

SERVIZIO SANITARIO REGIONALE
EMILIA-ROMAGNA
Azienda Ospedaliero - Universitaria di Ferrara

LA DIAGNOSTICA PER IMMAGINI NEL VASOSPASMO DA ESA

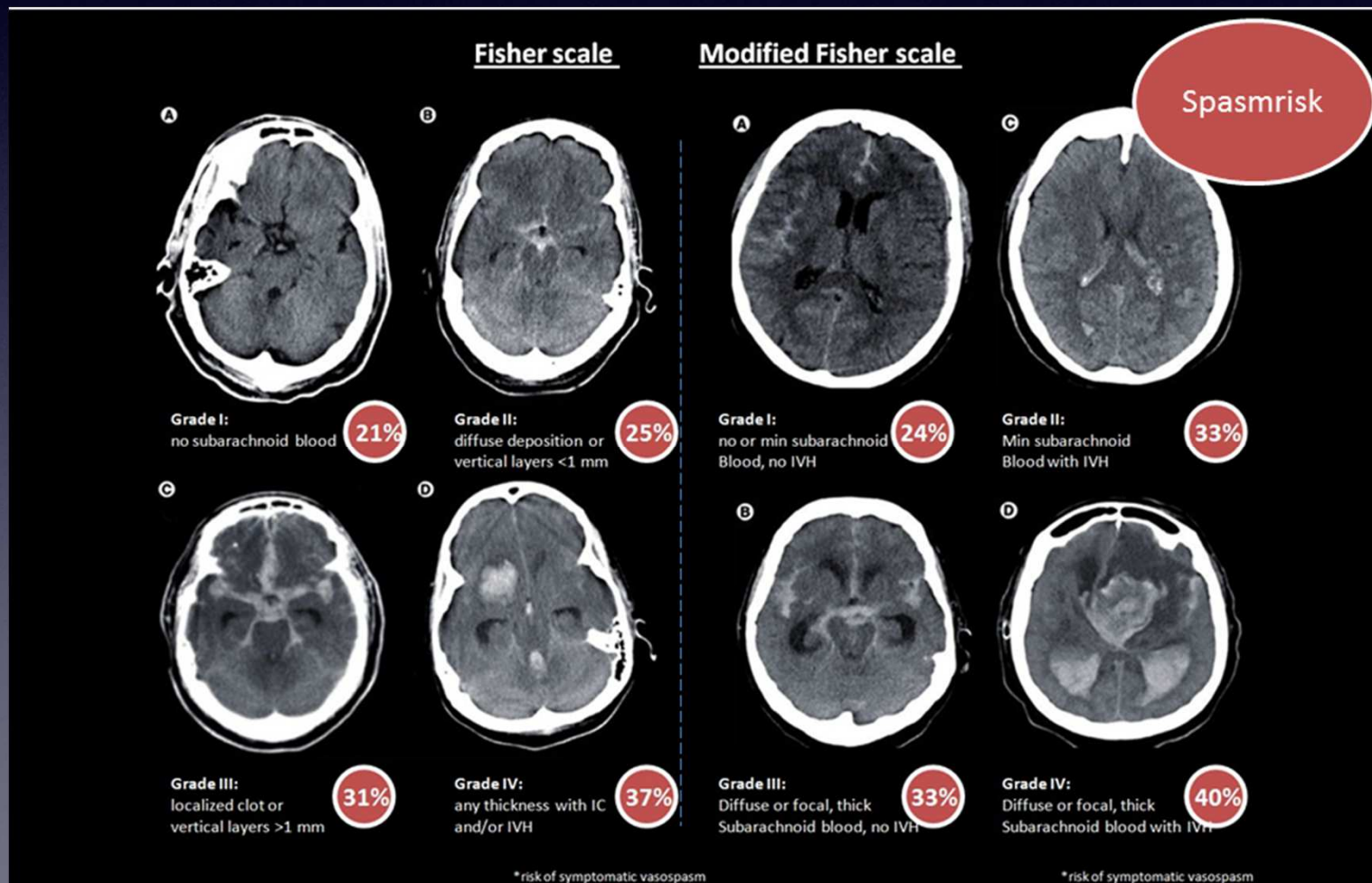


Università
degli Studi
di Ferrara



VASOSPASMO CEREBRALE

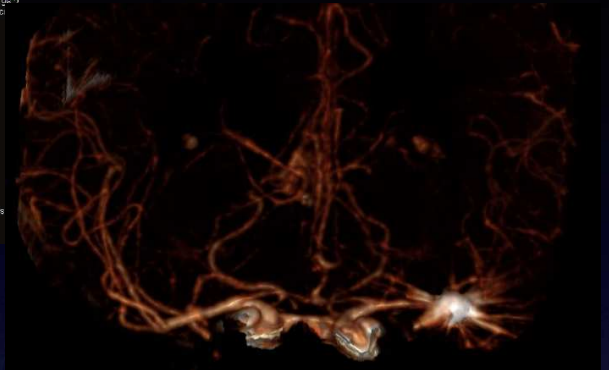
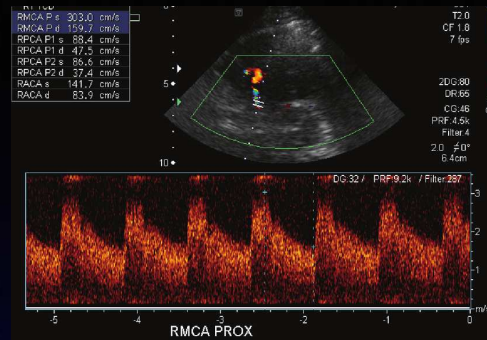
- Fenomeno reattivo all'ESA, più frequente in caso si ESA diffusa e di emiventricolo (Scala di Fisher=classifica l'entità del sanguinamento all'esame TC).
- Si manifesta nel 70% dei casi di ESA e nel 30% sviluppano deficit neurologici (vasospasmo sintomatico), 7% decesso, 7% deficit neurologici severi e permanenti.
- Solitamente (50% dei casi) si manifesta dalla 4^a giornata sino a 2 settimane.



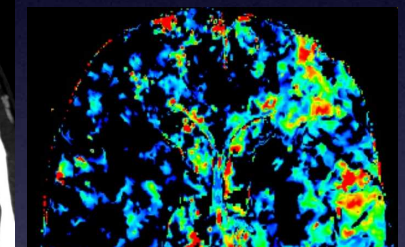
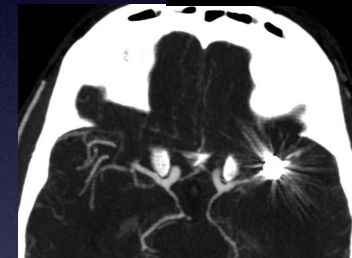
DIAGNOSI STRUMENTALE del VASOSPASMO

- EcoColorDoppler Transcranico

(monitoraggio quotidiano, VF<120cm/s)



- TC, AngioTC (MPR,MIP,VR), TC di Perfusione.



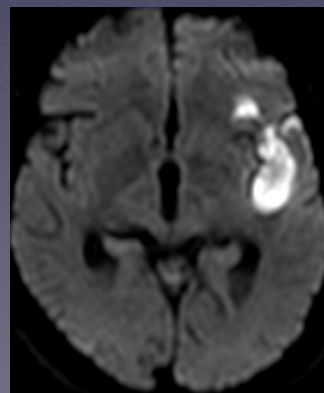
- RM: T1,T2,FLAIR,SWI,DWI, 3D TOF, 3D PC, RM di Perfusione (DCE,DSC,ASL).



RM

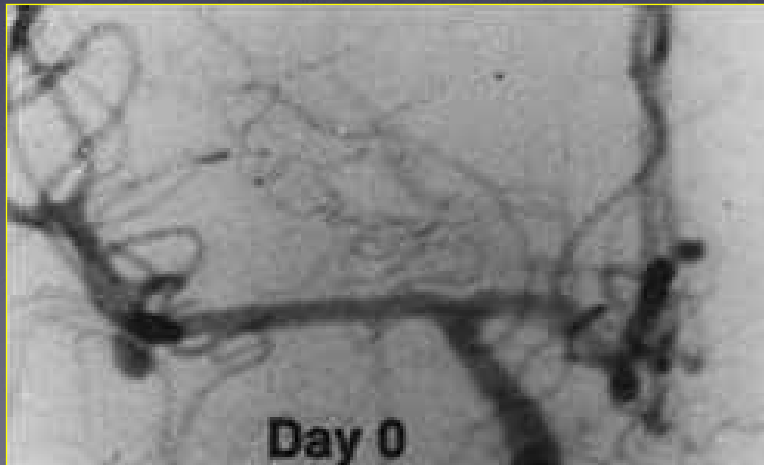
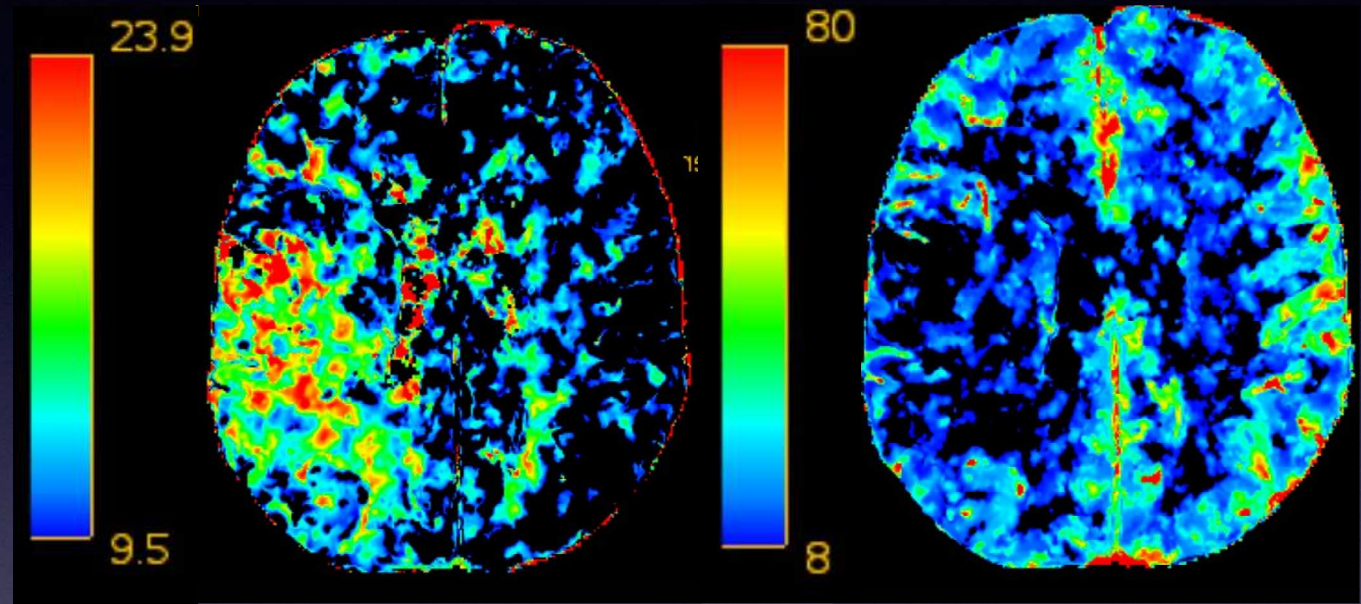
- metodica meno disponibile e diffusa
- costi elevati
- tecnica flusso dipendente
- maggior tempi di esecuzione
- no Paz. critici, claustrofobici, obesi o con pacemaker

- Angiografia.

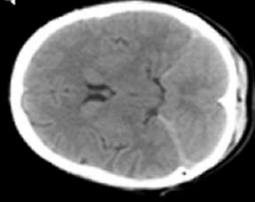




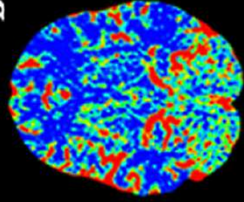
- ANGIO TC: alterazioni morfologiche → diffuso o focale restringimento vasale.
- TC di Perfusione: ipoperfusione (\downarrow CBF, \uparrow MTT e Tmax) del territorio vascolare parenchimale tributario del vaso/i interessato/i.



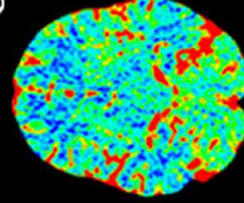
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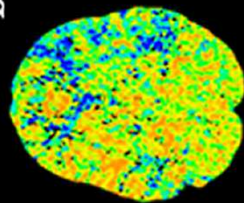
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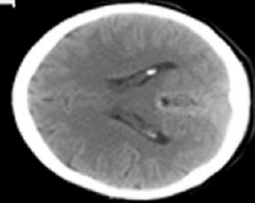
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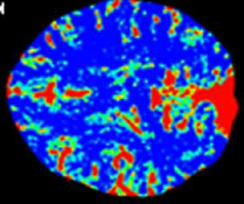
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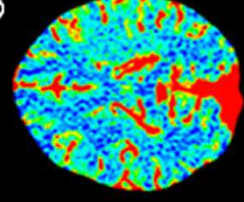
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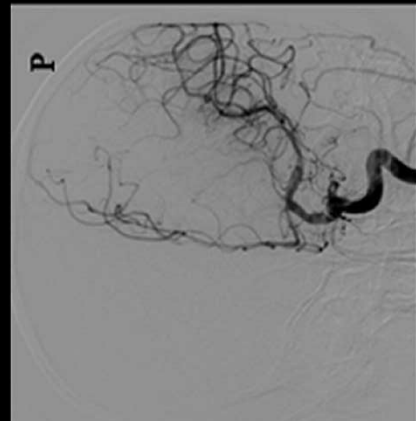
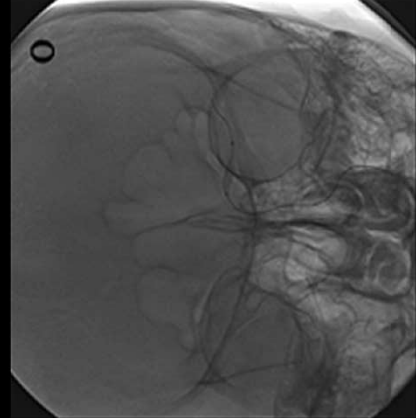
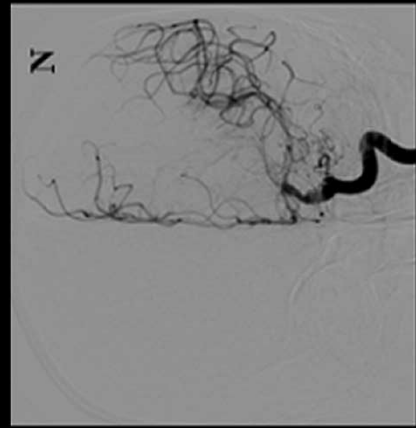
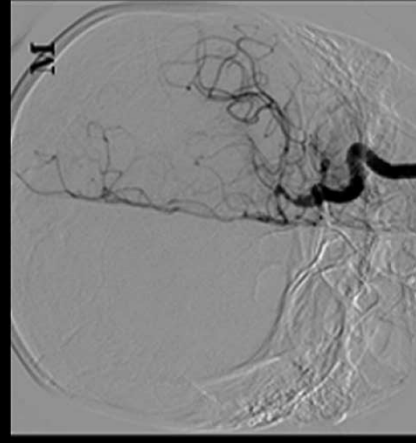
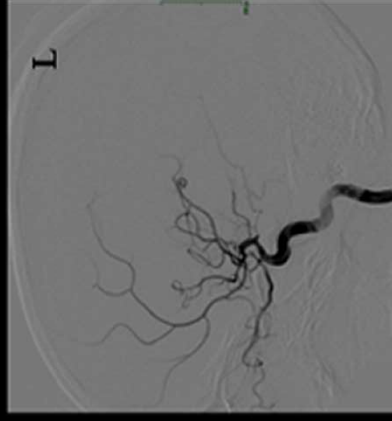
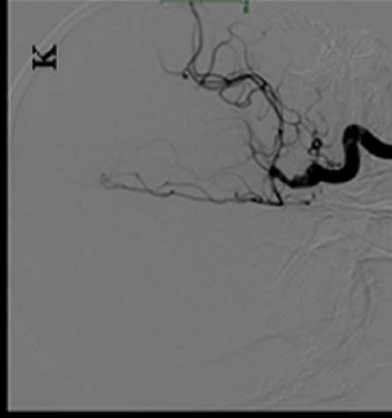
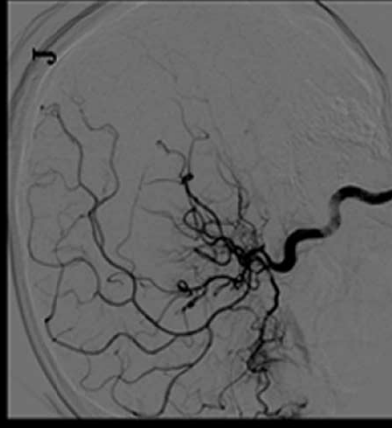
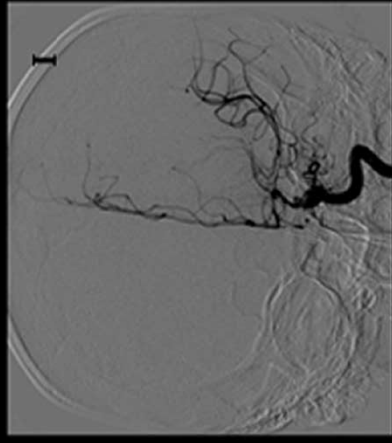
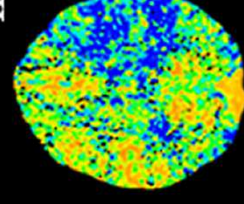
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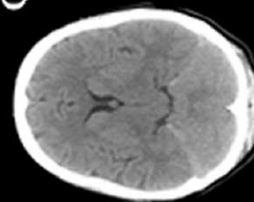
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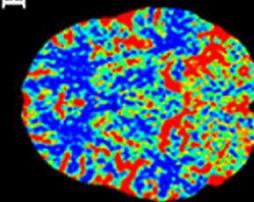
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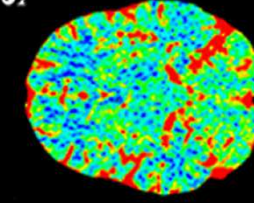
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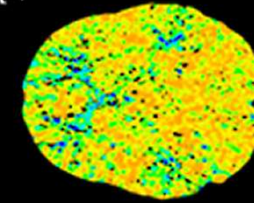
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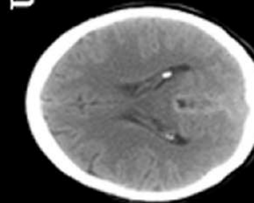
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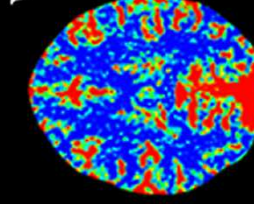
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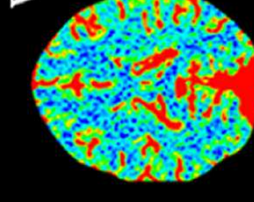
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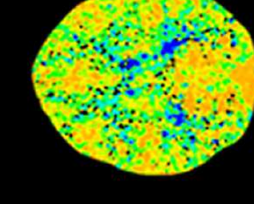
V



W



X



TRATTAMENTO ENDOVASCOLARE

In caso di vasospasmo sintomatico refrattario alla terapia conservativa.

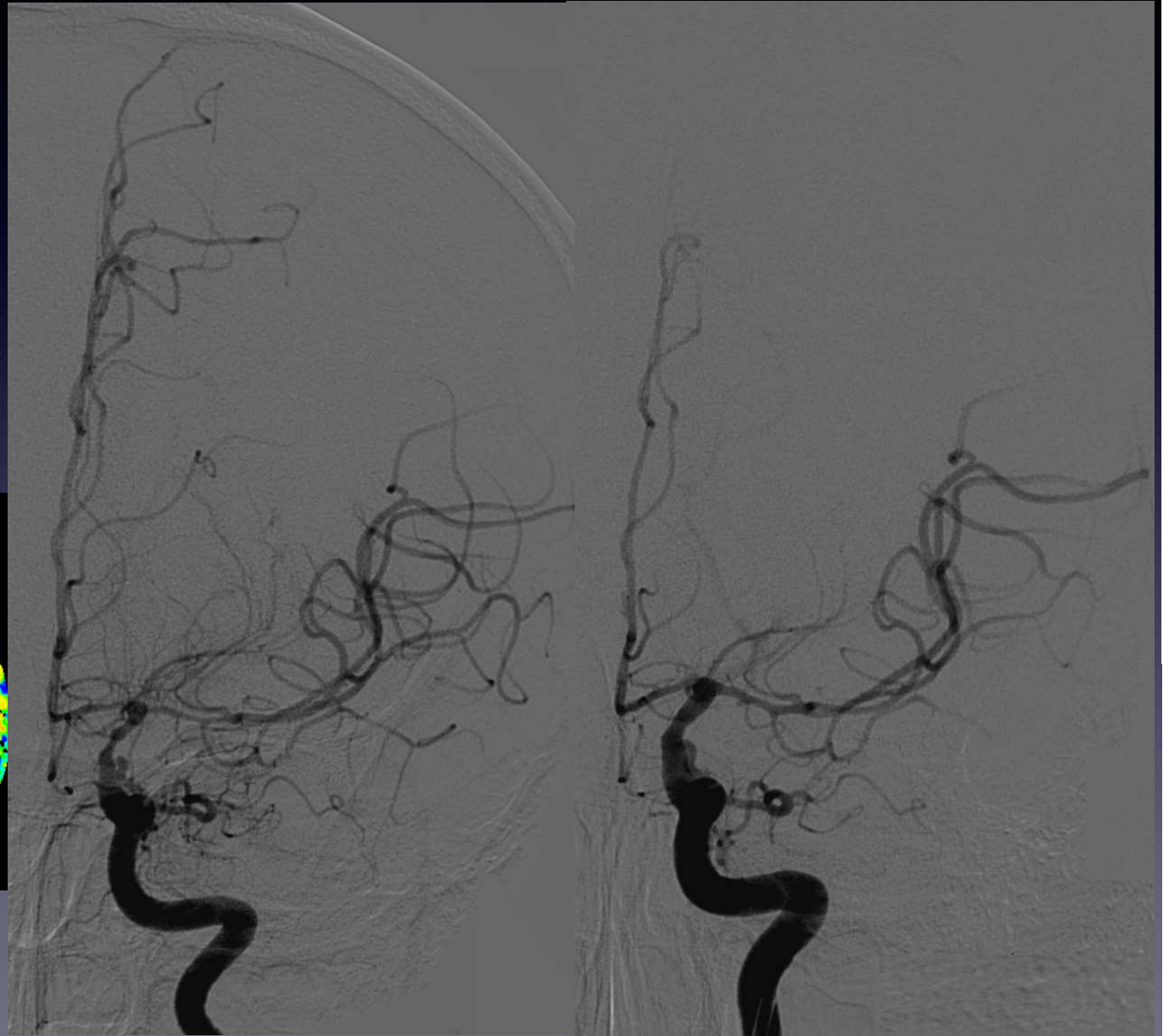
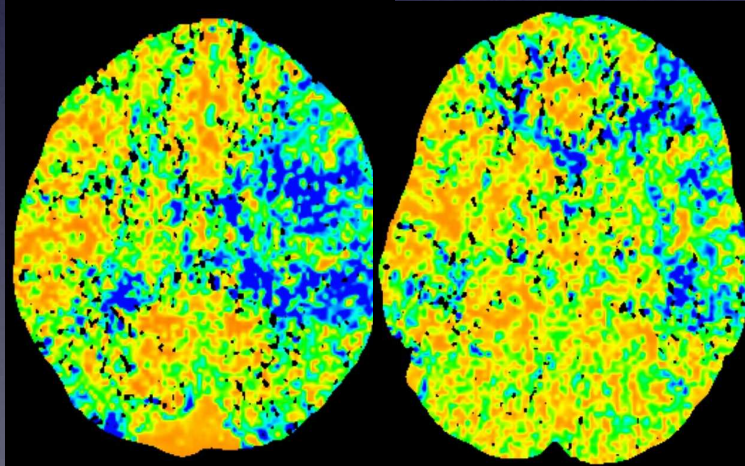
- Infusione locoregionale vasodilatatori (papaverina, nimodipina) vasi prossimali e distali. Possibilità di infusione temporanea o continua mediante pompe ad infusione sino a risoluzione della sintomatologia (+500 IU eparina ev) → ipotensione, ↑ FC.
- Angioplastica con cateteri a palloncino (vasi prossimali)
- Angioplastica con stent recuperabili (vasi prossimali).

Nimodipina i.a.: max 2 mg, inizio effetto terapeutico dopo 20-30 min, breve emivita.

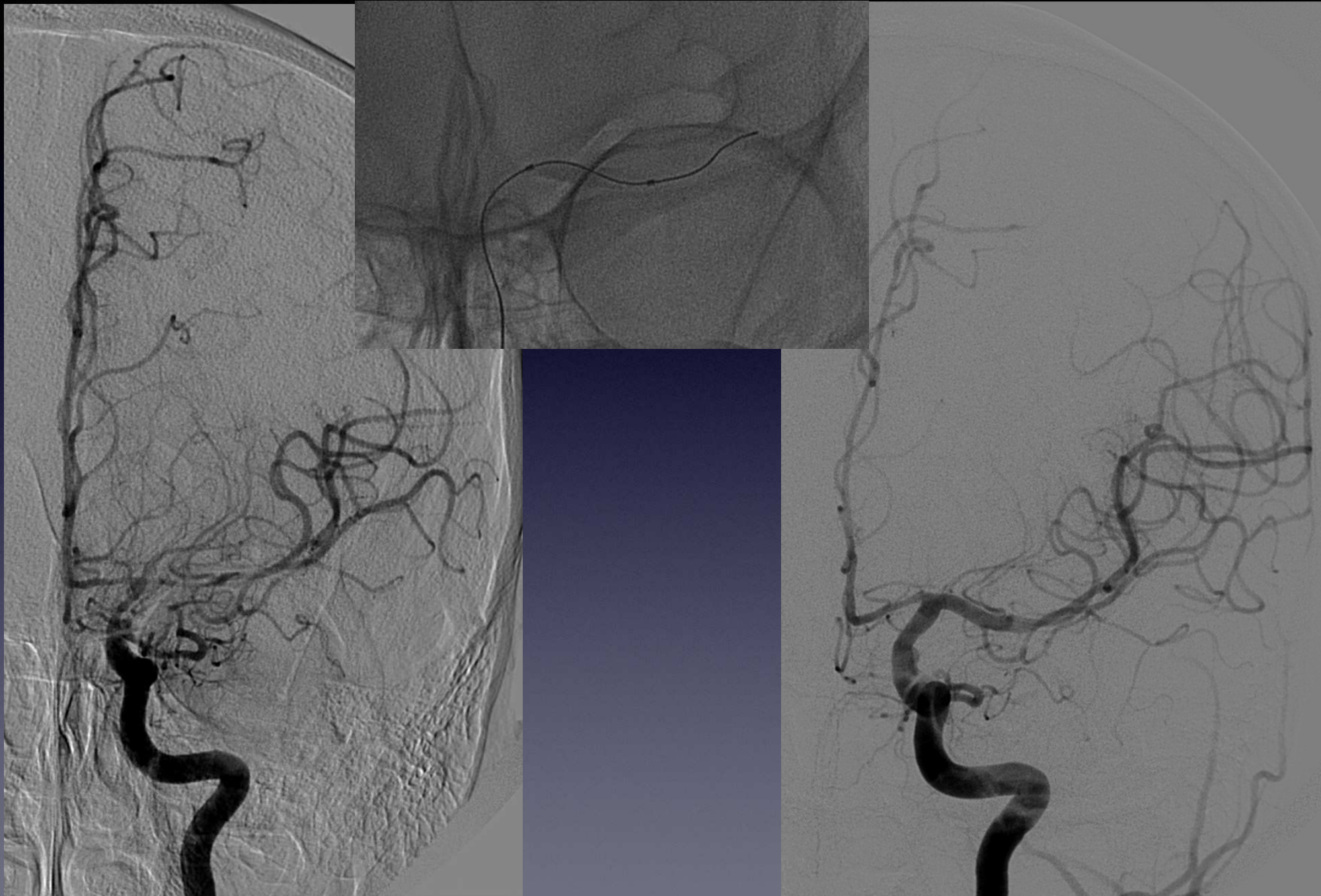


Pre Nimodipina

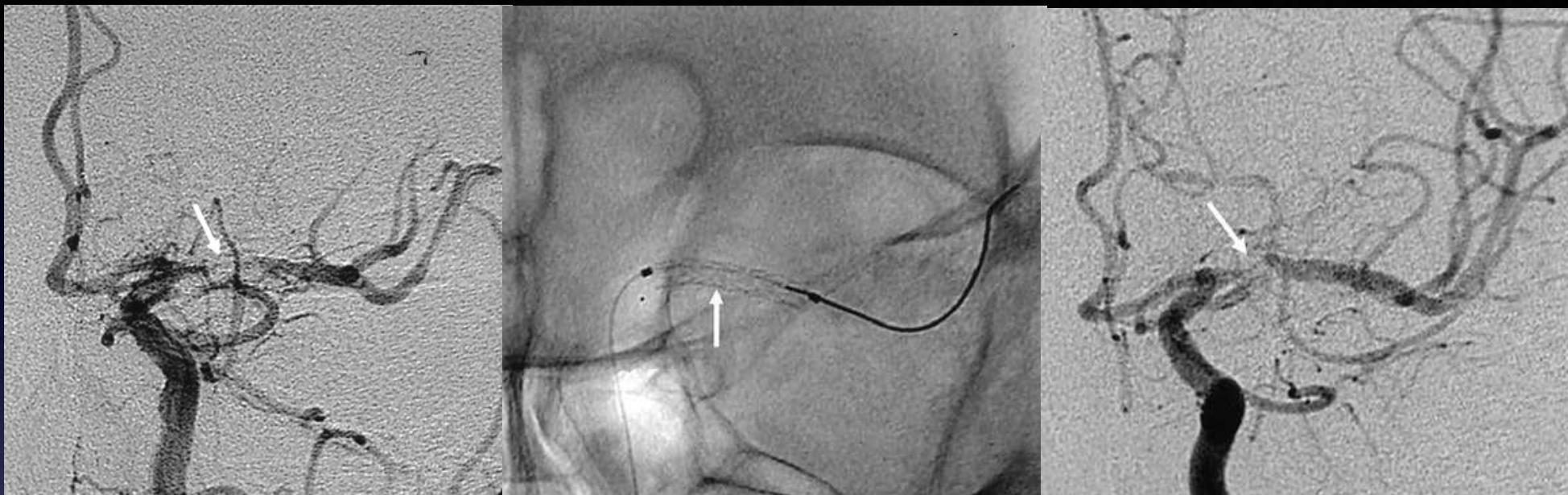
Post Nimodipina



Angioplastica con Palloncino

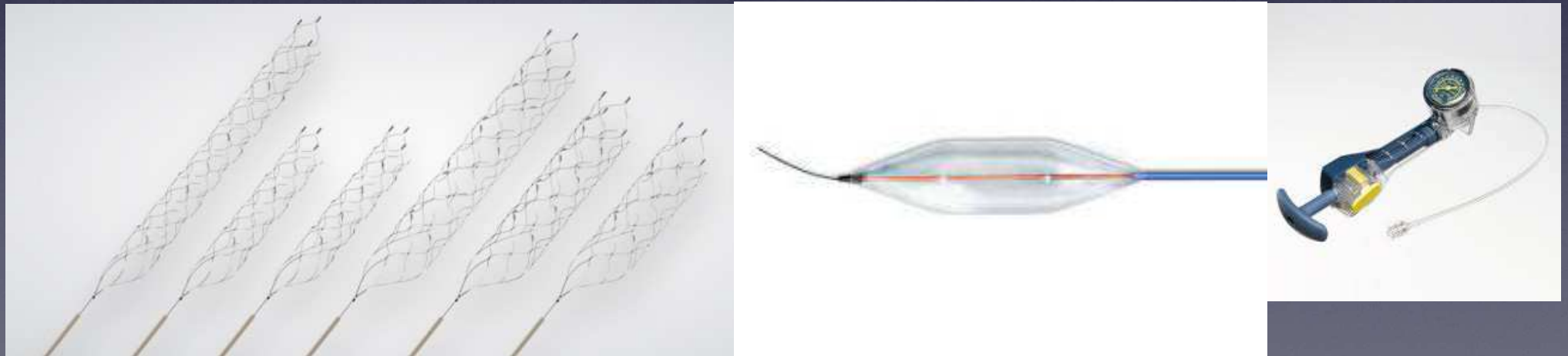


Angioplastica con Stent-Retriever



Vantaggi dell'Angioplastica con Stentriever vs. Palloncino:

- no arresto di flusso
- possibilità di utilizzo su vasi più distali
- più semplice e meno operatore dipendente
- minor rischio perforazione vasale
- tempi procedurali più brevi
- possibilità di somministrare nimodipina simultaneamente



Soderman M. et al. *J.Neurointerv.Surg.* 2017 Jan;9(1):52-59.
doi: 10.1136/neurintsurg-2016-012546. Epub 2016 Jul 14.

GRAZIE PER L'ATTENZIONE

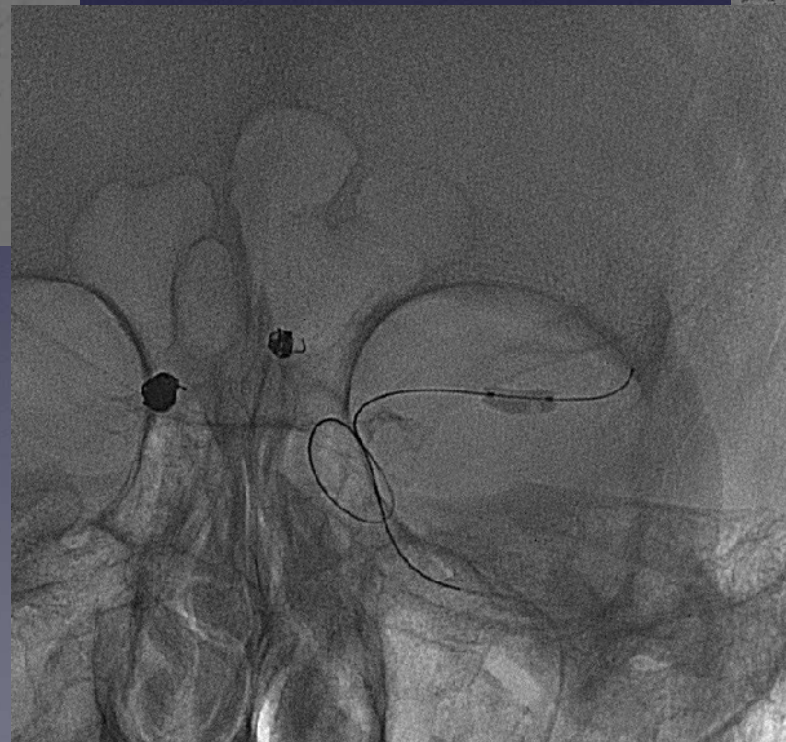
Dott. Andrea Bernardoni - a.bernardoni@ospfe.it

U.O. di Neuroradiologia - Dip. Neuroscienze/Riabilitazione - Ospedale Sant'Anna di Ferrara.





Angioplastica con Palloncino



TERAPIA MEDICA DEL VASOSPASMO

Triple-H Therapy:

- hypertension,
- hypervolemia,
- hemodilution.

Nimodipina orale o ev (60mg ogni 4 h per 21 gg)