



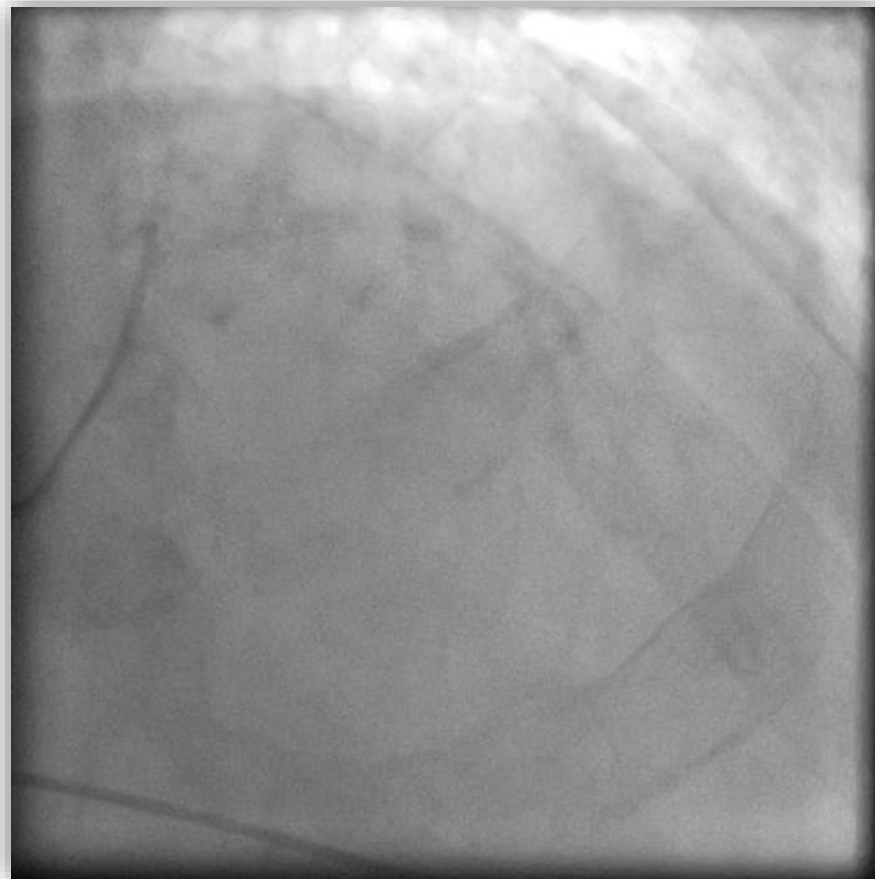
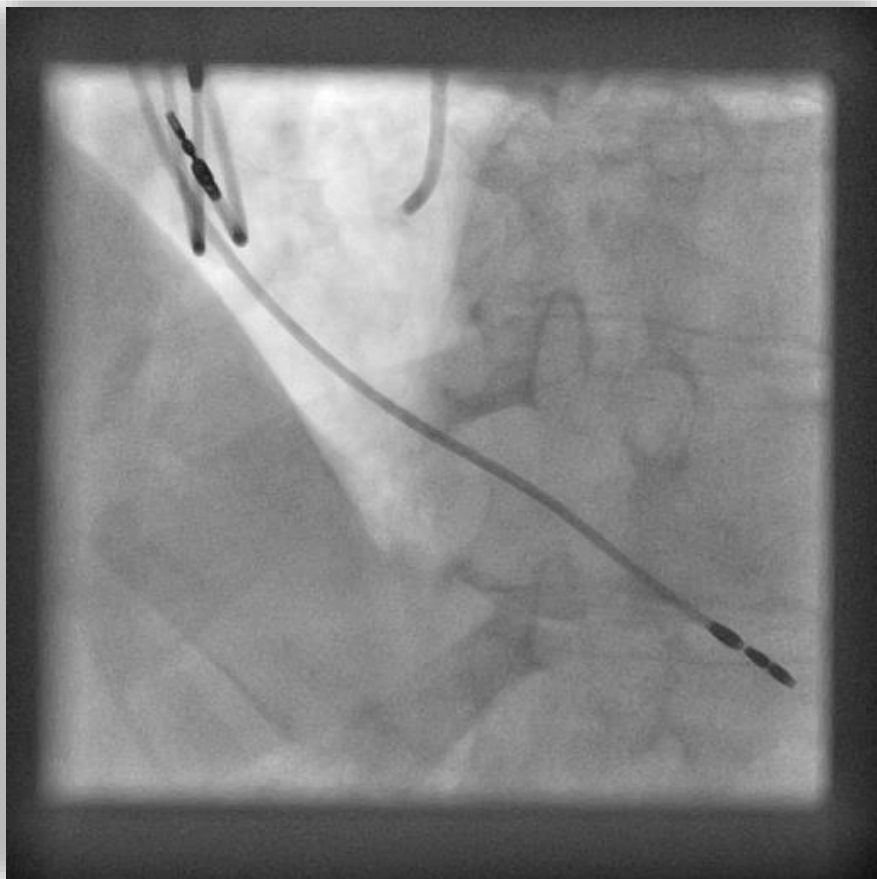
Lithoplasty-assisted proximal cap penetration in a calcified chronic total occlusion

A.Allali, R. Hemetsberger, K. Elbasha, G. Richardt

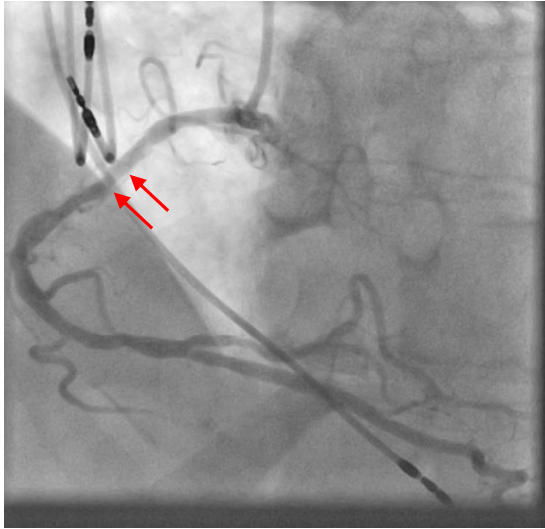
Heart Center Bad Segeberg

- No conflict of interest

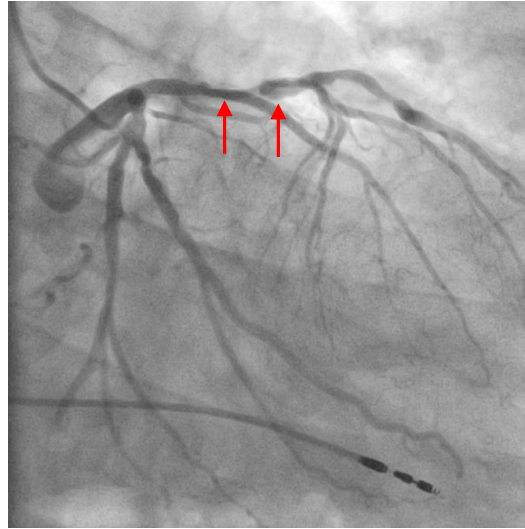
- 84 years old man
- History of:
 - DDD pacemaker (sick-sinus-syndrom)
 - Paroxysmal atrial fibrillation
 - Pulmonary embolism
- Current problem January 2021:
 - Dyspnea NYHA III and angina pectoris CCS II
- TTE:
 - normal ejection fraction



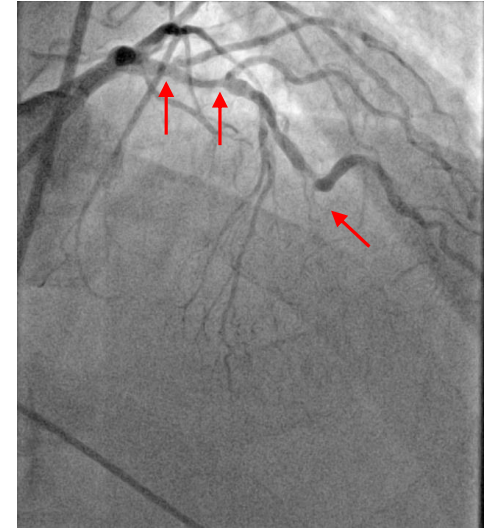
Diagnostic Work-up and Coronary angiography



Moderate stenosis in the right coronary



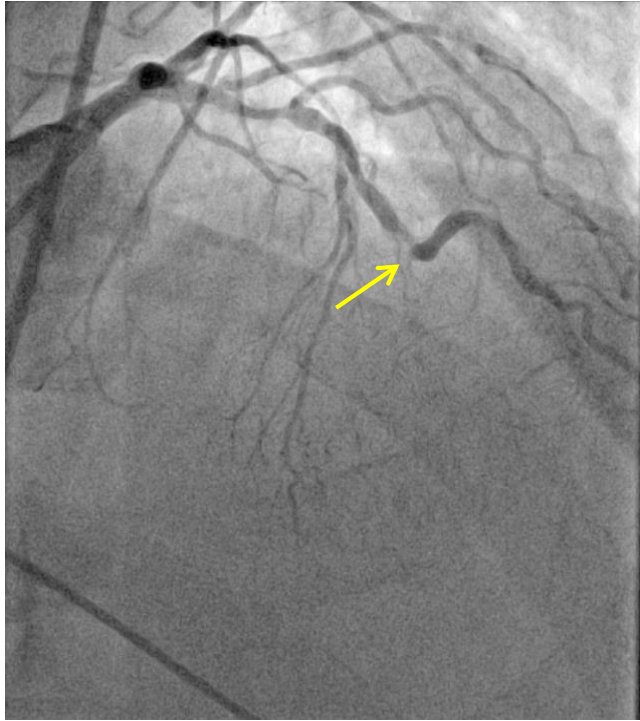
Left anterior descending: calcified proximal stenosis and chronic total occlusion after 3rd diagonal



Decision:

-PCI of the left anterior descending artery

Diagnostic Work-up and Coronary angiography



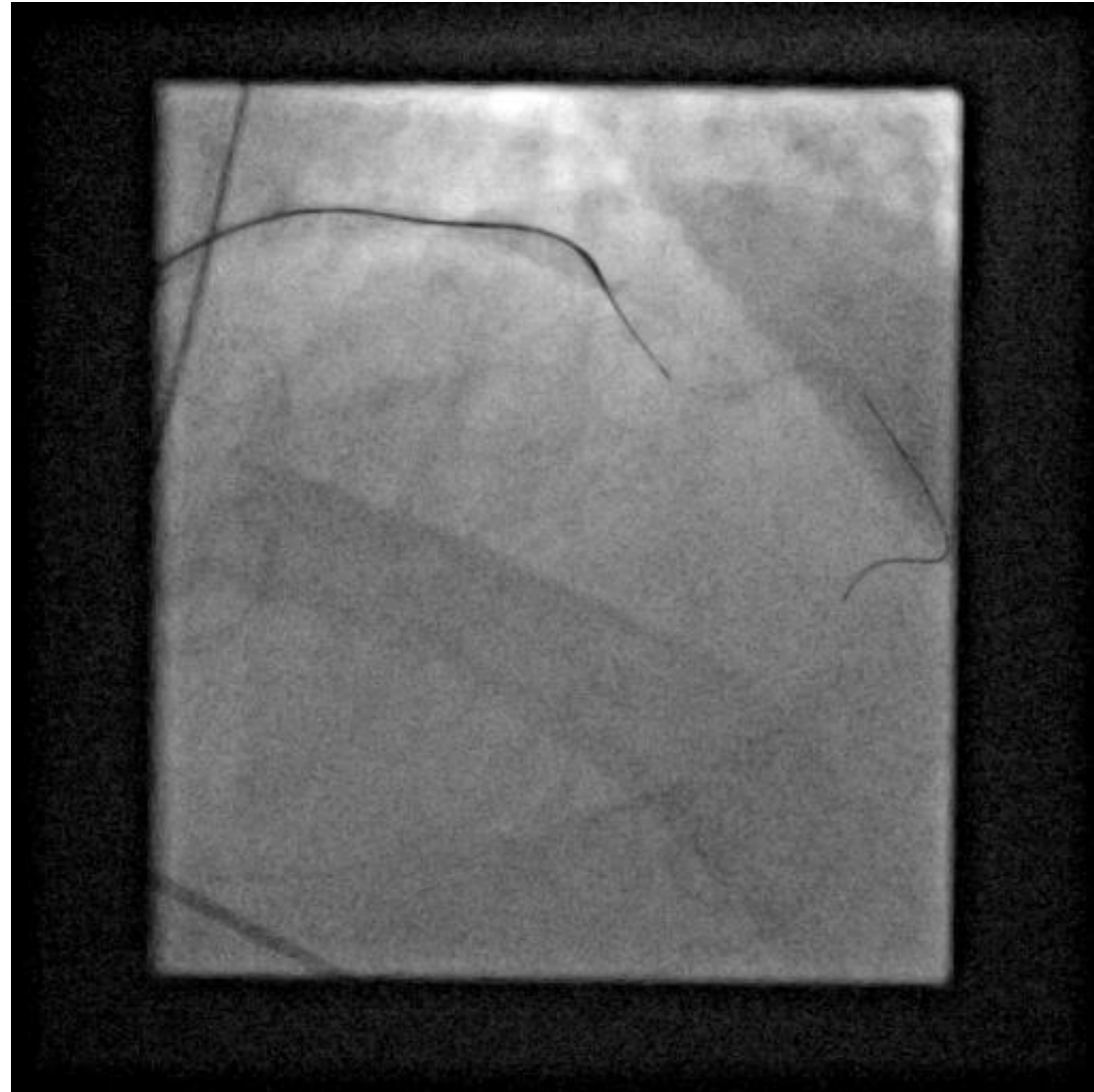
J-CTO score 3
Epsilateral filing



Expected challenges:

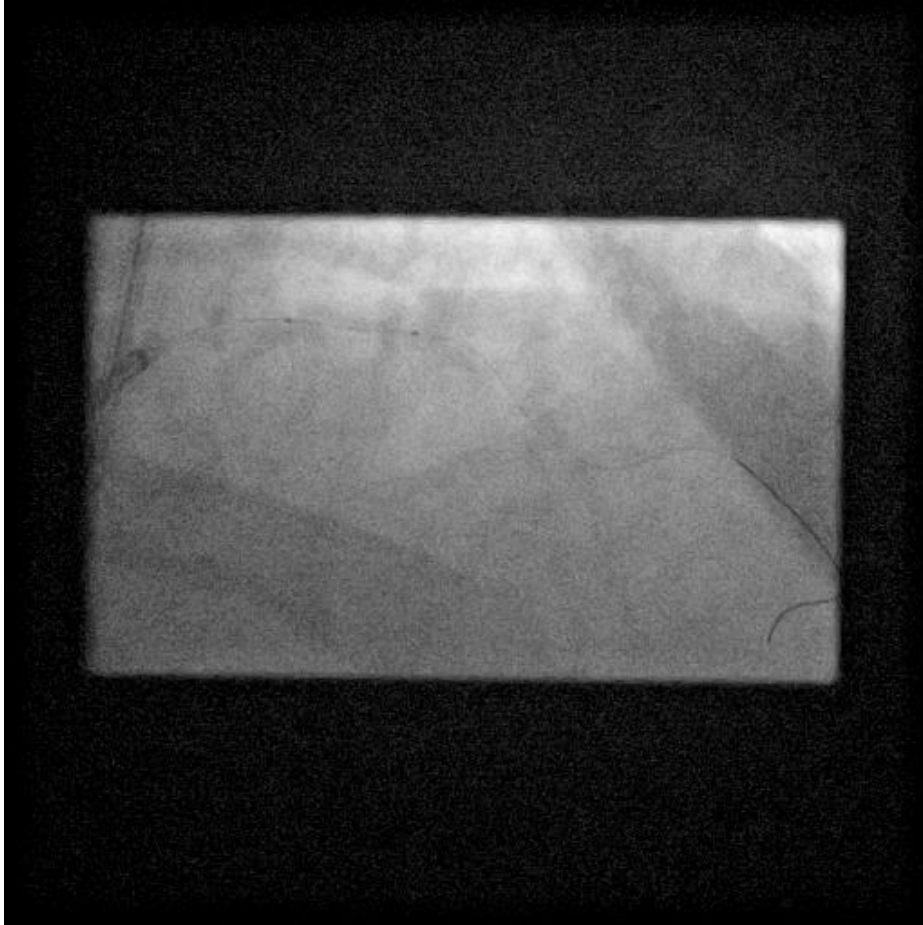
- Convex calcified proximal cap
- No visible collaterals for retrograde access
- Open side branch at the origin of the occlusion

EBU 4.0 7F Femoral access
Sion Blue guidewire in D3
Corsair Pro microcatheter

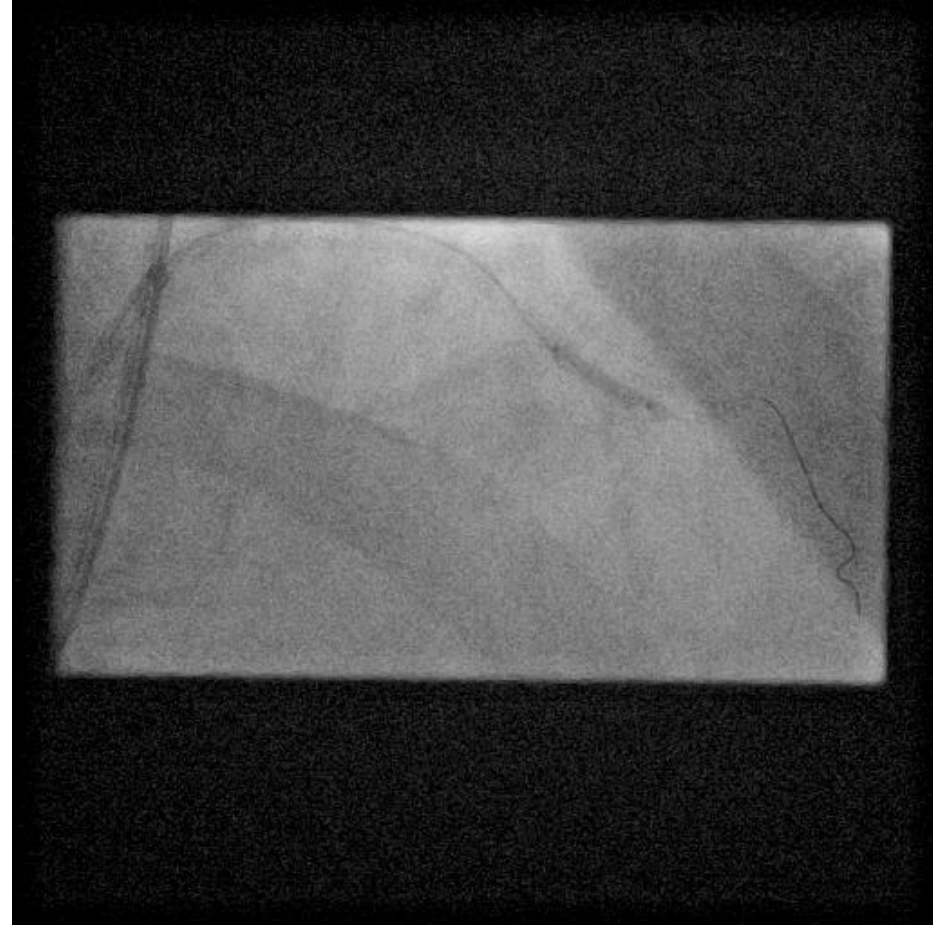


Fielder XT-A, wire escalation using Gaia II, Pilot 150, Progress 40

Proximal cap modification using lithoplasty

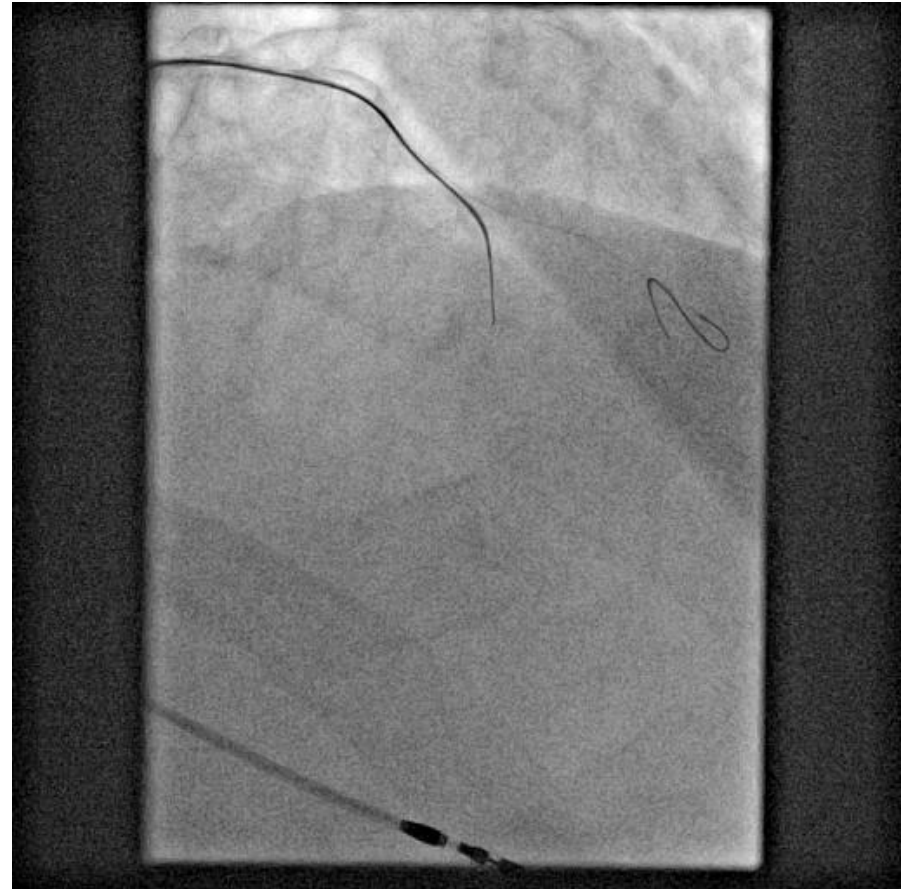
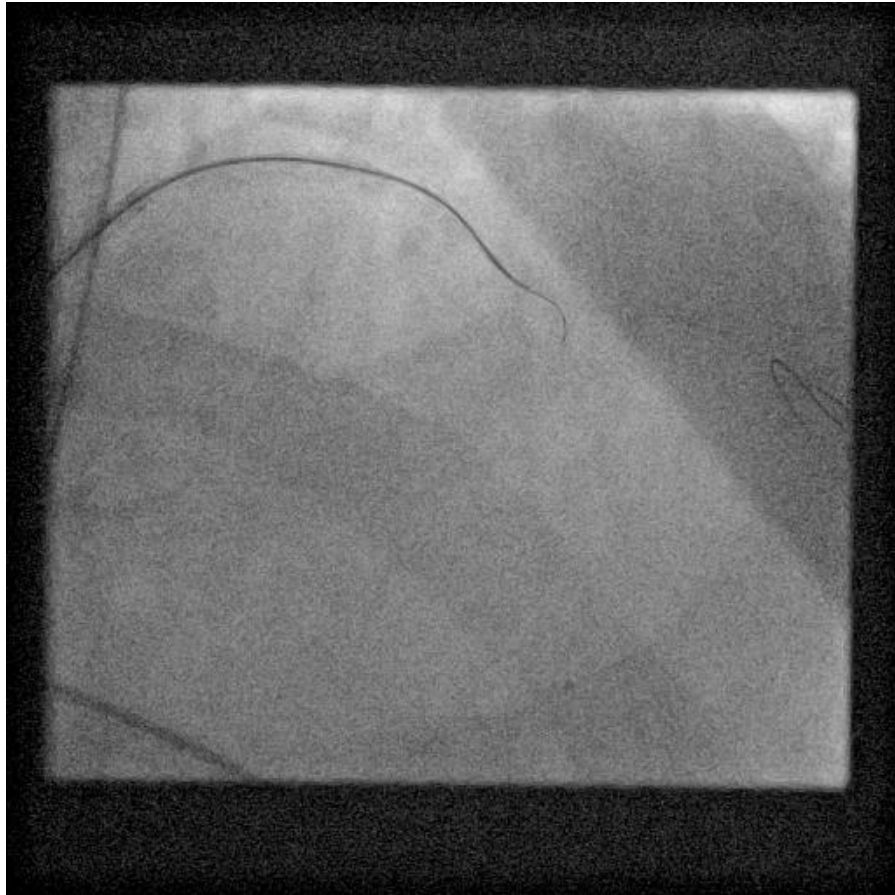


3mm NC-Balloon prox. LAD



2.5mm lithoplasty balloon 10 impulses

Penetration through the proximal cap



Gaia 2nd guidewire
penetrated the proximal cap

Penetration through the proximal cap



Parell wire technique



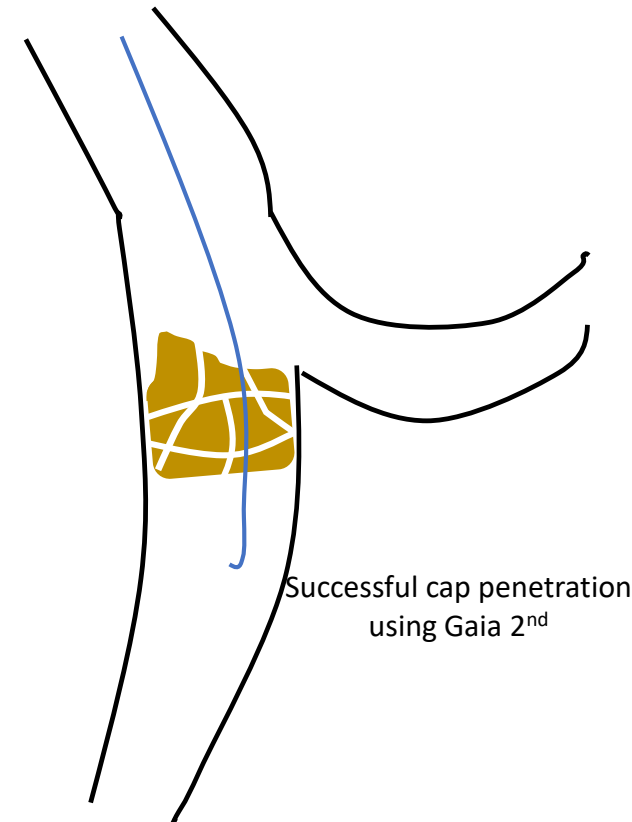
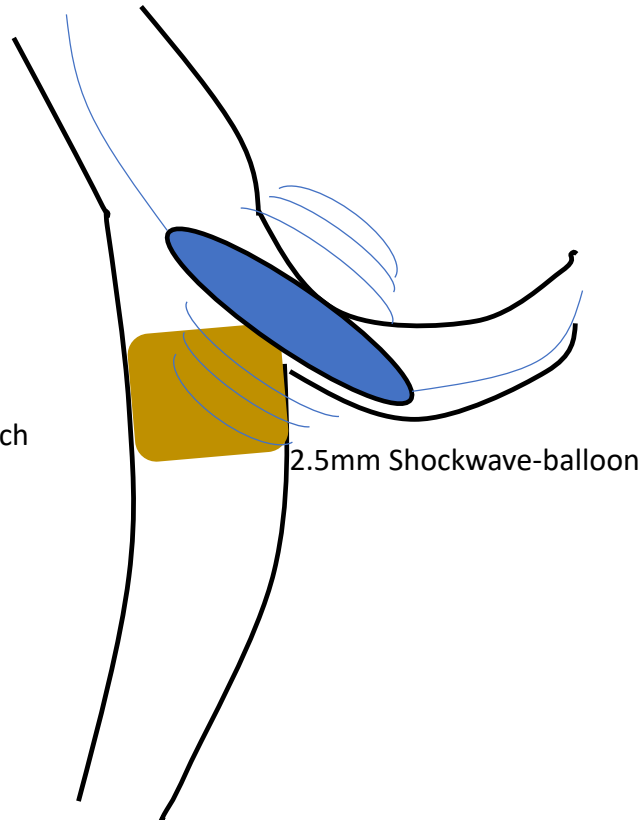
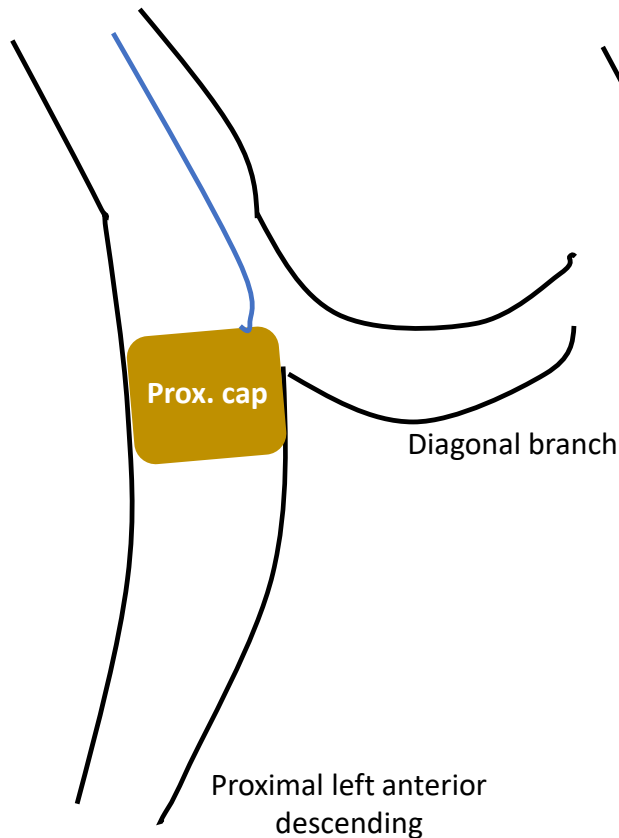
Successful wire passage in the
distal left anterior descending
using Progress 40

An illustrated example: Proximal cap modification

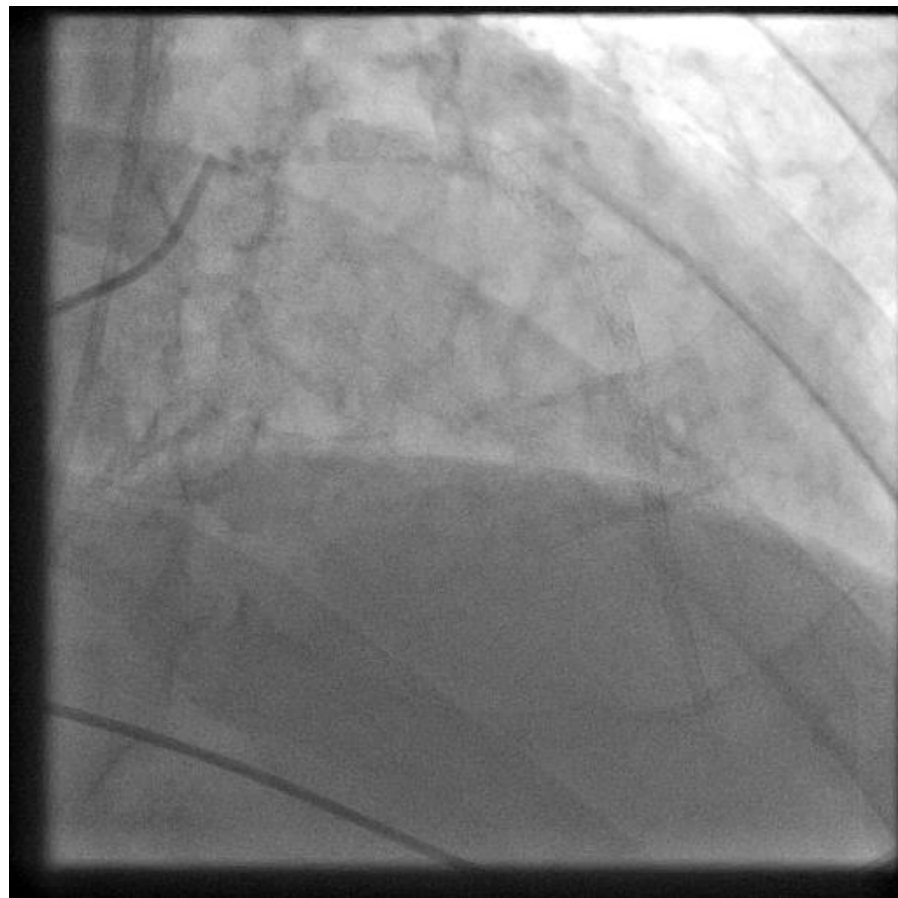
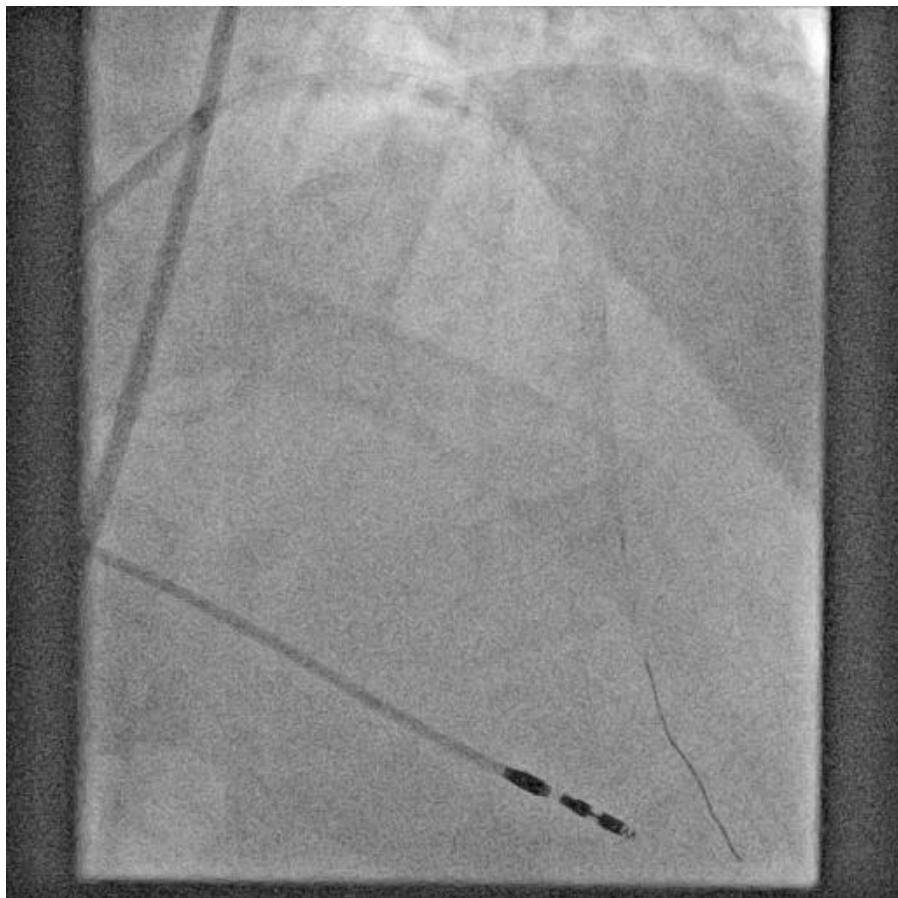
Probable effect of lithoplasty on the proximal cap:

- Calc fracture
- Reduce the convexity of the cap

Proximal left anterior descending



Final result after drug-eluting-stenting



- Uncrossable proximal cap is a challenging situation practically if no retrograde options are available
- In this case the presence of a patent side branch at the origin of the occlusion increased the difficulty of wire penetration but allowed us to perform lithoplasty
- Shockwave cap modification softened the proximal cap and allowed wire penetration