Coiling gone wrong!!!

Dr Arash Hashemi MD
Interventional cardiologist
Erfan General Hospital
Tehran , Iran

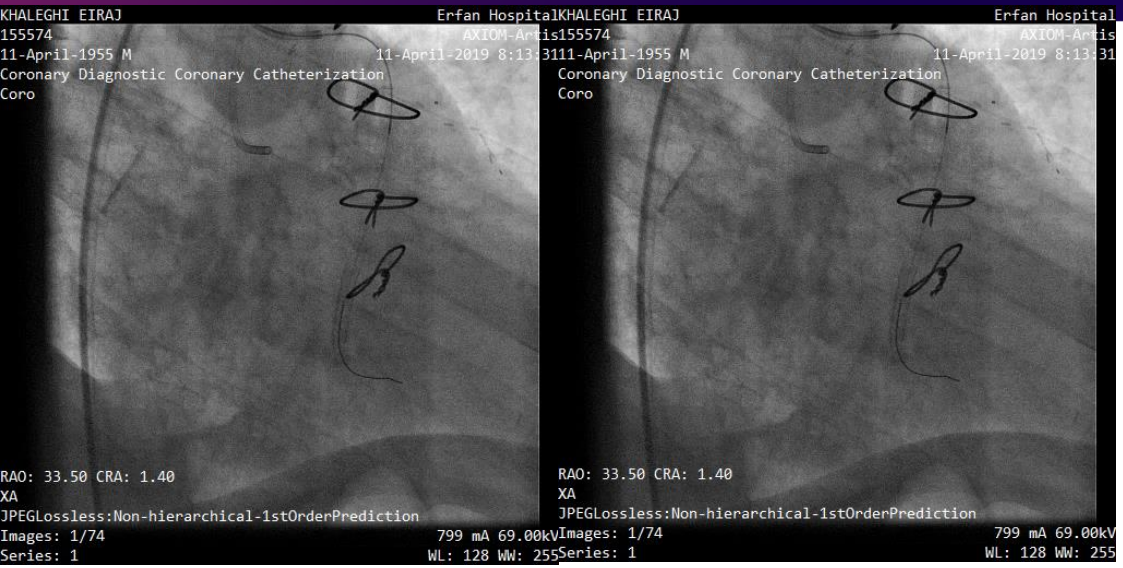
- I do not have any potential conflict of interest.

Patients background

- 78 years old male
- Post CABG
- Post PCI on SVG on OM
- Absent Left main
- LCX CTO from ostial
- Thrombotic subtotal occlusion in SVG on OM presented with acute coronary syndrome and referred to our center for tertiary treatment after coronary angiography
- History of failed PCI on LCX CTO
- J CTO Score; 4 Long , Calcified , Ambiguous proximal CAP and retry

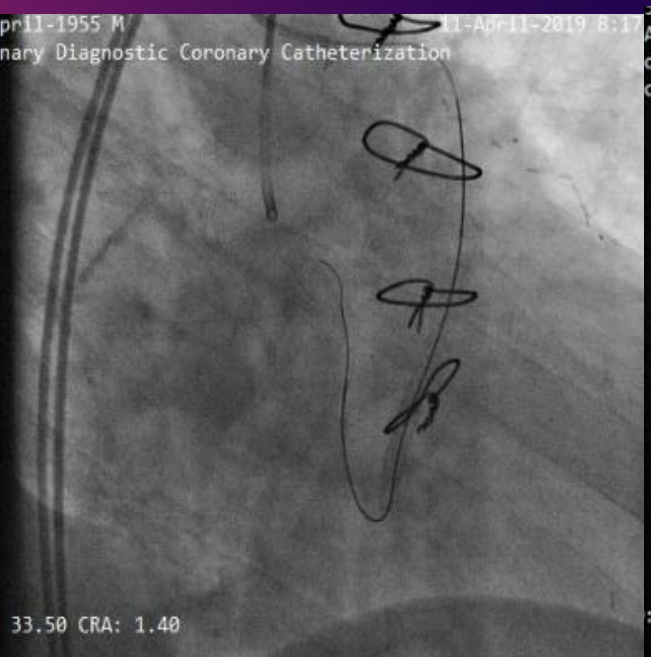
- Base line angiography:

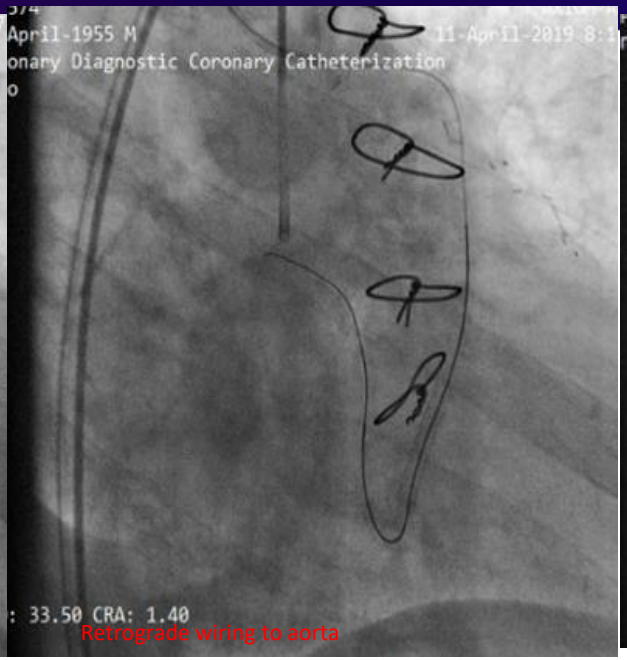
- Thrombotic SVG with In stent restenosis
  LCX CTO from ostial with no antegrade guide support

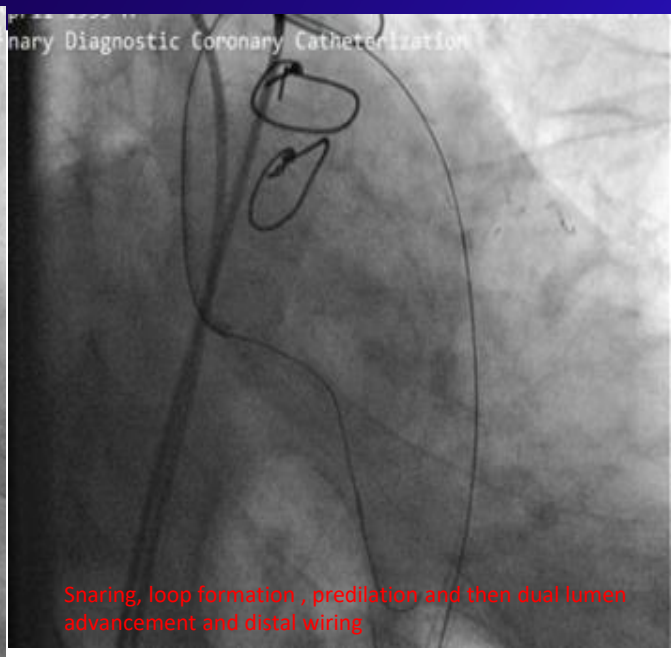

KHALEGHI EIRAJ
Erfan Hospital
155574
AXIOM-Artis
11-April-1955 M
11-April-2019 8:13:31
Coronary Diagnostic Coronary Catheterization
Coro
RAO: 33.50 CRA: 1.40
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/74
799 mA 69.00kV
Series: 1
WL: 128 WW: 255

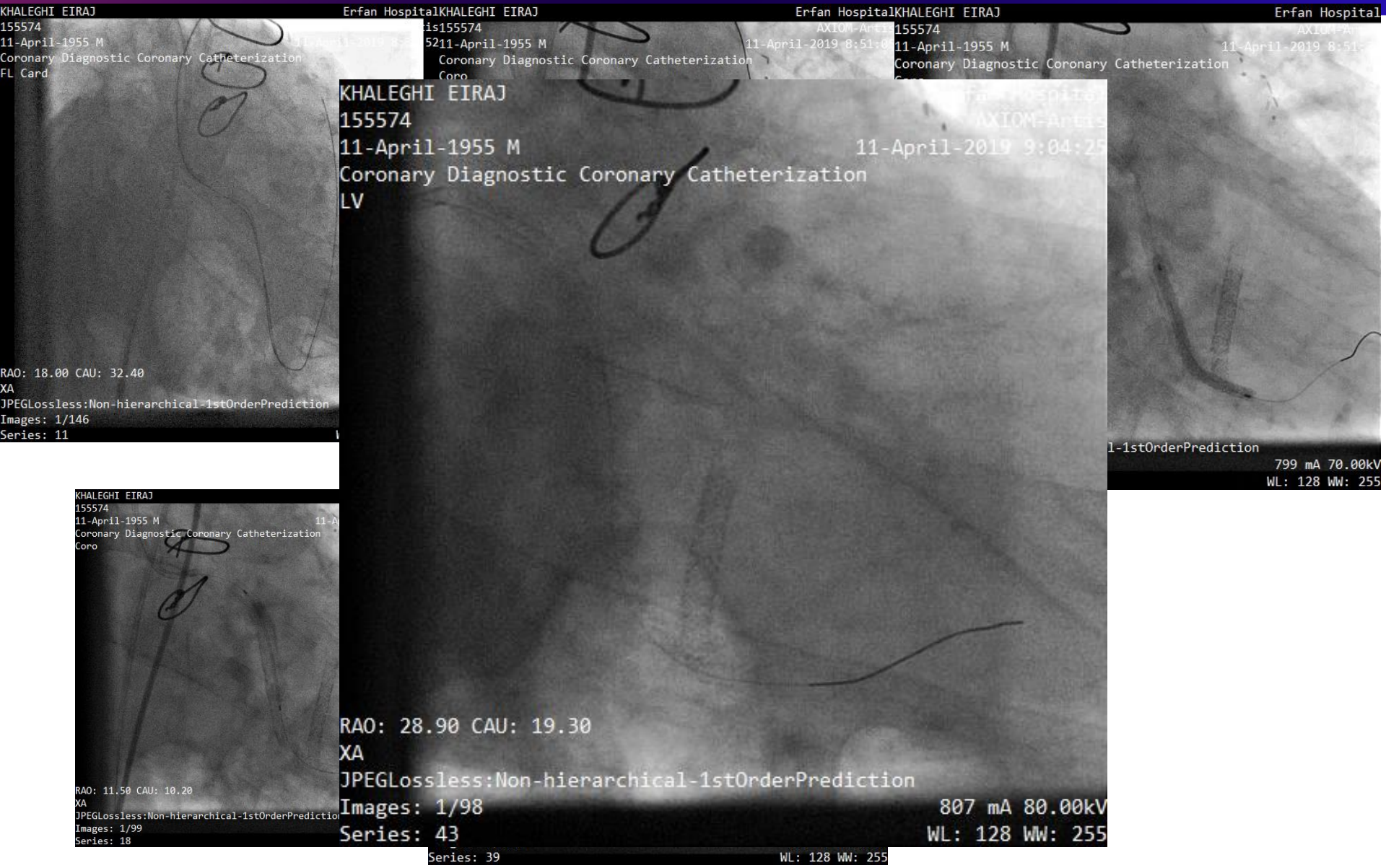
KHALEGHI EIRAJ
Erfan Hospital
155574
AXIOM-Artis
11-April-1955 M
11-April-2019 8:13:31
Coronary Diagnostic Coronary Catheterization
Coro
RAO: 33.50 CRA: 1.40
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/74
799 mA 69.00kV
Series: 1
WL: 128 WW: 255

Plan: CTO PCI using SVG as a retrograde conduit







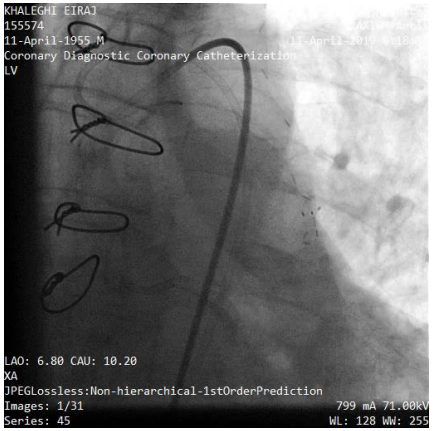

KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
FL Card
RAO: 18.00 CAU: 32.40
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/146
Series: 11
Erfan Hospital
KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
Coro
Erfan Hospital
KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
Erfan Hospital
KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
LV
11-April-2019 9:04:25
RAO: 28.90 CAU: 19.30
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/98
Series: 43
807 mA 80.00kV
WL: 128 WW: 255
Series: 39
WL: 128 WW: 255
1-1stOrderPrediction
799 mA 70.00kV
WL: 128 WW: 255
KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
Coro
RAO: 11.50 CAU: 10.20
XA
Images: 1/99
Series: 18

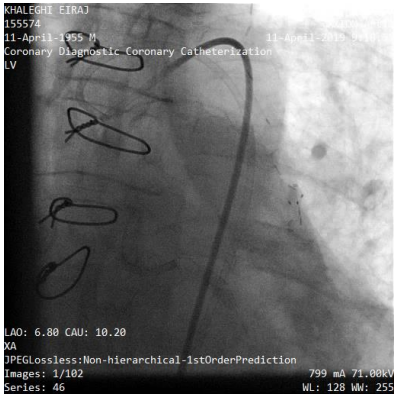
What to do with the donor SVG???

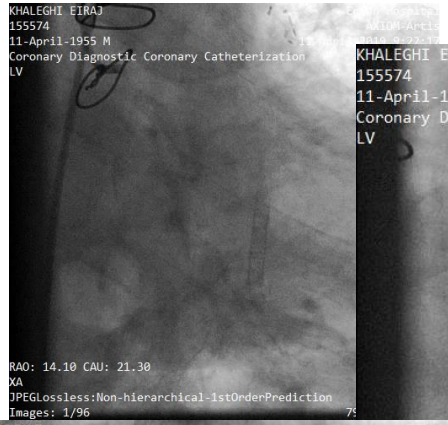
- 1- Leave it as it is
- 2-Clouser with coil or semi stent crush technique

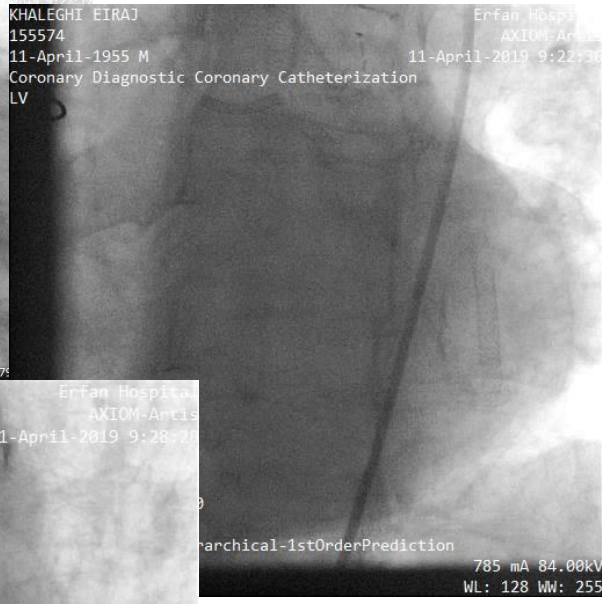
- Due to TIMI flow over 2 in this stenotic and thrombotic SVG we decided to coil occlude it so the competitive flow wont affect the newly opened CTO long term result

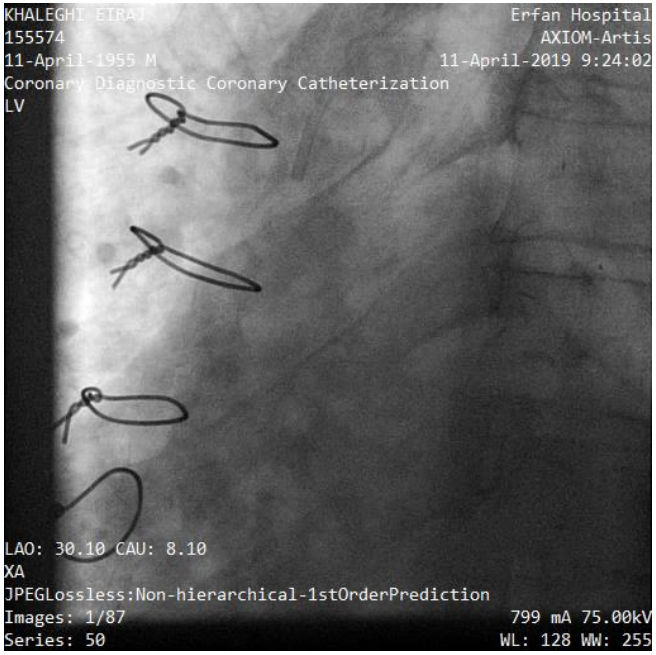
- unfortunately after coiling the patient suddenly moved and the coil was dislodged to aorta

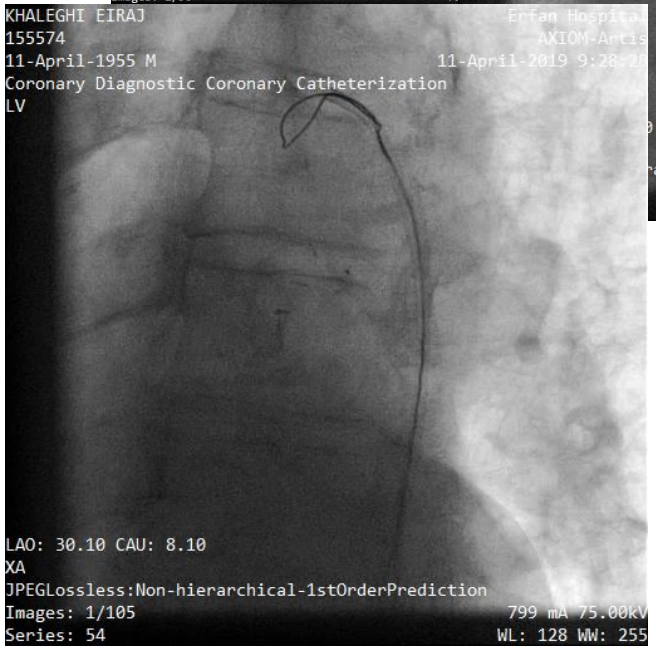

KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
LV
LAO: 6.80 CAU: 10.20
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/31
799 mA 71.00kV
Series: 45
WL: 128 WW: 255


KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
LV
LAO: 6.80 CAU: 10.20
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/102
799 mA 71.00kV
Series: 46
WL: 128 WW: 255

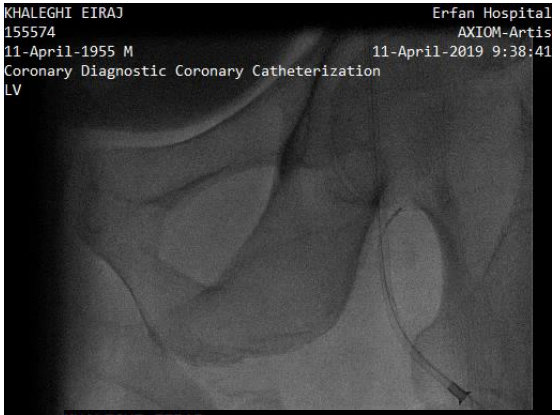

KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
LV
RAO: 14.10 CAU: 21.30
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/96

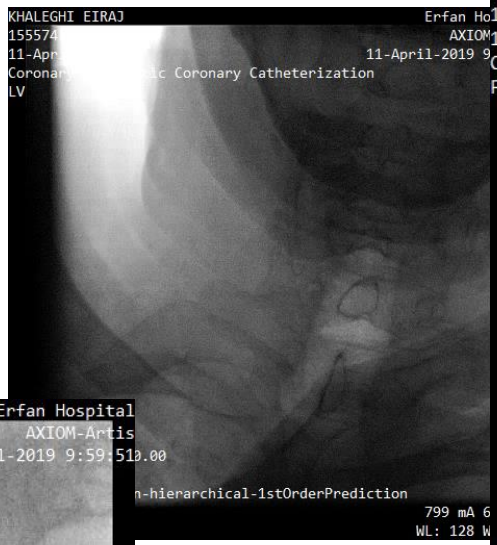

KHALEGHI EIRAJ
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
LV
785 mA 84.00kV
WL: 128 WW: 255

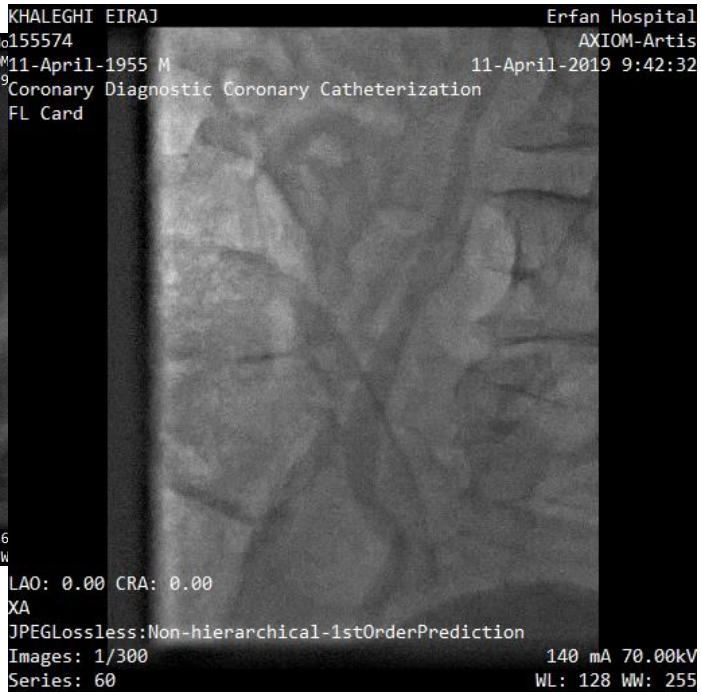

KHALEGHI EIRAJ
Erfan Hospital
155574
AXIOM-Artis
11-April-1955 M
11-April-2019 9:24:02
Coronary Diagnostic Coronary Catheterization
LV
LAO: 30.10 CAU: 8.10
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/87
799 mA 75.00kV
Series: 50
WL: 128 WW: 255

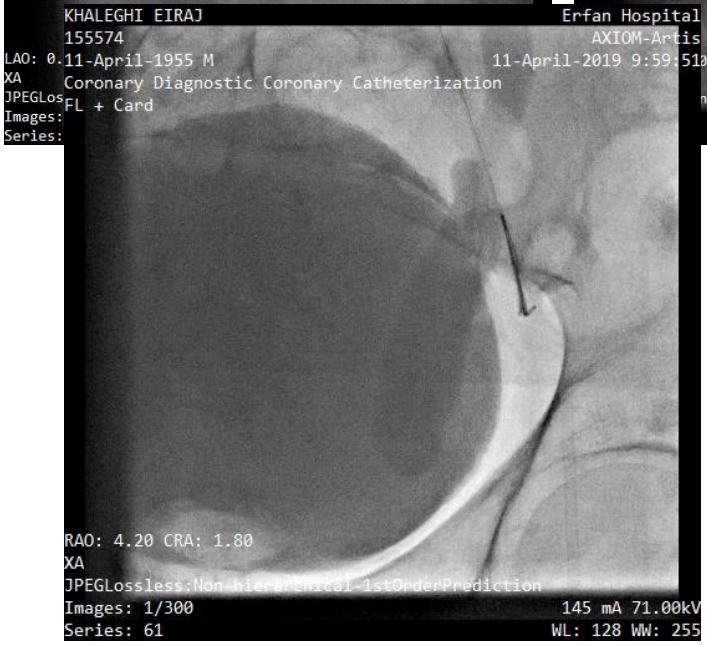

KHALEGHI EIRAJ
Erfan Hospital
155574
11-April-1955 M
Coronary Diagnostic Coronary Catheterization
LV
LAO: 30.10 CAU: 8.10
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/105
799 mA 75.00kV
Series: 54
WL: 128 WW: 255

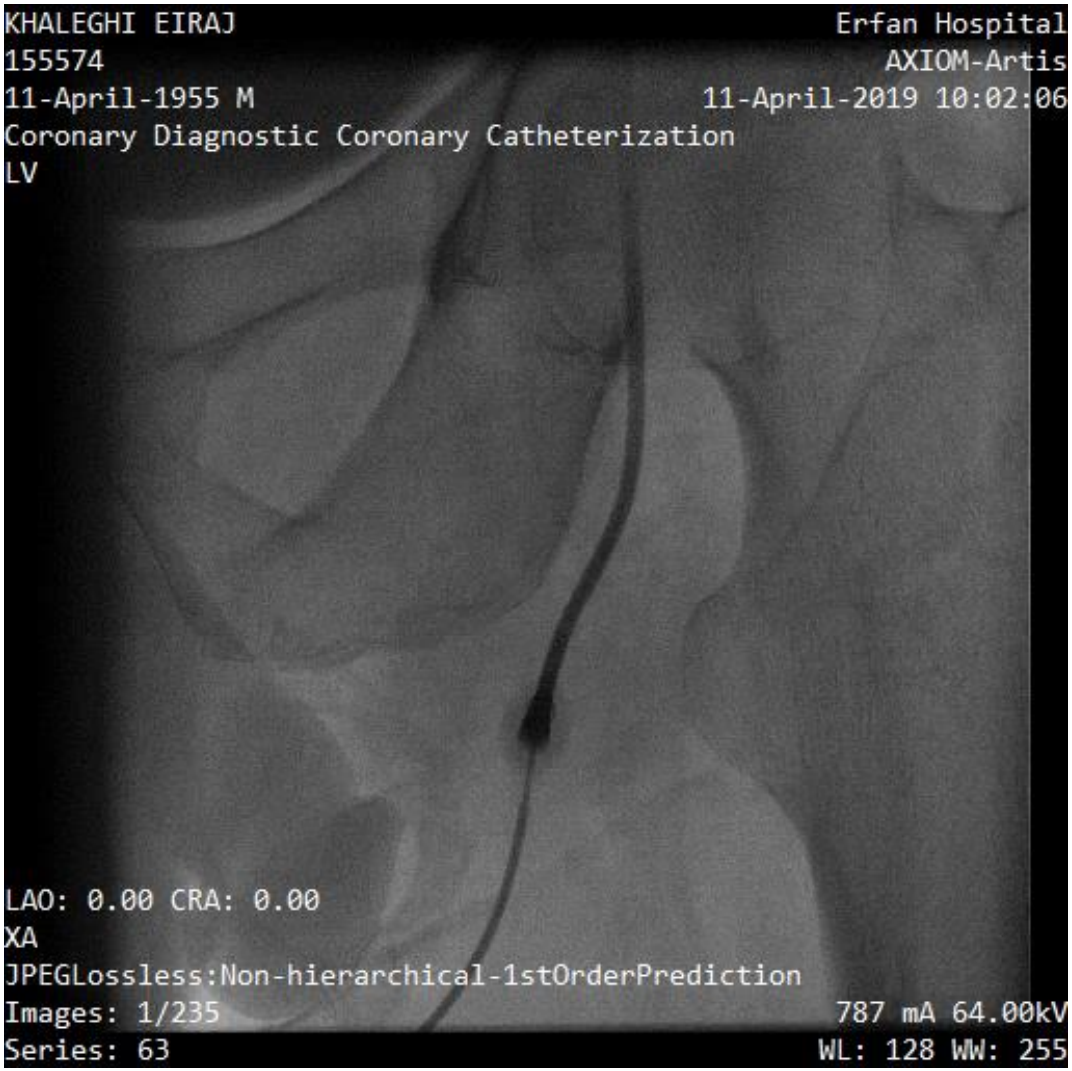
- During attempt to snare the dislodged coil with single loop snare, force by this device resulted in fracture in the dislodged coil and made two separated particles.
- One particle stayed in descending aorta and the other went to femoral artery. both then were snared eventually.


KHALEGHI EIRAJ
Erfan Hospital
155574
AXIOM-Artis
11-April-1955 M
11-April-2019 9:38:41
Coronary Diagnostic Coronary Catheterization
LV


KHALEGHI EIRAJ
Erfan Ho
155574
AXIOM
11-Apr
11-April-2019 9
Coronary Catheterization
LV
n-hierarchical-1stOrderPrediction
799 mA 6
WL: 128 W


KHALEGHI EIRAJ
Erfan Hospital
155574
AXIOM-Artis
11-April-1955 M
11-April-2019 9:42:32
Coronary Diagnostic Coronary Catheterization
FL Card
LAO: 0.00 CRA: 0.00
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/300
140 mA 70.00kV
Series: 60
WL: 128 WW: 255


KHALEGHI EIRAJ
Erfan Hospital
155574
AXIOM-Artis
11-April-1955 M
11-April-2019 9:59:51
Coronary Diagnostic Coronary Catheterization
FL + Card
LAO: 0.
XA
JPEGLos
Images:
Series:
RAO: 4.20 CRA: 1.80
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/300
145 mA 71.00kV
Series: 61
WL: 128 WW: 255


KHALEGHI EIRAJ
Erfan Hospital
155574
AXIOM-Artis
11-April-1955 M
11-April-2019 10:02:06
Coronary Diagnostic Coronary Catheterization
LV
LAO: 0.00 CRA: 0.00
XA
JPEGLossless:Non-hierarchical-1stOrderPrediction
Images: 1/235
787 mA 64.00kV
Series: 63
WL: 128 WW: 255

Take home massage

- Stenotic or occluded SVG's are perfect conduits for retrograde CTO PCI with less complication and more success than septal or epicardial collaterals and should be considered primary retrograde route when available.
- After loop formation the operator should work very fast as the patient usually gets heamodynamically unstable in a short time due to forces strangulating the heart by looped RG3 wire.
- Dissection and hematoma due to balloon rupture is a potentially catastrophic complication.
- In case of ostial stenting specially in setting which the operator wants to limit the antegrade injection Szabo technique or free floating wire in aorta are helpful
- After successful opening of the CTO if the SVG has TIMI flow over 2 or above occlusion of this SVG should be strongly considered as the competitive flow will have a negative effect on long term patency of the newly opened CTO.
- In case of embolized coil retrieval with 3 looped snares are superior to single loop snares