

Stent Dislodgement and Retrieval

Operator: Moo Hyun Kim

Fellow: Kai Song

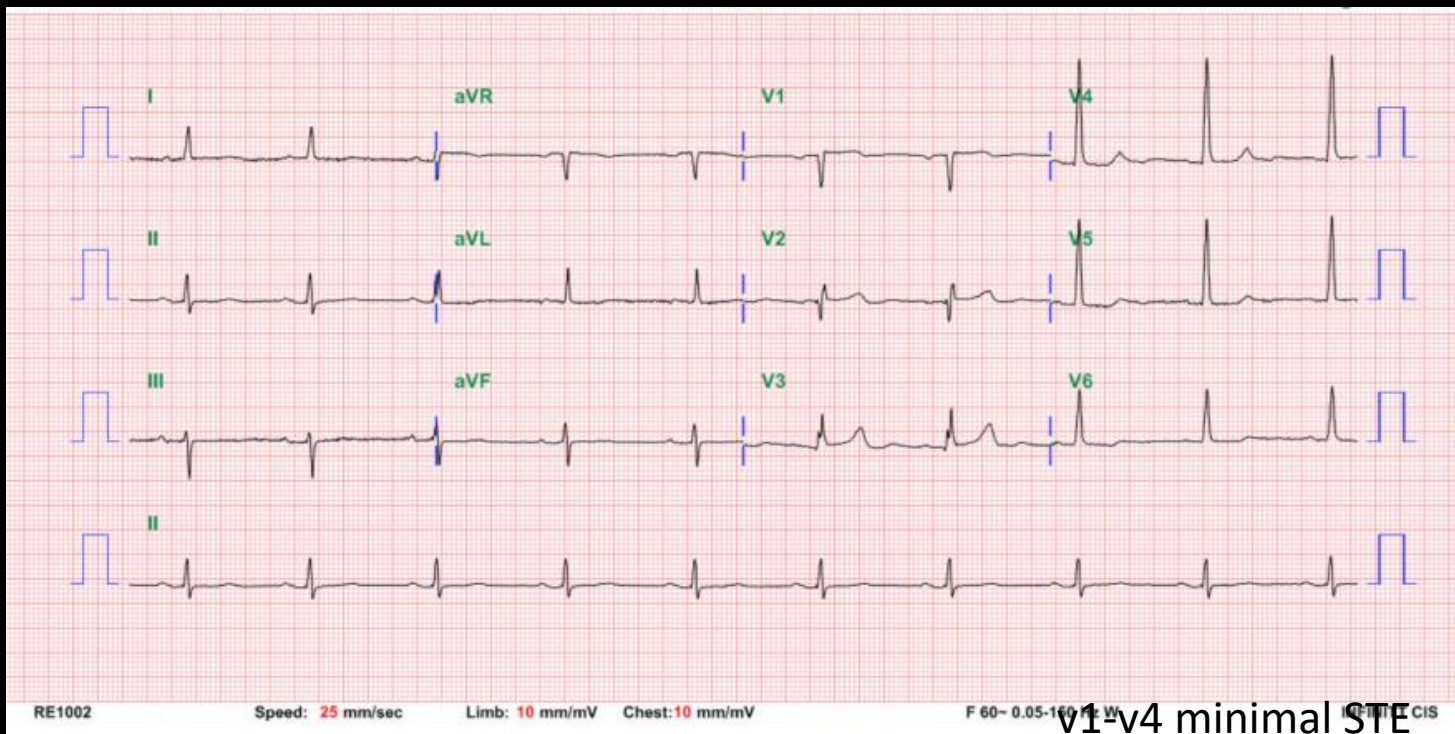
Dong-A University Hospital, Busan, South Korea

Case Summary (M, 76)

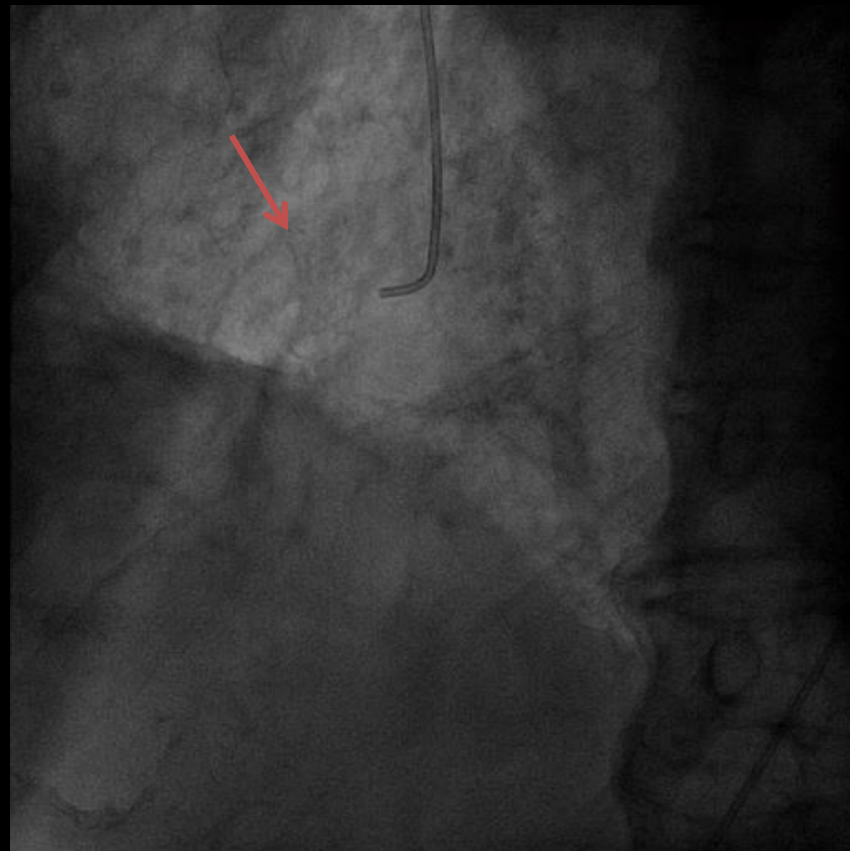
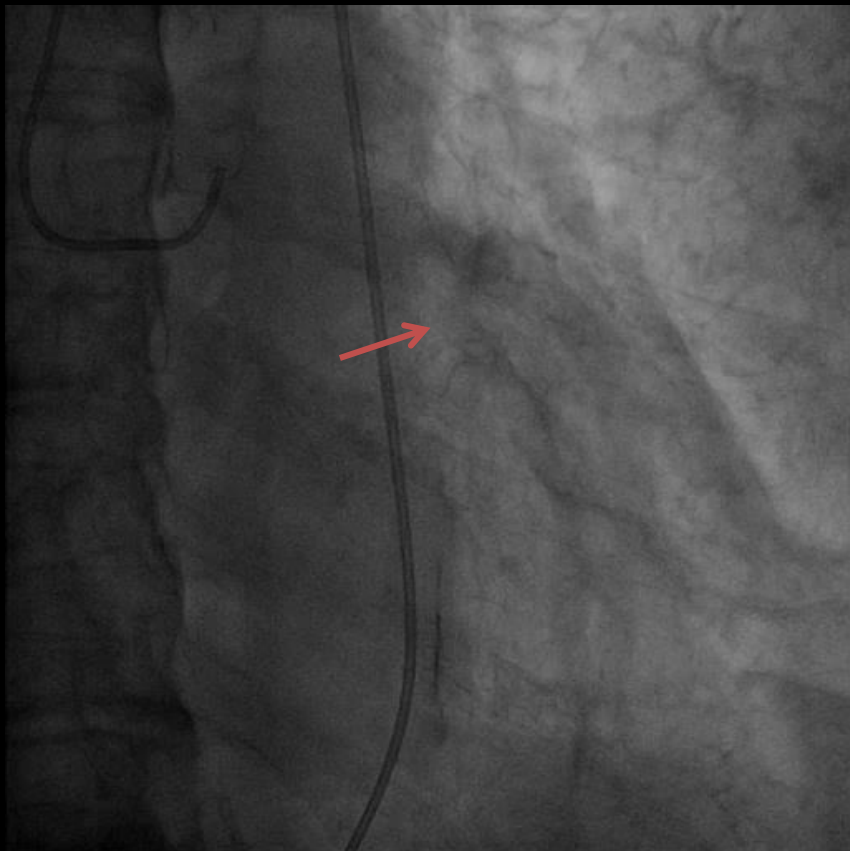
C.C.

- Coronary risk factor:
HTN, DL, oMI, Renal a. stenosis (stented)
- Prior STEMI, PCI (2016): proximal-distal LCx
- Echo: LVEF: 45%
- Lab test:
Hs-Tnl: 0.0592ng/ml
BNP: 3043.0

Pre ECG

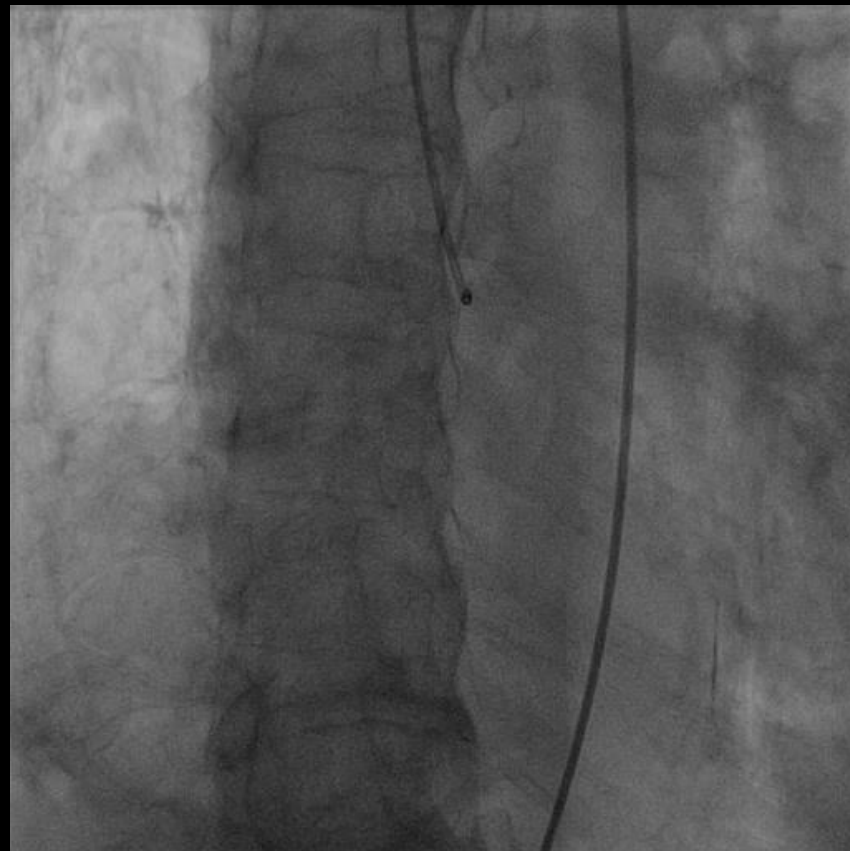
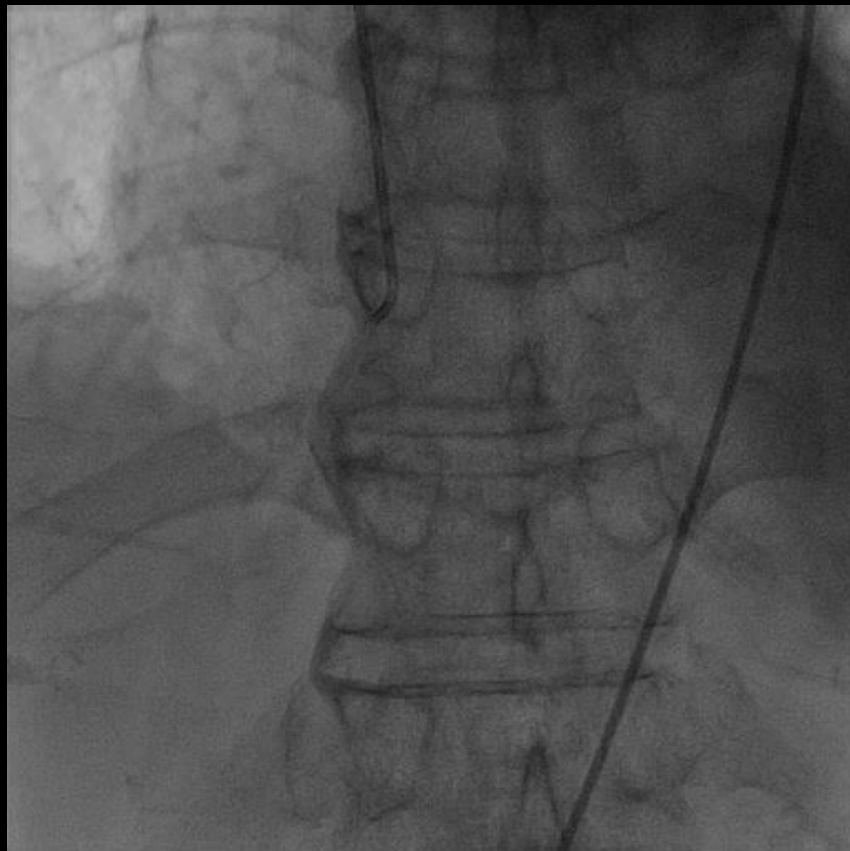


Initial CAG

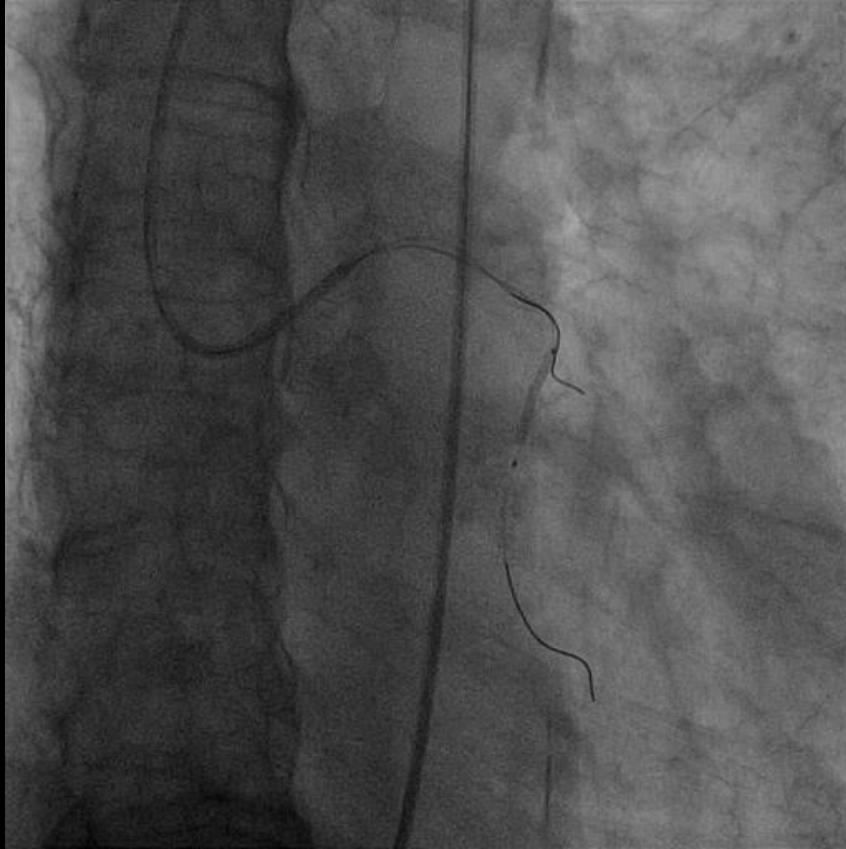


aneurysmal bulging
plaque rupture

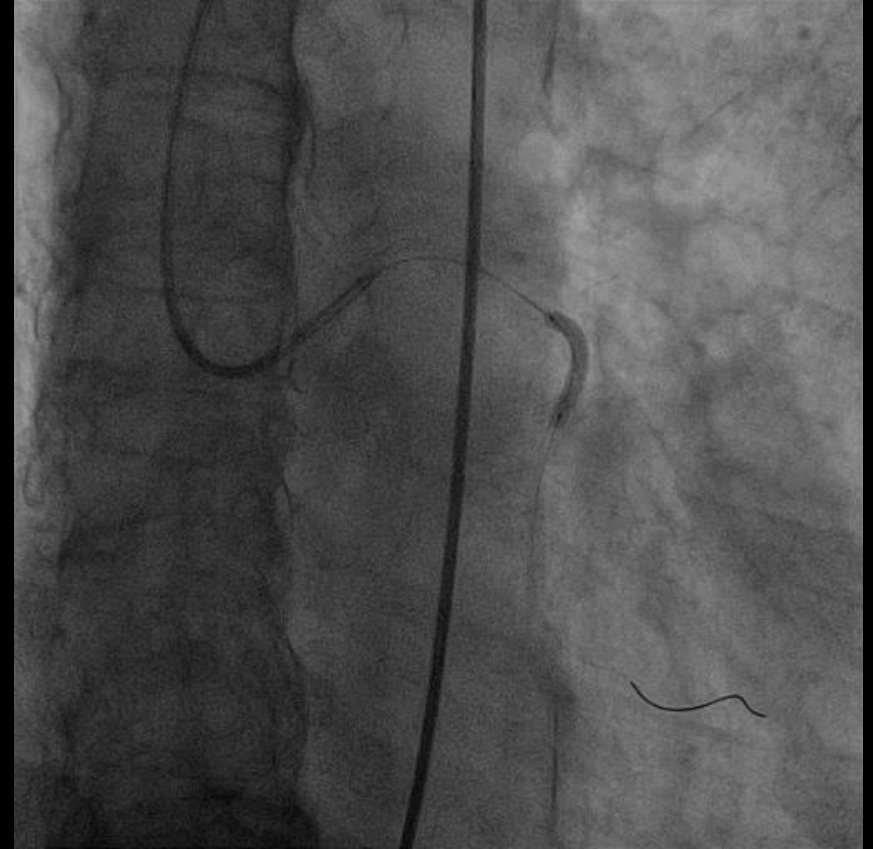
Initial CAG



LCx

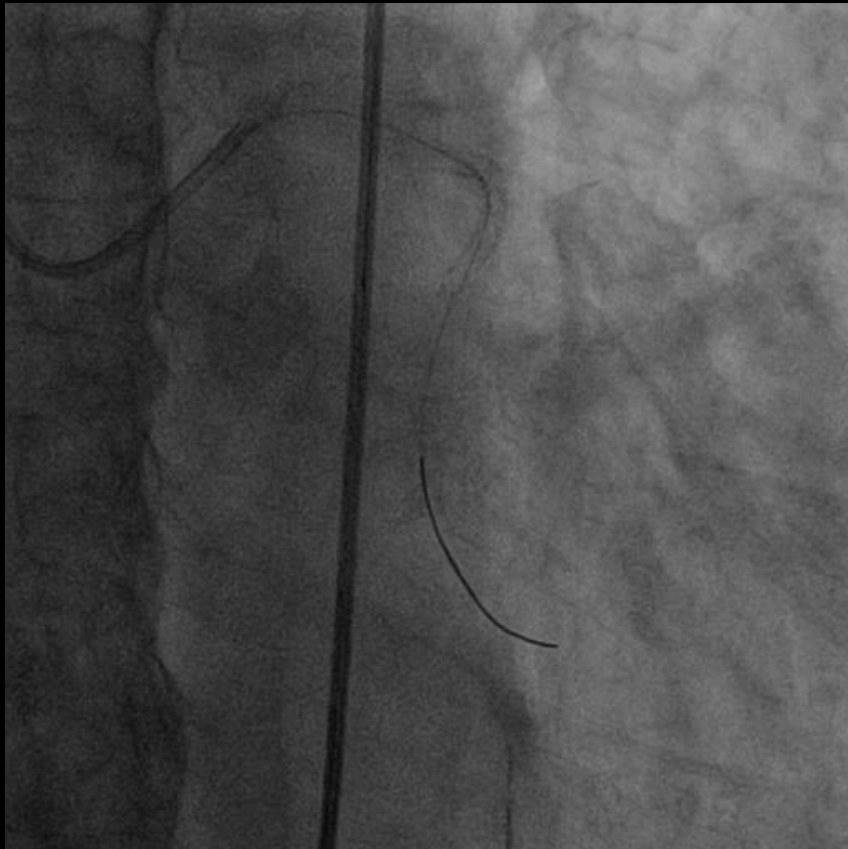


Runthrough + Sion Blue wire
2.0*20mm balloon



2.5*22mm Resolute Onyx stent

Final LCA



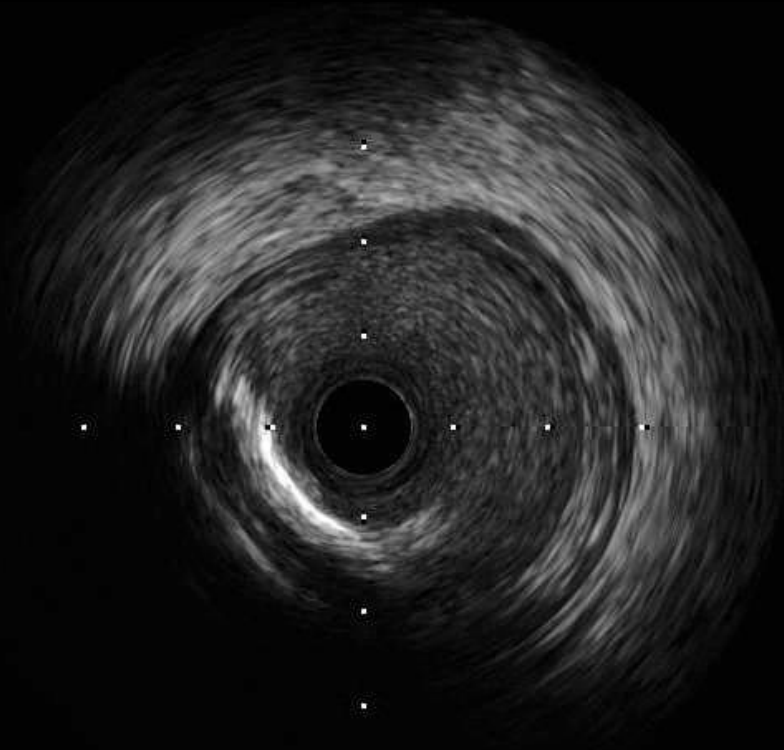
RCA



- AR II 6 Fr
- Runthrough NS

IVUS

- 3~7 Plaque rupture

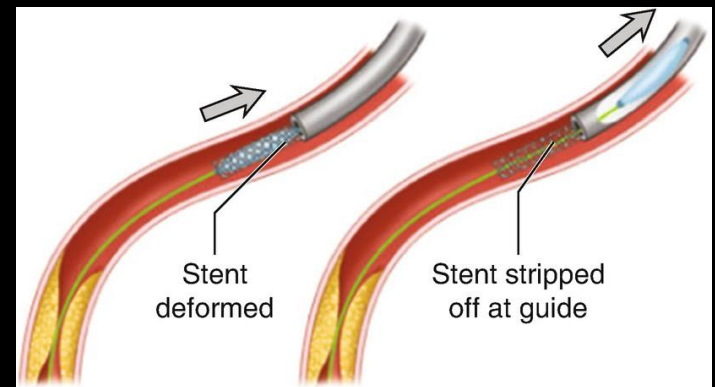


We wanted to deploy a 3.5*18mm Ultimaster
stent at pRCA

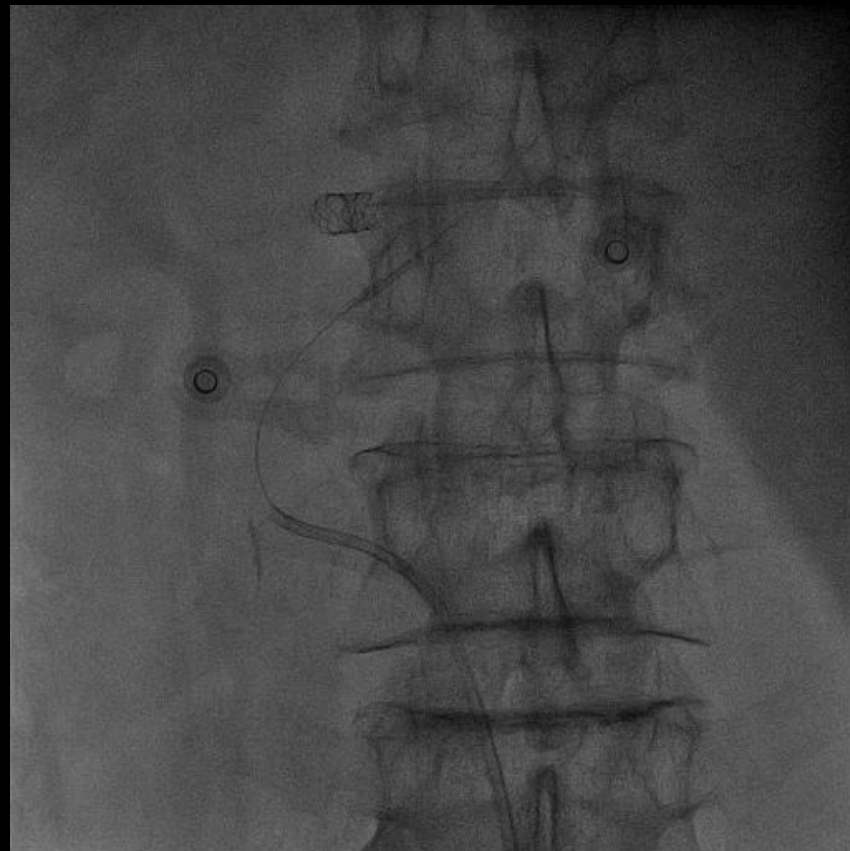
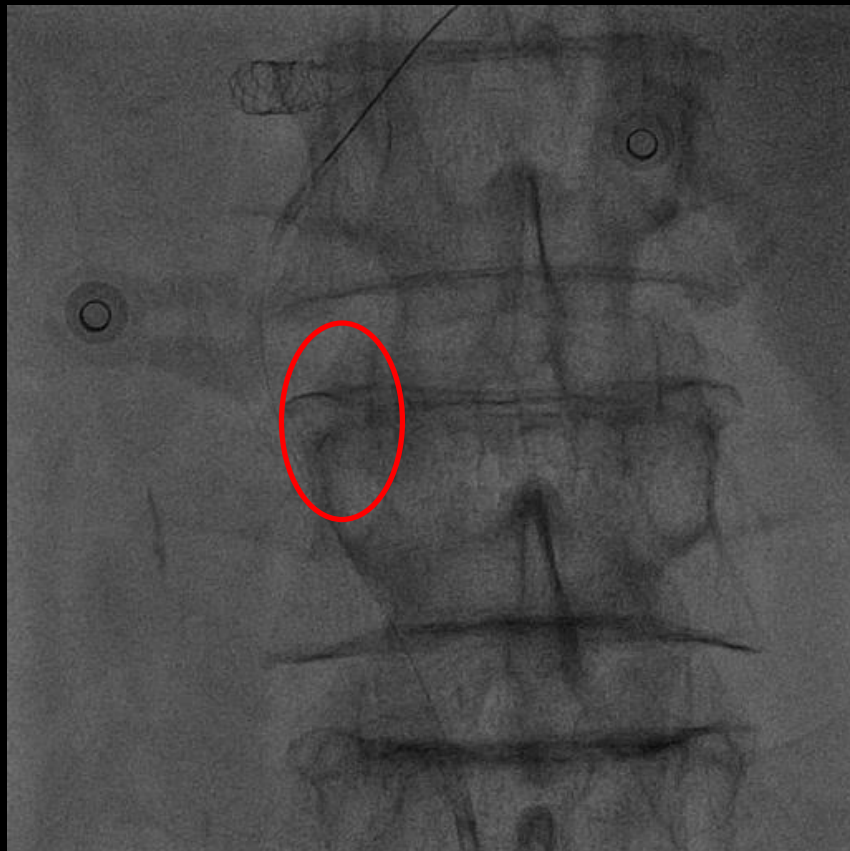
BUT

Problem Developed...

- Guide catheter was disengaged during the stent insertion.
- Due to angled AR II guiding catheter, the stent was not retrieved into GC
- The stent was finally dislodged and strip off the balloon during manipulation.



Stent was pulled down to the abdominal aorta, but still supported by the GW

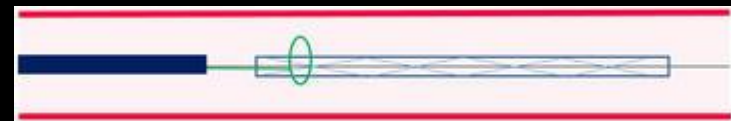
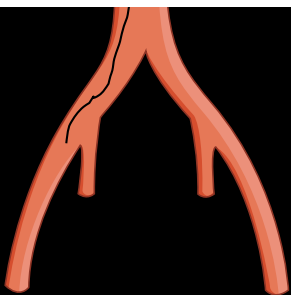


Current condition: total stent dislodged in aorta and GW in situ

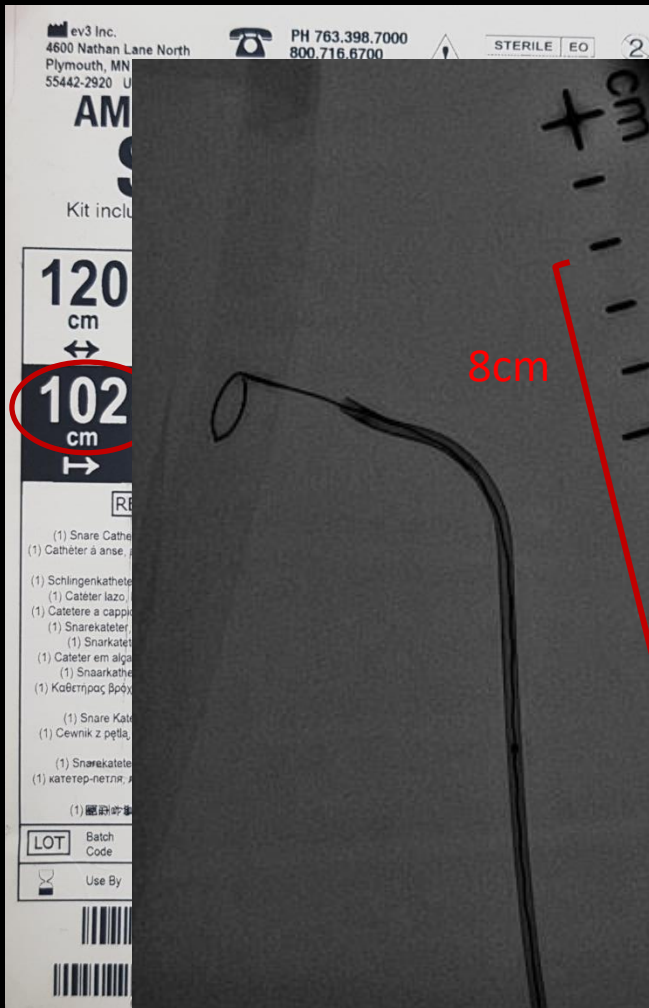
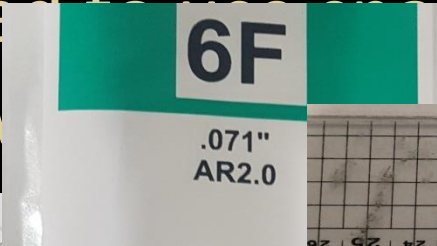
FORCEPS COMPARISON TABLE

The various types of forceps include: Vascular Retrieval Forceps, Flexible Myocardial Biopsy Forceps (Bioptome) and Maslanka Grasping Forceps

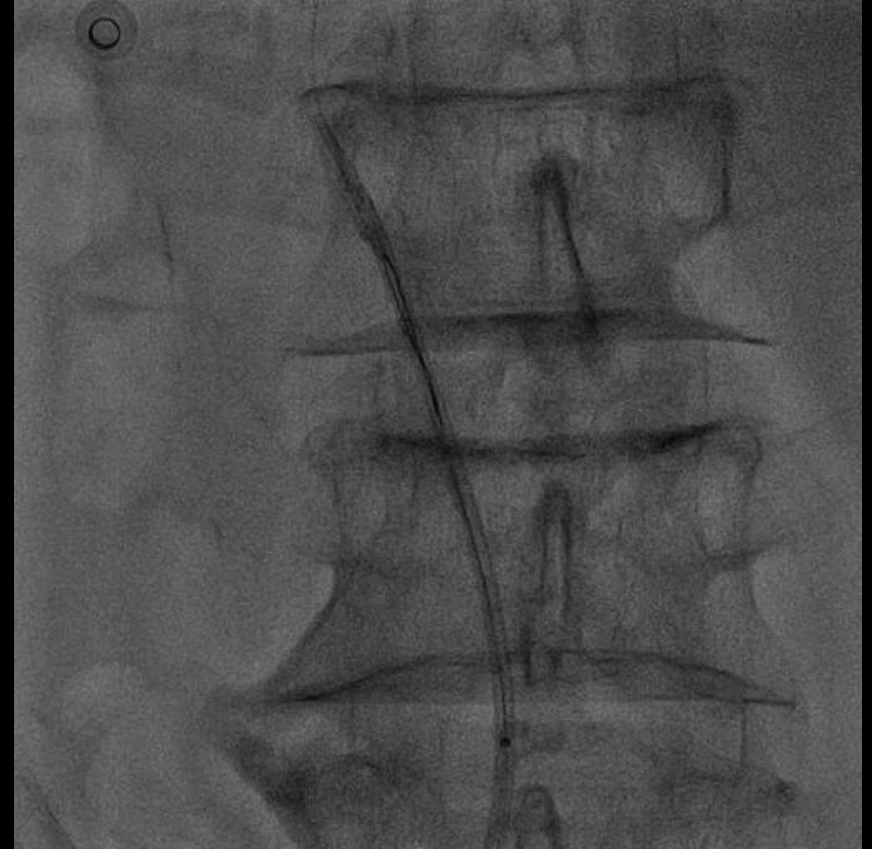
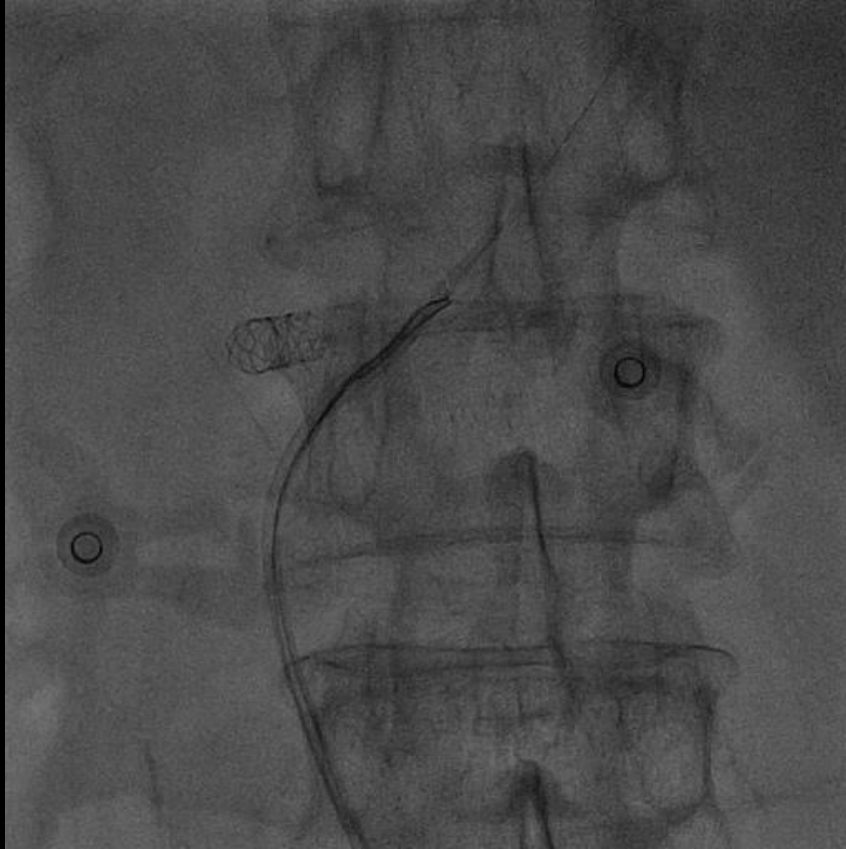
| DEVICE | BRAND | DIAMETER (Fr) | LENGTH (cm) |
|---|--------------|---------------|-------------|
| Vascular Retrieval Forceps | Cook Medical | 3Fr | 120cm |
| Flexible Myocardial Biopsy Forceps (Bioptome) | Cook Medical | 3Fr | 120cm |
| Maslanka Grasping Forceps | BVM Medical | 5.4Fr | 160cm |



Decided to use the 102cm sheath, but 102cm snare catheter was not available



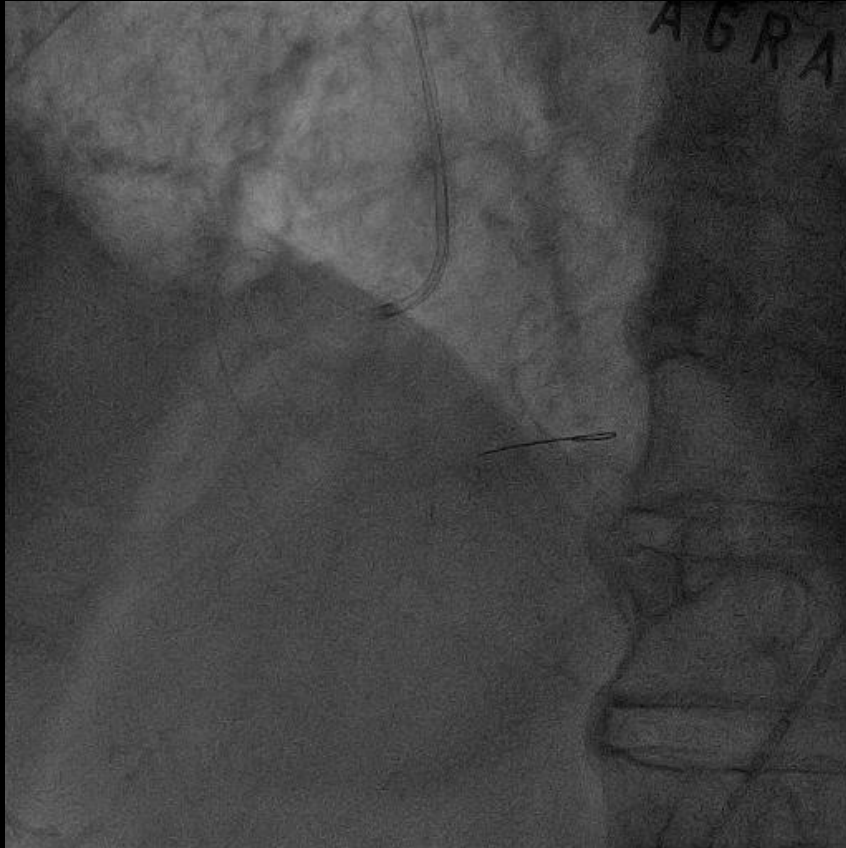
Tried to only use the loop to catch
the stent



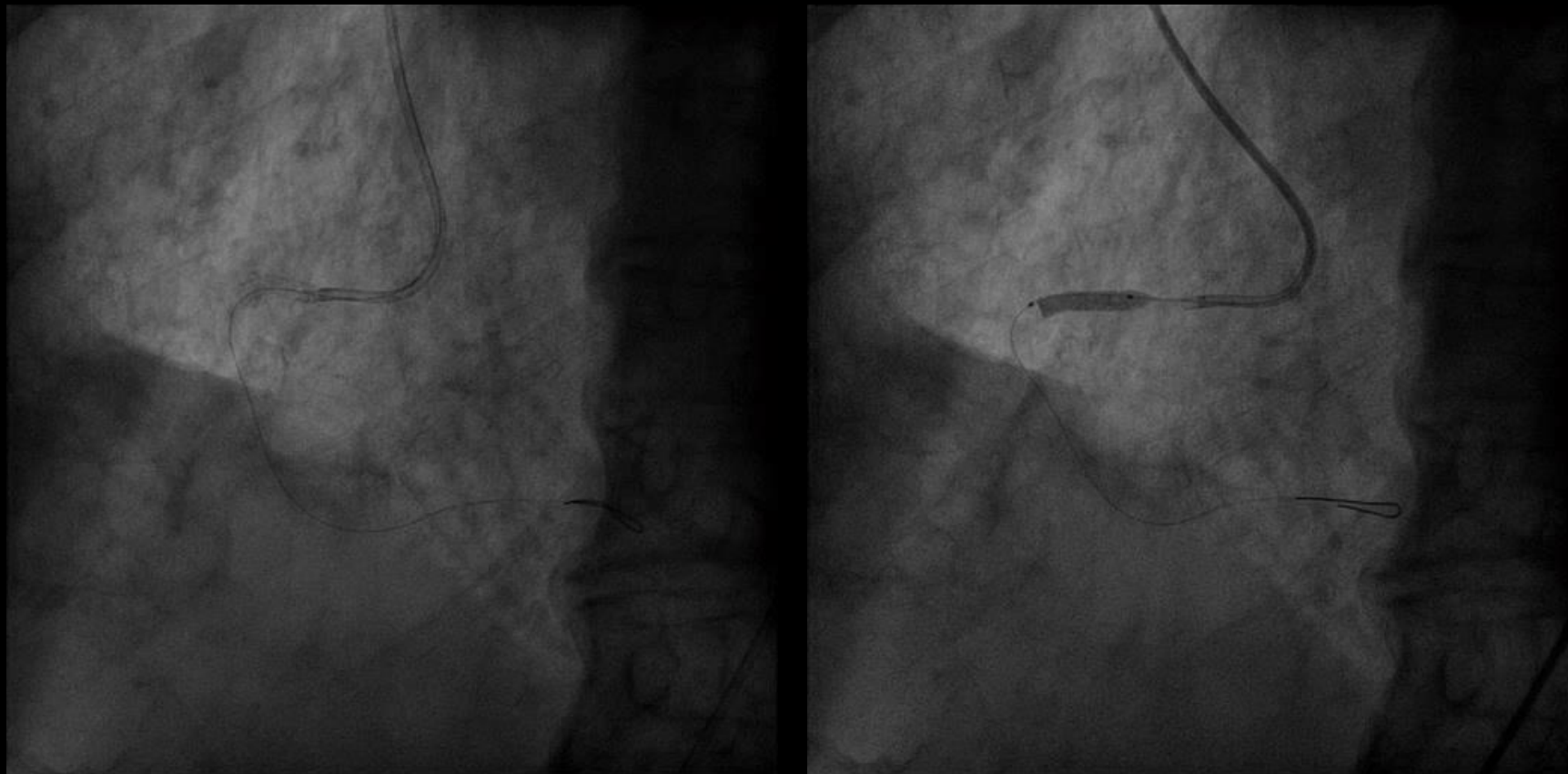
Removed outside cover, then
grab the stent



Re-stenting was successful after the support of the Guideliner

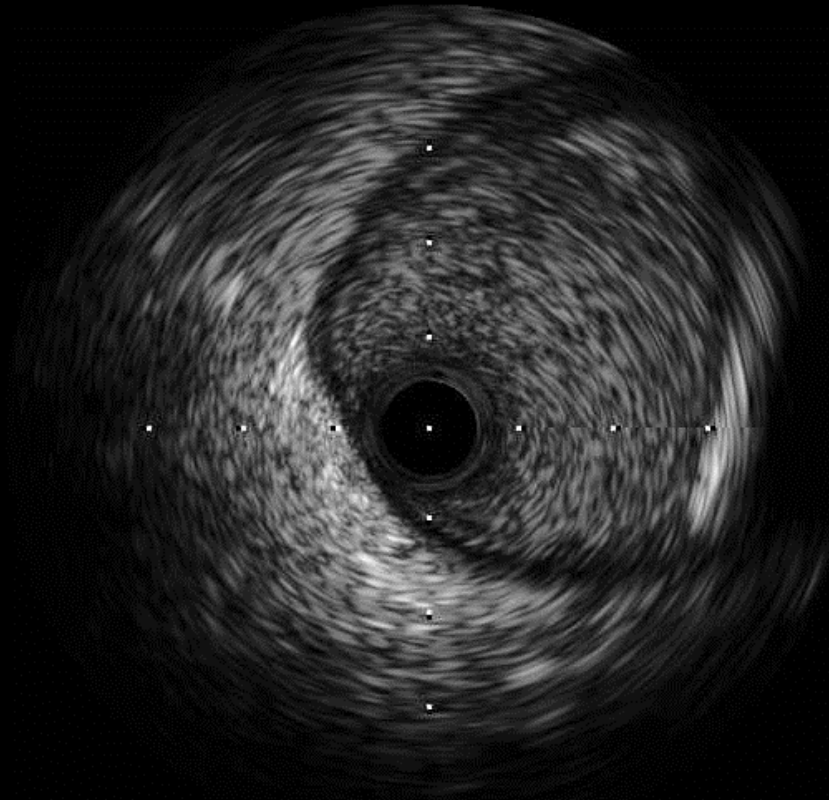


Stenting

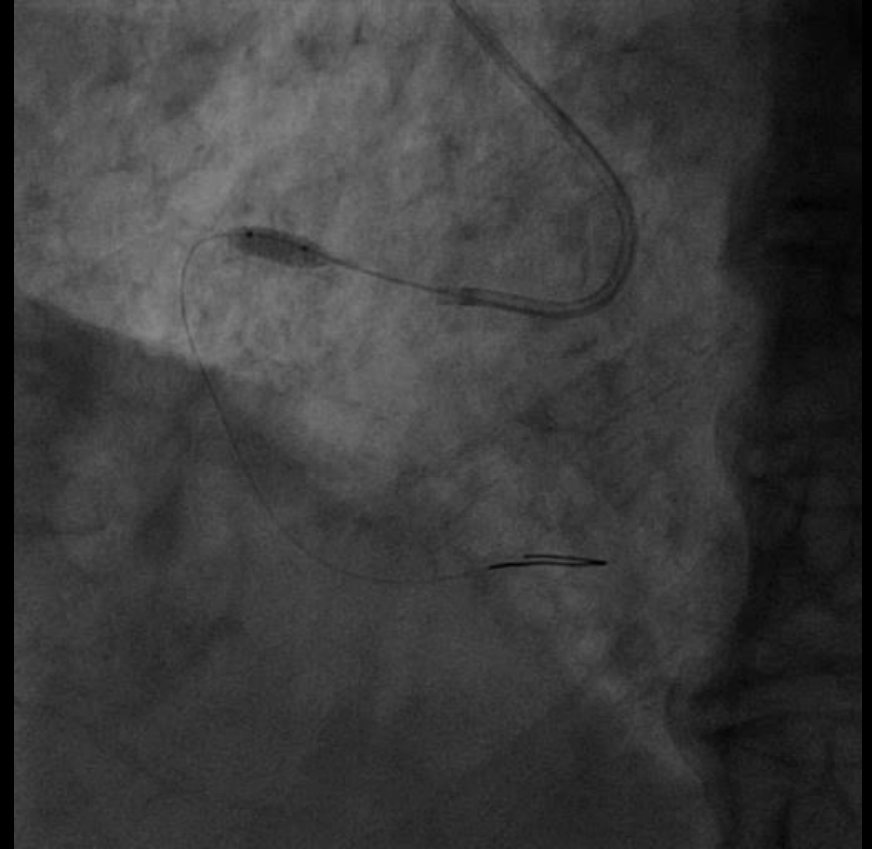


3.5*18mm XIENCE Sierra stent

Rupture plaque site had a huge positive remodeling >> Incomplete apposition

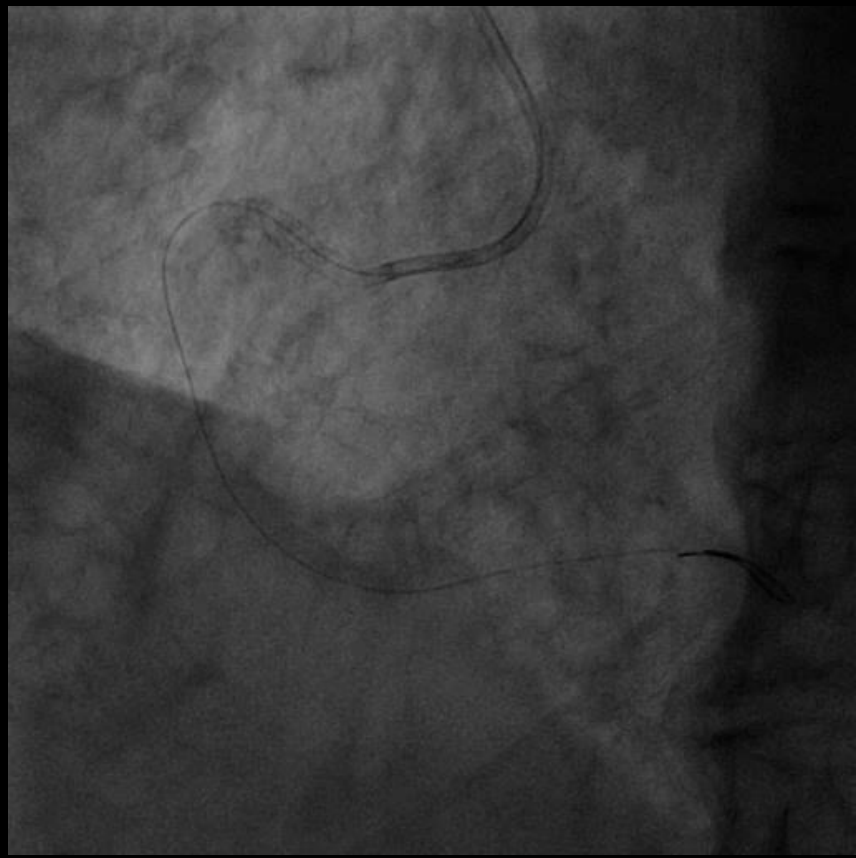
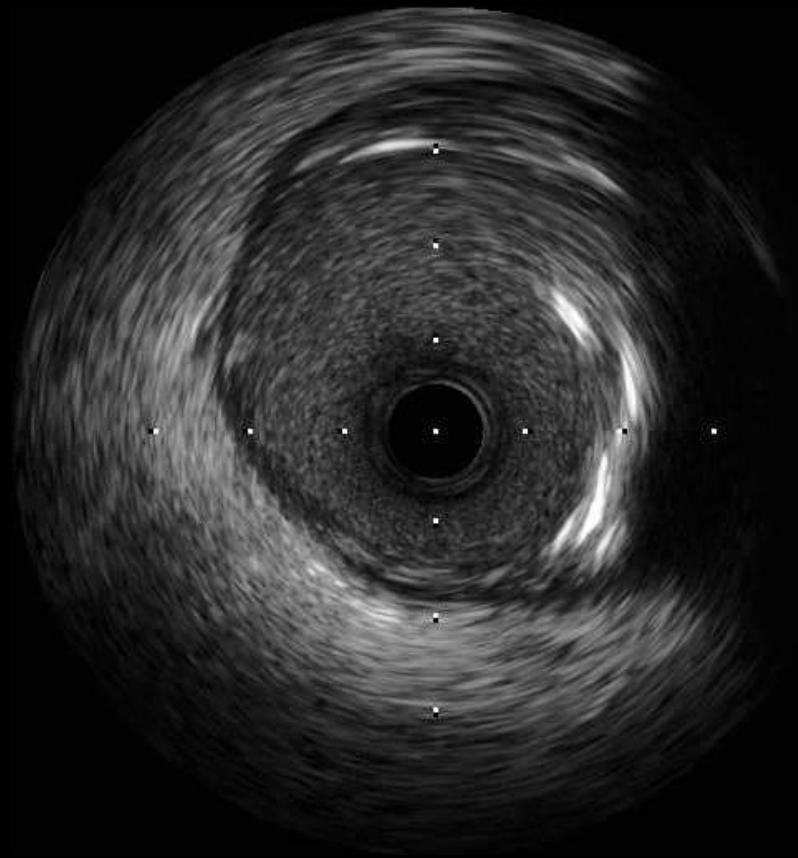


Post-dilating NC balloon



4.5*8mm NC balloon

Better final result



Summary

Partial stent loss

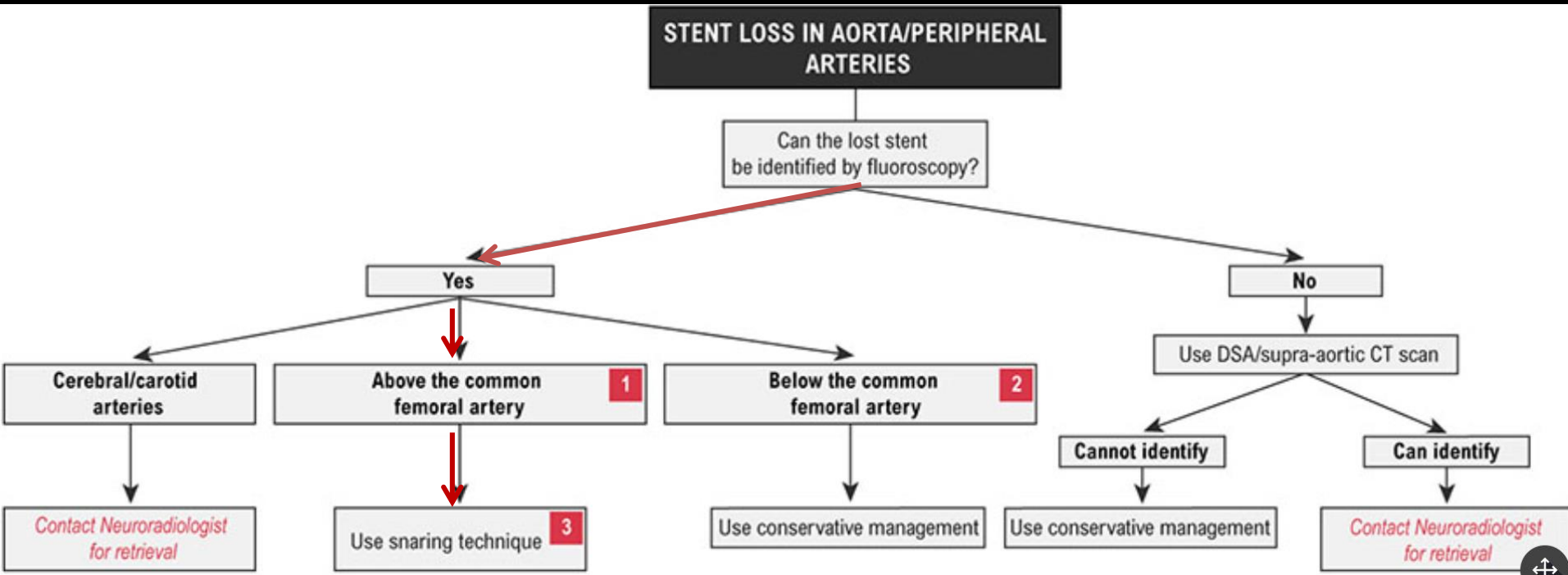
Total stent loss GW in situ

Stent in coronary artery

Total stent loss

Total stent and GW loss

Stent in aorta/peripheral arteries



Summary

- Stent dislodgement and delivery failure can occur during RCA stenting, especially angled GC and tortuous proximal vessel.
- Stent retrieval can be tried after pull down the stent position in lower abdominal side.
- Snare can be a useful tool, but the length of the snare should be considered.

Thanks !



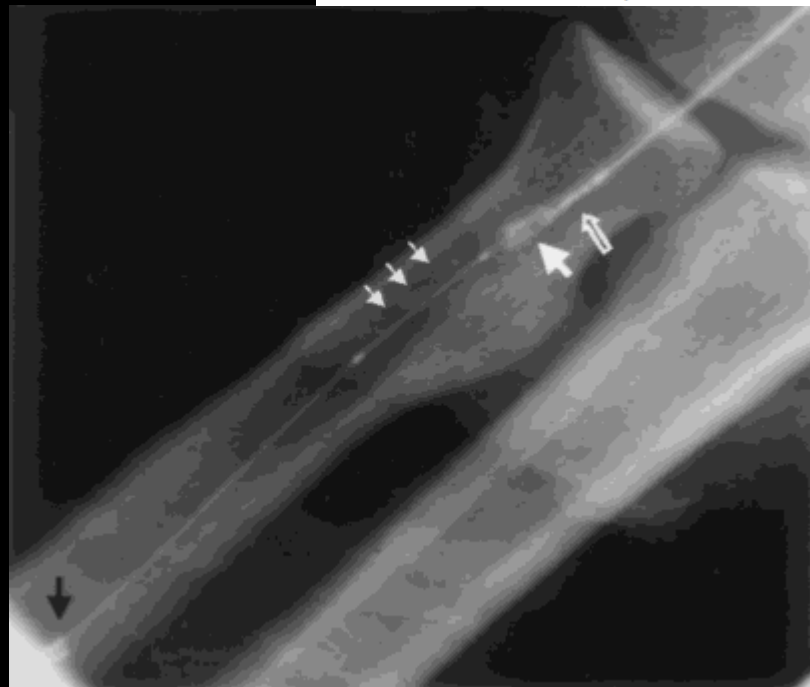
Forceps

Catheterization and Cardiovascular Interventions 52:489–491 (2001)

Retrieval of Dislodged and Disfigured Transradially Delivered Coronary Stent: Report on a Case Using Forcep and Antegrade Brachial Sheath Insertion

Moo Hyun Kim,* MD, Kwang Soo Cha, MD, and Jong Seong Kim, MD

We report a case of dislodged and damaged stent during transradial coronary procedure using 6 Fr device, which was successfully retrieved by using a forcep and 8 Fr antegrade brachial sheath. The disfigured and bulky stent can be removed, after their retrieval from the coronary circulation, using a forcep inserted through an 8 Fr brachial artery sheath if the radial artery is deemed too small to accommodate larger sheath. *Cathet Cardiovasc Intervent* 2001;52:489–491. © 2001 Wiley-Liss, Inc.

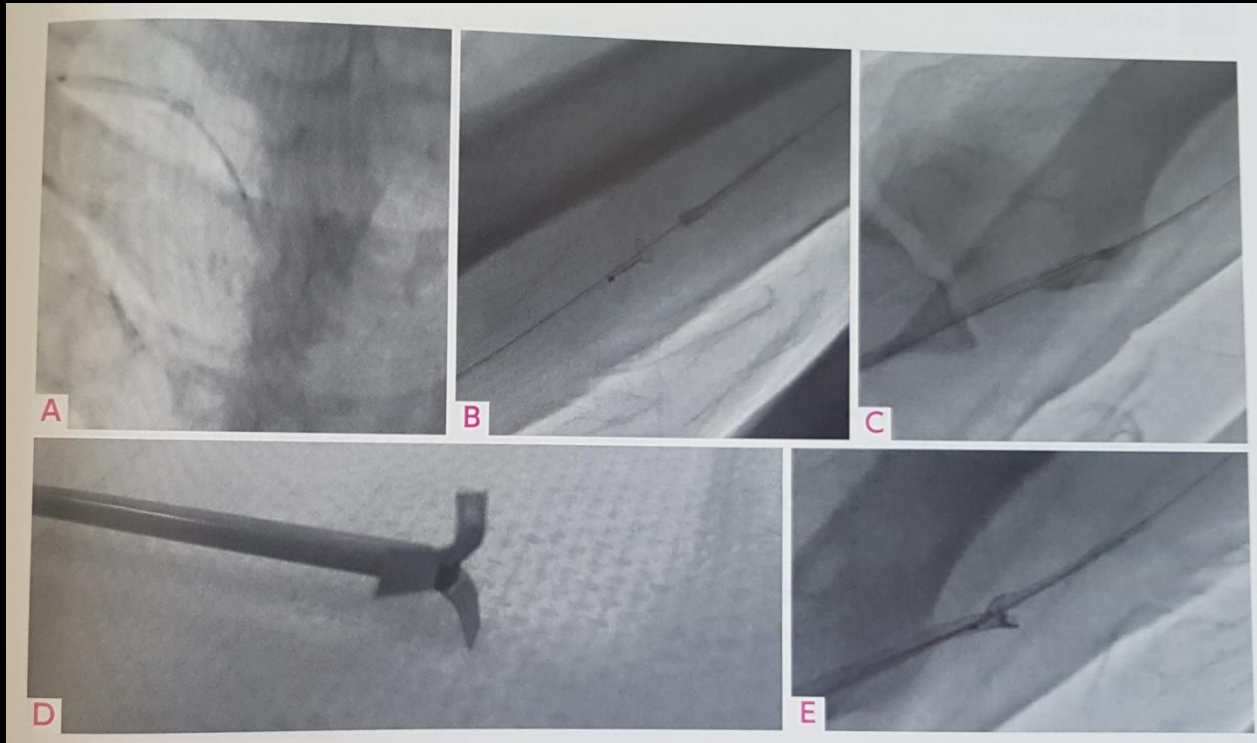


VASCULAR RETRIEVAL FORCEPS

- The low-profile device can be delivered through a catheter with an ID larger than .045 inches and inserted through a hemostasis valve.
- The device features a PTFE-sheathed, braided stainless steel shaft and strong gripping jaws.
- The distal spring-coil tip is designed to prevent you from inadvertently engaging the vascular wall during manipulations.

| Order Number | Reference Part Number | Fr | Length cm |
|--------------|-----------------------|----|-----------|
| G07187 | VRF-3.0-120 | 3 | 120 |

Some products or part numbers may not be available in all markets. Contact your local Cook representative or Customer Service for details.



- Prepare a sheath which cut at the distal end like a flower petal