Staged Recanalization Of Carotid Artery Occlusion

Paul Hsien-Li Kao, MD
Associate Professor
Cardiac Cath Lab Director
National Taiwan University Hospital
Cardiovascular Center







Disclosure Statement of Financial Interest

I, (Paul Hsien-Li Kao) DO NOT have a financial interest/arrangement or affiliation with one or more organizations that could be perceived as a real or apparent conflict of interest in the context of the subject of this presentation.





Case history

- 80y man with minor stroke in 2011-7
- HTN with adequate medical control
- Neck Duplex showed LICAO

 CTA in 2011-10 confirmed LICAO, with abnormal CTP





CTA 2011-10

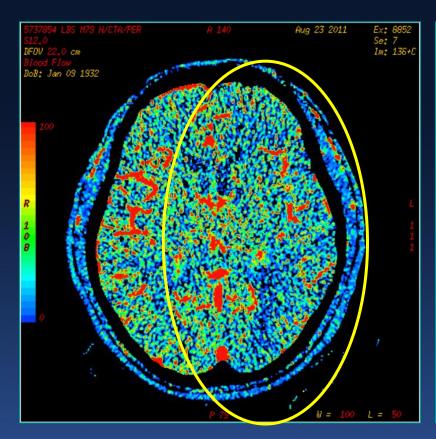


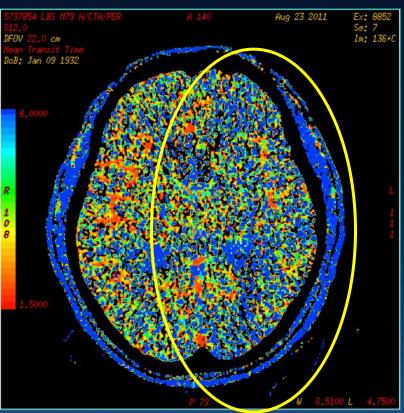






CTP 2011-10









Treatment planning

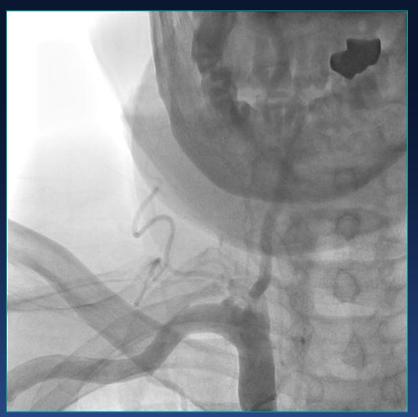
EC/IC bypass was refused

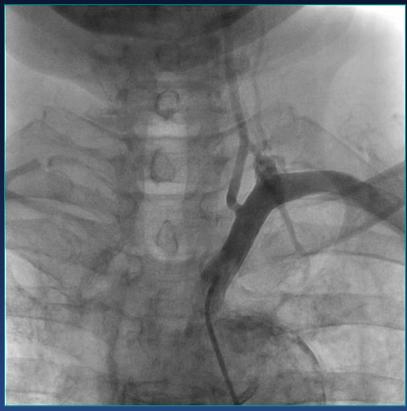
EC4V with recanalization attempt scheduled in 2011-11 after informed consent





Bilateral VAs









Patent RICA with cross-filling



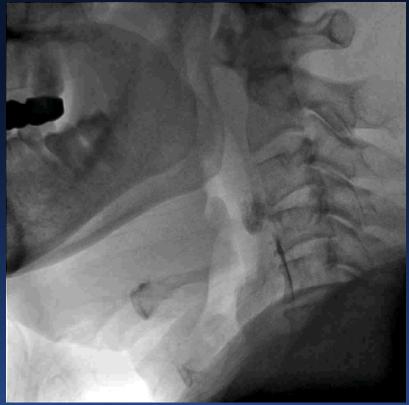






LICAO

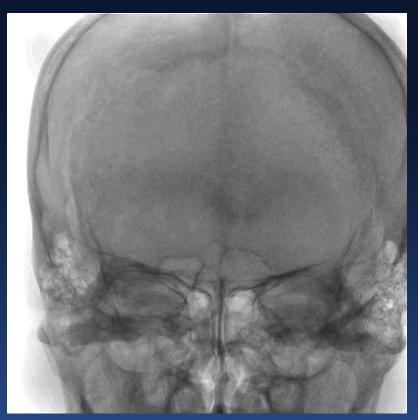


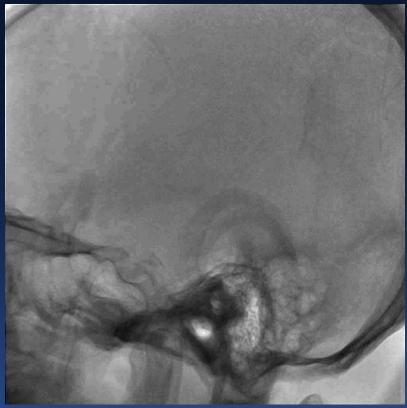






Distal ICA via OA









Recanalization strategy

- Femoral approach with 8FJR4 GC
- Coronary hydrophilic wire followed by CTO wire, with micro-catheter support
- Once wired through, exchange to spring-coil tip wire
- Small profile coronary balloon dilatation
- Stent deployment (with/without embolic protection) as indicated





Initial wiring





Fielder FC in Finecross

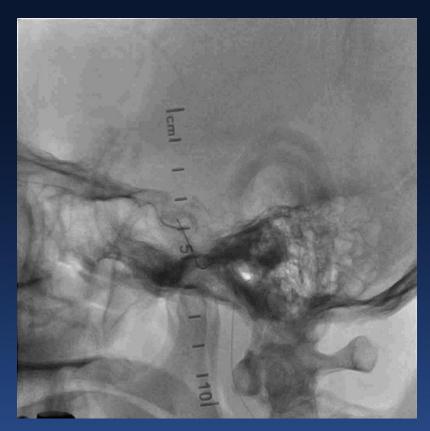
Conquest Pro in Finecross







Finally wired into OA





Fielder FC in Finecross

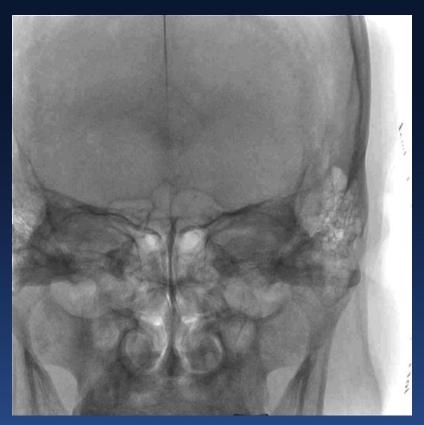
Fielder FC in Finecross







Confirmed





Finecross injection

Sion in MCA







Small-size ballooning





1.5mm lkatzuchi

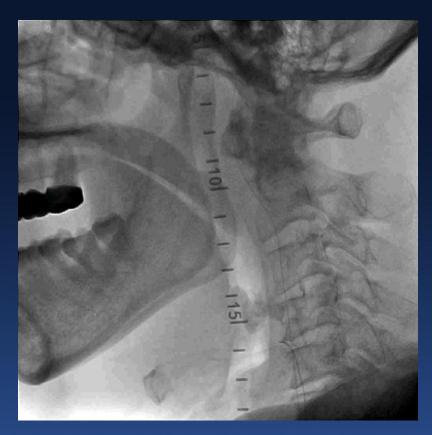
2.0mm lkatzuchi







Yeahhh....oops





CC fistula!!







Now what?

- Patient totally asymptomatic
- Transfer to ICU for observation
- Reverse heparin, maintain lower BP
- Discharged 1 week later without any complaint or sequela
- Follow-up CT 1 month later if stable





CTA 2012-1

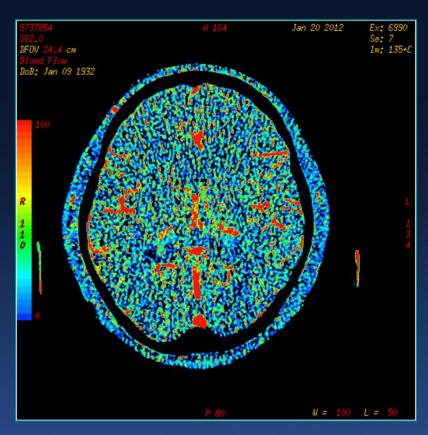


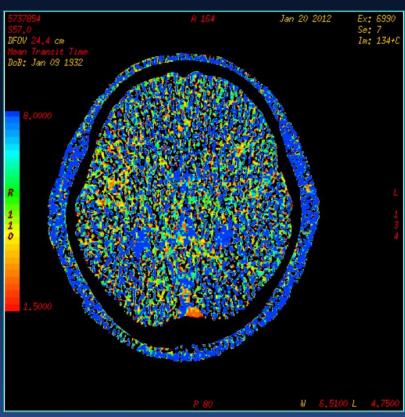






CTP 2012-1









Staged CAS in 2012-2

Confirm resolution of CC fistula

Proximal embolic protection

 Self-expanding stent for cervical ICA and balloon expandable for distal lesion





Cervical LICA

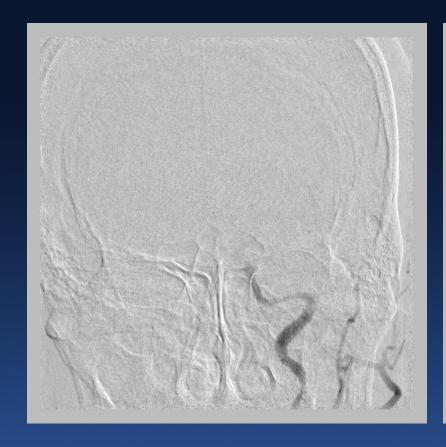


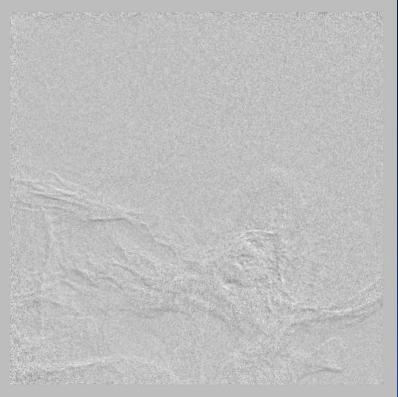






LICA IC



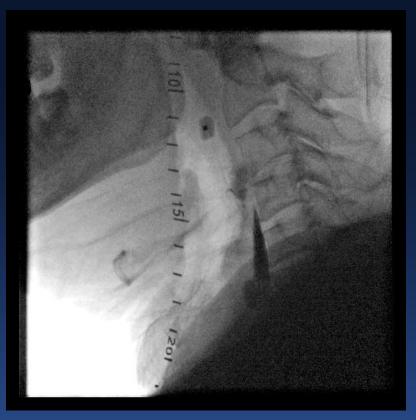






MoMA protected wiring





8F MoMA Sion





Wall stent and aspiration



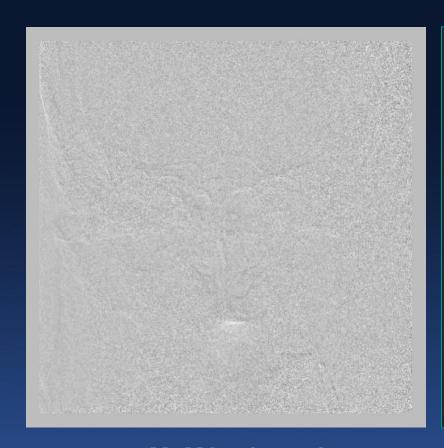


7x50mm Wall stent dilated with 6mm Sterling and aspiration





Tsunami for distal ICA



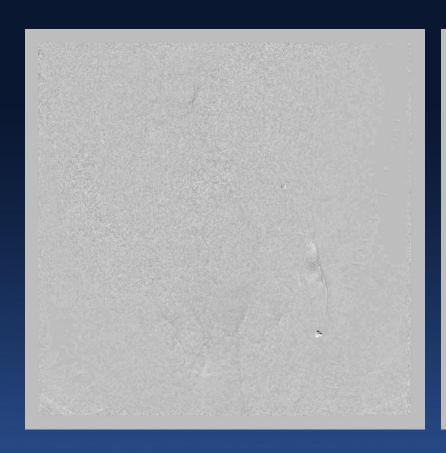
MoMA released

3.5x20 Tsunami stent





Final cervical LICA



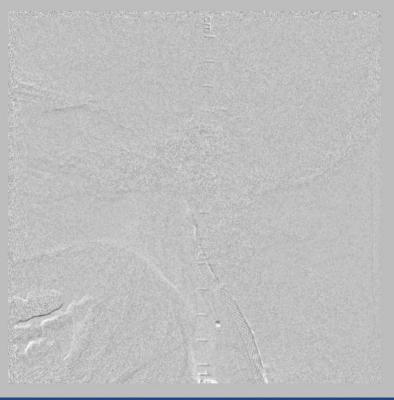






Final LICA IC









Clinical course

- ICU overnight observation without any event
- Discharged 2 days post procedure
- DAPT

 Clinical follow-up without any complaint up till now





CTA 2012-4

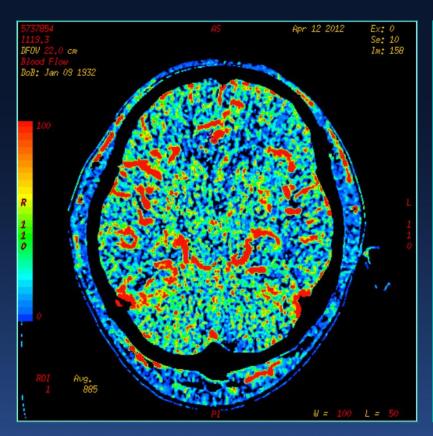


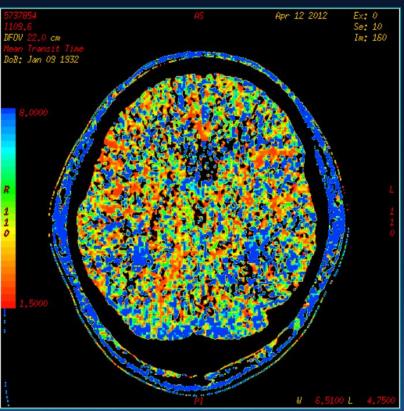






CTP 2012-4









Conclusion

 CAO recanalization is feasible and improves cerebral perfusion, but requires specialized techniques and devices

CC fistula can be self-limiting if managed correctly

 MoMA is the device of choice for long ugly ICA lesion



