

Tandem lesion stroke : Shall we always strive to kill two birds at one procedure ?

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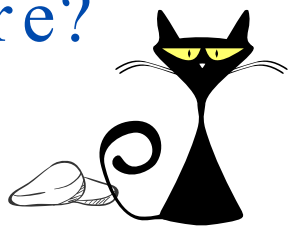
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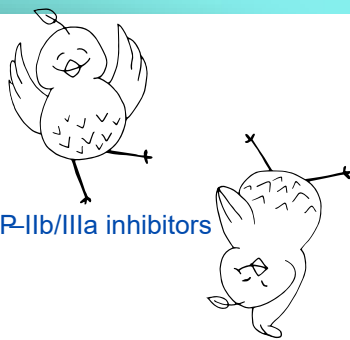
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POINTS FOR OPEN DISCUSSION

- How often do you find and treat AIS with a tandem lesion in your daily practice?
- What strategy do you prefer? (CAS//PTA//deferred CAS/CEA)
- Do you use protection performing CAS in AIS? (distal/proximal//Device(s) of choice?)
- What kind of drugs and in what dose do you use during CAS? (iv heparin // iv aspirin // GP-IIb/IIIa inhibitors eptafibatide/abciximab/aggrastat? // clopidogrel/prasugrel/ticagrelor... iv. cangrelor??)
- Which lesion do you treat first? Extracranial or intracranial? Why?
- How do you minimize the risk of intracranial bleeding after stenting?
- Does the use of stentriever (rather than aspiration only) during MT affect the risk of bleeding with pharmacotherapy need after CAS ?
- What kind of stent(s) do you choose? (cellular/mesh) How do you size stents? Do you treat the culprit lesion before stenting and postlate after?
- In your opinion, does the stent implantation technique have an effect on acute stent thrombosis risk?
- What kind of devices and techniques do you prefer? (delivery catheters//reperfusion catheters //stentriever/wires)
- How 'deep' do you go to treat M1/M2/M3/M4?
- If you deferred ICA treatment what kind of procedure do you prefer next for the CAS or CEA? And what does it depend on? When? (ie. how many days after AIS you believe the procedure should be performed) Does the infarct size/hemorrhagic transformation affect your management/how?



TAKE HOME MESSAGE

What is believed ?

- (Probably) best therapeutic choice for AIS with the tandem lesion is concomitant treating intracranial and extracranial lesions with acute ICAsenting.
- The best pharmacotherapy during CAS is one/two antithrombotic drugs.
- Acute stenting with antithrombotic therapy does not routinely increase bleeding risk while it may improve patients outcome.
- The choice for a treatment sequence matters – treating firstly an intracranial lesion and then a CAS may give better results.

TAKE HOME MESSAGE

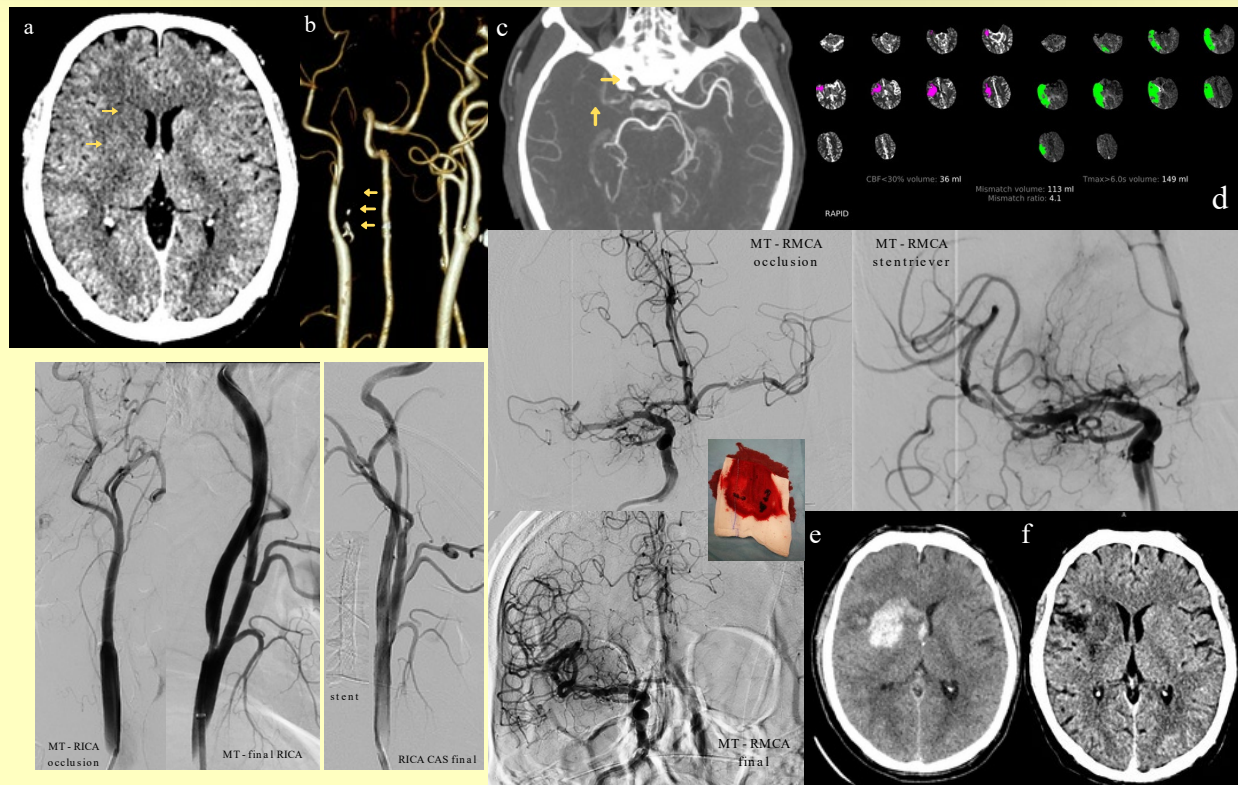
What is yet unknown?

- The best combination of antithrombotic therapy in AIS with a tandem lesion treated with CAS?
- Hierarchy of factors increasing the risk of cerebral bleed post intracranial recanalization in relation to acute or deferred carotid artery stenting.

Everybody “wants” a randomized study in “tandem” lesions (simultaneous vs. deferred CAS). With definite cross-overs - would it really answer the question “how to treat” and cover all clinical scenarios? What do YOU think?



patient 1



- 46yo male, mRS0
- Right hemispheric symptoms 3h
- CT: no bleeding, hyperdense MCA sign, ASPECTS 8(a)
- CTA: RICA occlusion (b) + M1/MCA occlusion (c)
- IVT: yes
- CT perfusion (before MT): penumbra area 153ml; irreversible ischemic area 28ml (d)
- MT: done

Devices: NeuronMAX (Penumbra Inc); Sofia6F (Microvention); Solitaire XR 4x40mm (Medtronic) – mTIC3

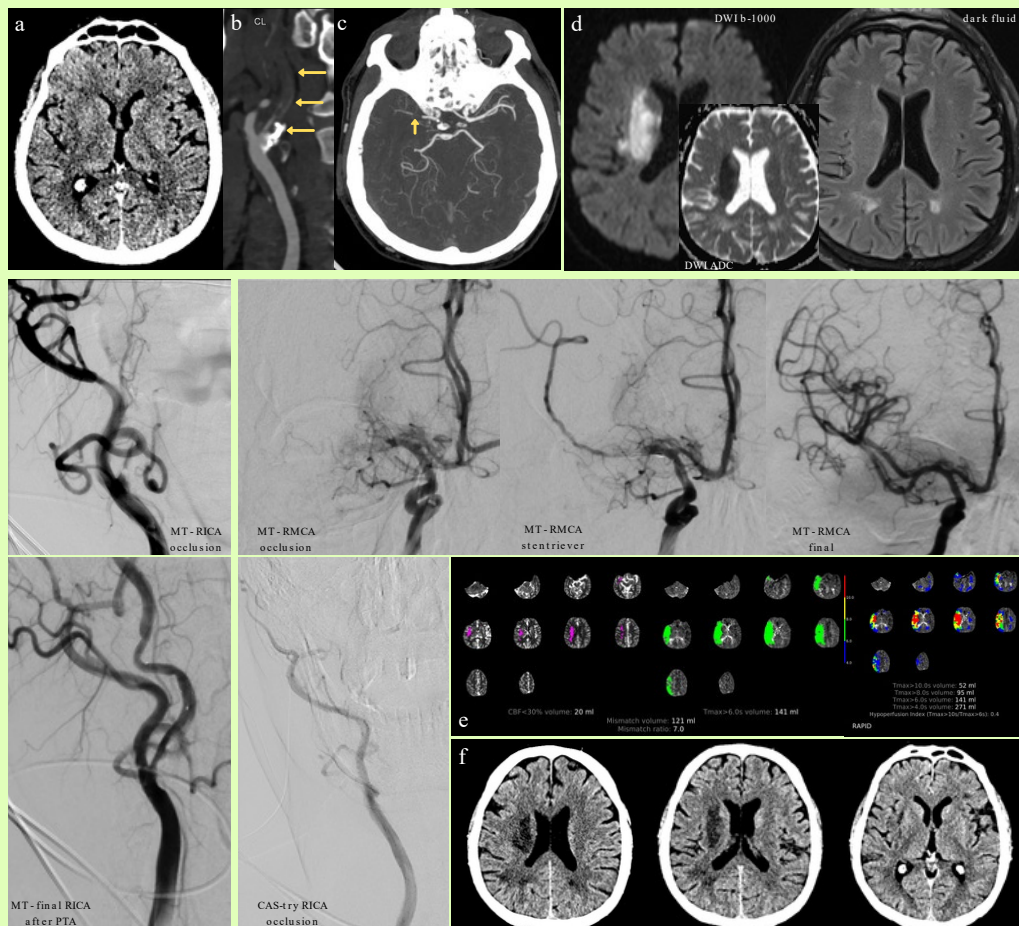
ICAtreatment: balloon angioplasty, deferred CAS

90-day outcome: mRS3 and NIHSS5



patient 2

90-day outcome: mRS3 and NIHSS6



- 53yo male, mRS0
- Right hemispheric symptoms with “wake-up stroke”
- CT: no bleeding, hyperdense MCA sign, ASPECTS 10(a)
- CTA: RICA occlusion (b) + M1/MCA occlusion (c)
- MRI: DWI-FLAIR mismatch present (less than 4.5h onset) (d)
- IVT: no (neurologist decision because of “wake-up stroke”)
- CT perfusion (before MT): penumbra area 14ml; irreversible ischemic area 20ml (e)
- MT: done

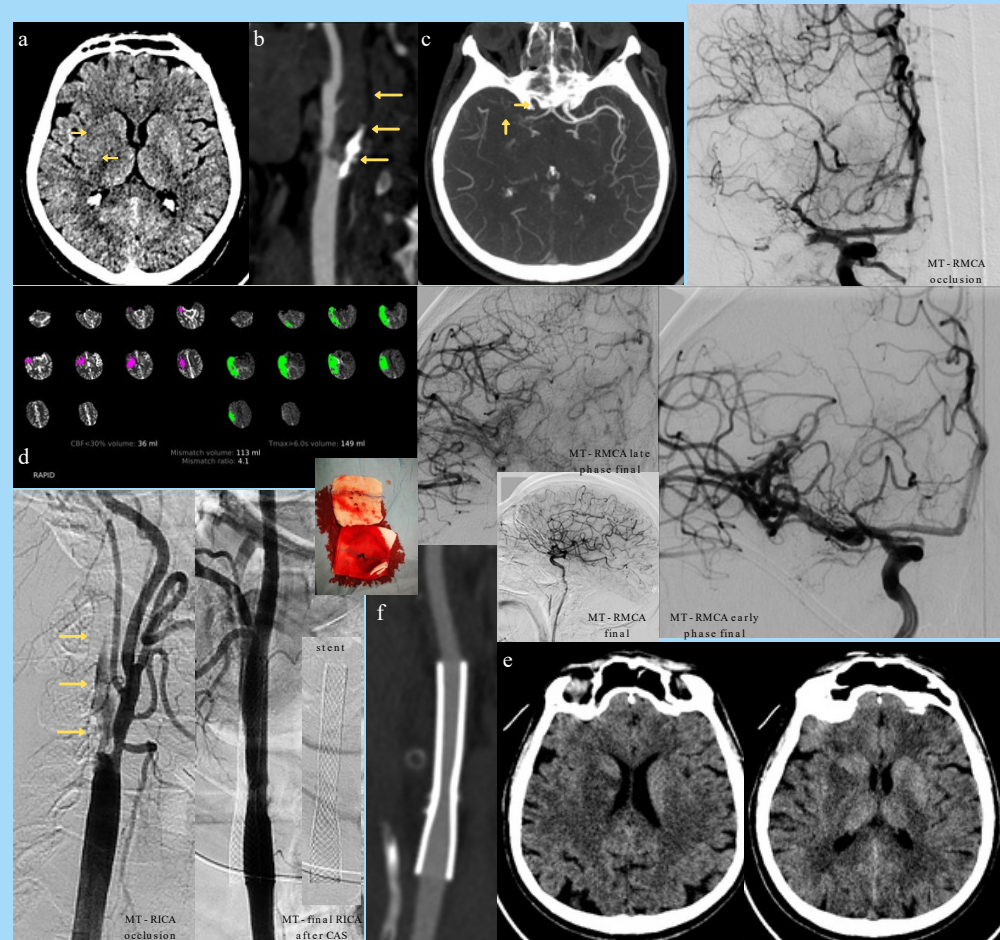
Devices: NeuronMAX (Penumbra Inc); Sofia6F (Microvention); TrevoXP 4.0x30mm (Stryker) – mTIC3

ICAtreatment: balloon angioplasty (5.0x20mm), deferred CAS- ICA occlusion



patient 3

90-day outcome: mRS2 and NIHSS4



- 61yo male, mRS0
- Right hemispheric symptoms 2h
- CT: no bleeding, hyperdense MCA sign, ASPECTS 9(a)
- CTA: RICA occlusion (b) + M1/MCA occlusion (c)
- IVT: yes
- CT perfusion (before MT): penumbra area 17ml; irreversible ischemic area 55ml (d)
- MT: done

Devices: NeuronMAX (Penumbra Inc); Sofia6F (Microvention) – mTIC3

ICAtreatment: CAS – predilatation (3.0x20mm), stent (Carotid WallStent 7.0x40mm; Boston Scientific), post dilatation (5.0x20mm) + iv. eptifibatide

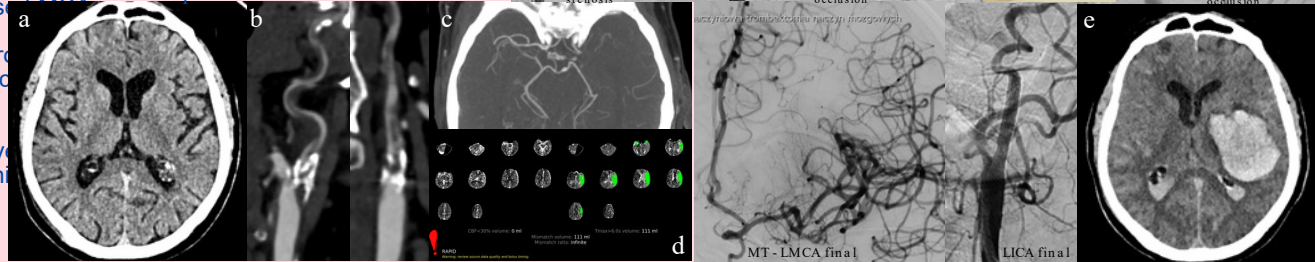
patient 4

NEW



Devices: NeuronMAX (Penumbra Inc); Sofia6F (Microvention); Solitaire XR 4x40mm (Medtronic) – mTIC3

ICAtreatment: CAS – distal protection (SpiderFX Medtronic), predilatation (3.0x20mm), stent (Carotid WallStent 8.0x40mm; Boston Scientific), post dilatation (5.5x20mm) + iv. eptifibatide



- 66yo male, mRS0
- left hemispheric symptoms 2h
- CT: no bleeding, hyperdense MCA sign, ASPECTS 10 (a)
- CTA: LICA stenosis with thrombus presence (b) + LMCA M1 occlusion (c)
- IVT: yes
- CT perfusion (before MT): penumbra area 111ml; irreversible ischemic area 0ml (d) technical ALERT! (CT ASPECTS 9)
- MT: done

3days later: mRS6