
Sheathless “Guide-o-plasty” – A Useful Way of Dealing With a Radial Artery Perforation

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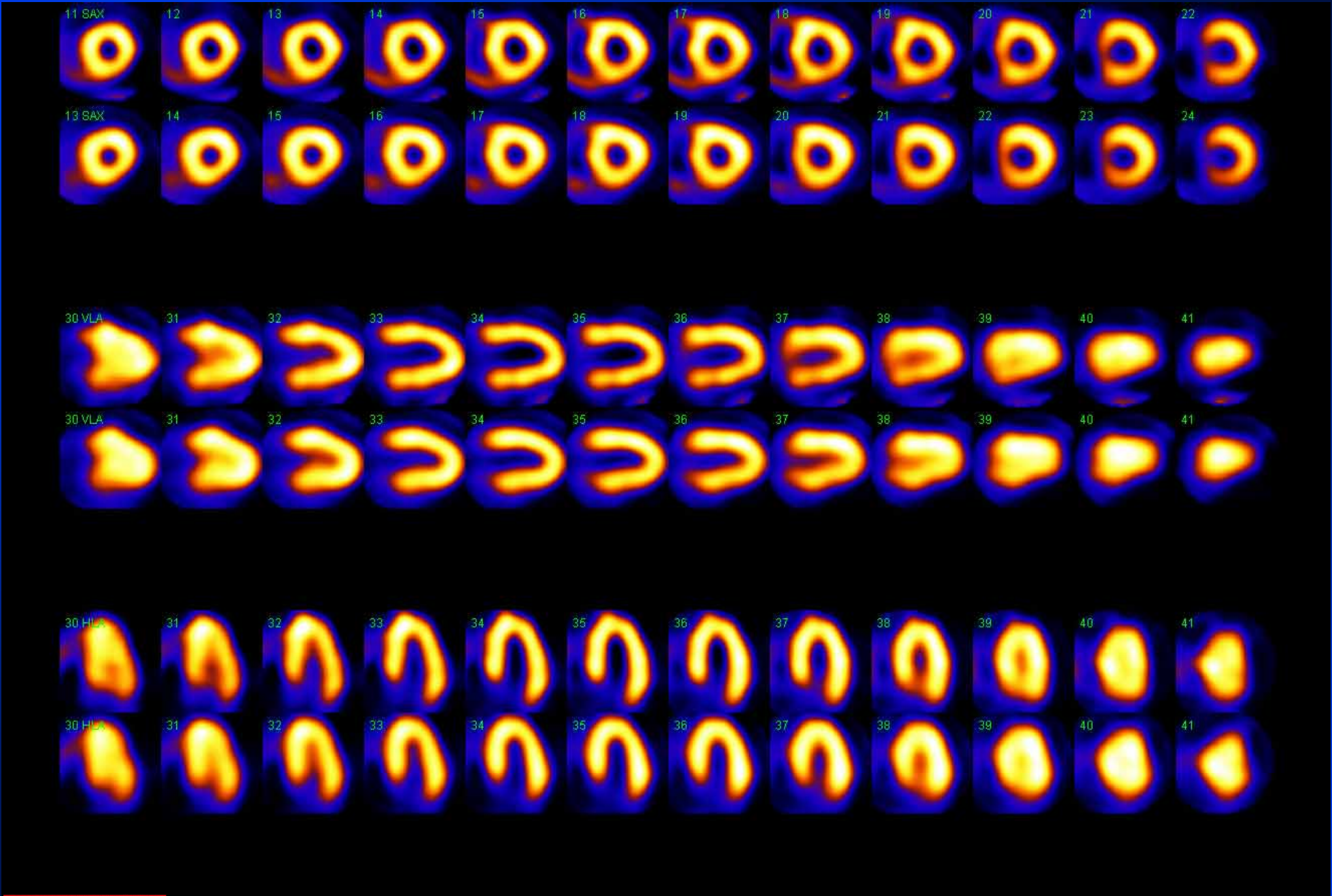
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History

- 54 year old man,
 - Hyperlipidemia
 - Prior stroke (no residual)
- Presented with atypical chest pain
- EKG – nonspecific
- Underwent myocardial perfusion scan



TID Ratio 1.21

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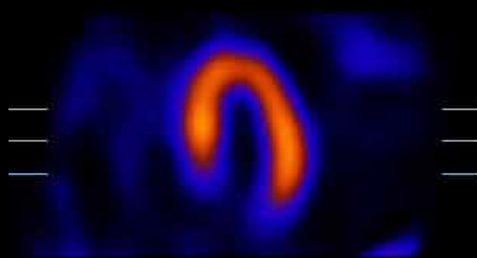
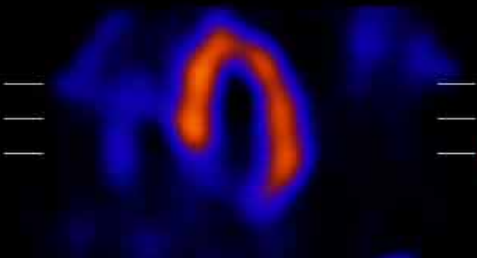
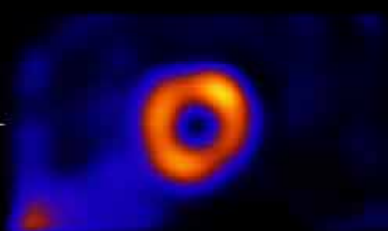
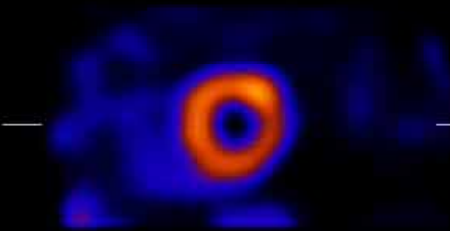


11 SAX

13 SAX

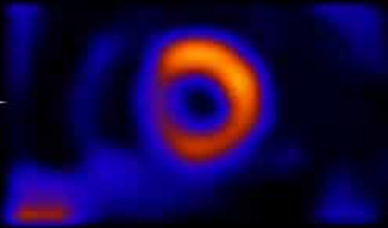
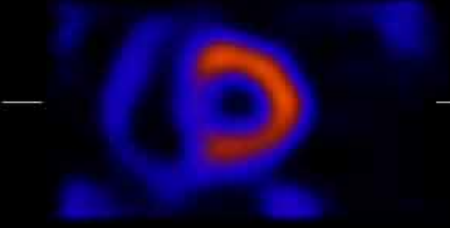
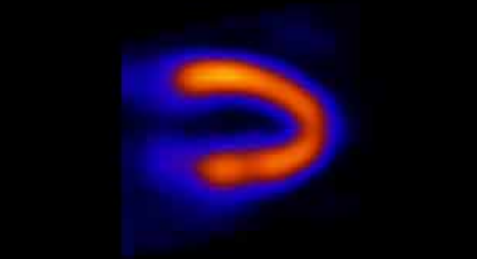
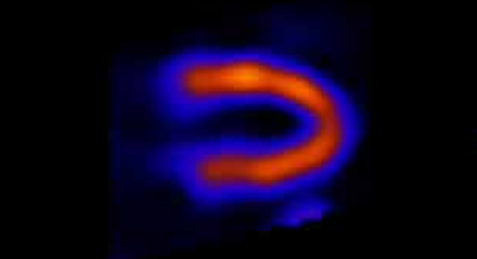
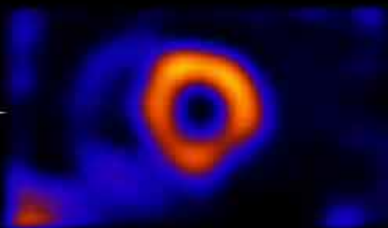
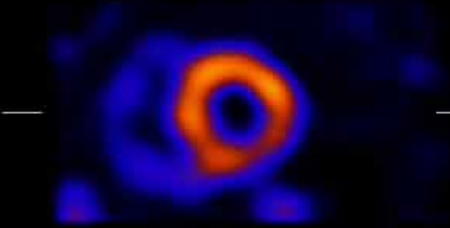
35 HLA

35 HLA



34 VLA

34 VLA

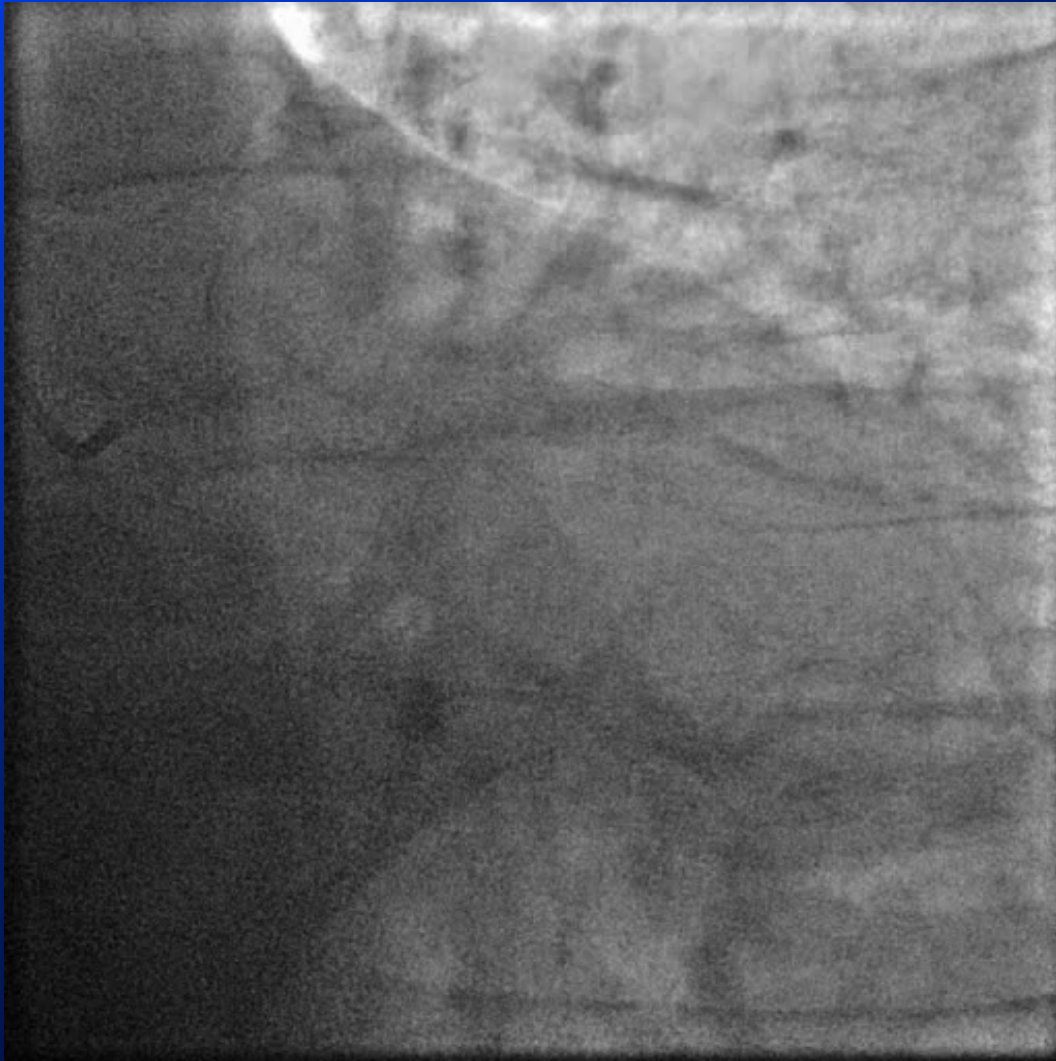


Stress EF 56%

Rest EF 67%

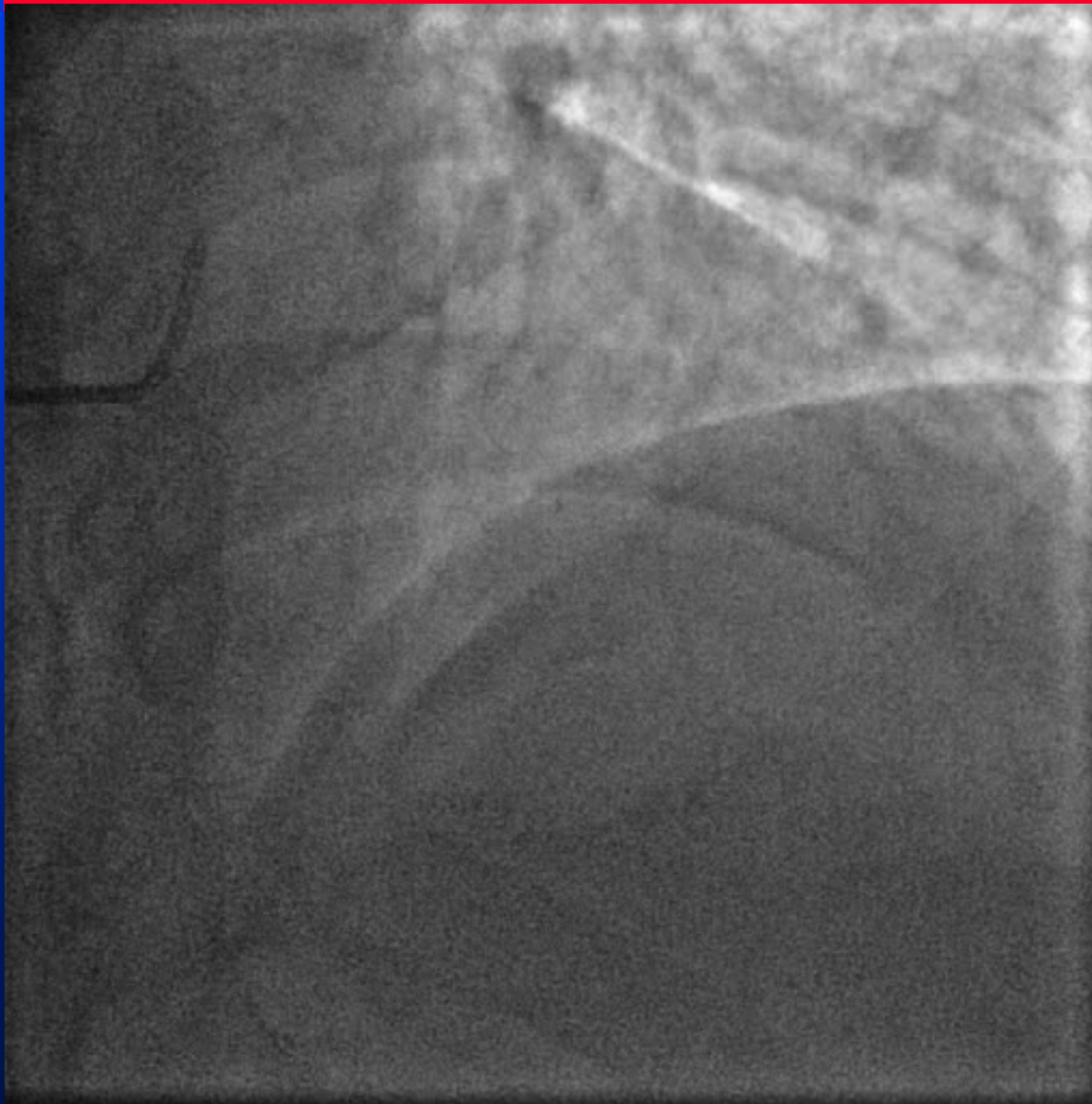
NOT FOR DIAGNOSTIC USE

Diagnostic Angiography



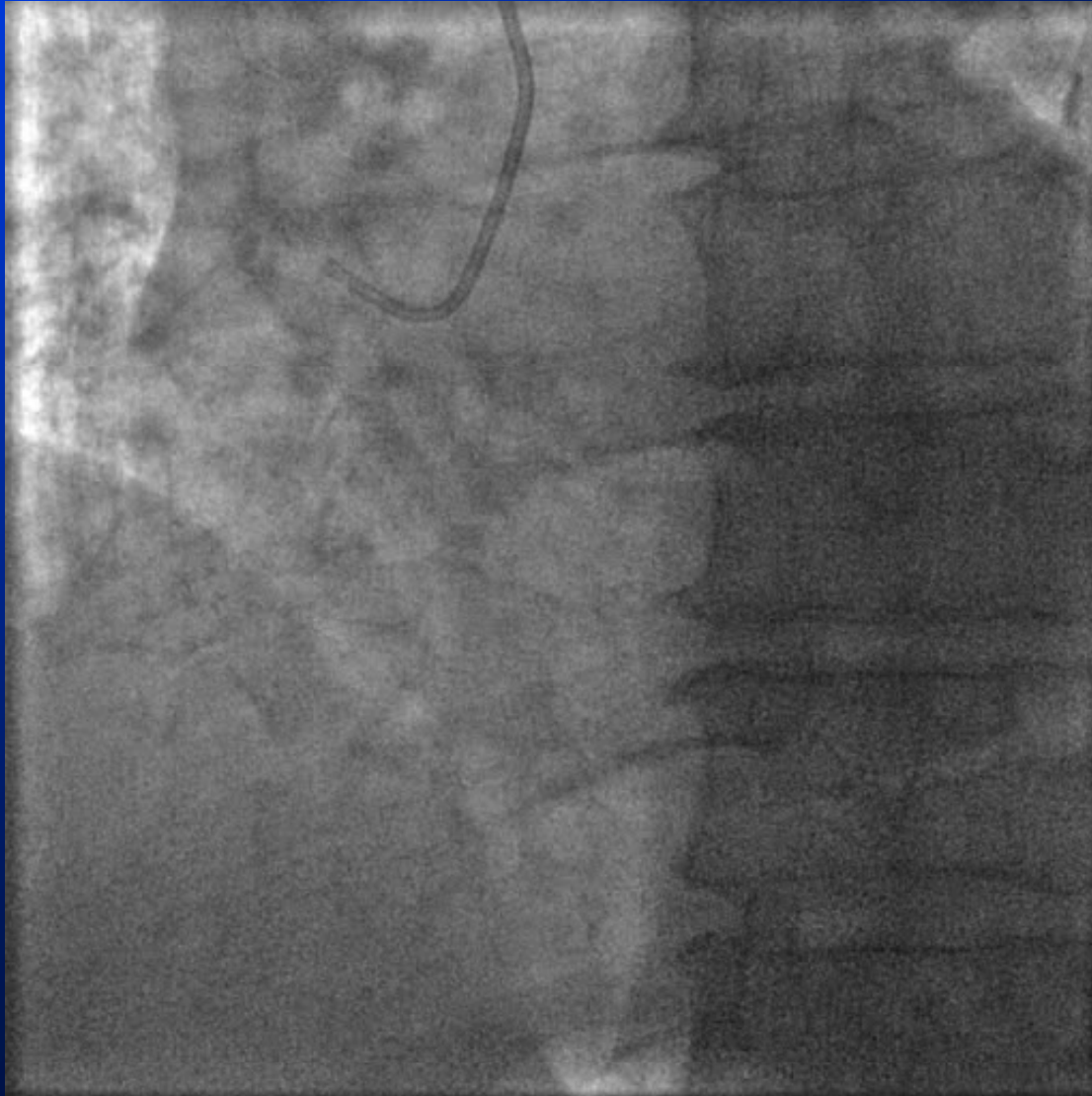
- Right radial approach
- Given UFH 2000 U + NTG 200 mcg intra-arterially
- 5F TIG catheter
- LCx severe disease

Diagnostic Angiography



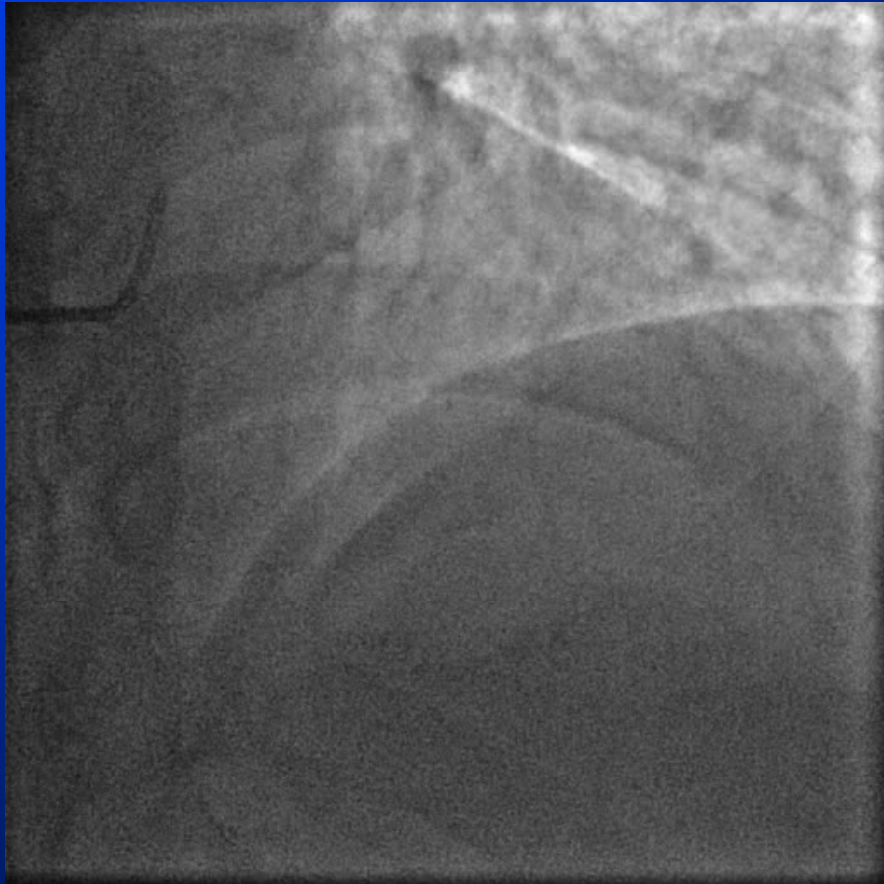
- Right radial approach
- 5F TIG
- LAD – mild-mod long diseased segment (mid)

Diagnostic Angiography

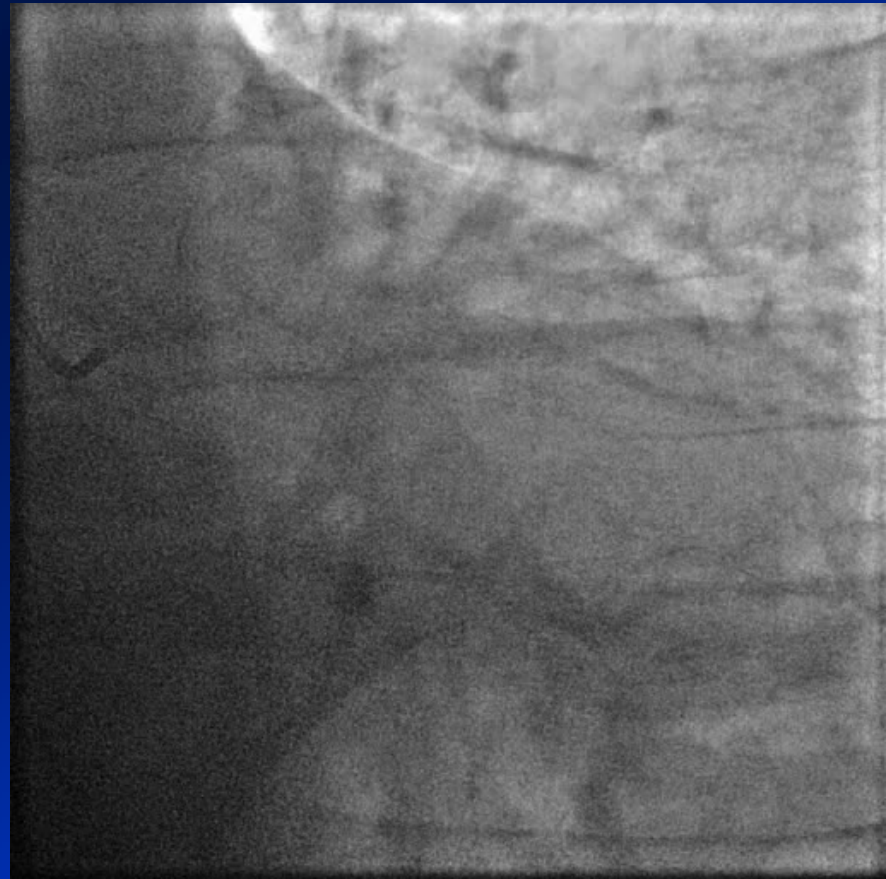


- Right radial approach
- 5F TIG
- RCA minor

Now What ?



- Stop and go home?
- Fix the LCx only?
- Fix both LAD and LCx?
- FFR the LAD, fix LCx?
- FFR both?



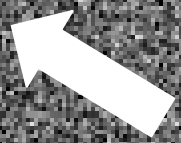
Decision: Functional Assessment



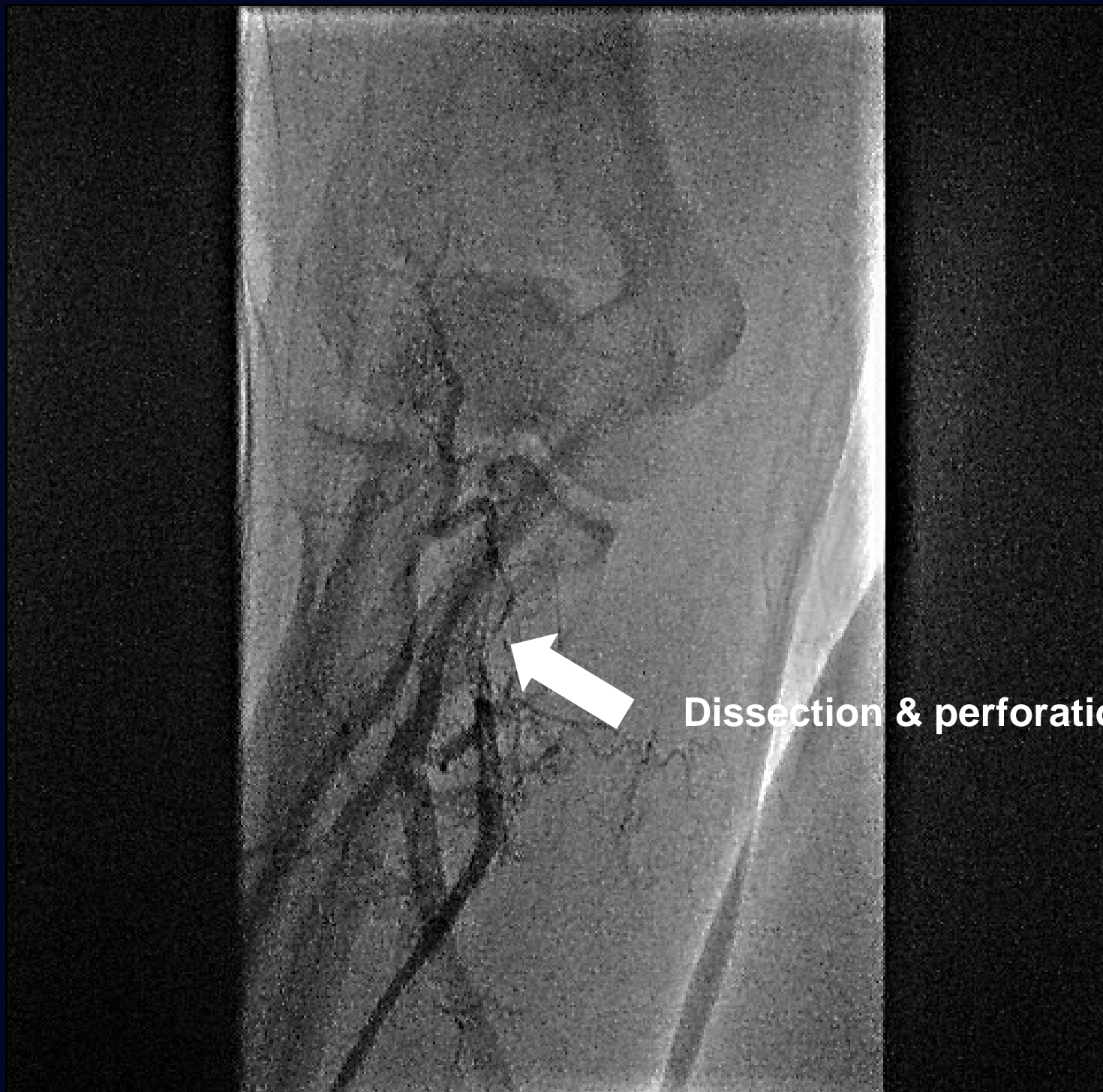
- Plan to FFR LAD and possibly stent LCx
- UFH “topped up” to 60 U/kg (extra 3000 U given)
- My fellow introduced 6F Medtronic LARA guider in right radial
- Called in because guide “stuck” in radial artery



**Contrast
extravasation**







Dissection & perforation

Options?



- ? abandon and go left radial
- ? abandon and go femoral
- ? other

Salvage Approach



- Took a Runthrough floppy wire and advanced it

Salvage Approach

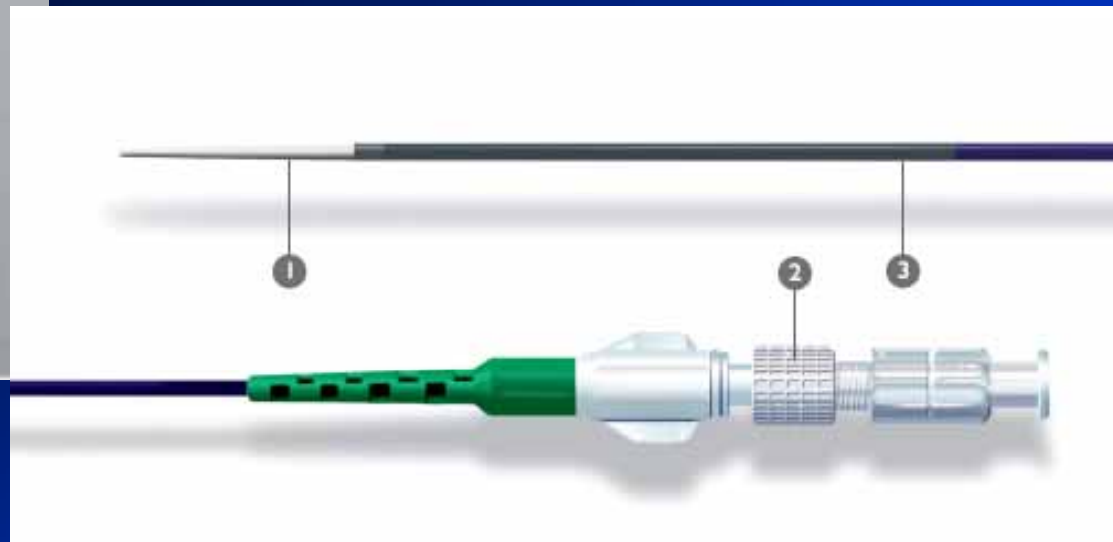
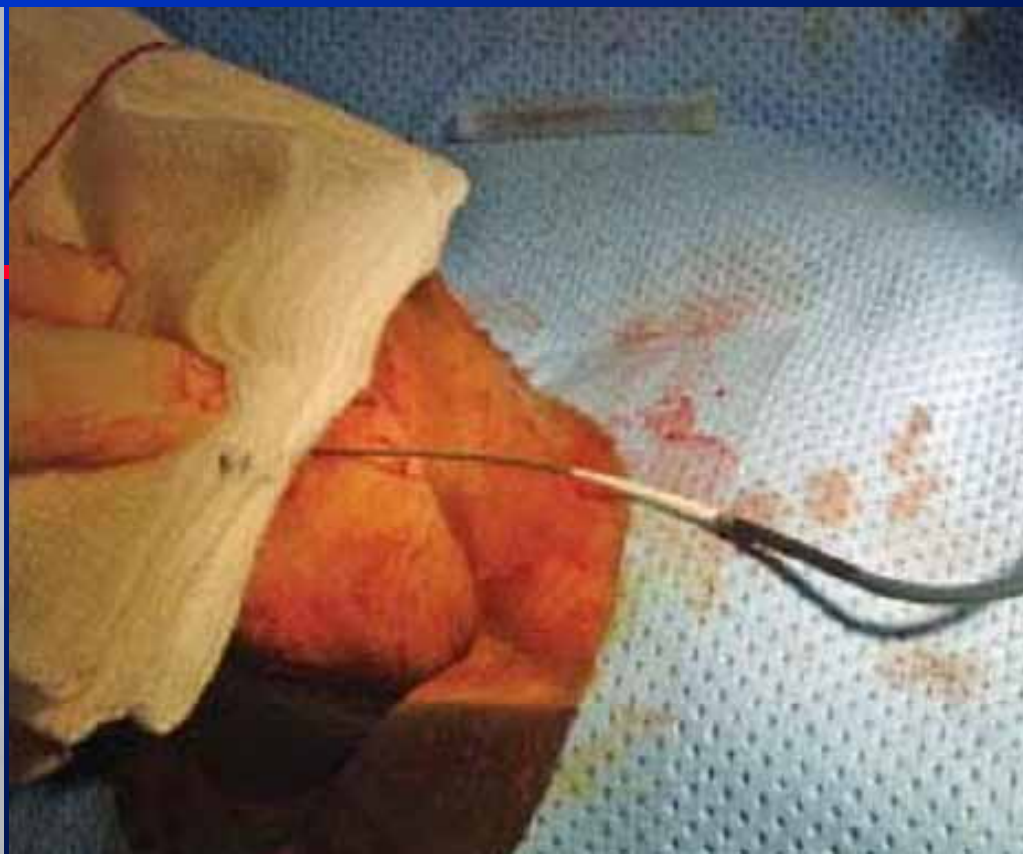


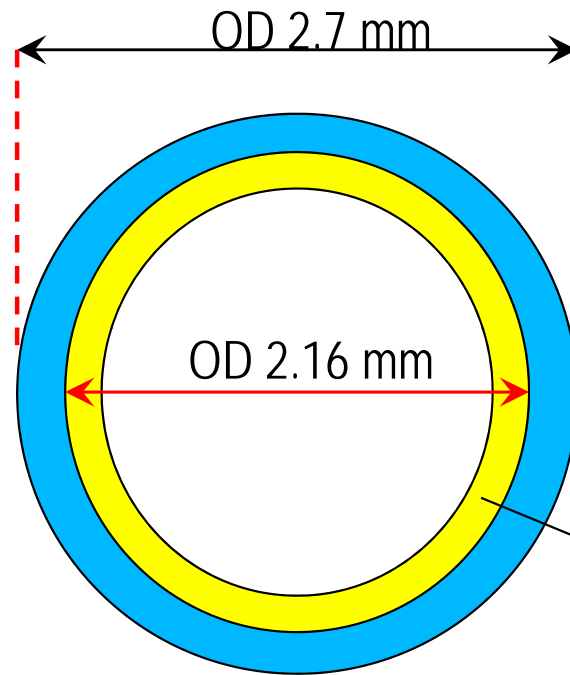
- Followed Runthrough floppy wire with a 4F JR4 diagnostic catheter

Salvage Approach

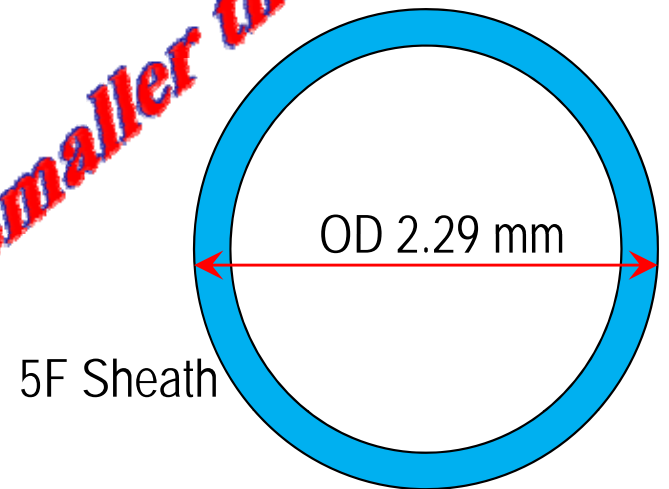


- Swapped coronary guidewire for Terumo hydrophilic J wire





Smaller than ...

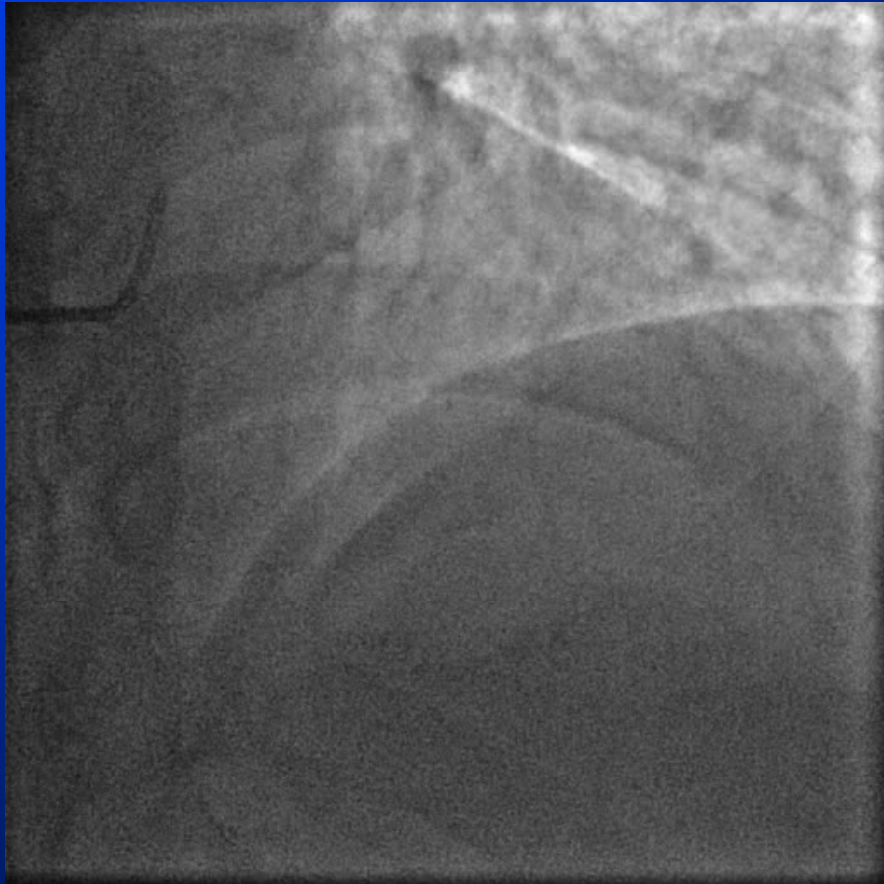


Salvage Approach

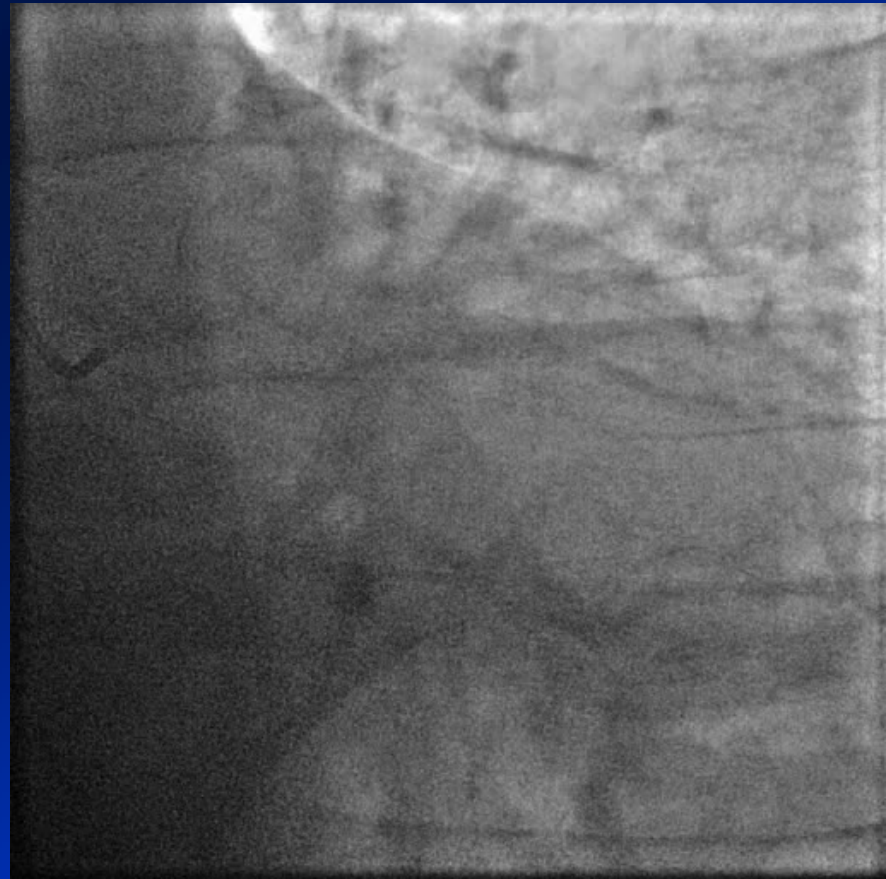


- Over J wire advanced an Asahi "sheathless" 6.5F PB 3.0 guider

FFR Performed



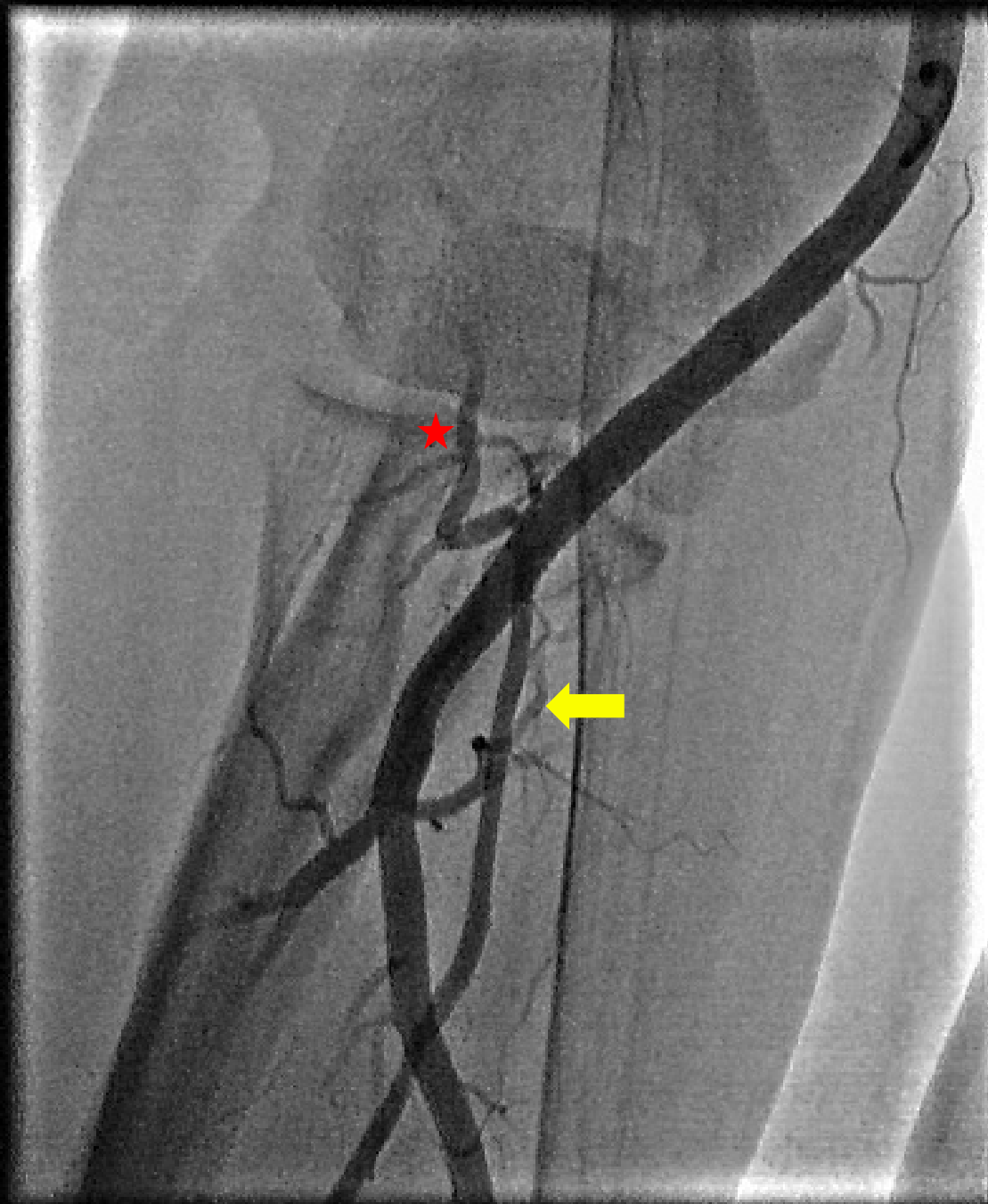
- FFR – LAD → **0.92**
(adenosine 300 then 400 mcg)
- FFR – LCx → **0.93**
(adenosine 400 mcg then papavarine 16 mg)



Post Procedure Radial Imaging



- Sheathless guide removed with no problems and swapped for radial sheath
- Image through sheath

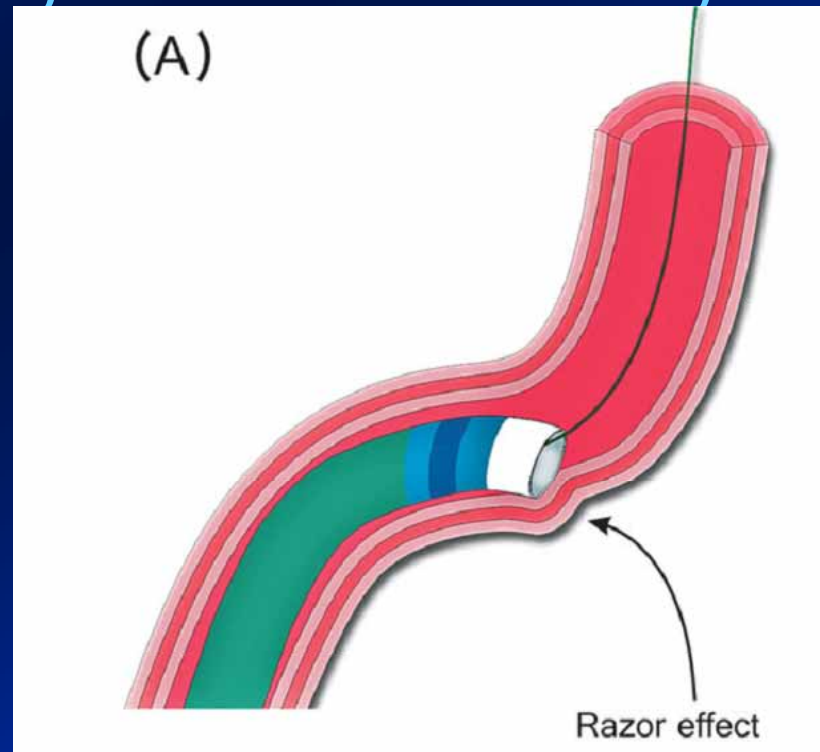


Follow Up:

- Discharged the next day without incident
- Follow up 2 weeks later – right forearm normal.
- Radial pulse +2
- Barbeaux test normal

Learning Points:

- Radial artery dissections and perforations can occur
- I think they may occur more often than we appreciate
- Happened with guide: likely due to the “razor effect” of guide edge in relatively smaller radial artery



From: Patel T et al. *Cath & Cardiovasc Interv.*

14 Nov. 2012

Jafary / TTSH



Learning Points:

- A sheathless guide offers:
 - Tapered tip (no “razor” effect)
 - Smaller lumen
 - Lubricious surface

all making it ideally suited to cross dissection & perforation
- Our case demonstrates rapid and complete healing of the dissection and perforation in a relatively short time (despite use of heparin)
- Use of a sheathless guide can perform therapeutic “**guide-o-plasty**” of dissected and/or perforated radial arteries