



‘Mother-in-child’ catheter induced retrograde dissection during PCI

Dr. Pankaj Jariwala

MD, DNB, DNB, MNAMS, FICPS, FACC, FSCAI

Fellowship in Interventional Cardiology [ICPS, Paris, France]

Consultant Interventional Cardiologist

Yashoda Hospitals, Somajiguda, Hyderabad

Clinical scenario

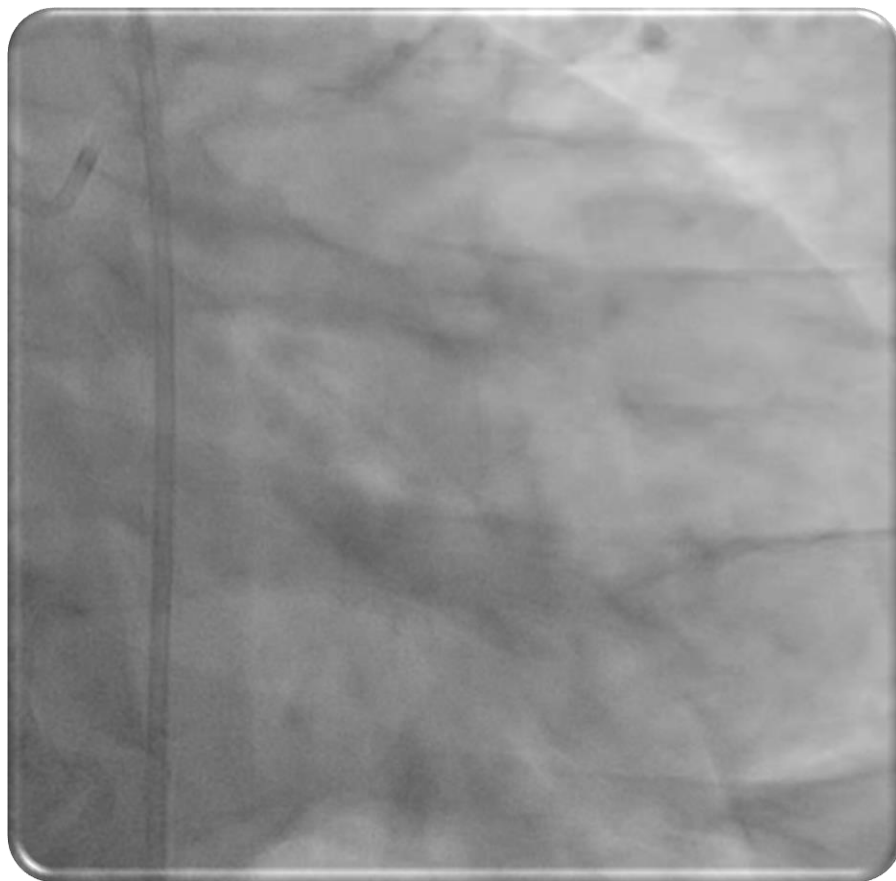
55-years-Male, Ex-smoker, peripheral vascular disease, TASC D lesions of bilateral ilio-femoral and femoral-popliteal, tibio-peroneal system.

Recent onset exertional angina CCS class III despite optimal medical management.

Echocardiography – fair LV function [50%] with regional wall abnormality of antero-septal walls.

Coronary angiography - Calcified critical tandem stenoses of LAD; Significant stenosis of obtuse marginal and proximal RCA

Coronary Angiography



CT surgeon refused CABG in view of multiple comorbidities

Planned for PCI to LAD followed by staged PCI of OM and RCA

Coronary and Peripheral Angiography



High Syntax score – 33 and Euro SCORE – patient
accepted for PCI

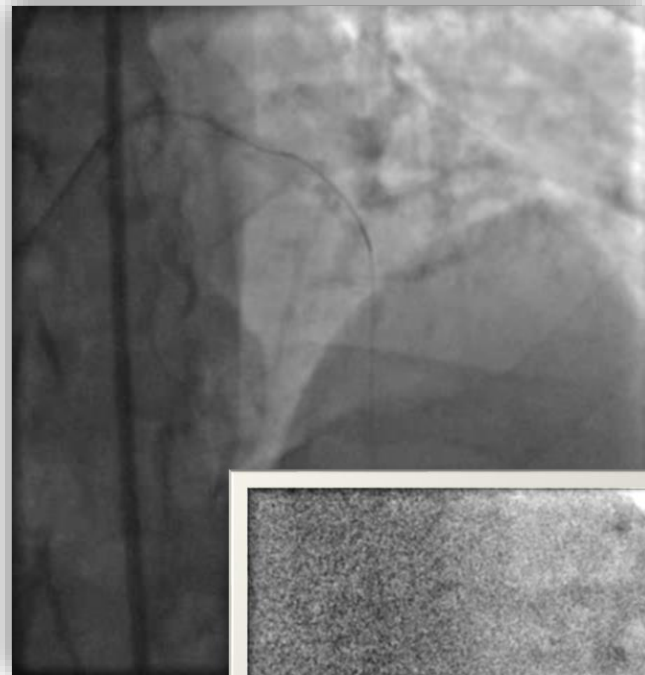
Percutaneous Coronary Intervention

High risk for CABG – COPD, Peripheral vascular disease refused by CT surgeon.

Transfemoral Approach, 7Fr.

Rota-ablation using 1.50 burr.

Post-dilatation using 'OPN' balloon.



Management of complication

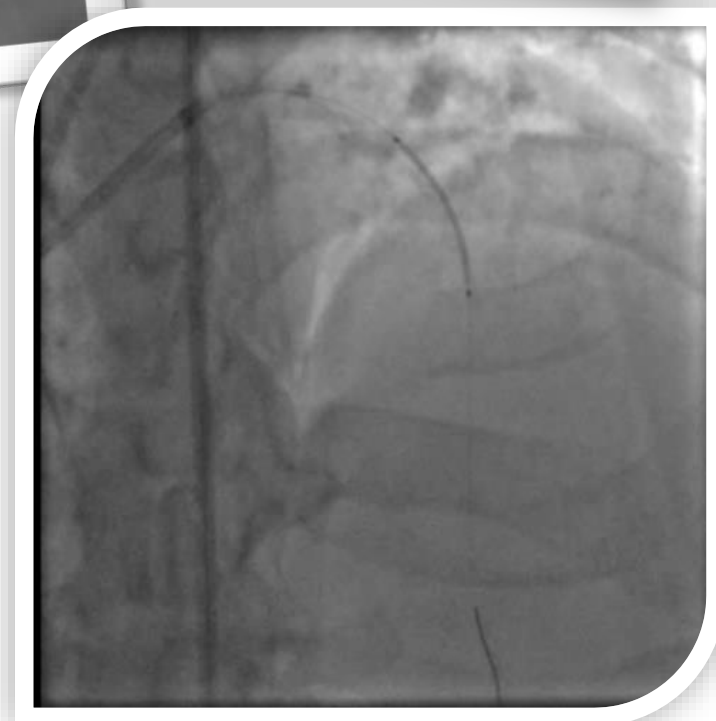
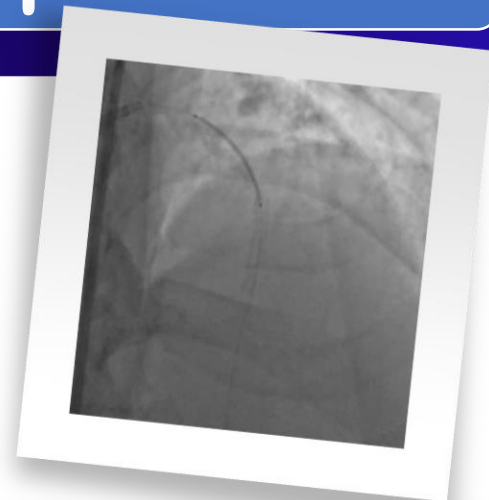
Still stents unable
to cross



Mother in Child
Catheter –
Guideliner – Stents
could cross



Two overlapping
DES deployed



Management of complication

Angiography revealed dissection of distal LMCA and Osteal LAD.



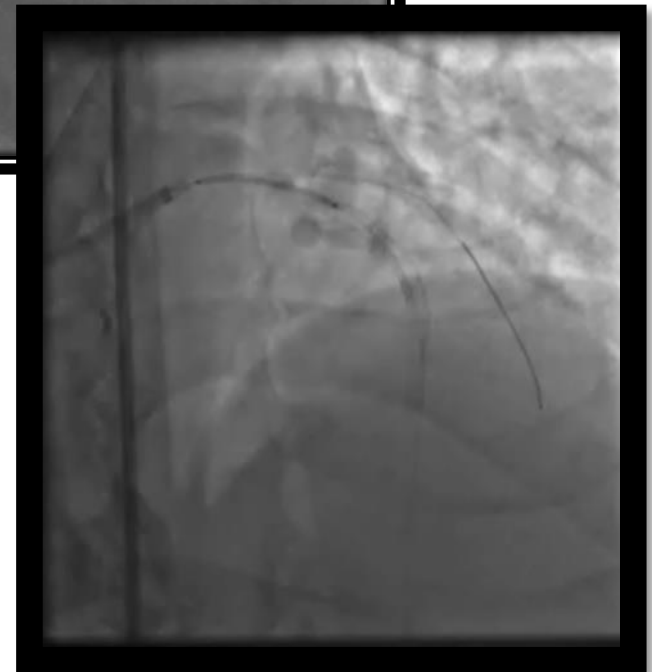
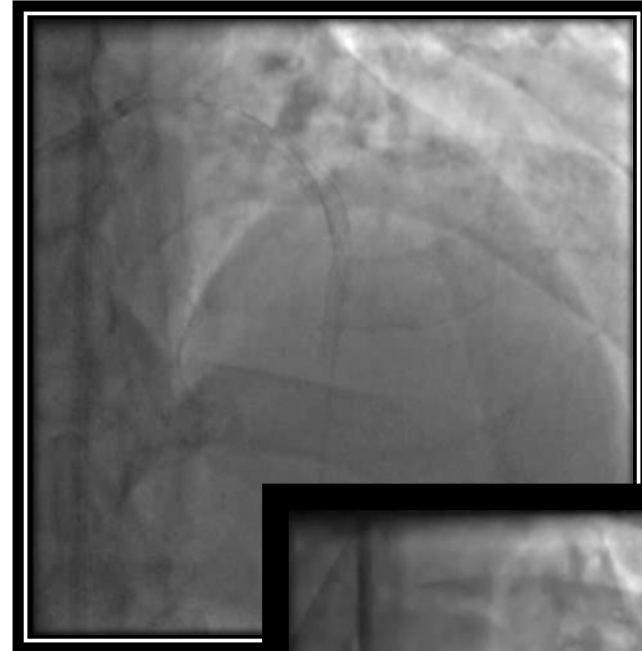
Across the distal LMCA-osteal LAD dissection stent deployed



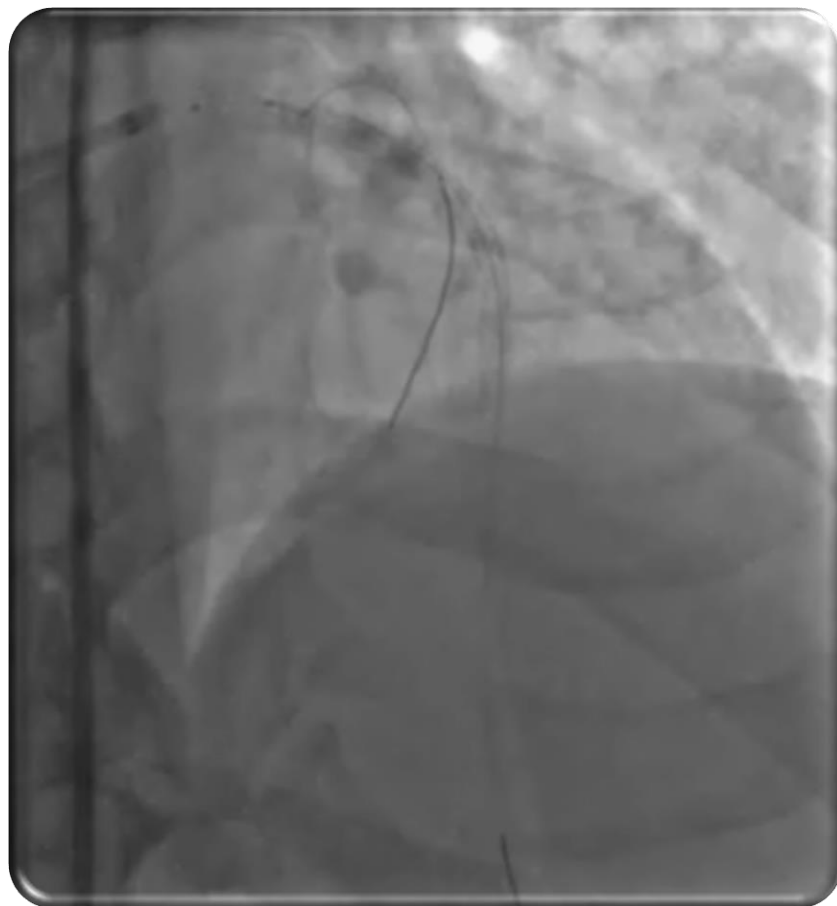
Proximal optimization Technique



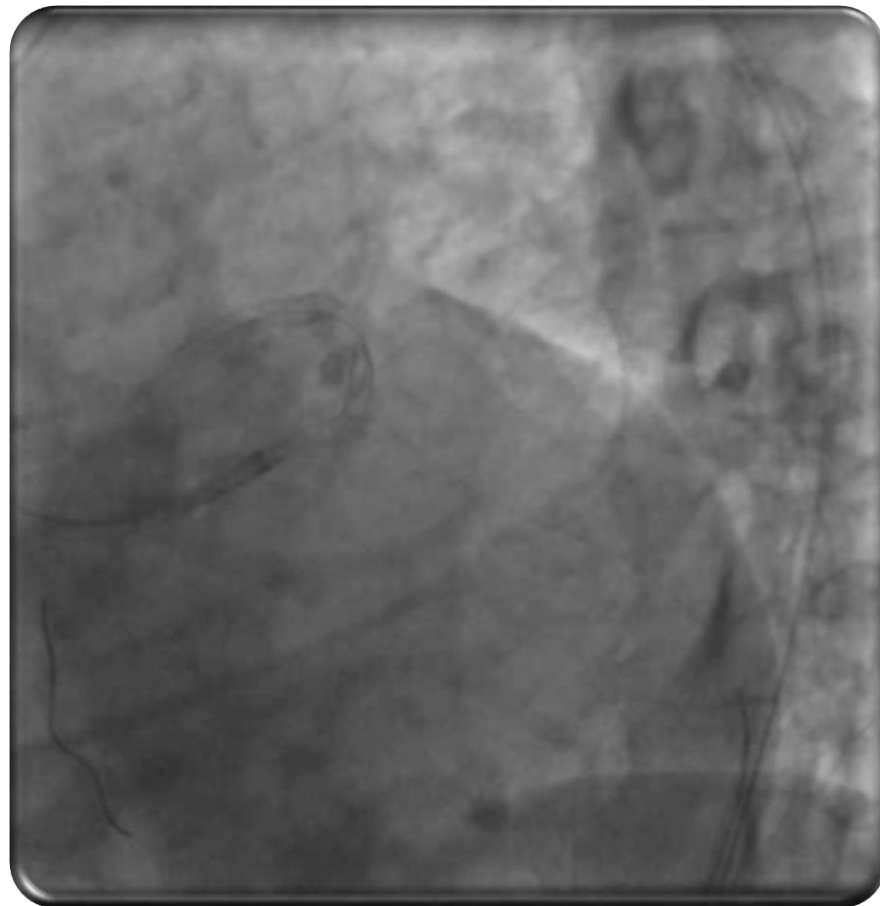
IVUS run to confirm the apposition of the stent struts.



Final Angiography



Proximal Optimization
Technique



TIMI III flow in LAD with no
residual dissection

Take Home Message

The soft tip of the Guide-Liner was not coaxial and likely abutted the vessel wall or plaque despite no warning of pressure damping before contrast injection.

Focal hydraulic pressure generated by short and forceful hand contrast injection could easily create a crack at a vulnerable plaque

Track into the injury point, resulting in coronary dissection.

Careful position of 'Mother-in-child' catheter is important.

OPN balloon is very useful hardware and should be in the cath-lab shelf – for pre/post dilatation for the lesion preparation