Acute stroke—case presentation

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DISCLOSURES

Consultant/Advisory Board: Ownership Interest: Silk Road Medical – modest
Consultant/Advisory Board: Covidien/Medtronic: unpaid
Consultant: Stryker Neurovascular unpaid
PI: REVASCAT (Fundacio Ictus Malaltia Vascular), unpaid
PI: DAWN (Stryker Neurovascular), unpaid
Acute stroke due to tandem occlusion – case presentation

• 77 year R handed old man
• Acute onset aphasia, right hemiplegia, left gaze deviation
• Presents at local hospital (200 miles away from mother ship)
• Examined by telemedicine NIHSS 14
• Head CT – ASPECTS 9
• CTA – left ICA/MCA occlusion
• Pt received iv t-PA at 2.45 hrs post symptoms onset and transported by helicopter to UPMC Presbyterian University Hospital (PUH)
• Time from iv t-PA to UPMC PUH – 90 min
• NIHSS 14
• Time from Hospital arrival to CT – 13 min
• TIME FROM ONSET TO HOSPITAL ARRIVAL 4.5 HRS
HEAD CT AT UPMC PUH ASPECTS 6

Hyperdense L MCA

INSULAR, BG, FRONTAL HYPODENSITY
CTA PUH CERVICAL ICA OCCLUSION/M1 MCA OCCLUSION
CTP AT UPMC PUH – LOW/INCREASED CBV, LOW CBF, INCREASED MTT
Core = 29.1 cc’s; Territory at risk = 257.6 cc’s
ANGIOGRAPHIC FINDINGS

L ICA OCCLUSION

COLLATERALS
ENDOVASCULAR MANAGEMENT OPTIONS FOR PROXIMAL OCCLUSION

• NO TREATMENT OF PROXIMAL OCCLUSION (EMBOLECTOMY THROUGH OCCLUDED VESSEL)
• LARGE BORE CATHETER THROUGH OCCLUSIVE LESION BUT NO ANGIOPLASTY/STENT
• ANGIOPLASTY ONLY
• ANGIOPLAST AND STENT
• IF ANGIOPLAST/STENT - BEFORE OR AFTER DISTAL REVASCULARIZATION ?
• IF ANGIOPLASTY/STENT – LOAD WITH ASA/CLOPIDOGREL ?
6 Fr Shuttle sheath (NeuronMax) and aspiration catheter (Navien 0.72) through occlusion. Run confirms patency of ICA distal to extracranial segment.
LAO RUN NAVIEN 072 and NeuronMAX
Microcatheter distal to clot → Solitaire 6mm/30mm deployed → Temporary flow resoration
SMAT (Stentriever + Manual Aspiration Thrombectomy)
L ICA RUN POST FIRST PASS TICI 2c
L ICA RUN POST WITHDRAWAL OF BASE CATHETER

ANGIOPLASTY

5 MIN POST ANGIOPLASTY

10 MIN POST ANGIOPLASTY
IN ANTICIPATION OF STENTING - WHAT TO DO

• Heparin, Integrilin without stent
• Heparin, Integrilin with stent
• Heparin, ASA and Plavix, no Integrilin
• No heparin, Integrilin and ASA/Plavix
• Heparin and ASA only with stent
• ASA only with stent
INTEGRILIN 18 MG/KG IV GIVEN
ASA AND PLAVIX LOAD POST PROCEDURE (600 MG)
STENTING AND ANGIOPLSTY PERFORMED
WORKFLOW DATA

• GROIN PUNCTURE TO BASE CATHETER  7 MIN
• BASE CATHETER TO MICROCATHERETER 30 MIN
• MICROCATHER TO SOLITAIRE DEPLOYED – 3 MIN
• FIRST SMAT PASS – 5 MIN
• GROIN PUNCTURE TO TICI 2B- 45 MIN
• DISTAL REPERFUSION TO PROXIMAL STENTING – 30 MIN
• TOTAL PROCEDURE DURATION – 80 MIN
FOLLOW-UP MRI AT 24 HOURS-FINAL INFARCT VOLUME 45 CC’S (INFARCT GROWTH – 16 CC’S)
CLINICAL OUTCOME

• Home after 45 days in rehab
• At 90 days walks with quad cane
• Fully independent in ADL’s
• Cannot drive
• mRS 2
QUESTIONS ?