Retrieving the Stent from the LMT During PCI

Jun-Jack Cheng MD, PhD
Shin Kong Hospital, Taipei, Taiwan
Clinical Data

- 80 y/o Female,
- CAD risk factors – DM, HT, Dyslipidemia
  Non-smoker
  FH of CAD +
- ECG: ST-T depression over V leads
- NSTEMI, high cardiac enzymes
3VD, Multiple Lesions

RCA- small diffuse

LAD- p, 80% calcified lesions
  m, CTO
d, 80%

LCX- m, lesions
Proximal LAD 80%
Mid-LAD near total occlusion
Distal LAD 80%
Proximal LAD 80%
Mid-LAD near total occlusion
Distal LAD 80%
Miracle wire cross the m-LAD CTO lesion
Miracle wire cross the m-LAD CTO lesion
2.25mm balloon dilation
2.50-2.75mm balloon dilation with long dissection
2.50-2.75mm balloon dilation with long dissection
2.5x28mm DES deployment in m-LAD
2.5x28mm DES deployment in m-LAD P-LAD dissection
2.75x24mm DES development in p-LAD
Stent Loss
2.75x24mm DES dislodged in LM
2.75x24mm DES dislodged in LM
RETRIEVAL TECHNIQUES

1. Deploying, or Crushing the Stent
2. Small-Balloon Technique
3. Two-wire Technique
4. Using a Loop Snare, or Other Retrieval Devices
a. Dislodged stent

b. Advance second wire

c. Advance balloon

d. Inflate balloon to crush stent

e. Advance new stent

f. Deploy new stent to cover crushed stent
Simple Small Balloon Technique
Our Patient
Retrieve the damaged stent, but keep the wire.
Small Balloon Technique (1): Advanced fixed wire small balloon
Small Balloon Technique (2): Inflat distally and withdraw
Retrieval of the loss stent - 2.25mm small balloon, loop snare techniques
Retrieval of the loss stent - 2.25mm small balloon, loop snare techniques
Small Balloon Technique
Retrieval of the stent loss - loop snare technique
Loop Snare
Simple Balloon Technique
Two-wire Technique
Two wires with candy wrap method
Two wires with candy wrap method
Successfully removed the loss stent
Successfully removed the loss stent
Finally recross the LAD lesion & stenting
Finally recross the LAD lesion & stenting
Finally recross the LAD lesion & stenting
Take Home Message

1. Stent loss occurred in about 1% of patients

2. Retrieving the stent from the coronary artery:
   - Small profile balloon technique
   - Two-wire technique
   - Loop Snare
   - Others

3. Different personalized strategies

4. Interventionalist should be familiar with retrieved techniques to prevent serious complications