Retrograde balloon hemostasis

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Clinical presentation

History past: CABG 2016 (LIMA-LAD + RIMA-MX, Y conection)

RF: obesity, HTA, dyslipidemia

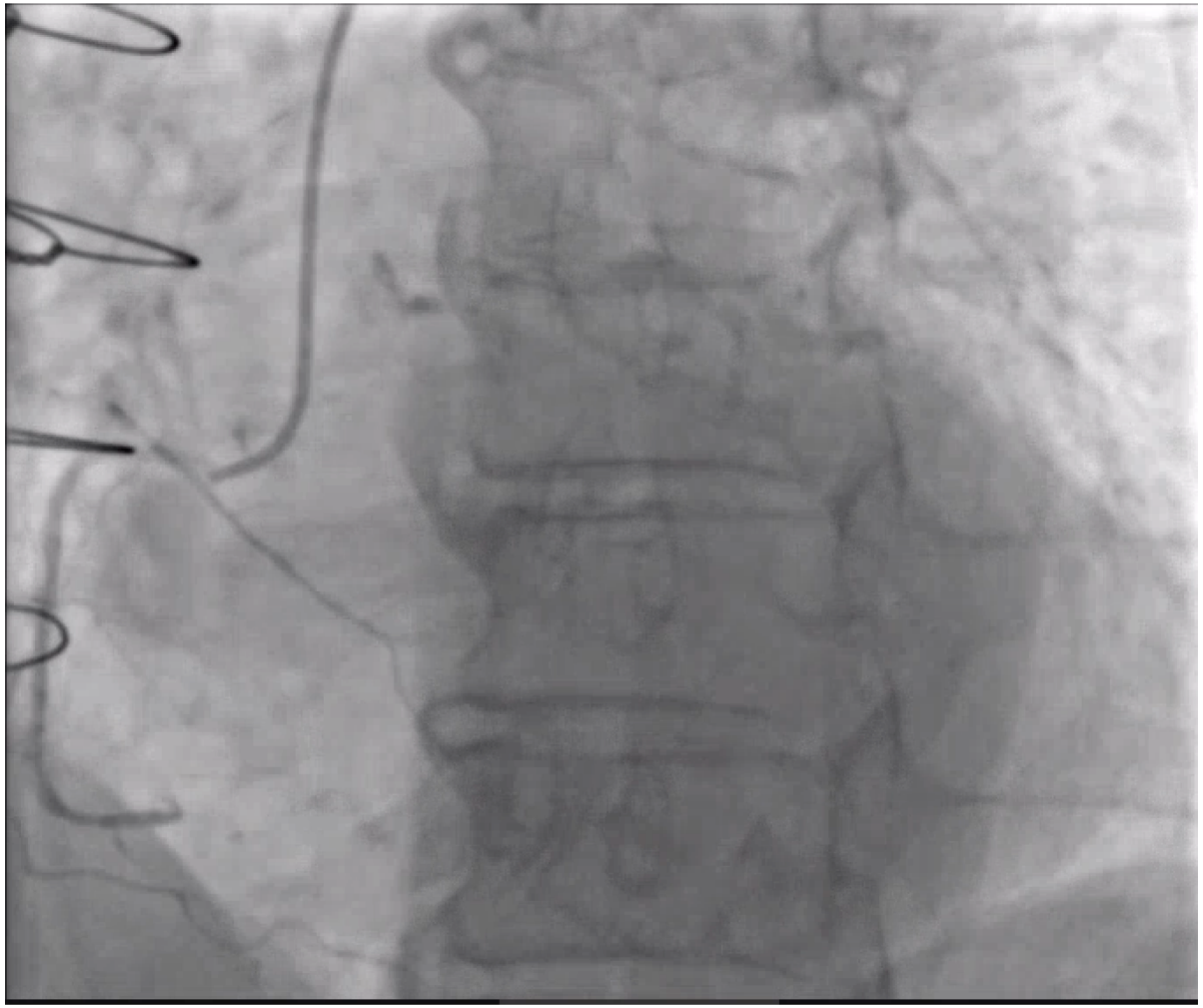
Symptoms: dyspnea NYHA III

Cardiac evaluation

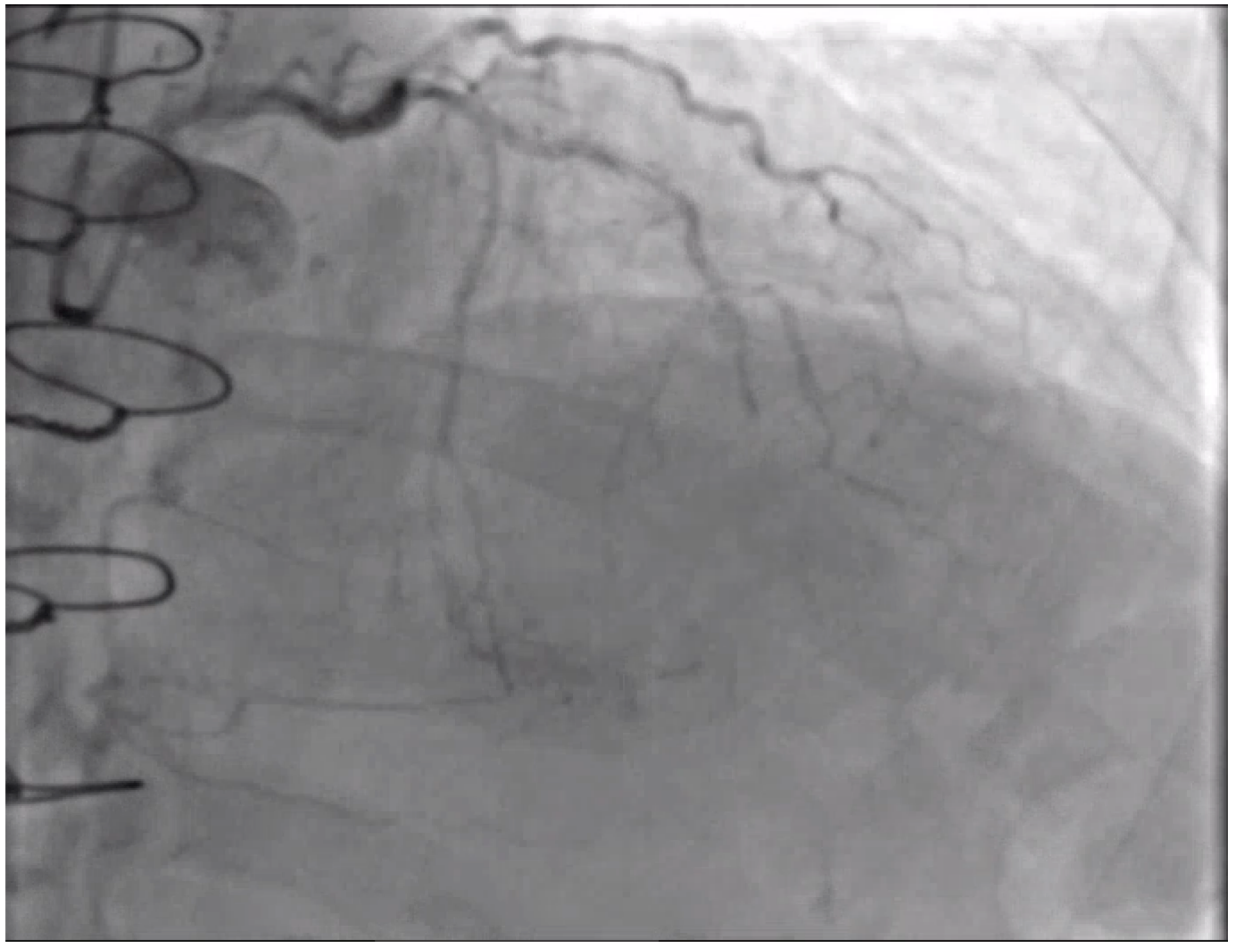
Myocardial scintigraphy: inferior ischemia

Echo: FEVG 50%, mil inferior hypokinesia .

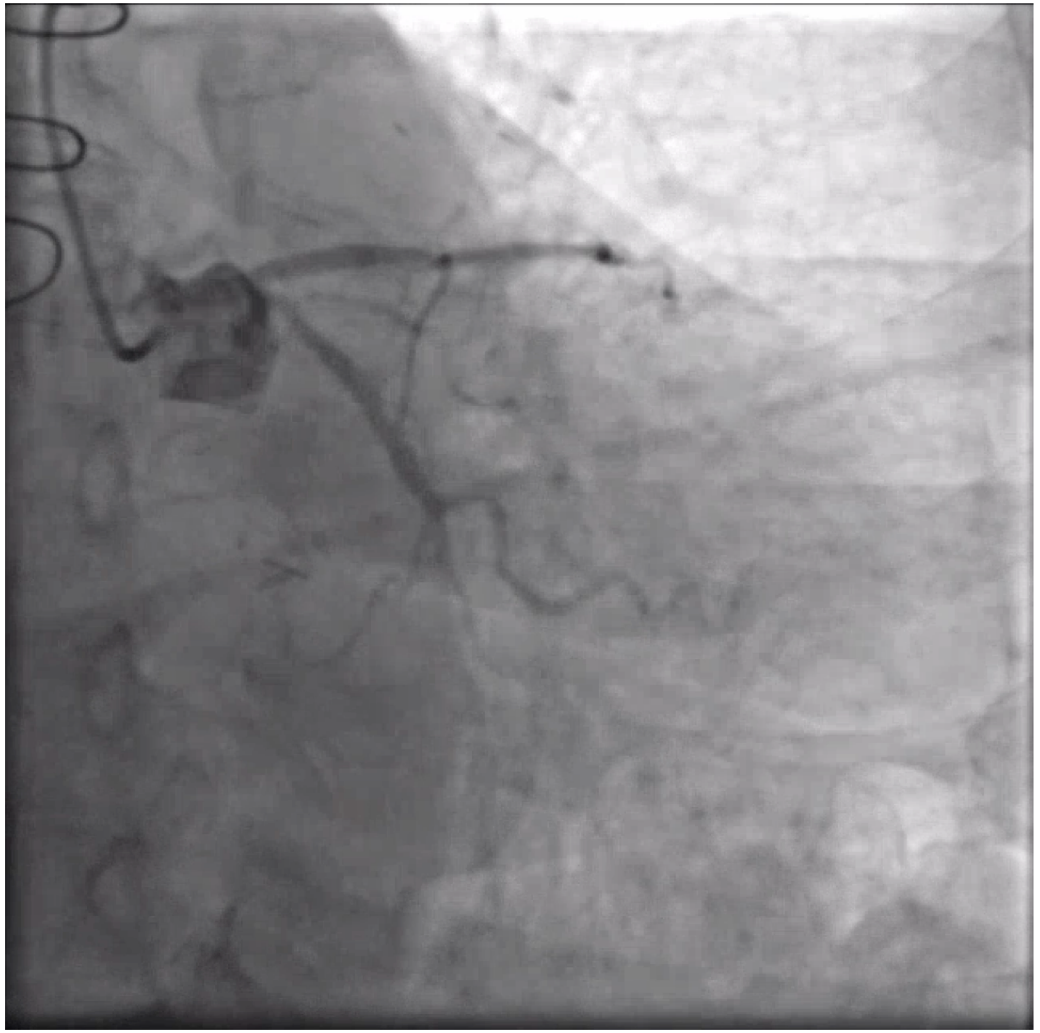
Diagnostic coronary angiogram



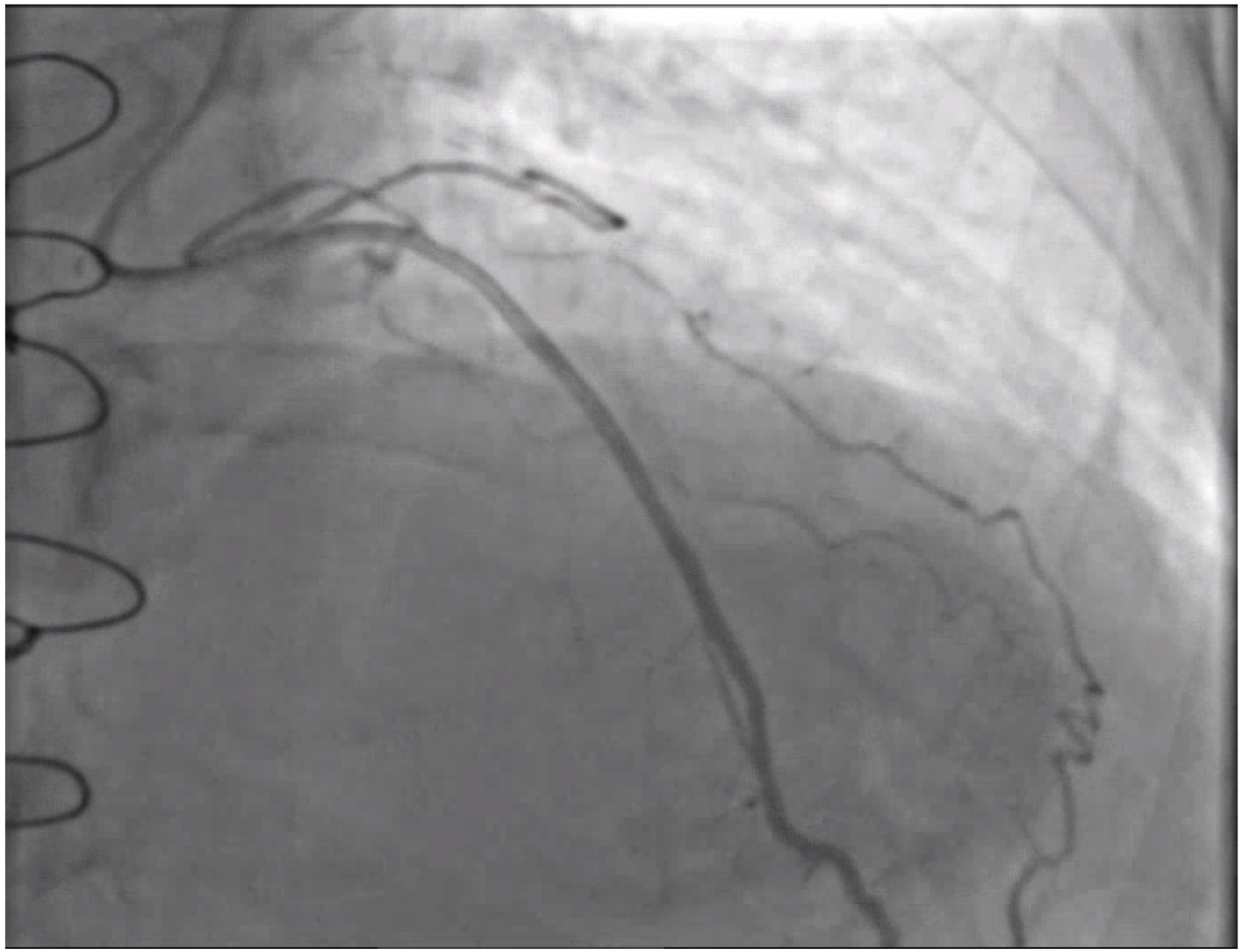
Diagnostic coronary angiogram



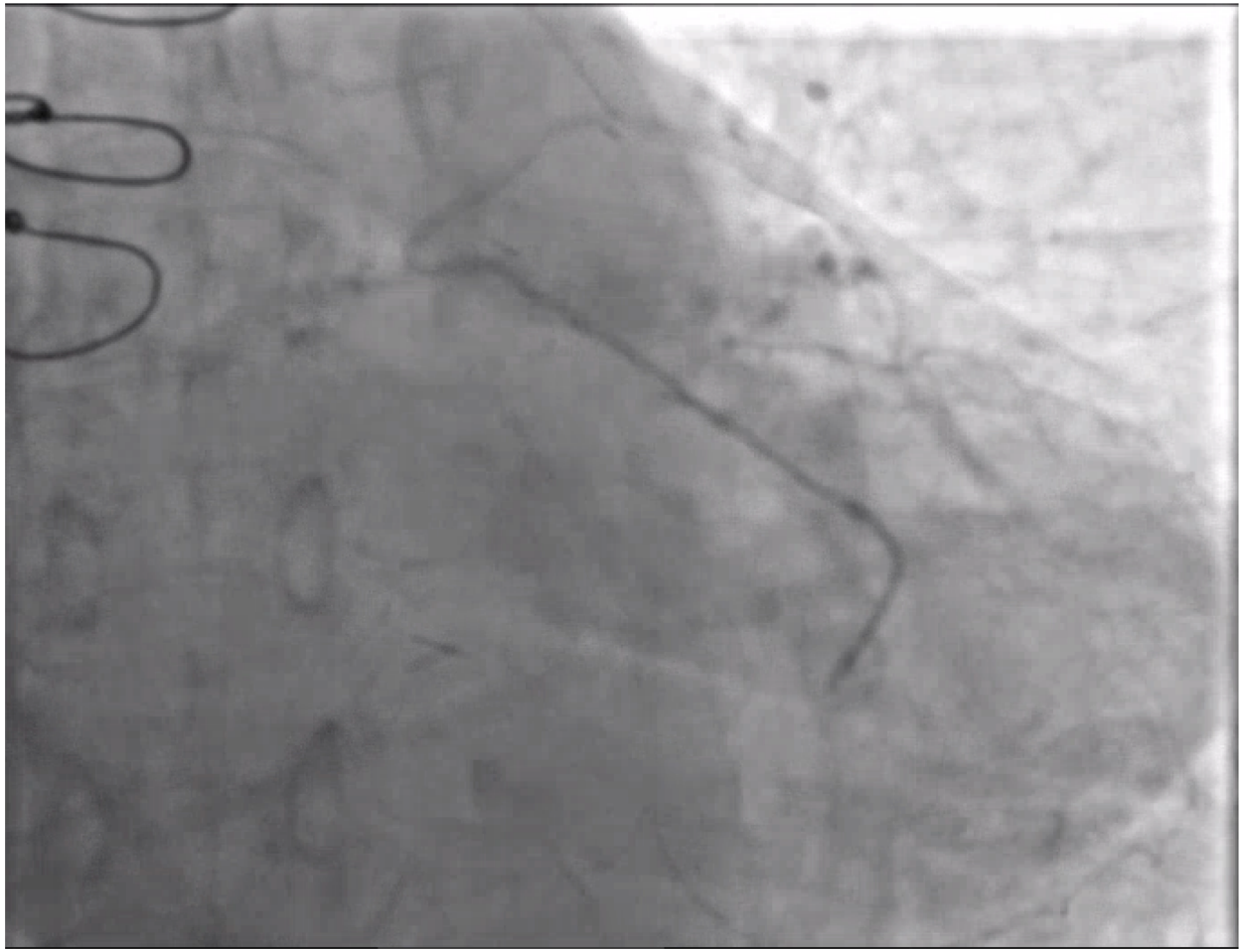
Diagnostic coronary angiogram



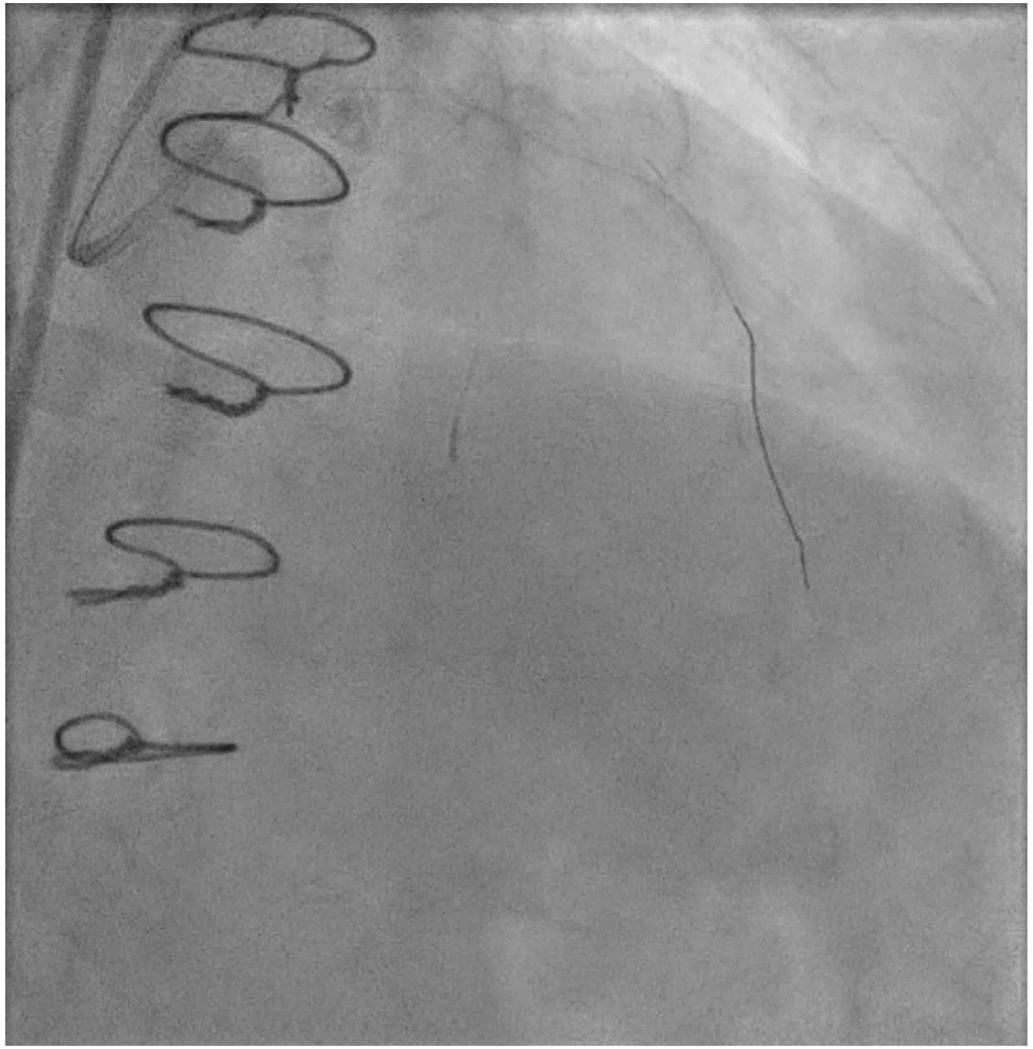
Diagnostic coronary angiogram



Diagnostic coronary angiogram

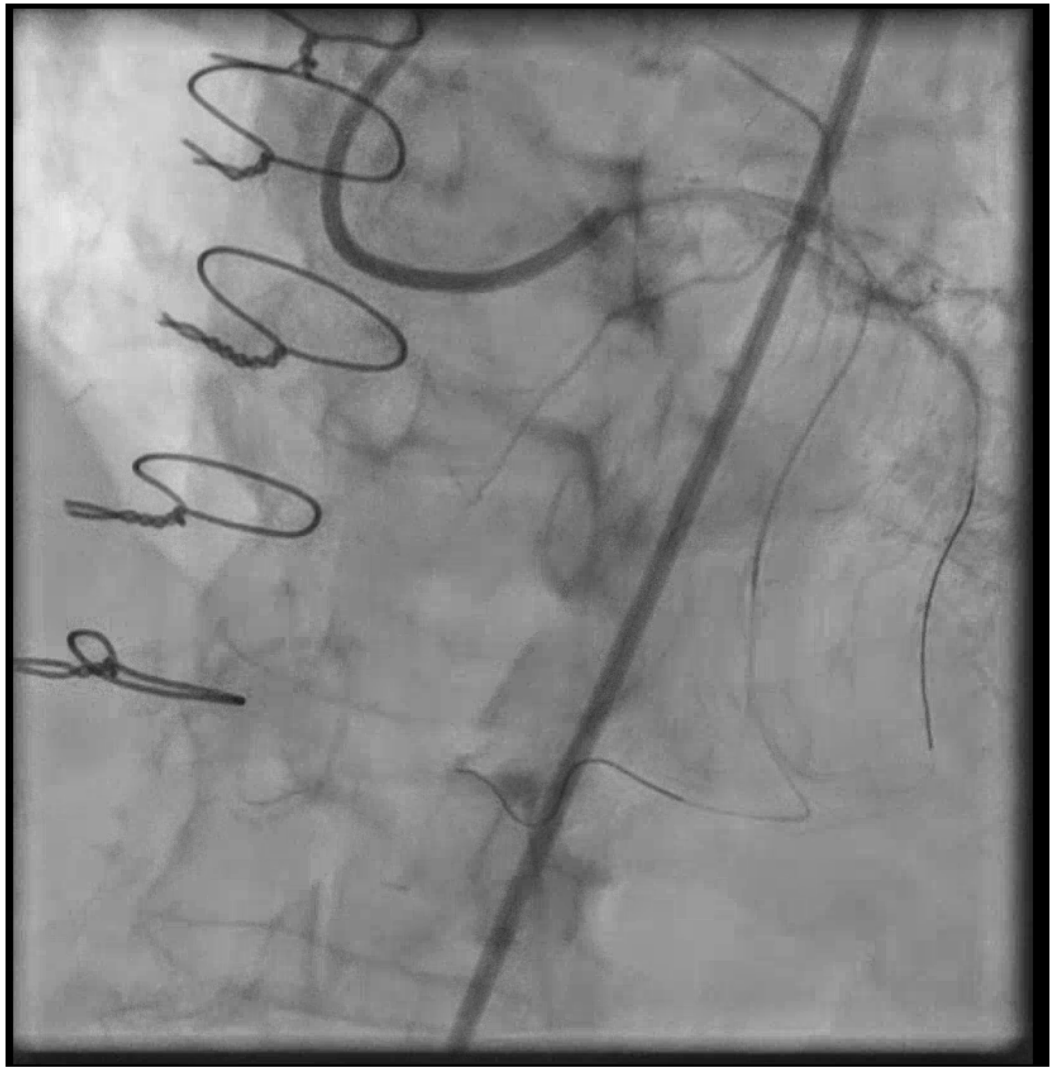


CTO-PCI / Septal Crossing

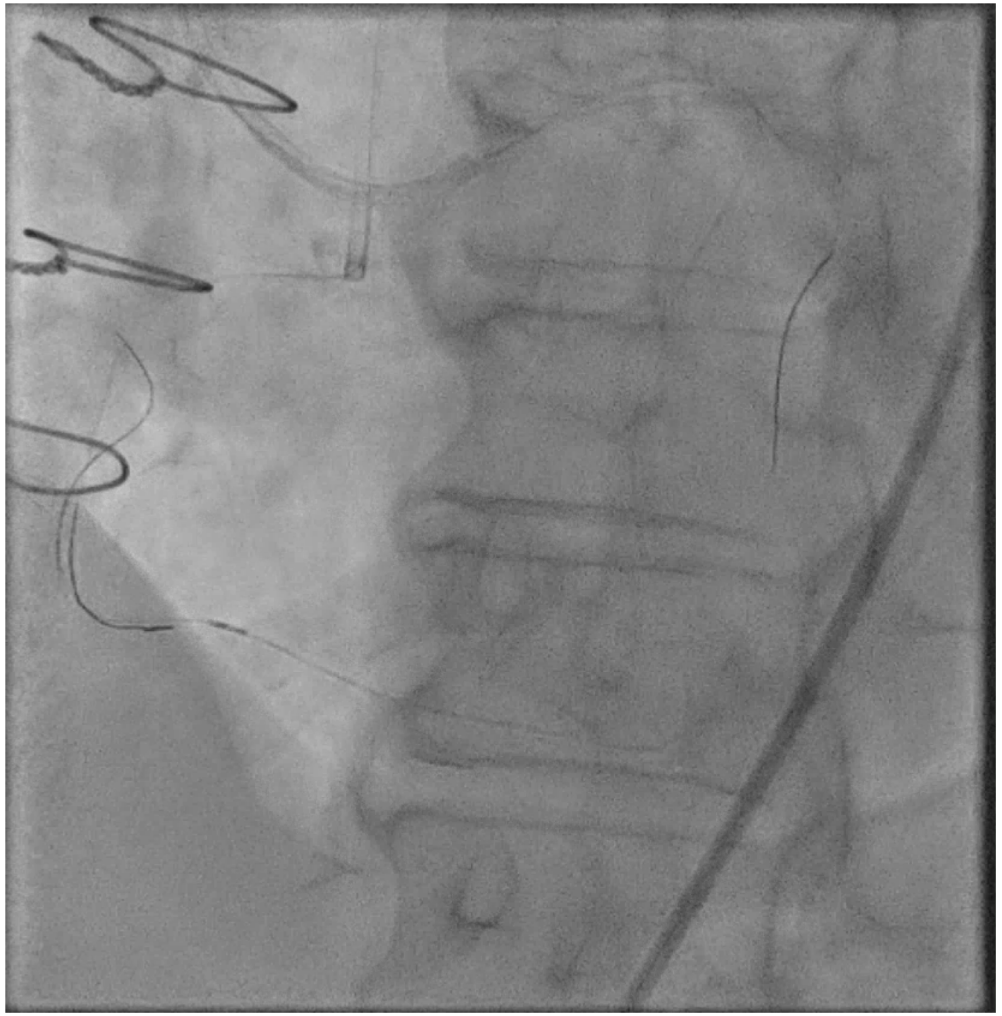


Setting :
right Distal Rail Tracking 6Fr
right 7Fr femoral

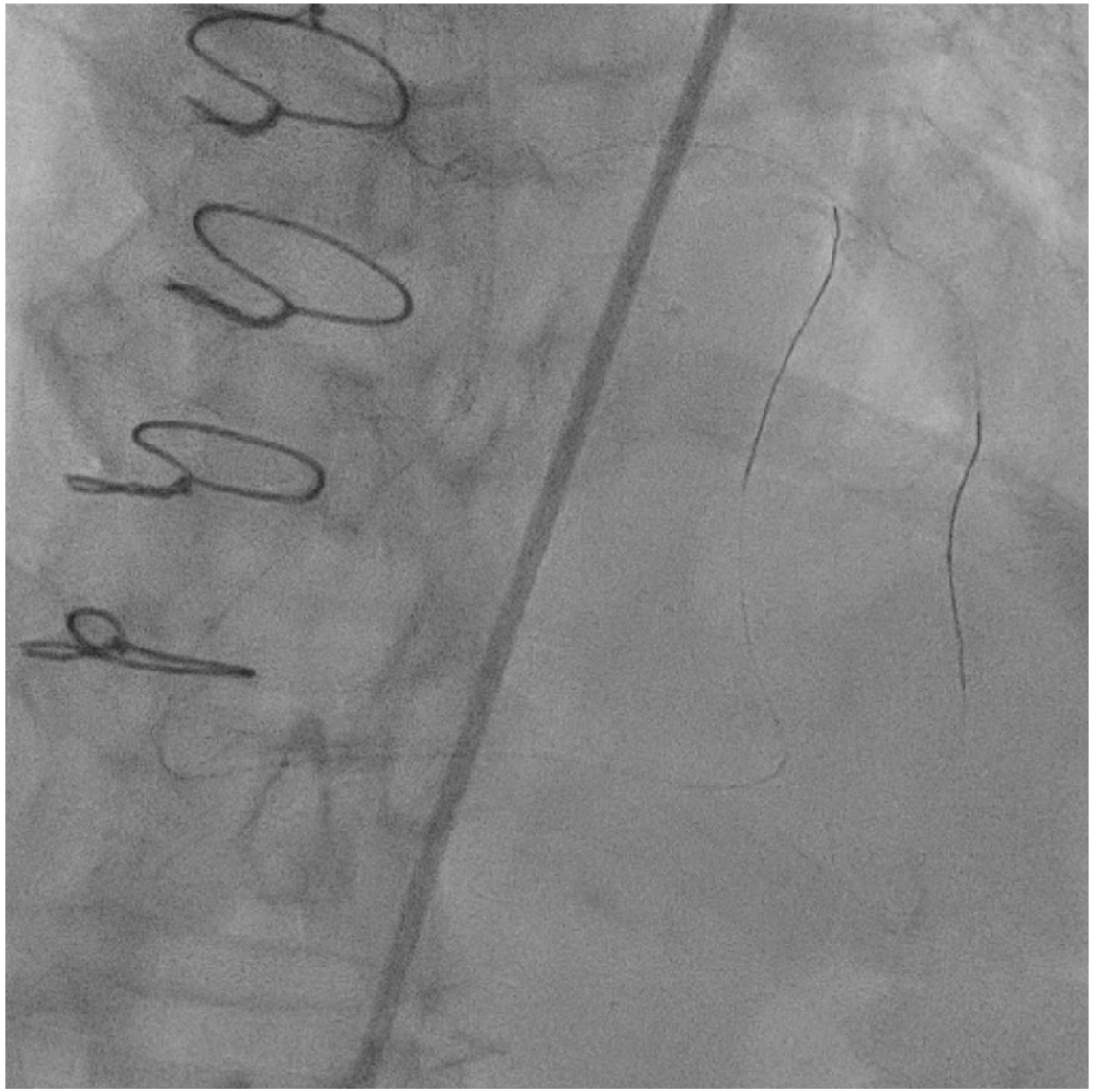
CTO-PCI / Ambiguity Distal CTO cap



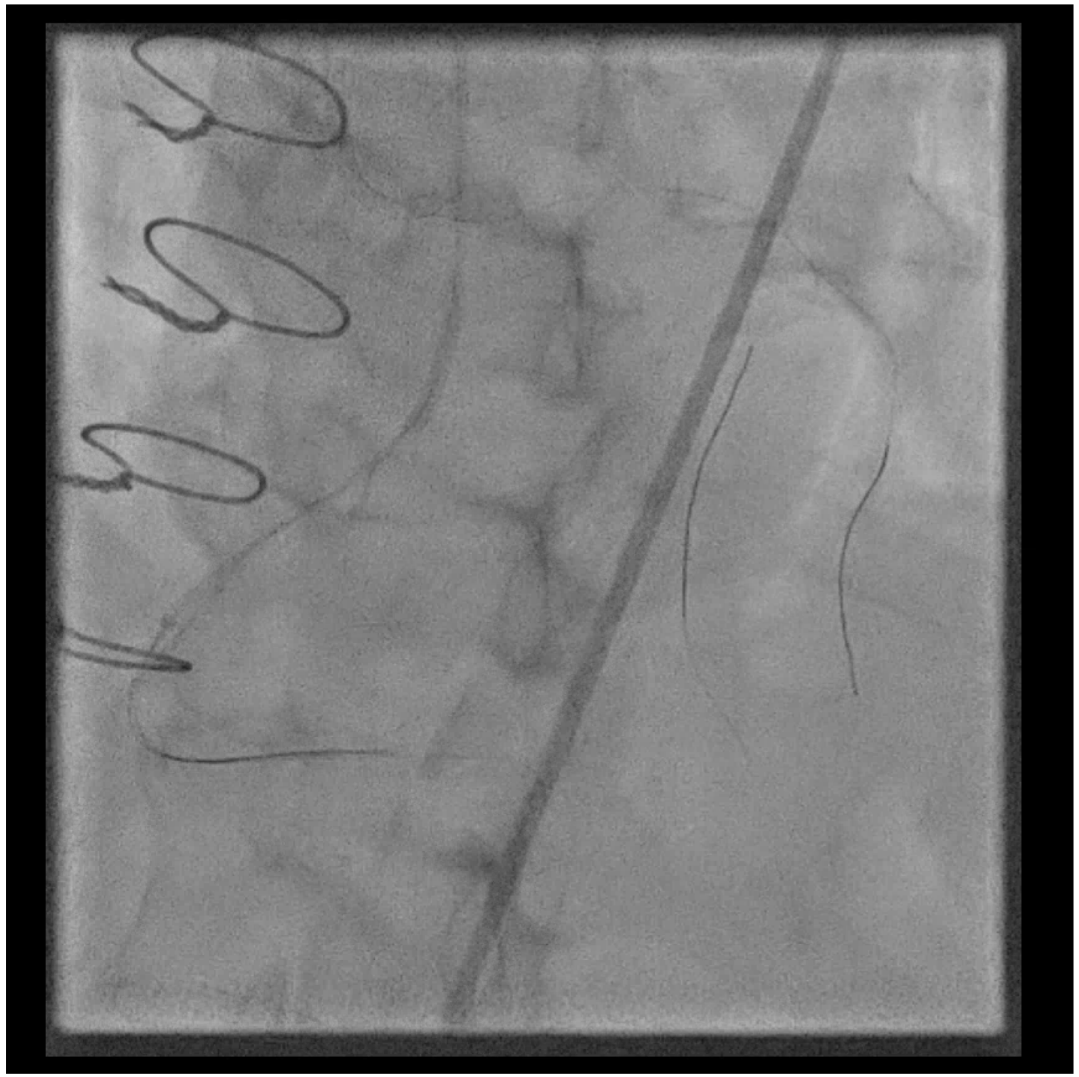
CTO-PCI / Revers Cart



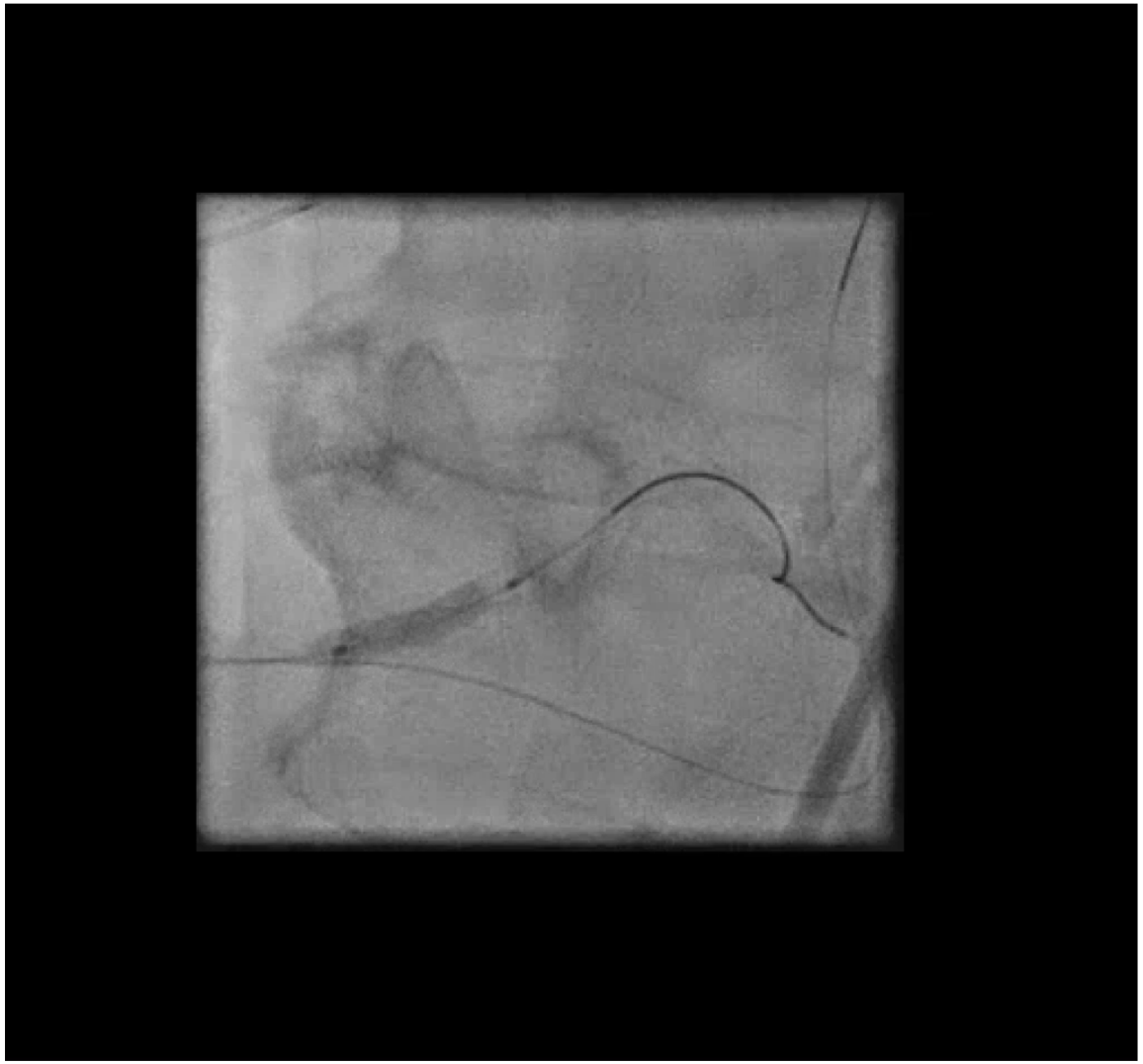
CTO-PCI / Multiple angioplasty NC 3 and 3,5 mm à 22 atm. Ca ++



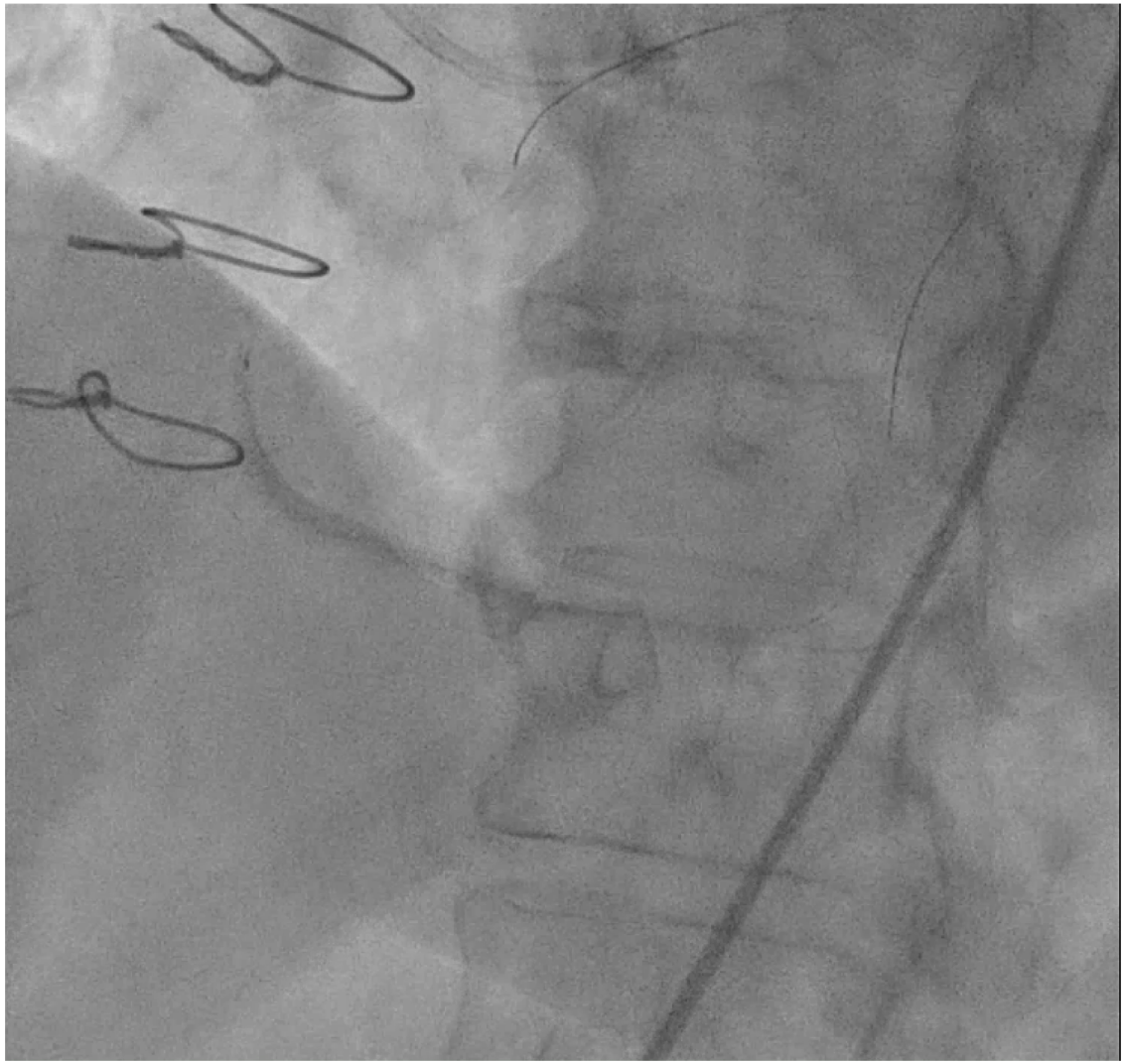
CTO-PCI / Double Lumen – PL Wiring



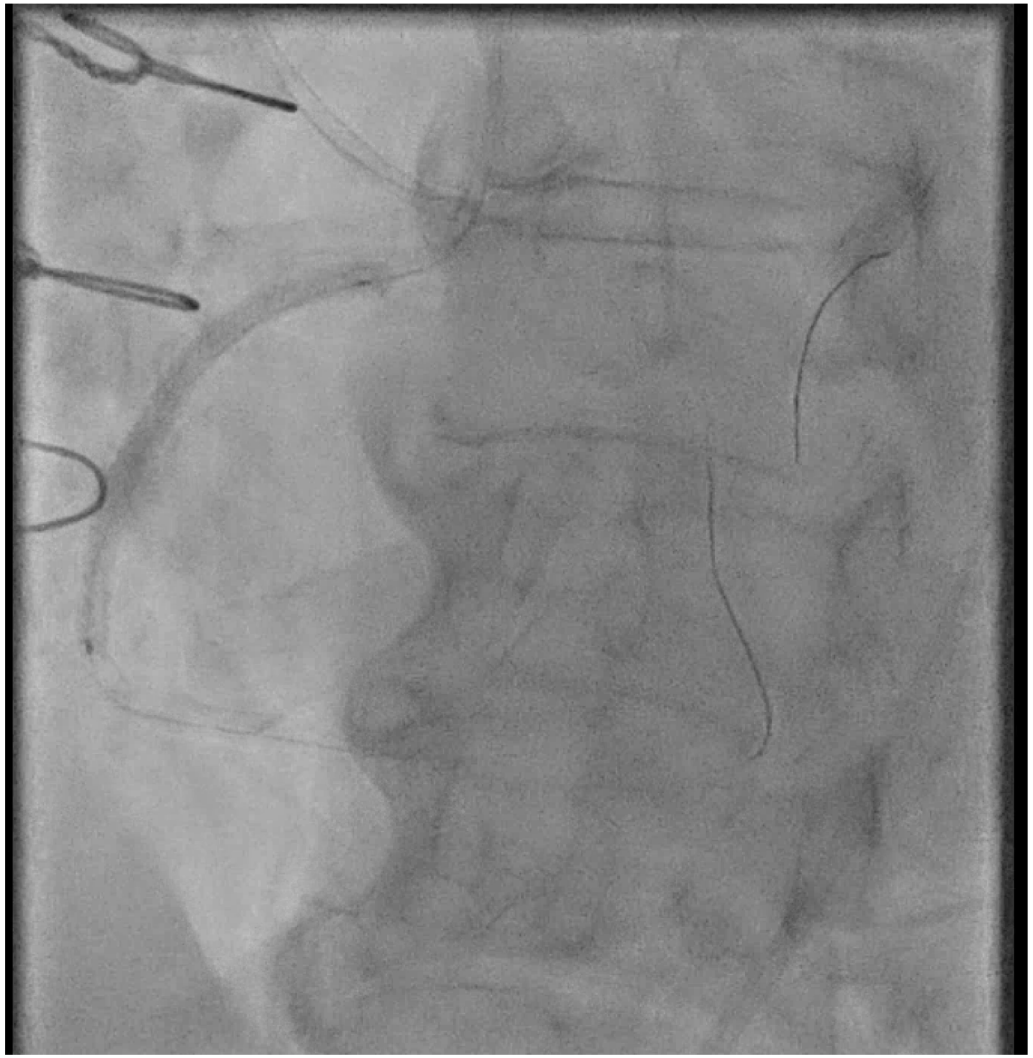
CTO-PCI / stenting the ostium of the postero-lateral brach



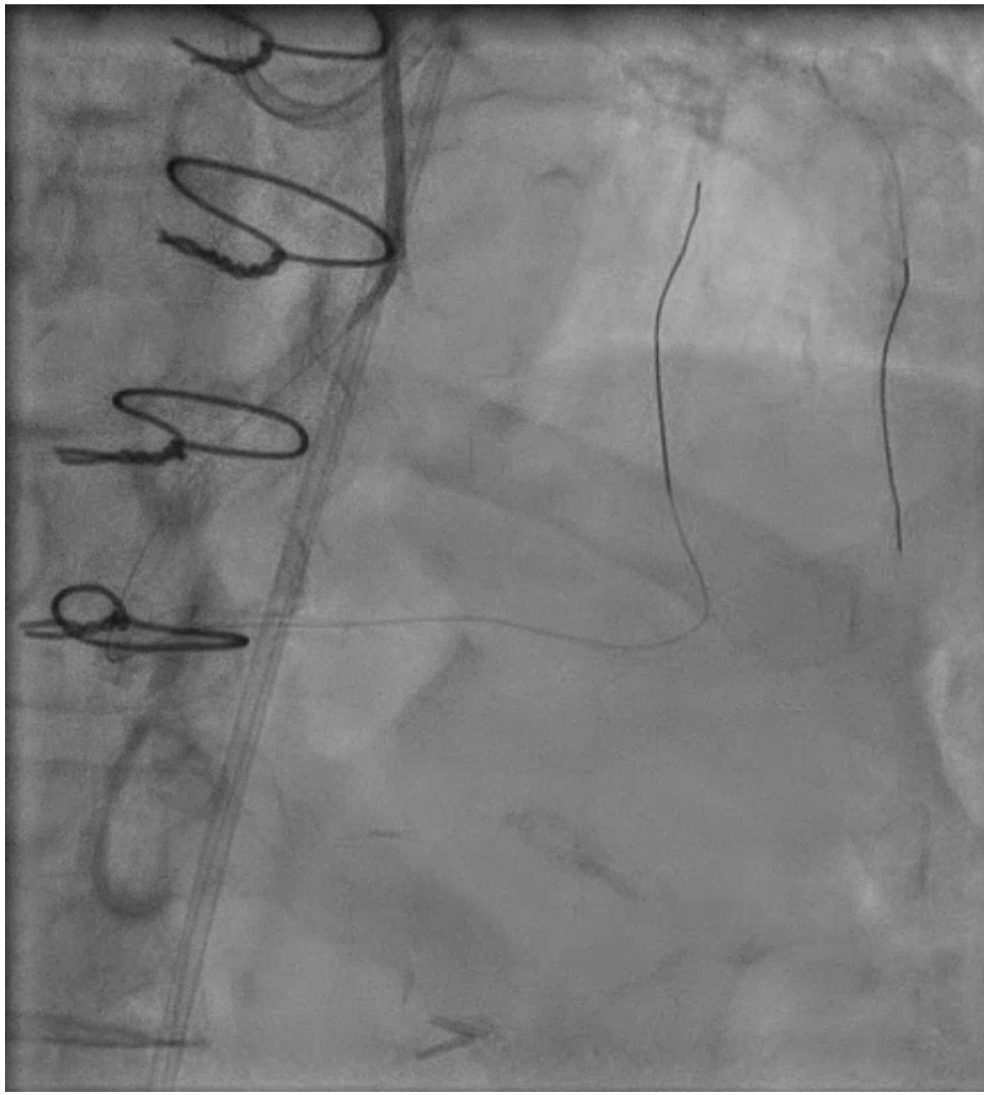
CTO-PCI / Stenting the RCA towards the PDA (2,5X48mm)



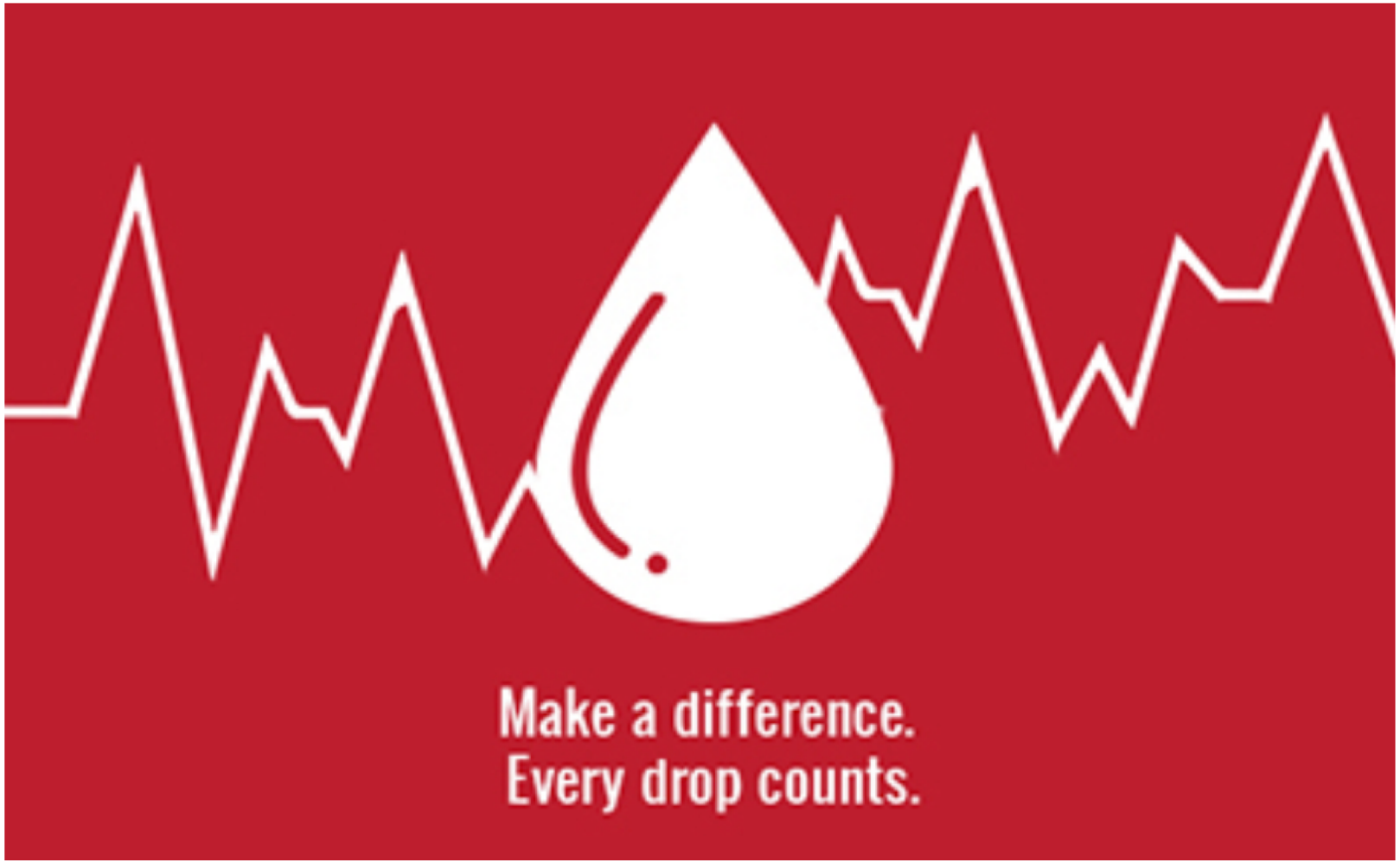
CTO-PCI / Stenting the Proximal RCA



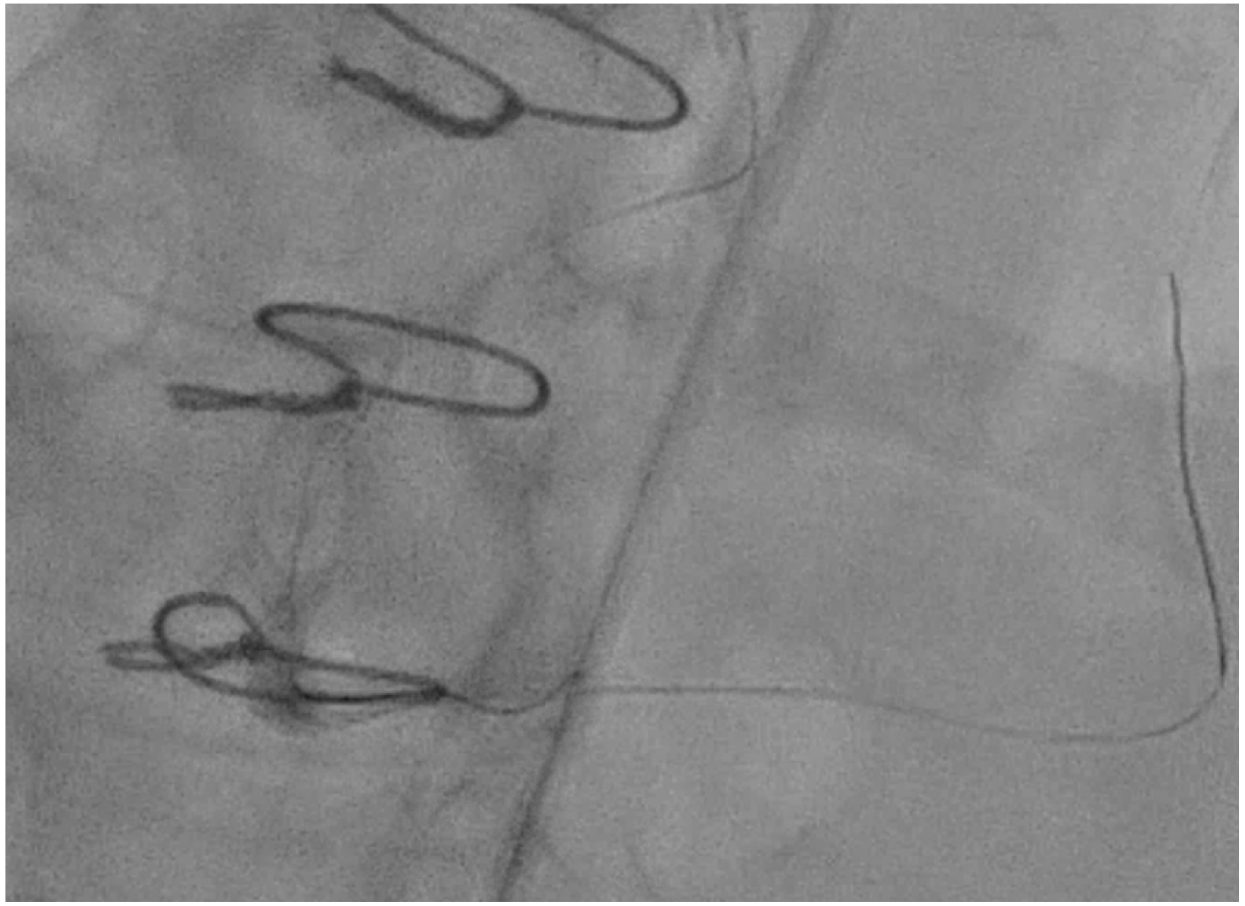
CTO-PCI / Distal Perforation



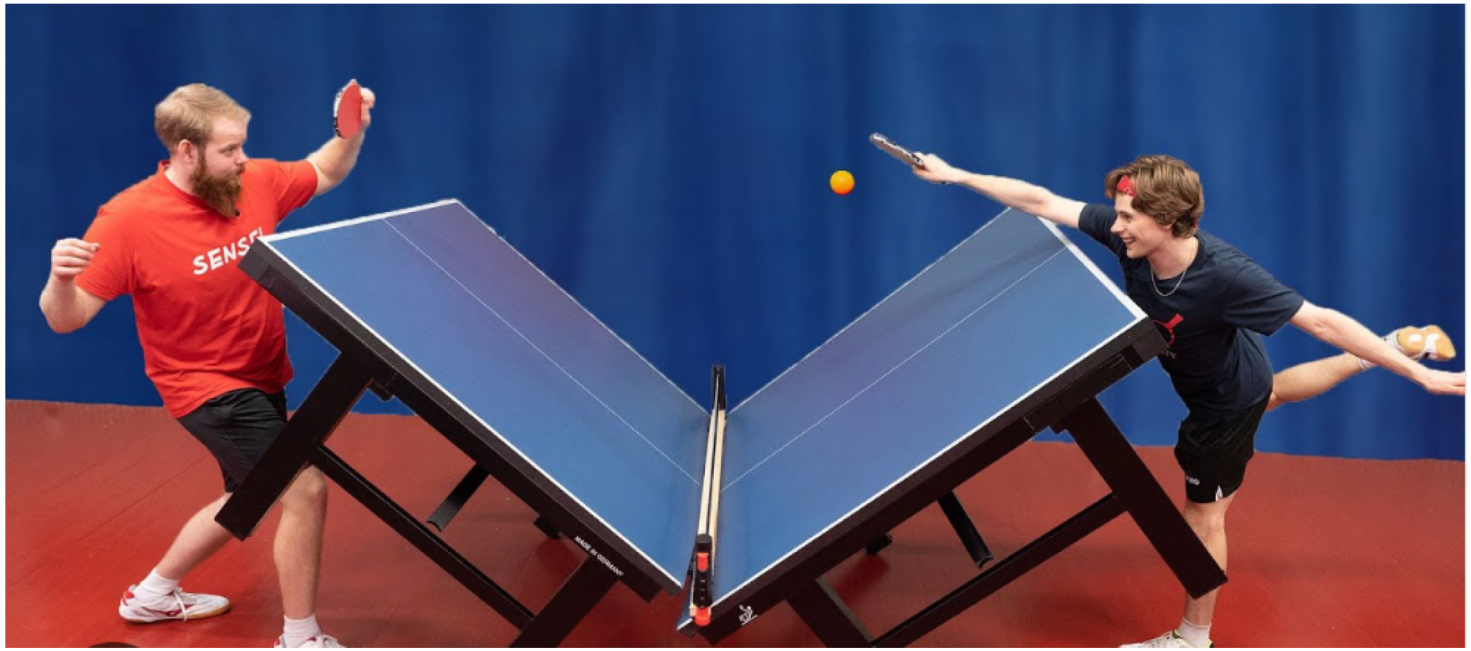
CTO-PCI /



CTO-PCI / The balloon didn’t crossed into the PDA



What to do ? A conventional Ping-Pong technique seems to difficult

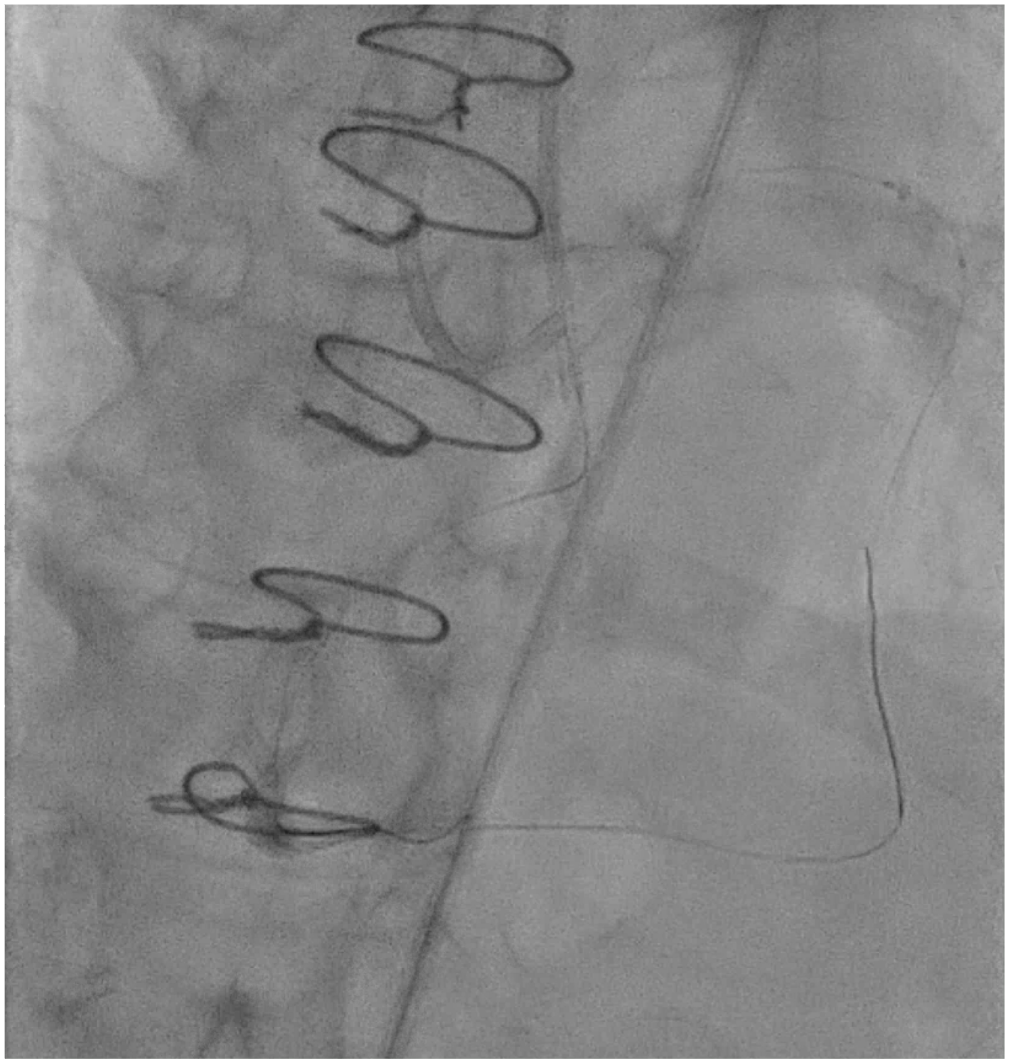


What to do ?

Perforations in patients with prior CABG surgery revealed high mortality !!!

Prompt sealing of the perforation is critical in these patients.

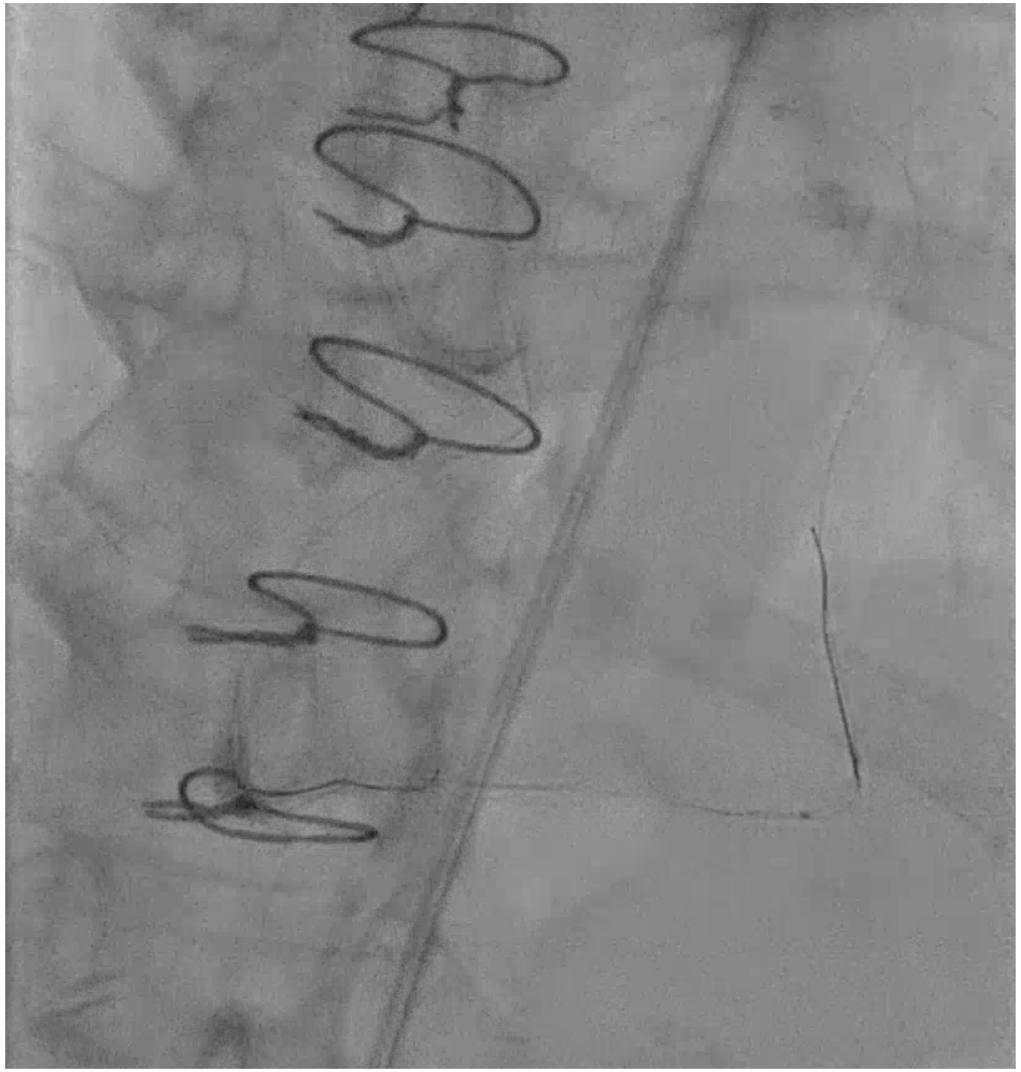
CTO-PCI / Ballon 3 mm through the septale



Guideliner needed

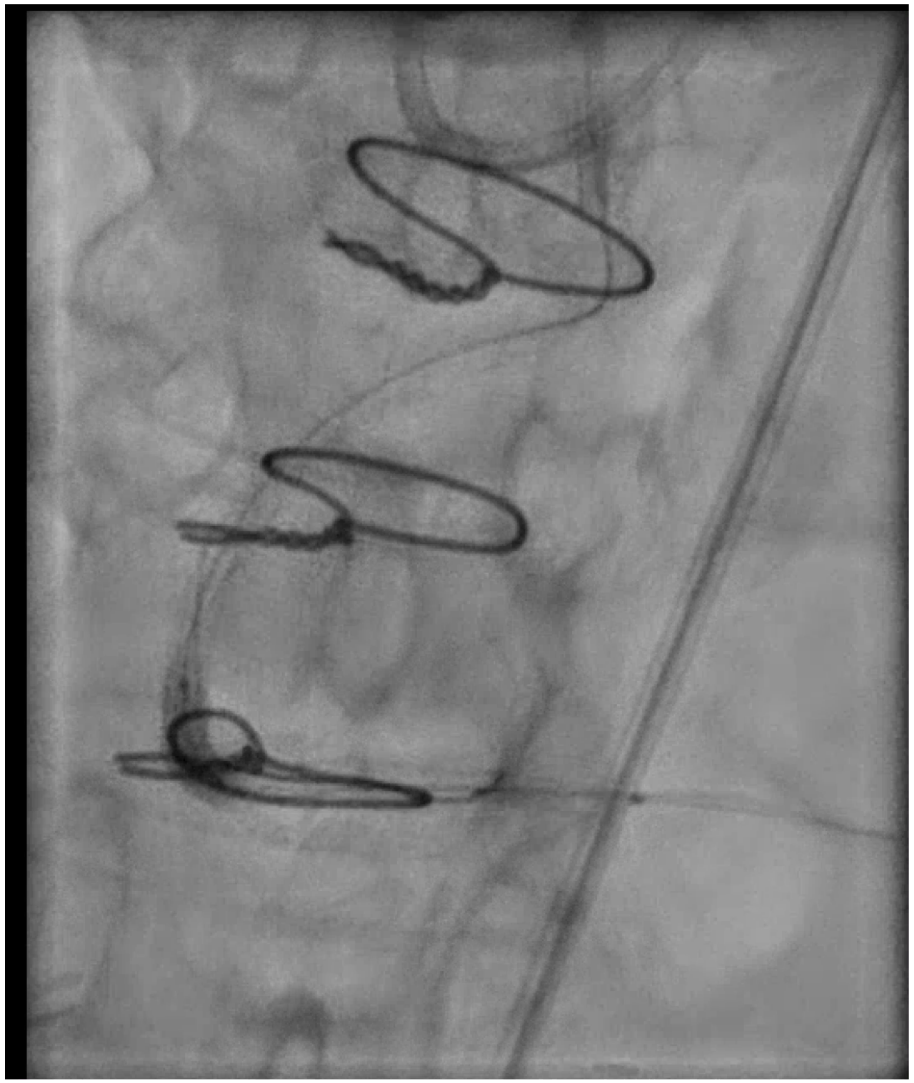
PUSH ….PUSH …..

CTO-PCI / Diffcult crossing of the apex

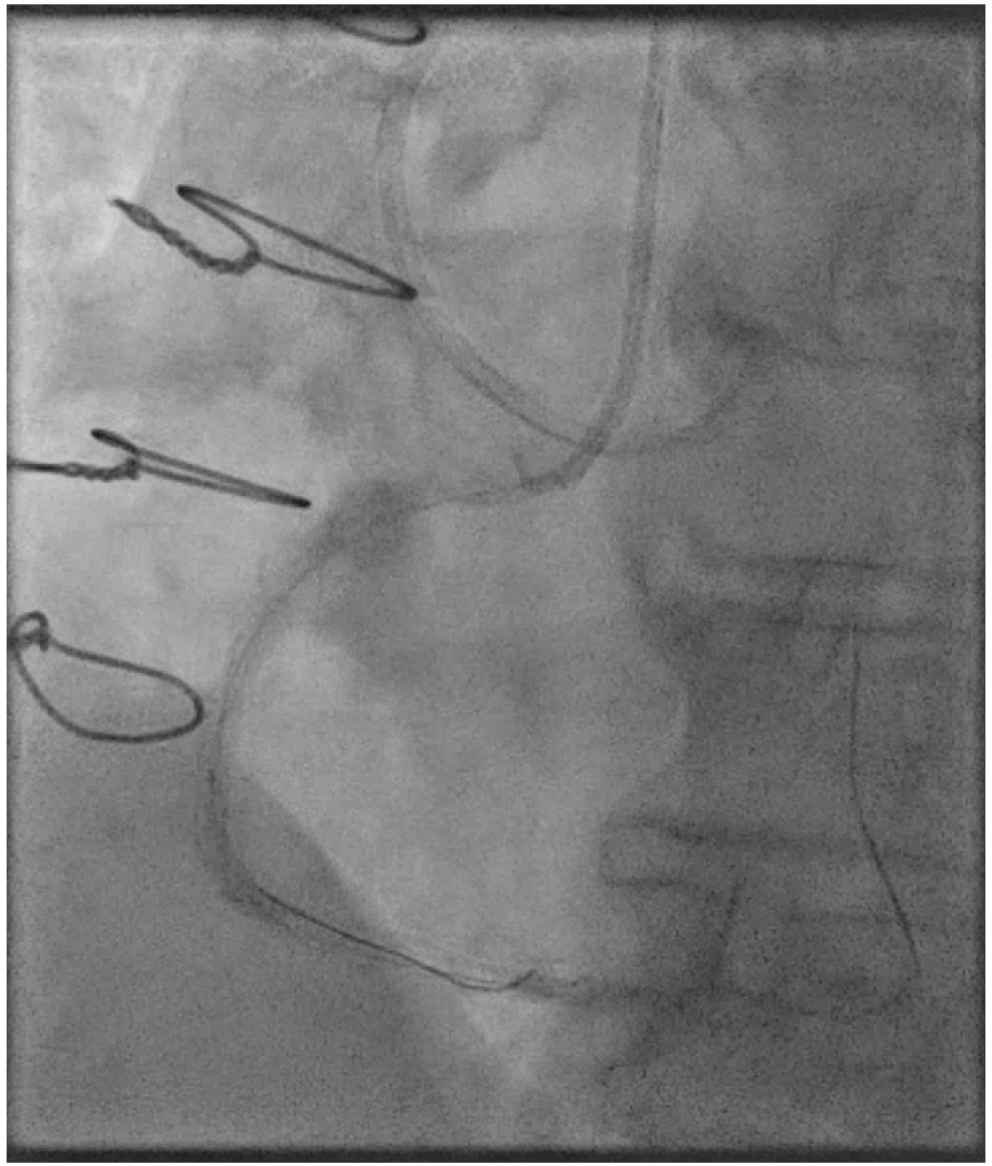


PUSH ….PUSH …..

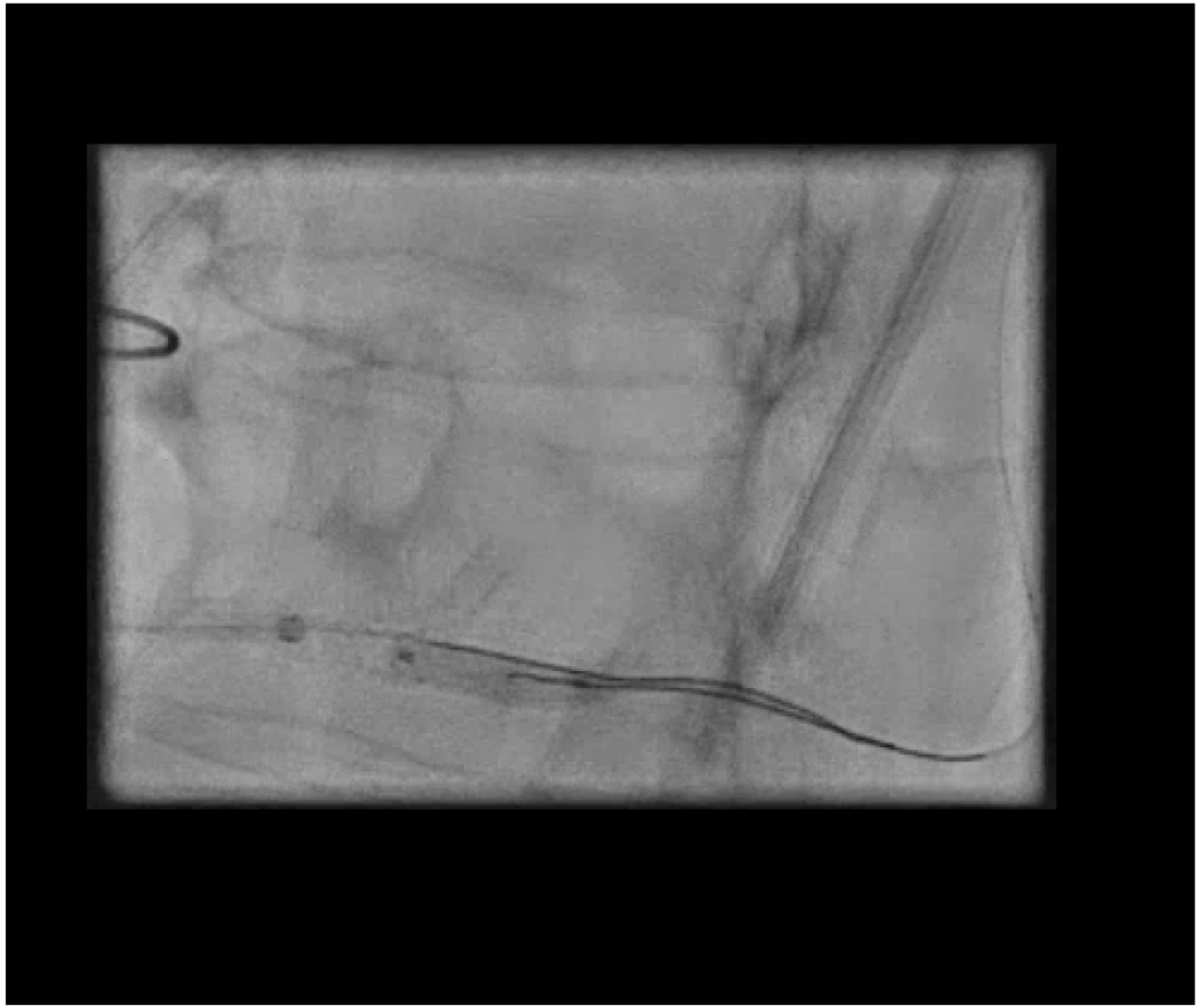
CTO-PCI / Retro Tamponade Balloon



CTO-PCI / Check

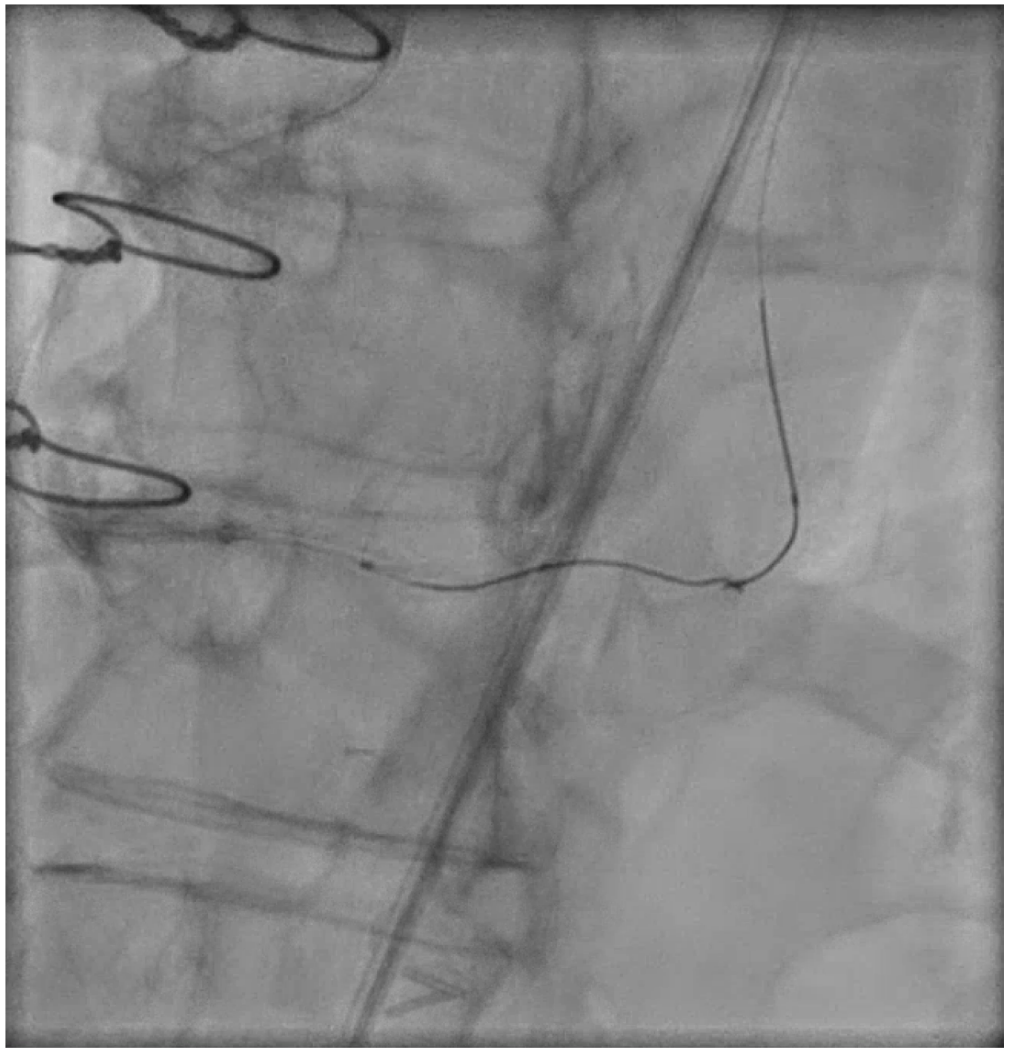


CTO-PCI / Anterograde Extension Guiding.

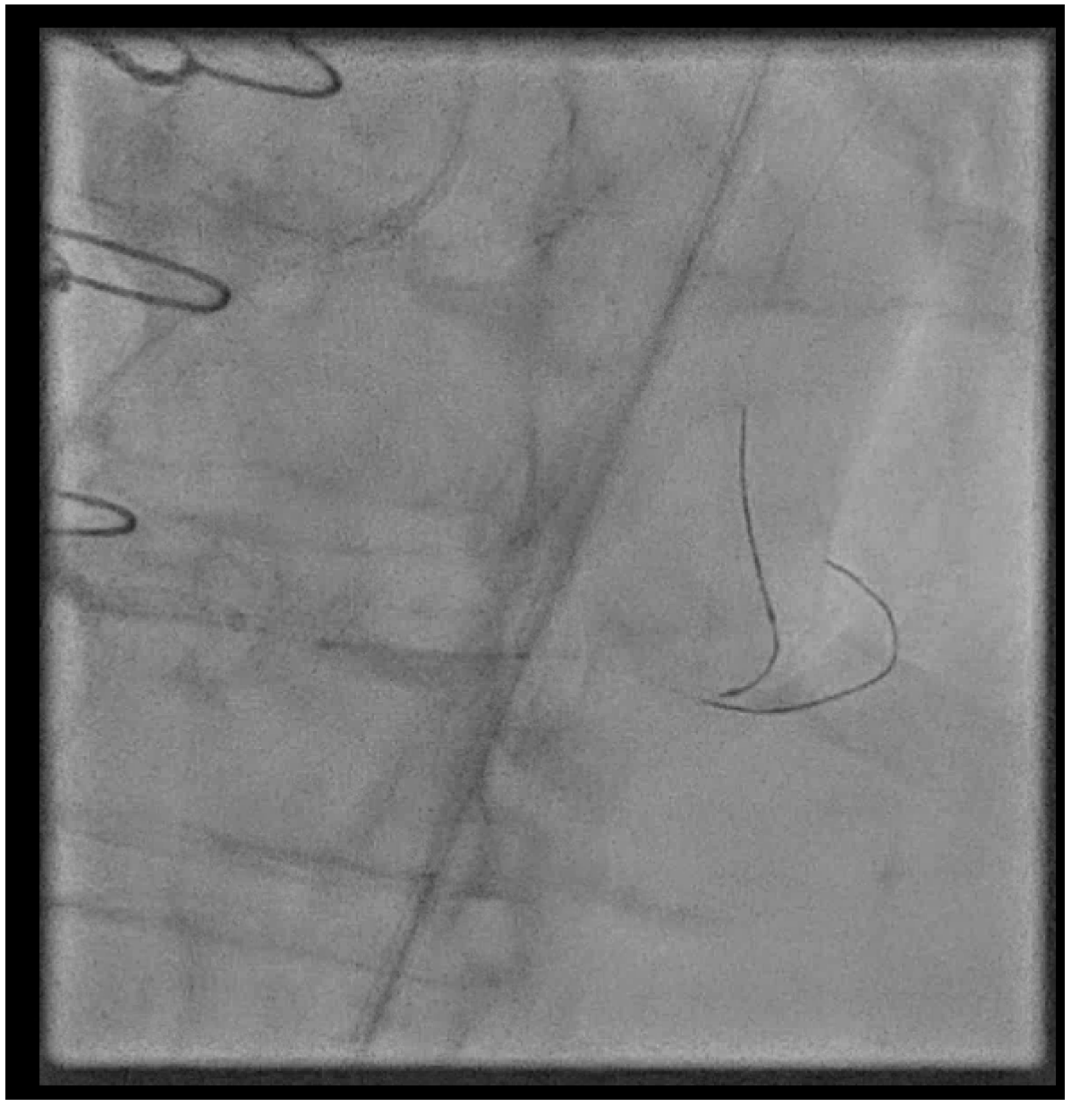


Après 20 min …..

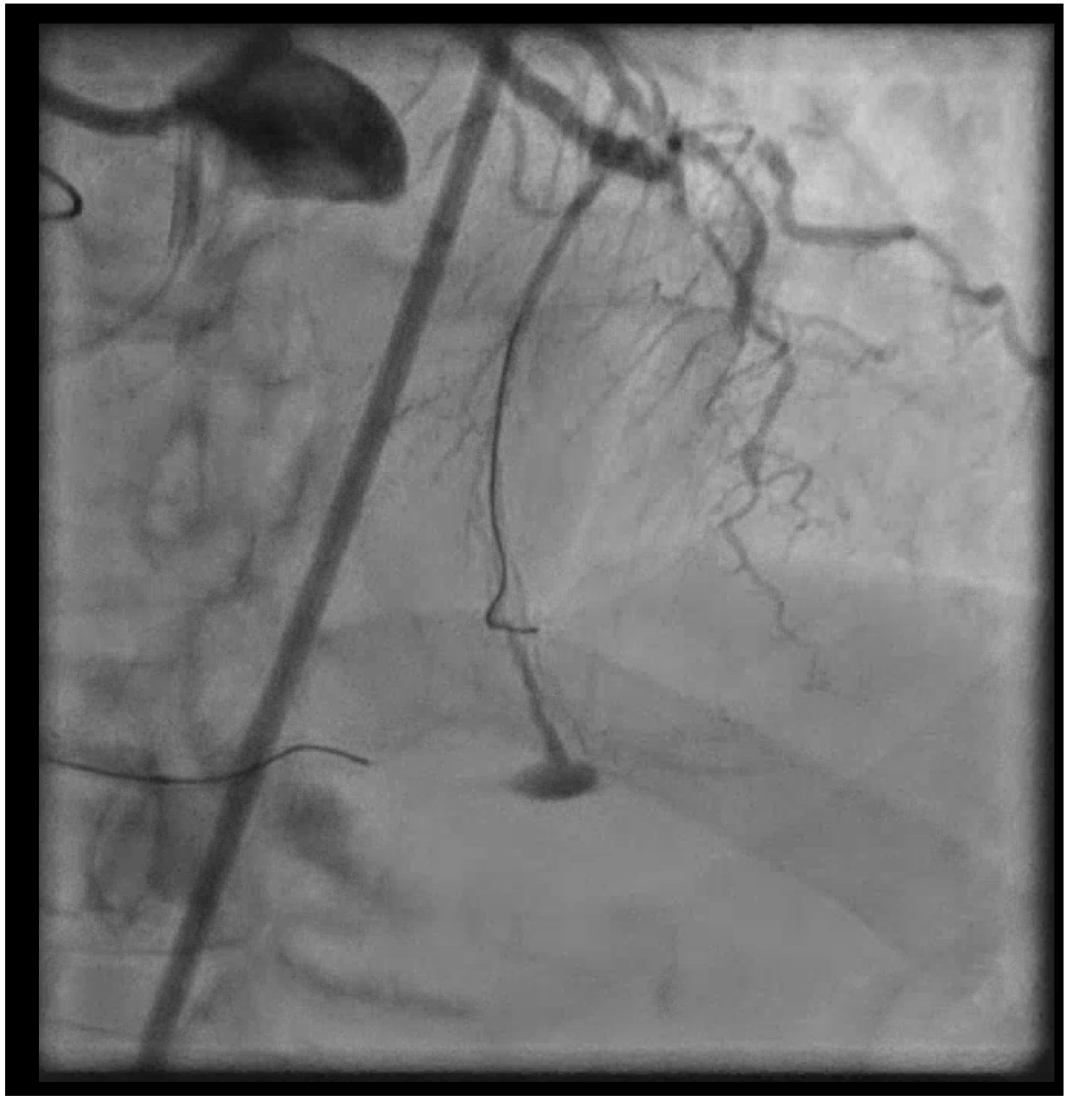
CTO-PCI / Fist Papyrus 2,5 !!!



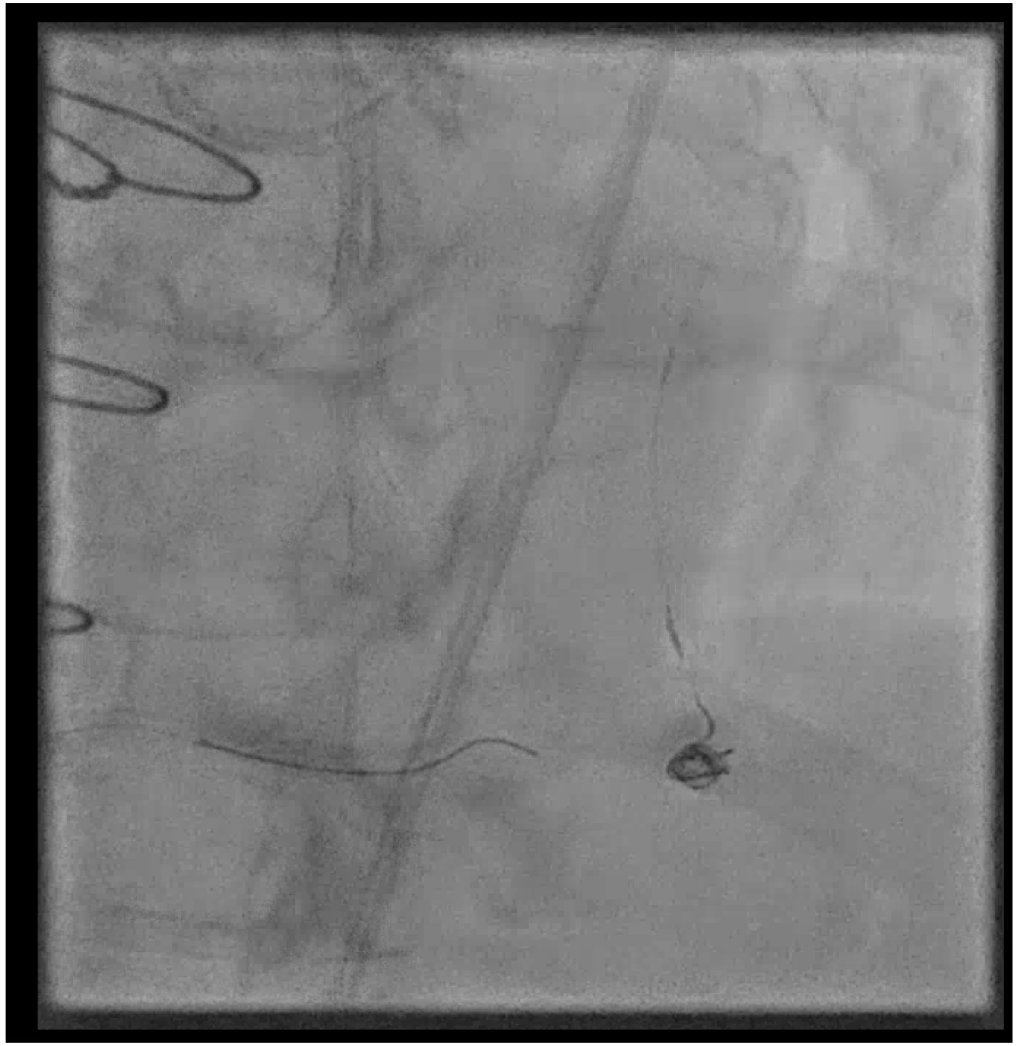
CTO-PCI / Second Papyrus 3 mm + NC 3,25 long inflation



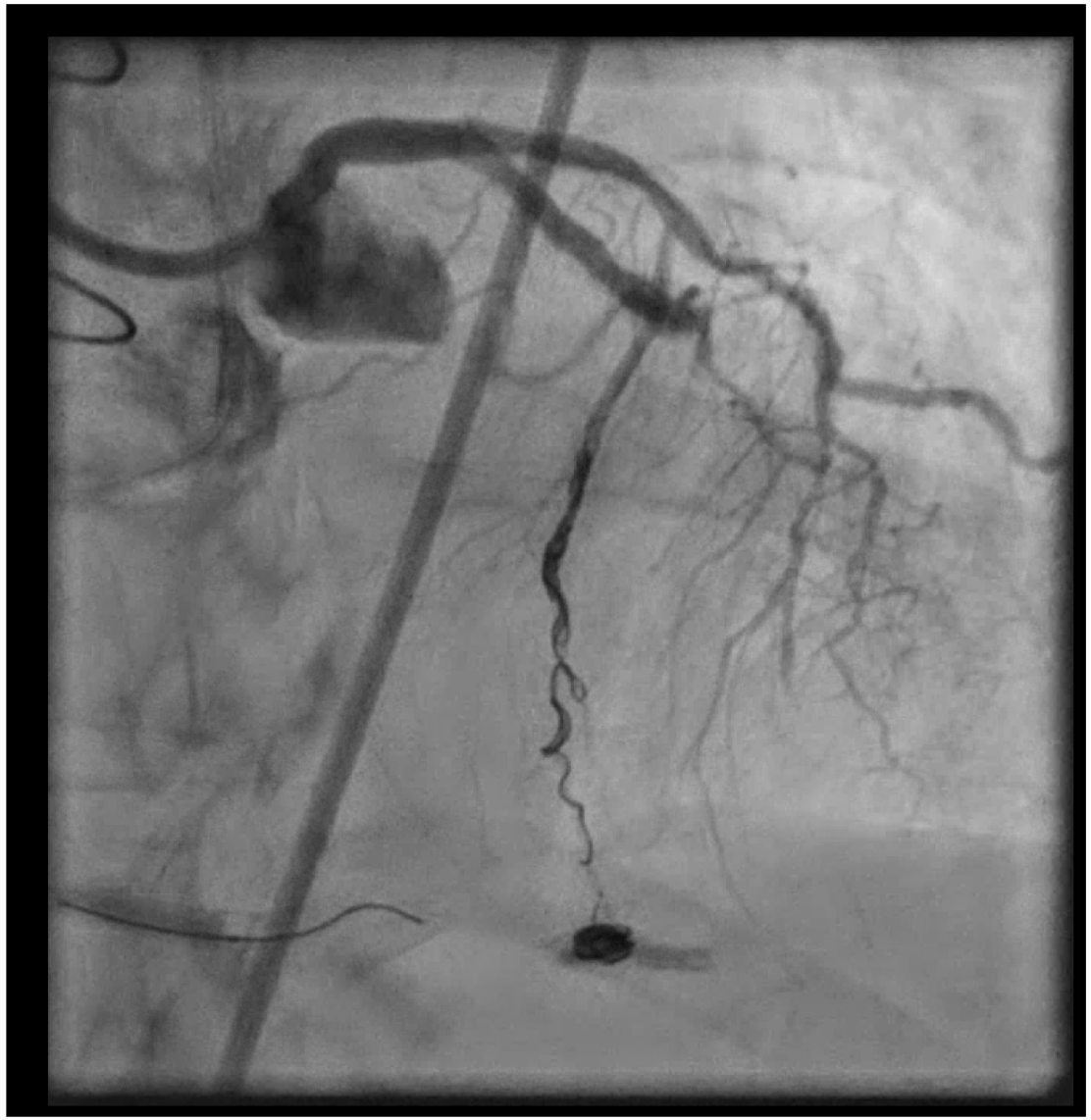
CTO-PCI / Septal large traumatisme



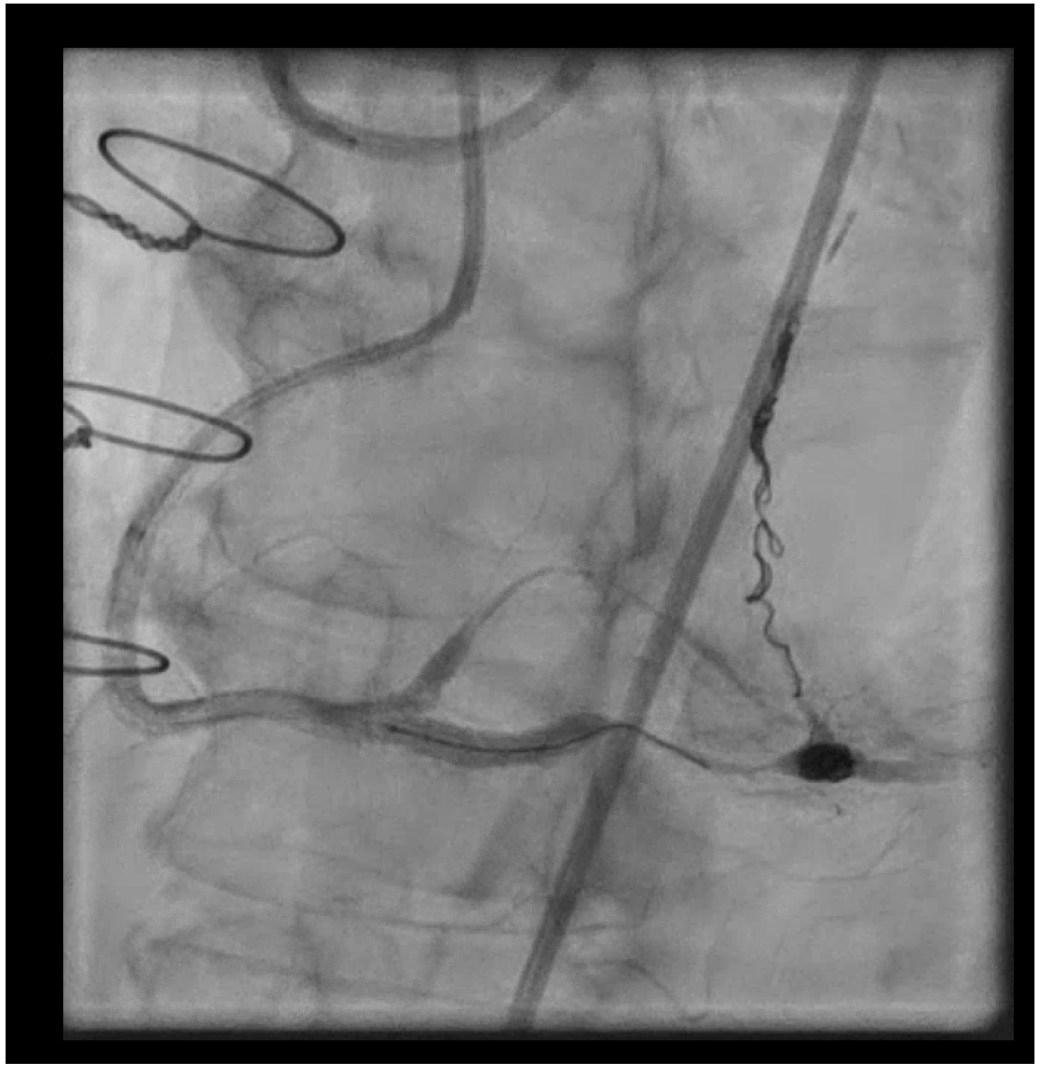
CTO-PCI / Septal Closure



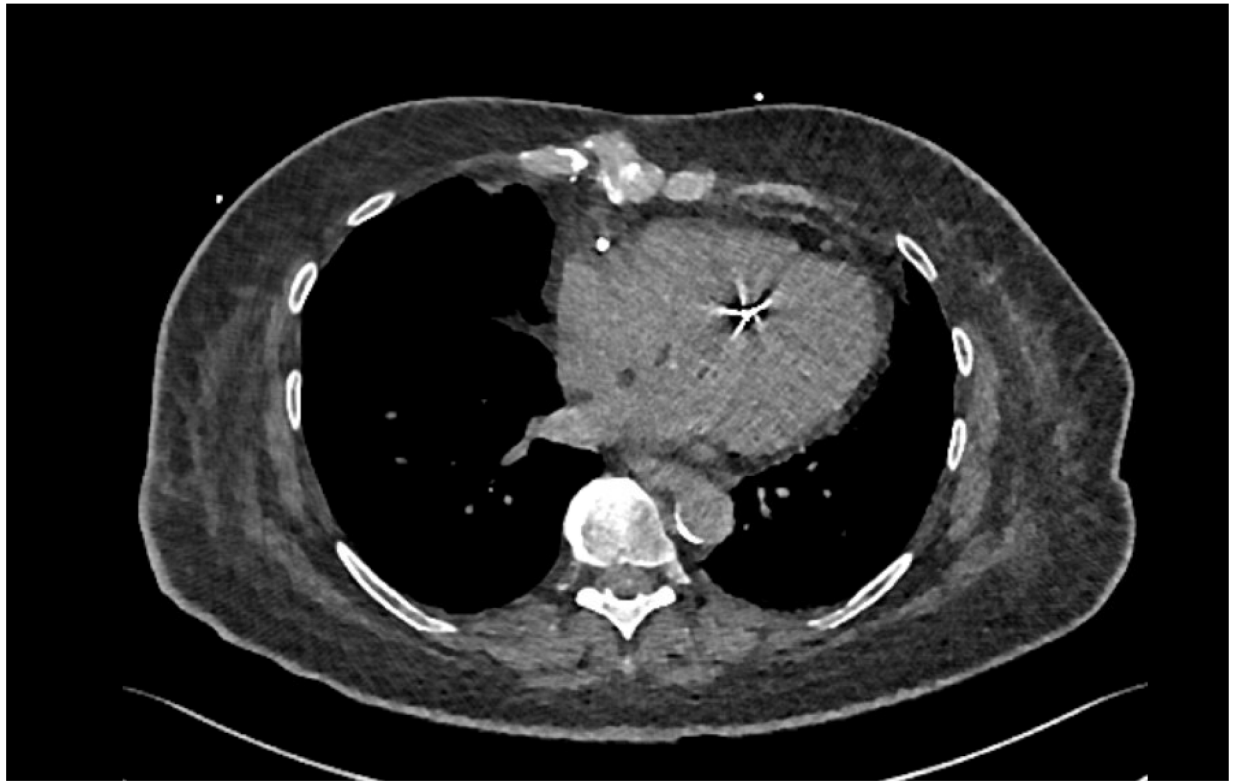
CTO-PCI / Check the septal connection



CTO-PCI / FINAL angiographic result

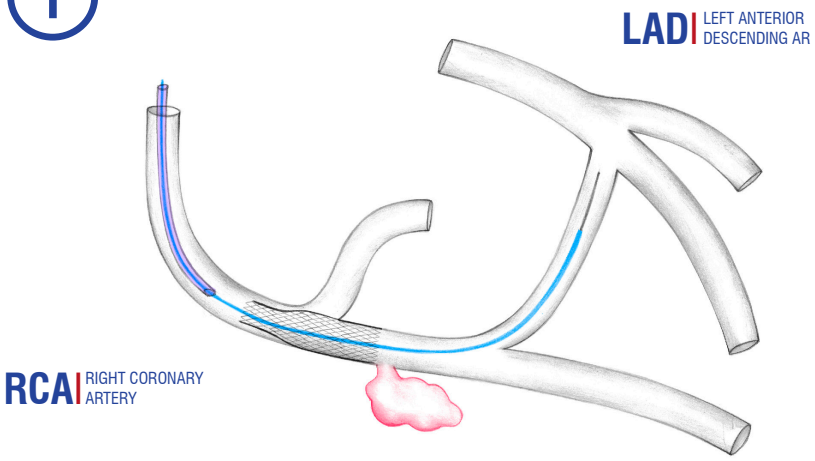


CTO-PCI / CT scan check



Illustrations

1



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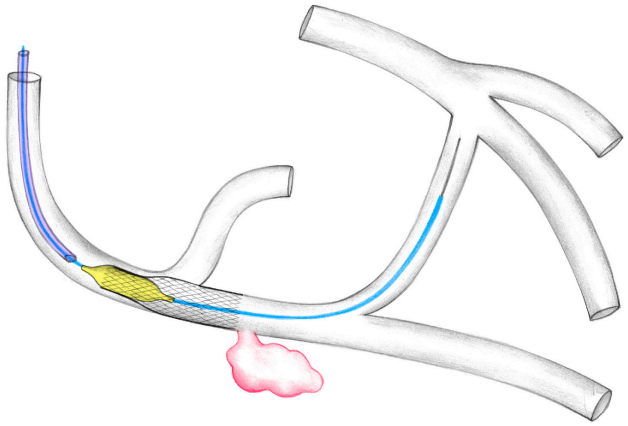

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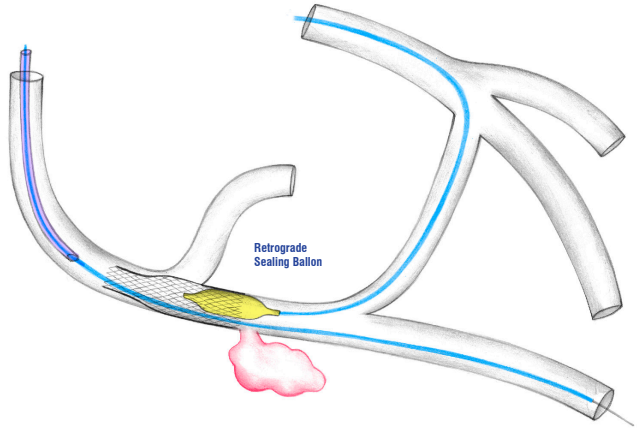

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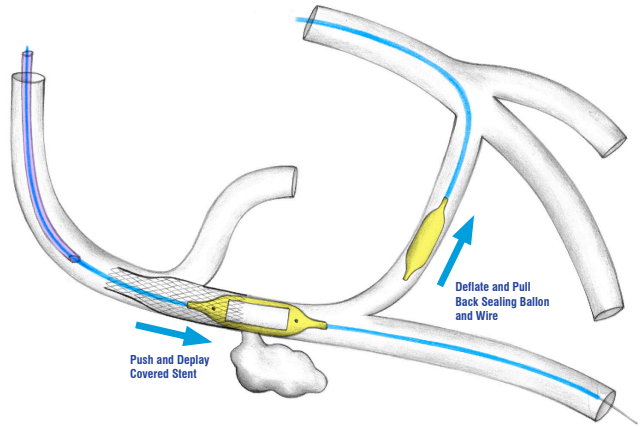

Conclusion

- To our knowledge, this is the first case describing an unconventional « Ping-Pong » technique
- Our objectif was to maximize the hemostasis time and prevent the development of a potential high-risk pericardial effusion in a CABG patient.
- This case demonstrated that septal connections could accommodate the crossing and the retrieval of coronary balloons but the risk of vessel rupture needs to be taken into the account and the materials for closing it, like coils, have to be available in the catheterization room
- This case highlights how the retrograde “ping pong” technique might be successfully adopted to treat coronary perforations occurring after stent deployment whenever antegrade balloon or covered stent delivery is impossible.

Thanks for your attention !

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