A Dislodged Left Main Stent

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Background (1)

• Mr MAT, a 60 year old gentleman

• Underlying
  - Dyslipidaemia
  - Mild coronary artery disease (COROS 2009)

• Active smoker
Background (2)

- Echo done in 2009 showed LVEF 62% with no RWMA and normal valves.
- Exercise stress test done in 2010, 2014 and 2017 were normal.
Clinical Presentation

- He presented to us on 03/10/2018 with shortness of breath on exertion
- Also had intermittent atypical chest pain for 2-3 months duration
- Vital signs were stable and there was no evidence of heart failure
• ECG showed sinus rhythm with T wave inversion at anterolateral leads.
• Echocardiography
  - LVEF of 55-60%
  - mild left ventricular hypertrophy
  - no RWMA
• Stress echo showed
  - no dynamic ECG changes
  - noted hypokinesia at LAD territory

• Cardiac Enzymes were Normal.

• Full blood count, Renal function and Liver Function tests were normal.
Normal Left Main Stem, mild disease of proximal LAD and severe stenosis of mid LAD with slow flow, mild disease of proximal LCx and mild disease of proximal RCA
PCI to LAD

- Right Radial approach with EBU 3.5/6FR guiding catheter and run through floppy wire
  
  Predilated with NC scoreflex 3.0x15 mm at 14 atm
  
  Stented with DES 3.0x24 mm at 10 atm
  
  Postdilated with NC 3.5x15 mm at 22 atm
• Catheter induced iatrogenic spiral dissection at the Left Main Stem (LMS)
• Patient experienced mild chest pain

• Not flow limiting and blood pressure was stable
• IVUS was done and LMS size was noted 5.0 mm
Direct Stenting of LMS

Rewired and stented with DES 4.5x12 mm at 16 atm
Stent was migrated and dislodged to guiding catheter during post dilatation and flare with NC 5.0x12 mm balloon
• Re-stented LMS with DES 5.0x12 mm at 16 atm without further delay

Post dilated with NC 5.0X8 mm balloon at 20 atm

• IVUS showed stent was well apposed
• Patient was stable and angina free
Retrieving of dislodged stent

Right Femoral Artery approach with 8 FR sheath and ONE SNARE 6 FR

Snaring of stent by inflating the NC 5.0mm balloon on the floppy wire distal to the guide was unsuccessful.
Decided to bring down the guide to descending aorta

Managed to snare after multiple attempts
Dislodged again and oscillating at right femoral artery

Managed to snare, crush and retrieve the stent through right femoral sheath
• Stent successfully retrieved
• Patient was monitored in CCU for 24 hours and discharged after 2 days
Discussion Points

• Coronary stent dislodgement is a rare complication with incidence between 0.3% and 0.8%

• Dislodgement of a stent can be secondary to
  - extreme coronary angulation
  - highly calcified coronary arteries
  - inadequate coronary artery predilation
  - direct stenting
  - interference by a previously deployed stent
  - inadequate coaxiality of the guide catheter
• Most of migrated stents can be retrieved by percutaneous interventional methods

• Immediate retrieval of migrated stent is recommended for the prevention of secondary embolic events
Various strategies can consider based on whether guide wire in-situ and site of migration,

- the recrossing technique
- snaring technique
- multiwire technique
- crush techniques

Figure 42.2 Retrieval devices for lost stents: A) Loop snare, B) En-snare three-loop retrieval system, C) Basket retrieval device, D) Biliary stone forceps, E) Biopsy forceps, F) Cook retained-fragment retriever
Conclusion/Take-home Message

- Straight forward case of angioplasty to mid LAD

- Complicated with iatrogenic dissection of LMS – could we have prevented?

- Further complicated with dislodged left main stent to the guiding catheter after deployment

- Various strategies were used to successfully retrieve the dislodged stent and to treat the left main dissection
• Always ask for help from experts when needed

• Avoid
  - inappropriate catheter selection
  - deep intubation
  - forceful manipulation of the guide catheter
  - forceful injection of the contrast

• Catheters should be appropriately sized, positioned and coaxially aligned with the artery

• Immediate recognition and appropriate management of complications can save lives
Thank you