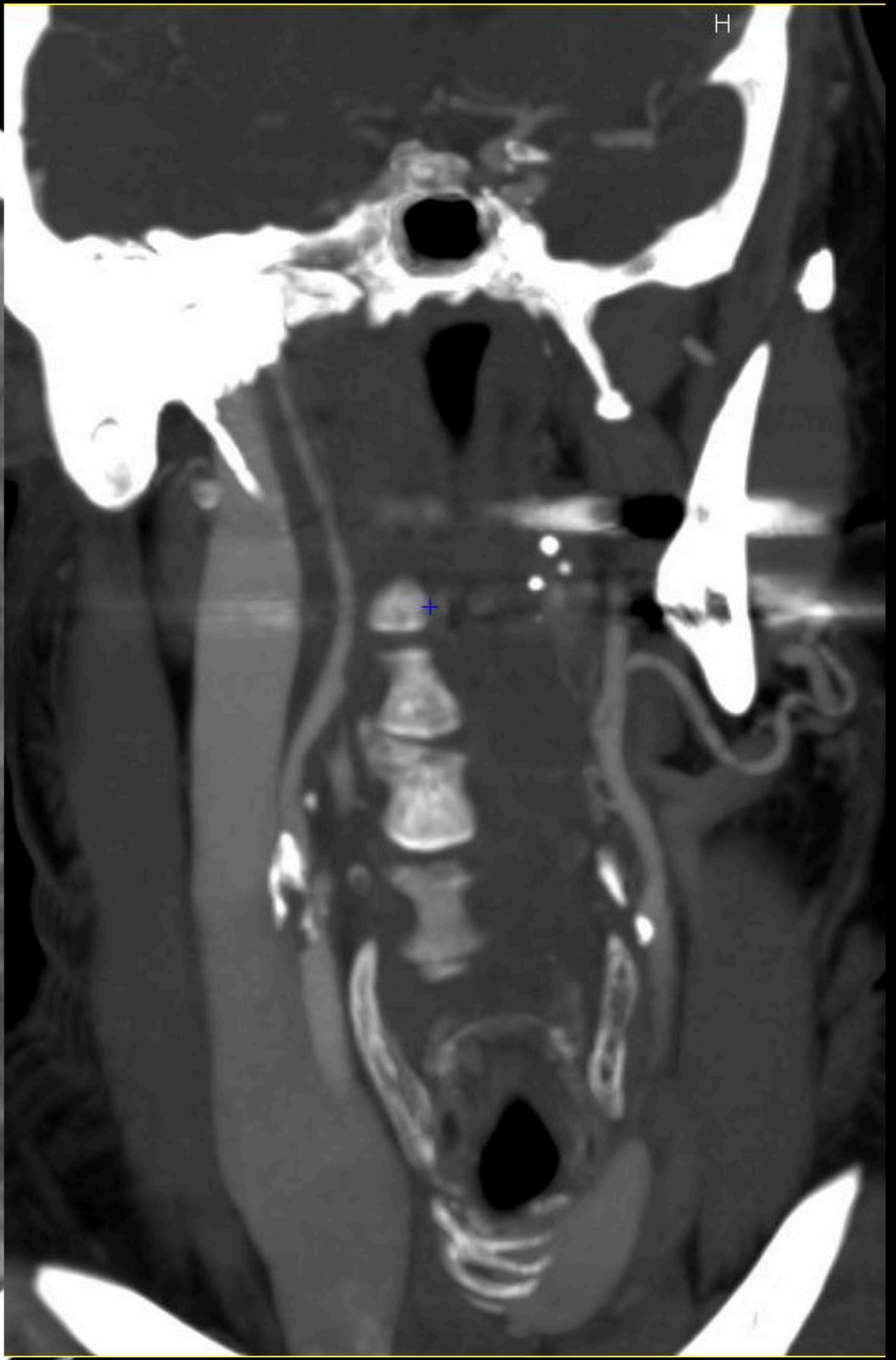


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Dissection

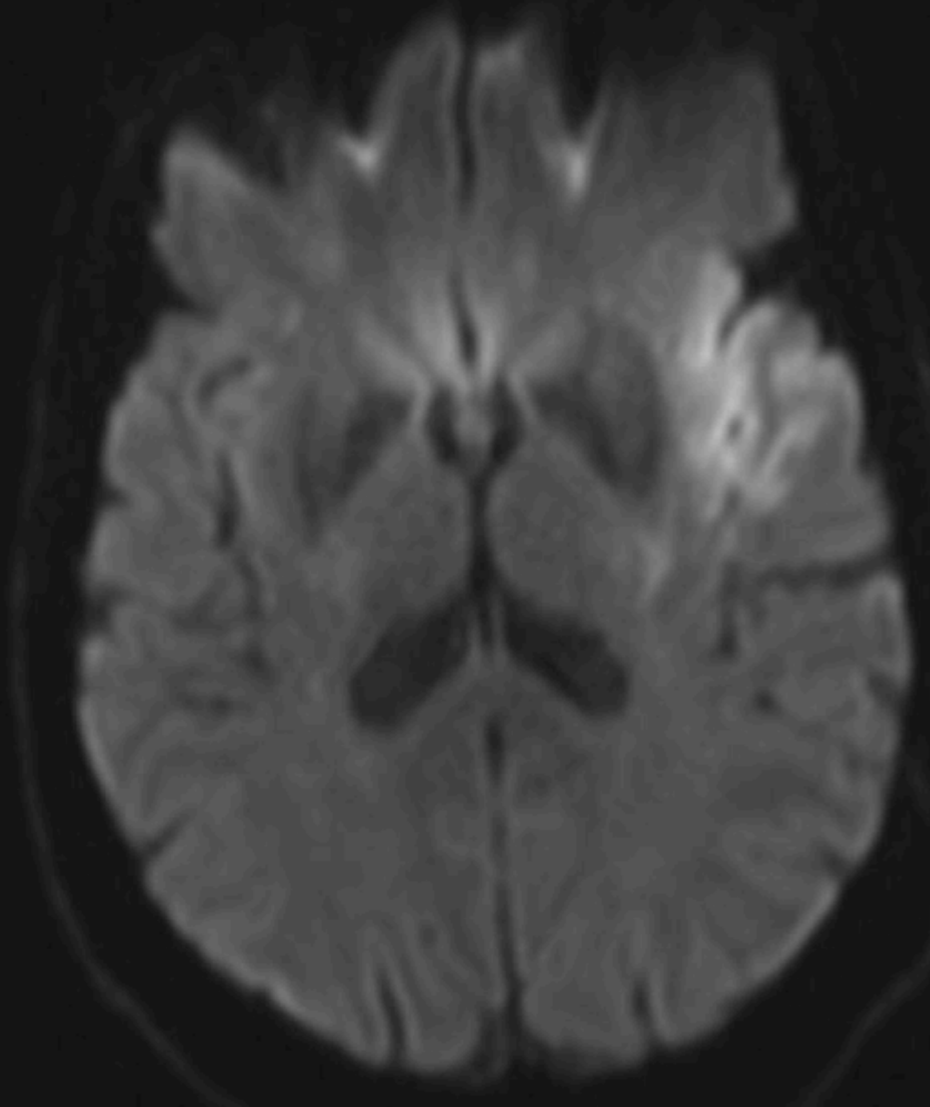
Low  
Recurrence  
Risk

Thrombectomy  
+  
Medical Therapy

Carotid Stent if Willis  
non functional or  
severe stenosis

- Stent x pas stent
- Très peu d'étude, critère d'exclusion
- Toujours regarder les autres axes
- S'en assurer d'être dans la vraie lumière

A

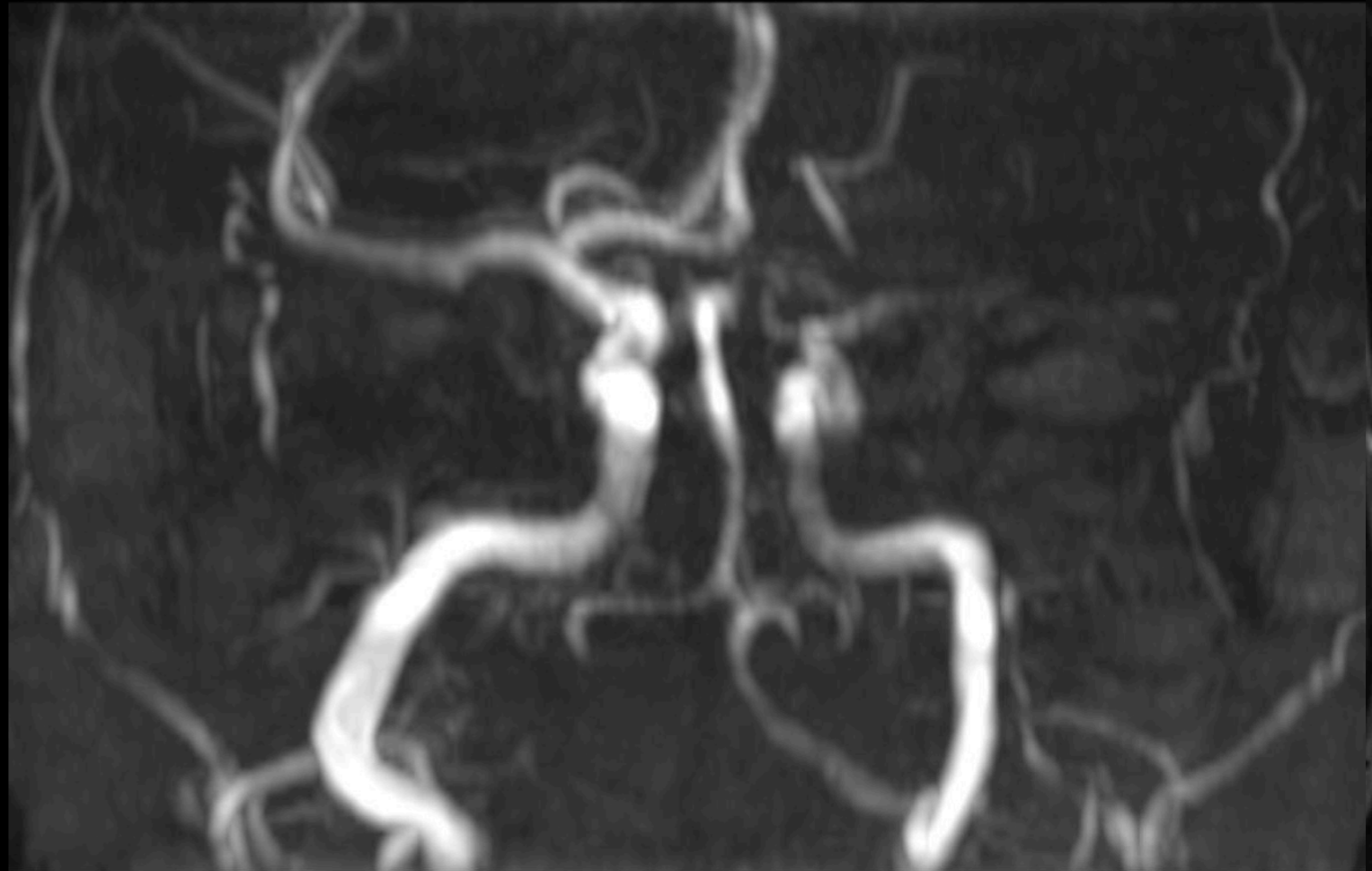


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A



H

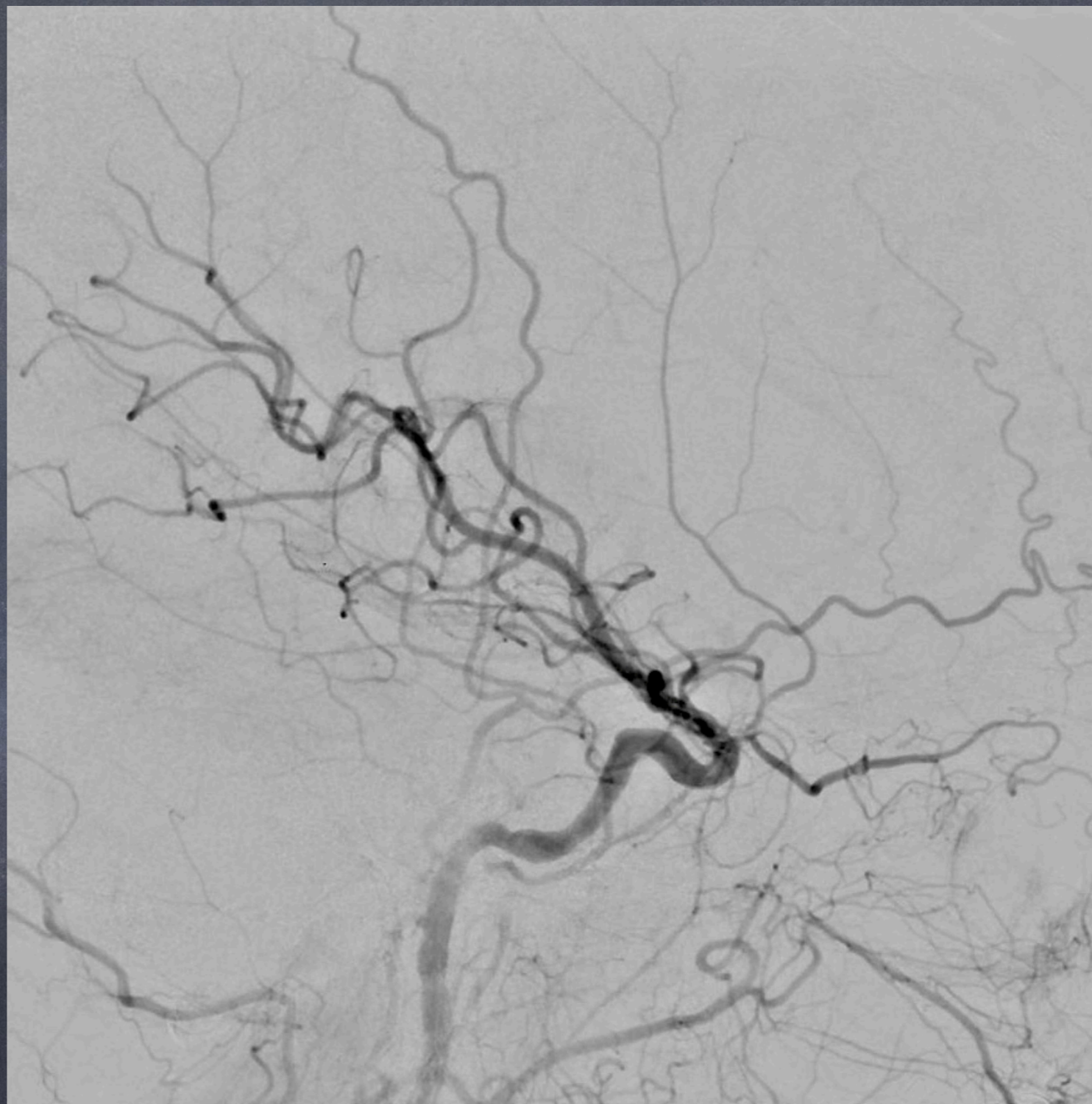
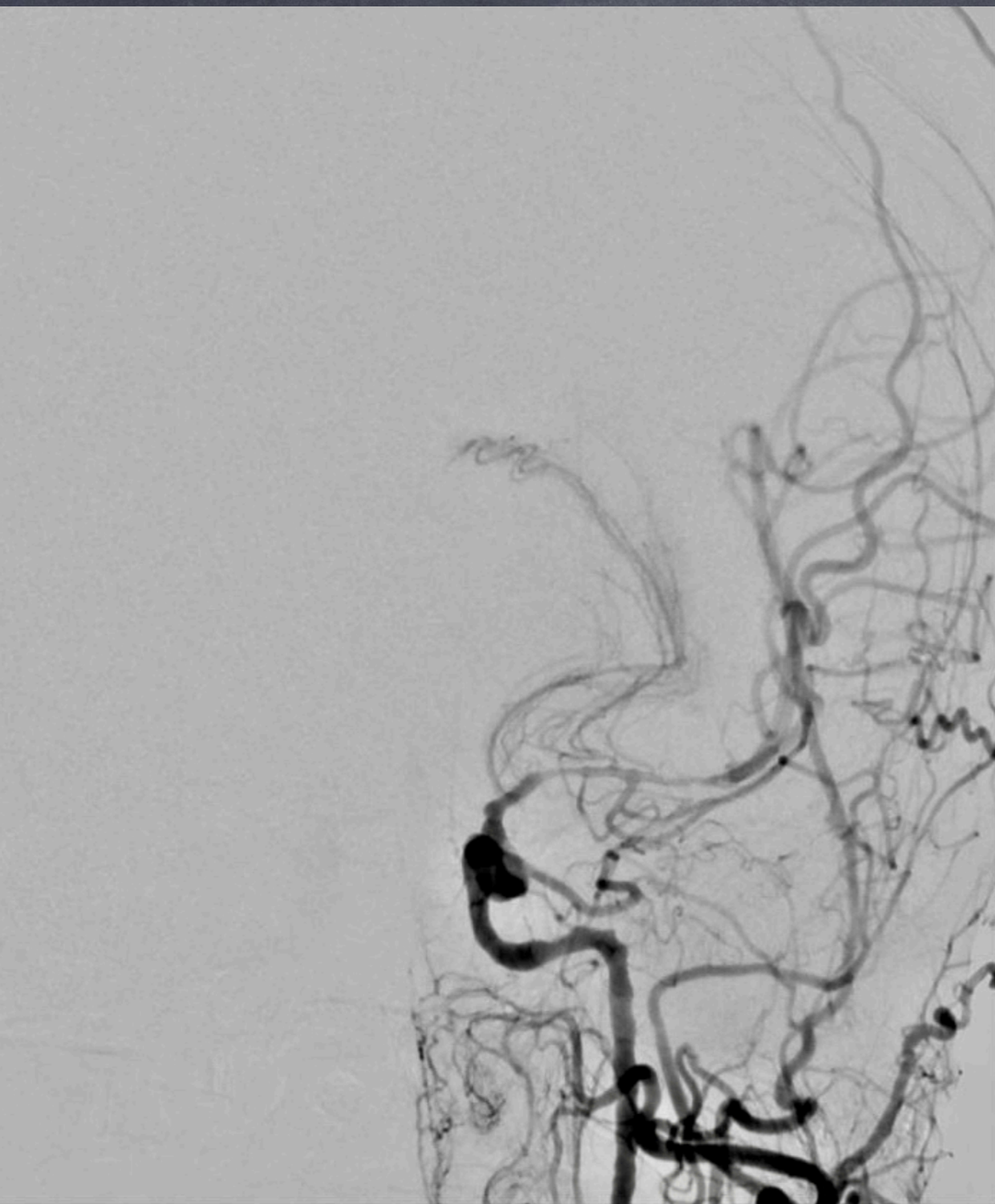


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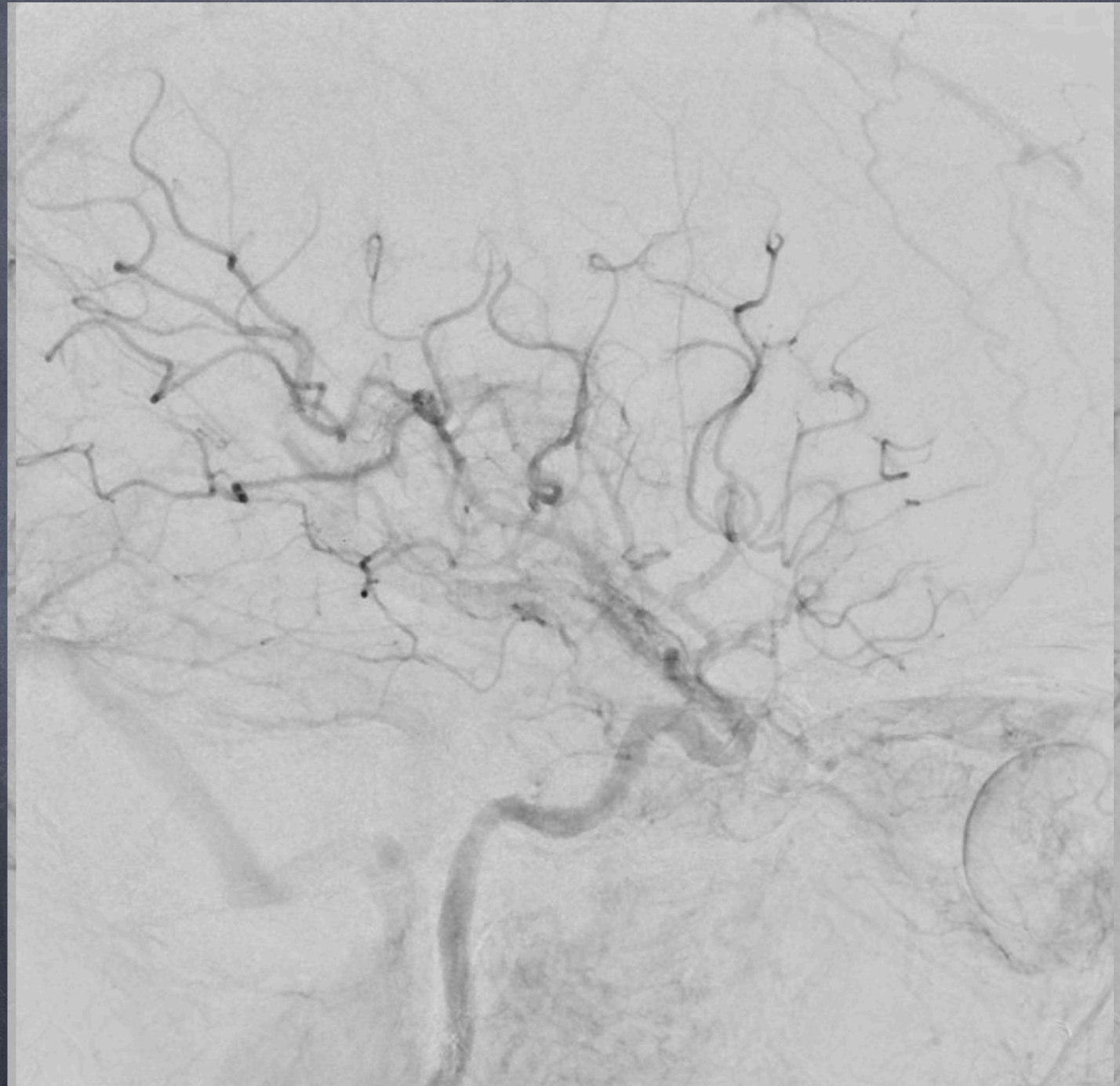
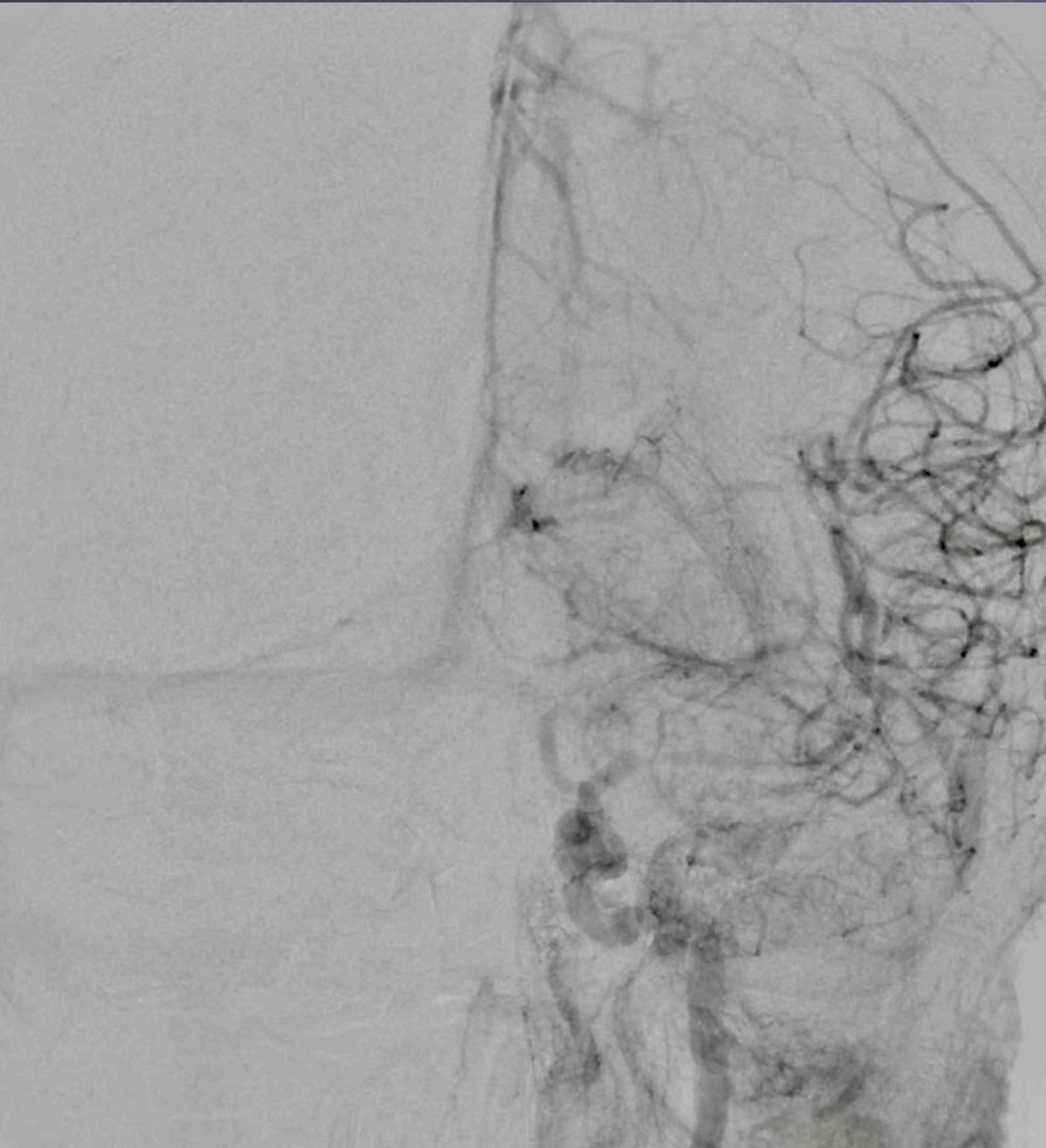
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# Après 1er Passage



Après 2mg Nimotop



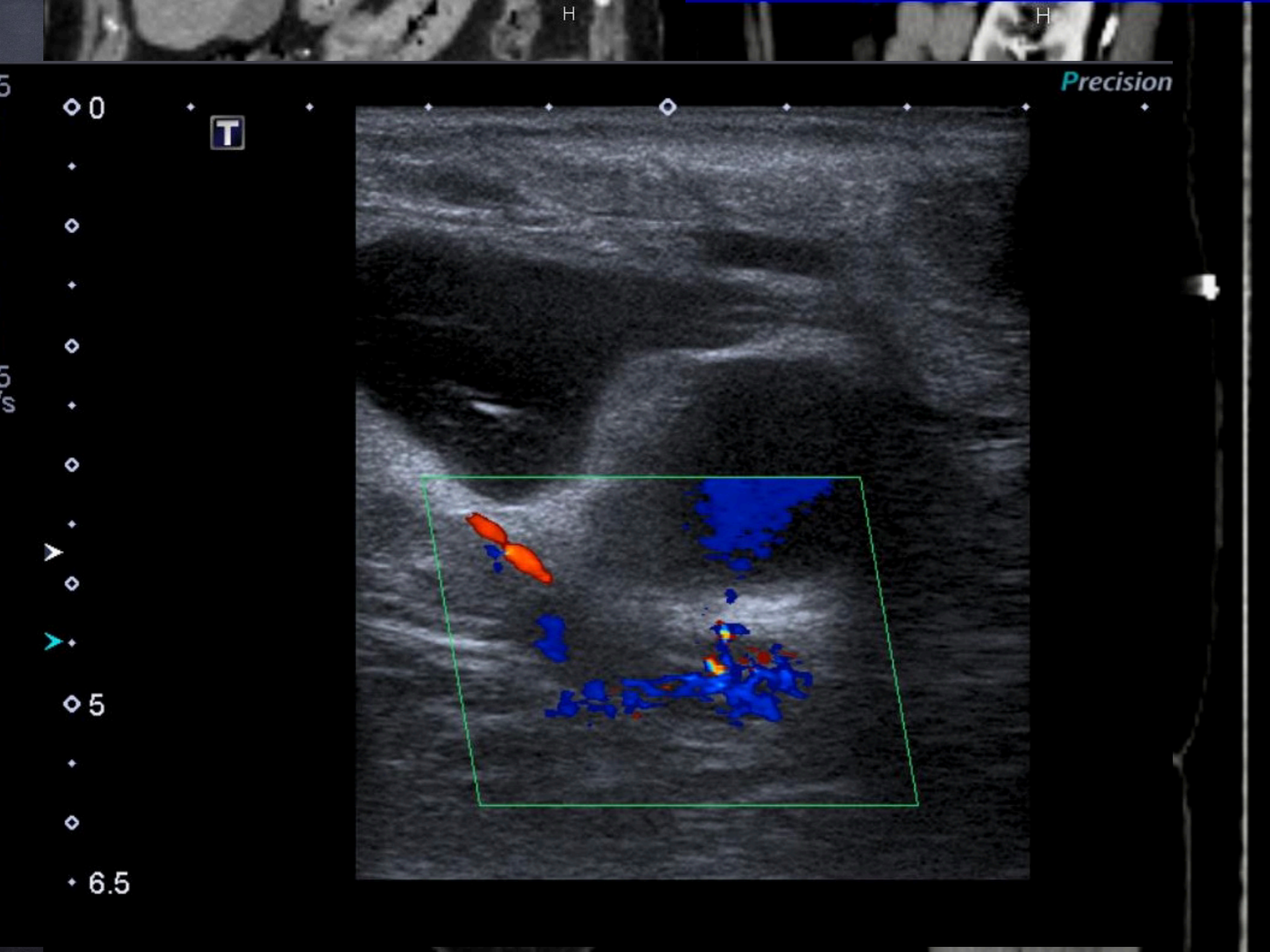


A



# Faux Anévrisme

- Compression manuelle +++, sac de sable, ....
- Compression à l'aide de l'échographe
- Stent couvert
- Chirurgie
- Injection de thrombine FloSeal



Precision

T

0

0

0

0

0

5

6.5

H

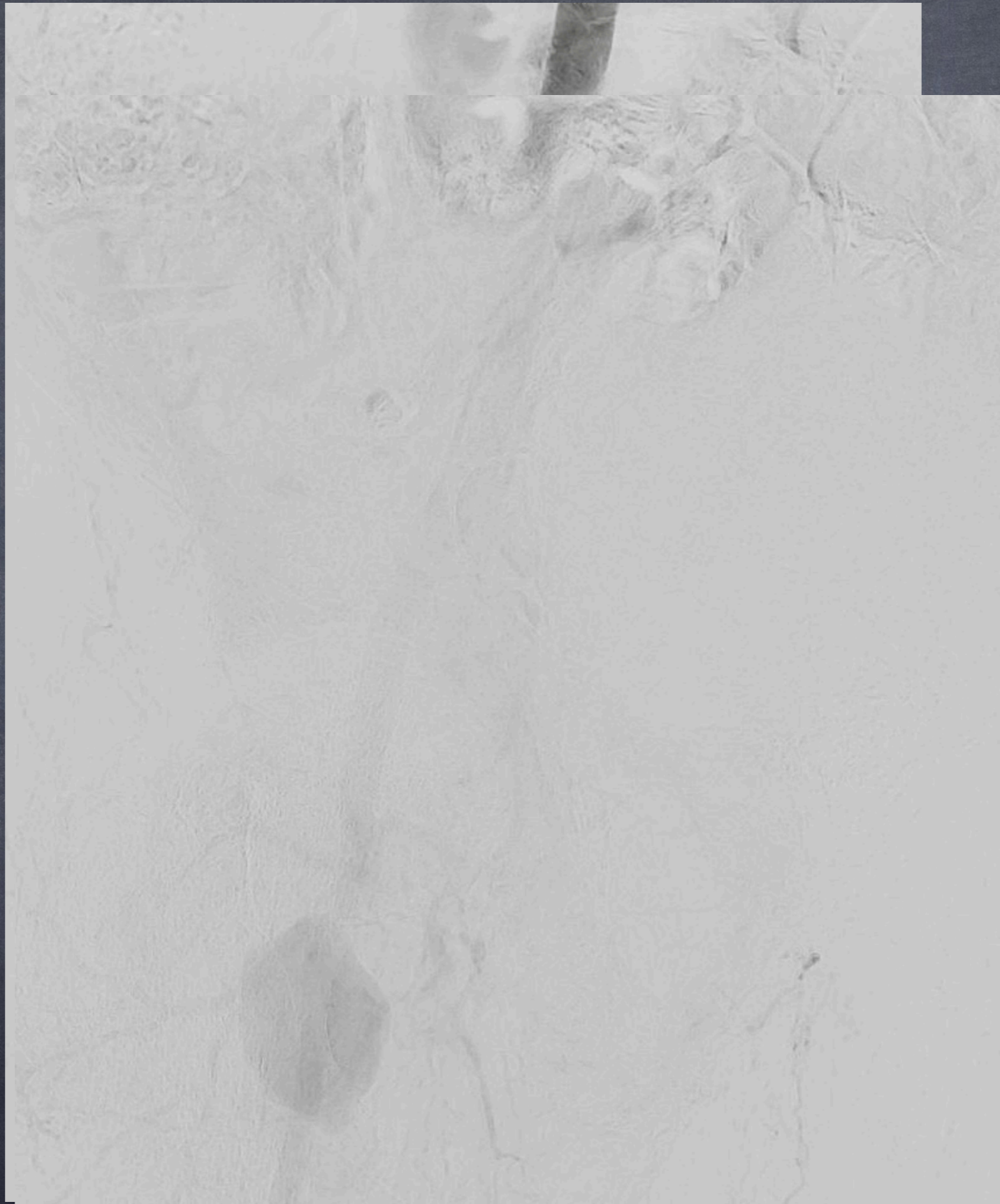
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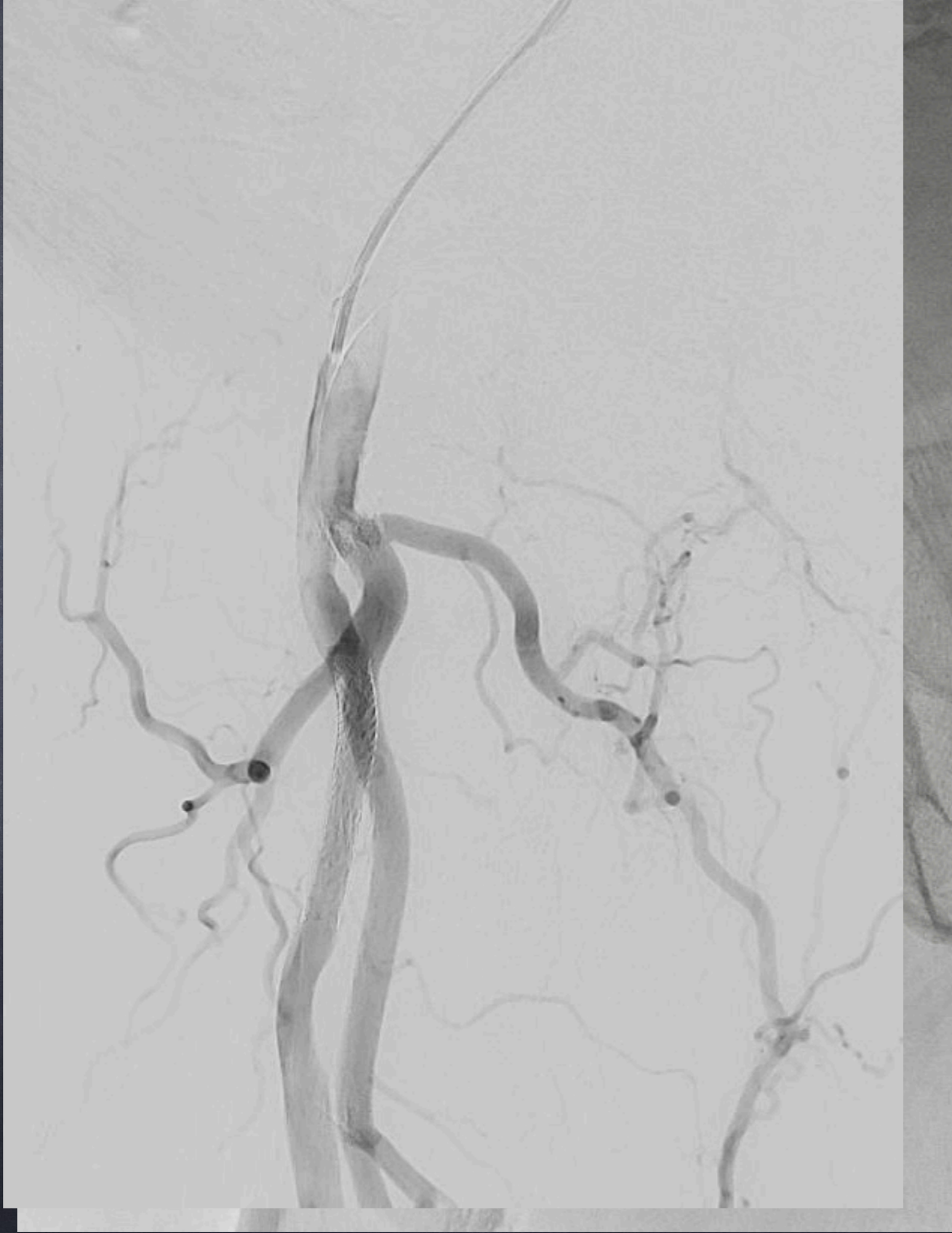
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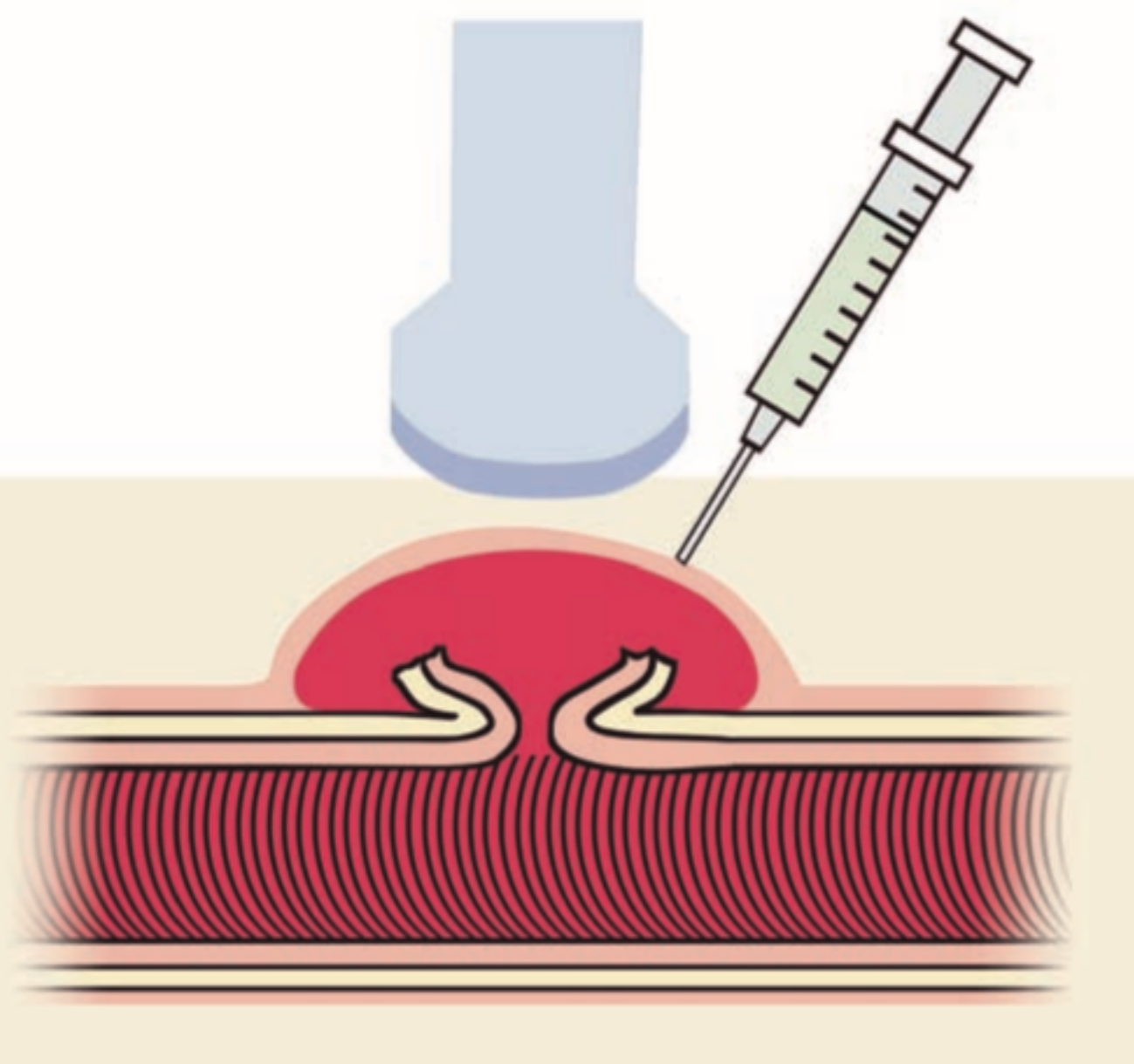
Y

Y









REF 1503353





# Conclusion

- C Hémorragiques
- Avoir du matériel (ballon, coil)
- Du Matériel Humain
- Garder son calme

# Conclusion

- C Ischémiques
- Méfiance T carotidien et tandem
- TICI 3 à tout prix?

# Conclusion

- Dissection / Vasospasme
- Patient jeune
- Faisable x raisonnable
- Etudier carotide contra latérale

Merci de votre attention

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