Reverse Wire and Other Special Techniques for Bifurcation Lesions

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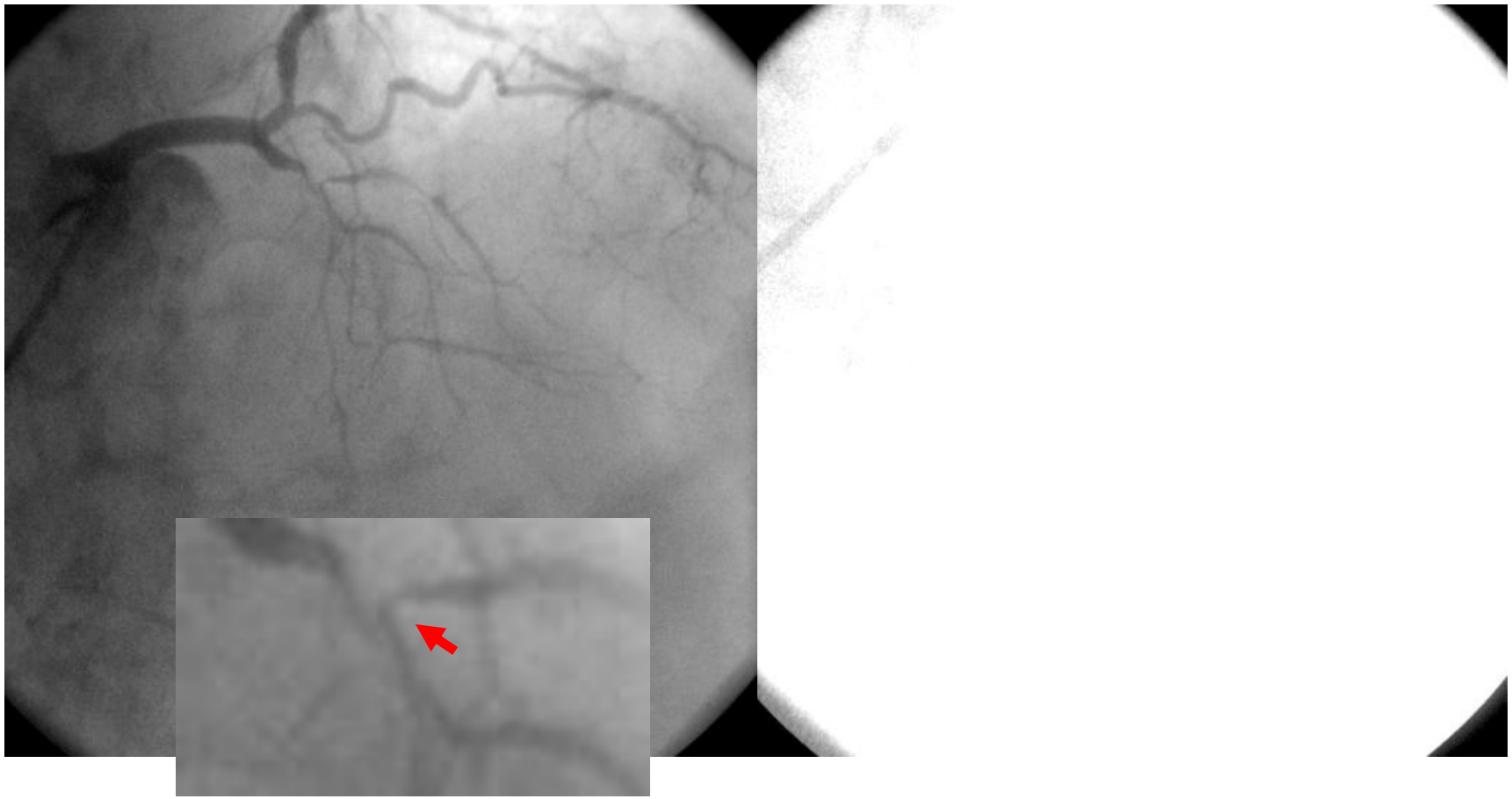
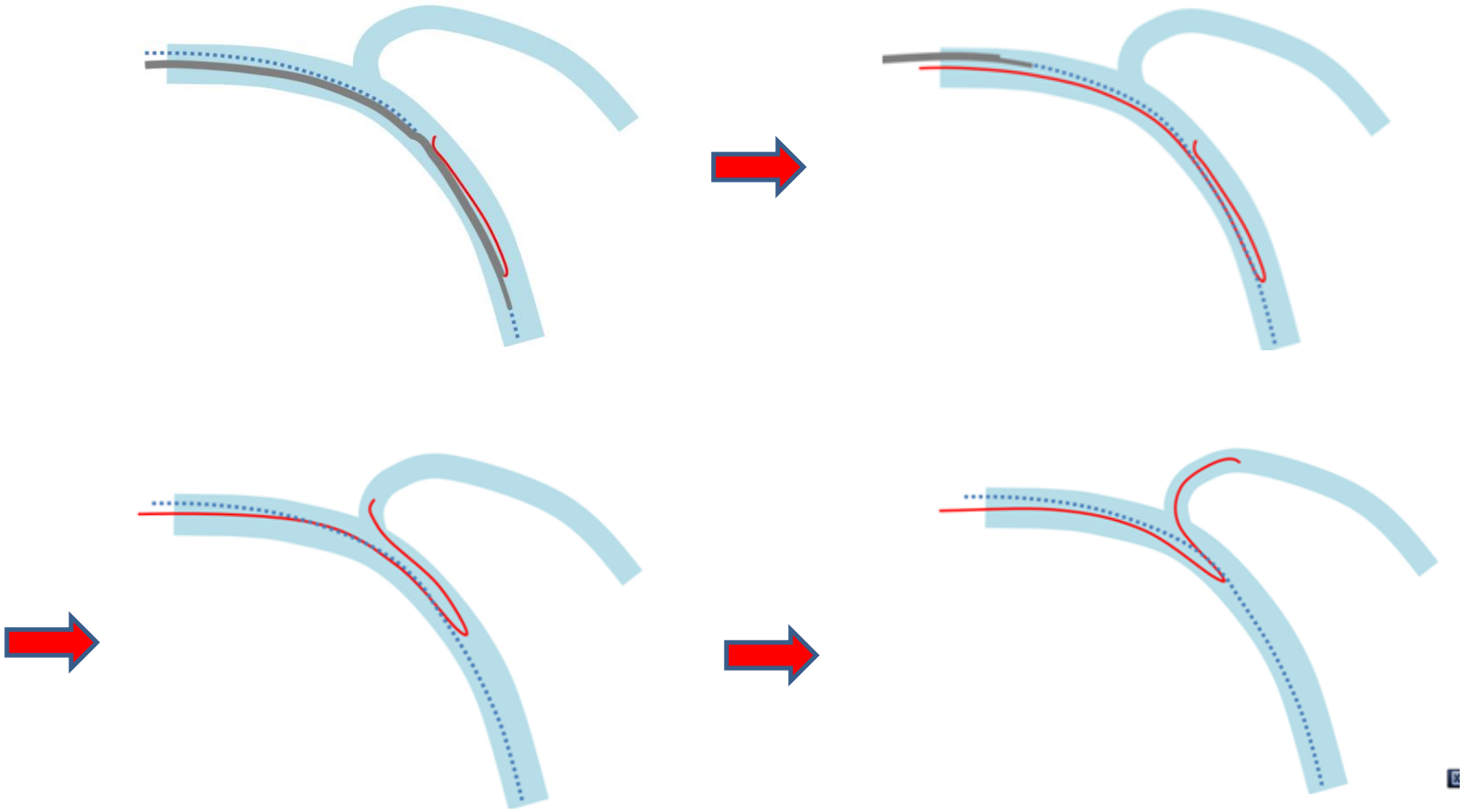
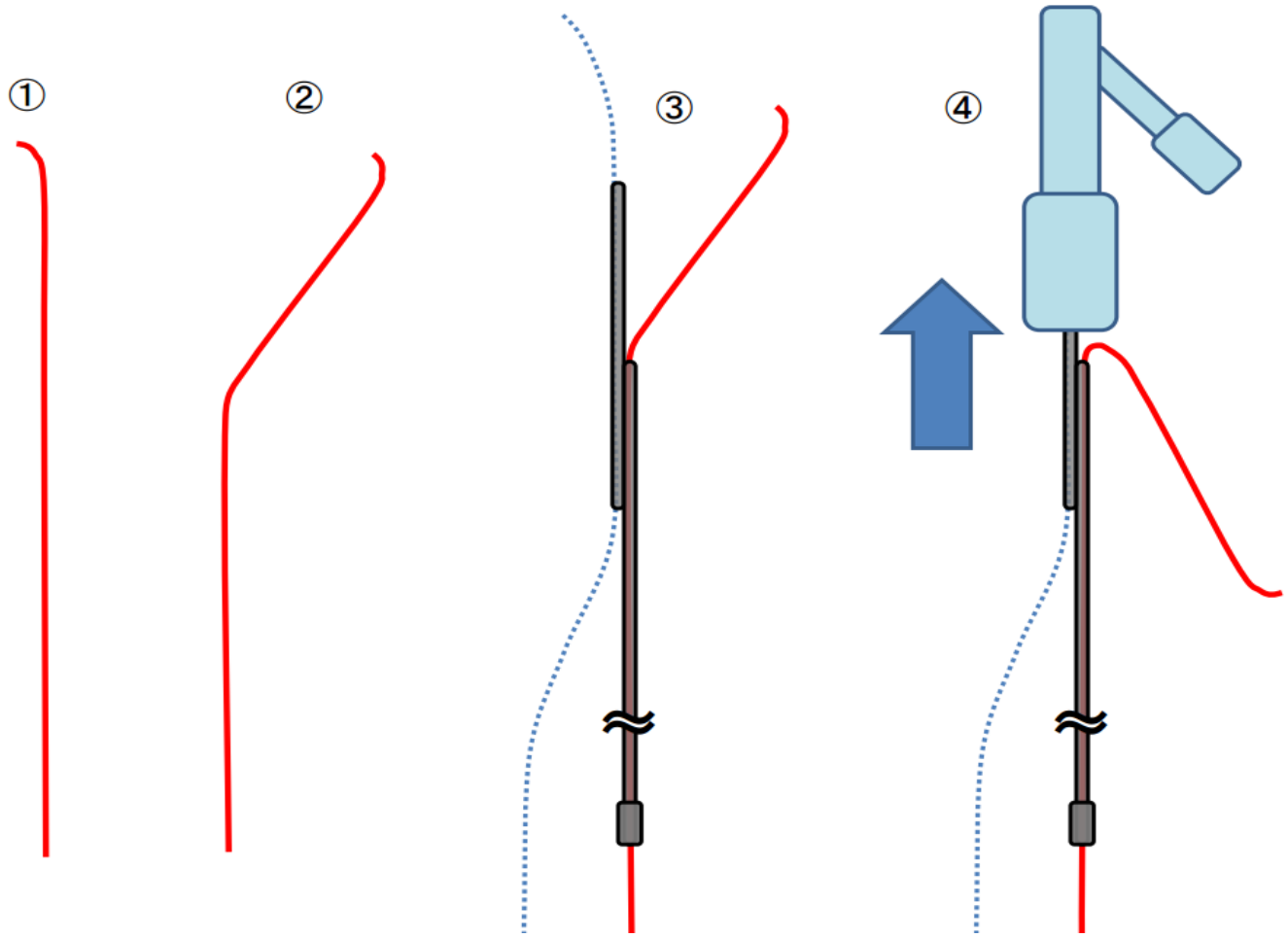
Conventional wiring is hardly possibly for this branch with extremely angulated take-off.



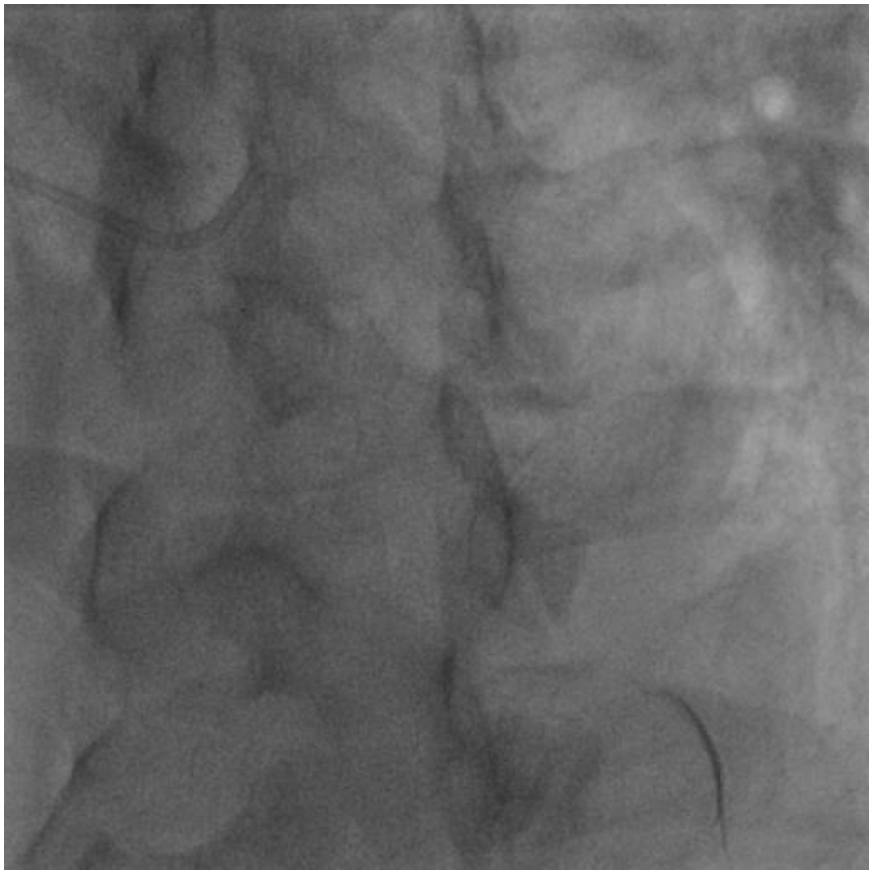
Reverse wire technique

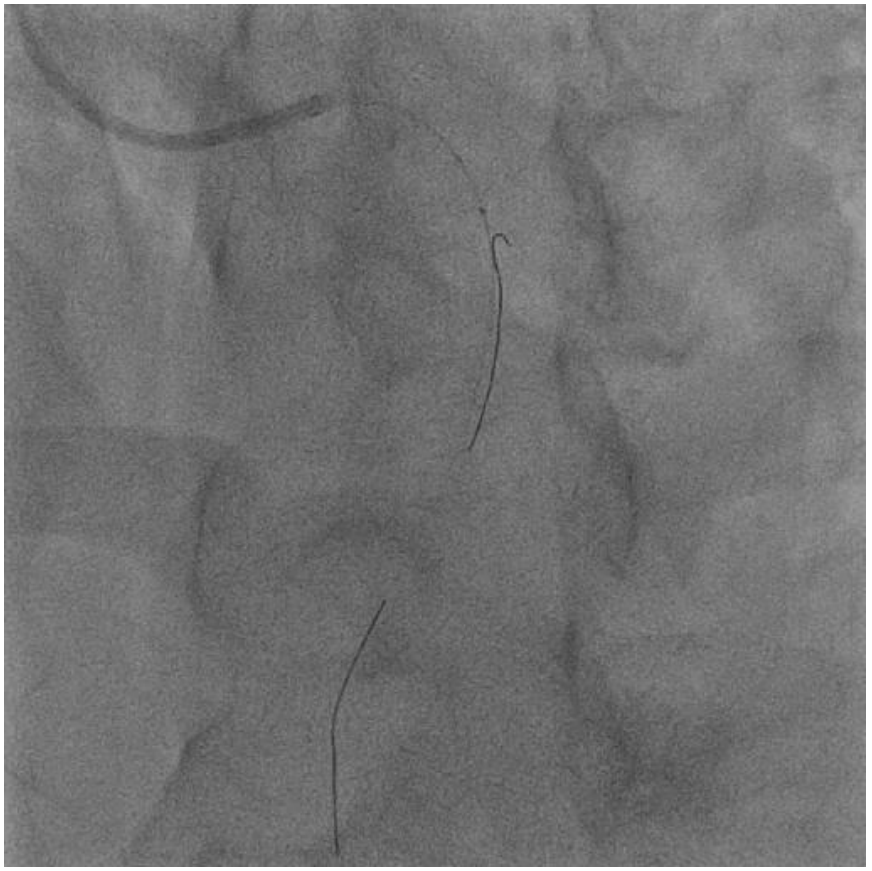


How to prepare the system



Reverse wire to approach the nearly occluded major D1





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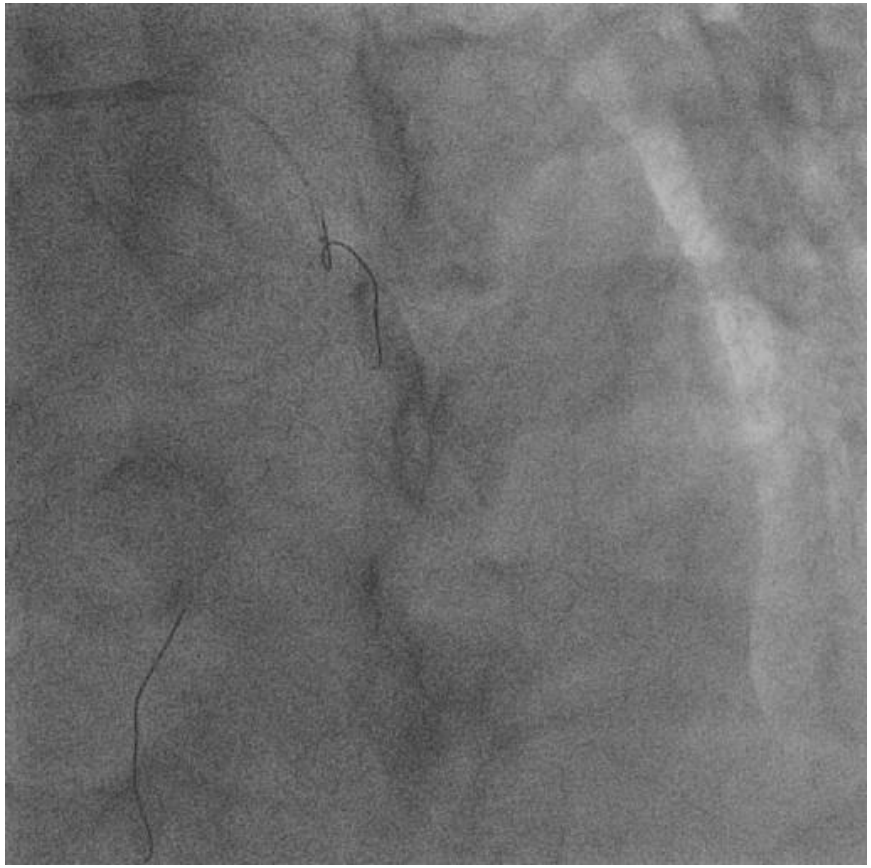
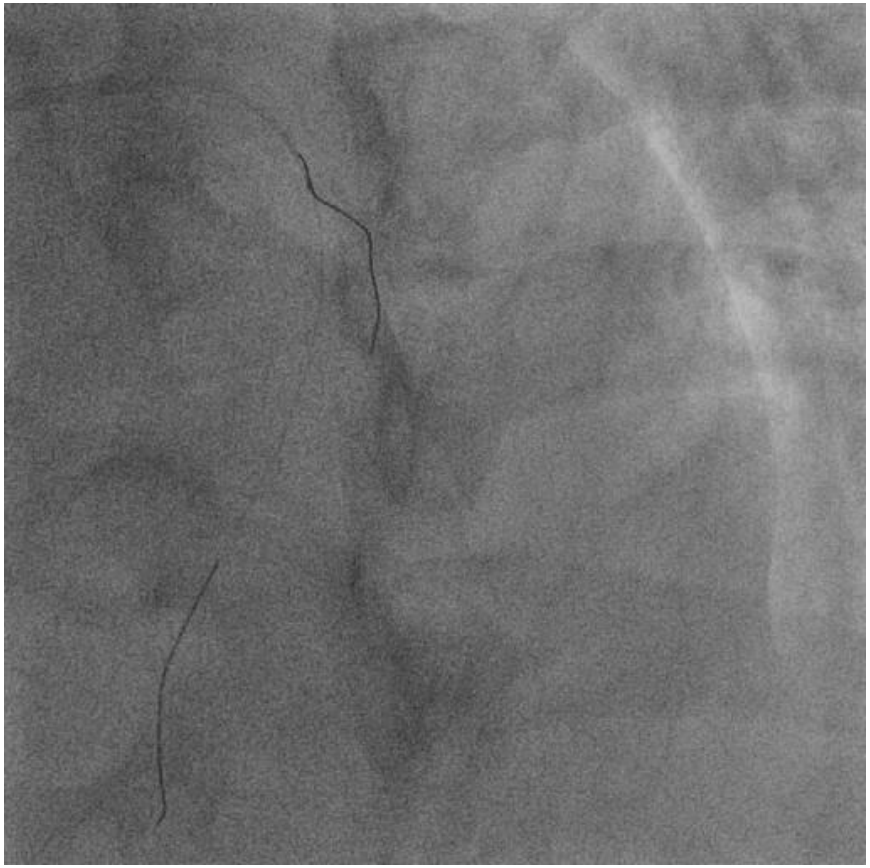
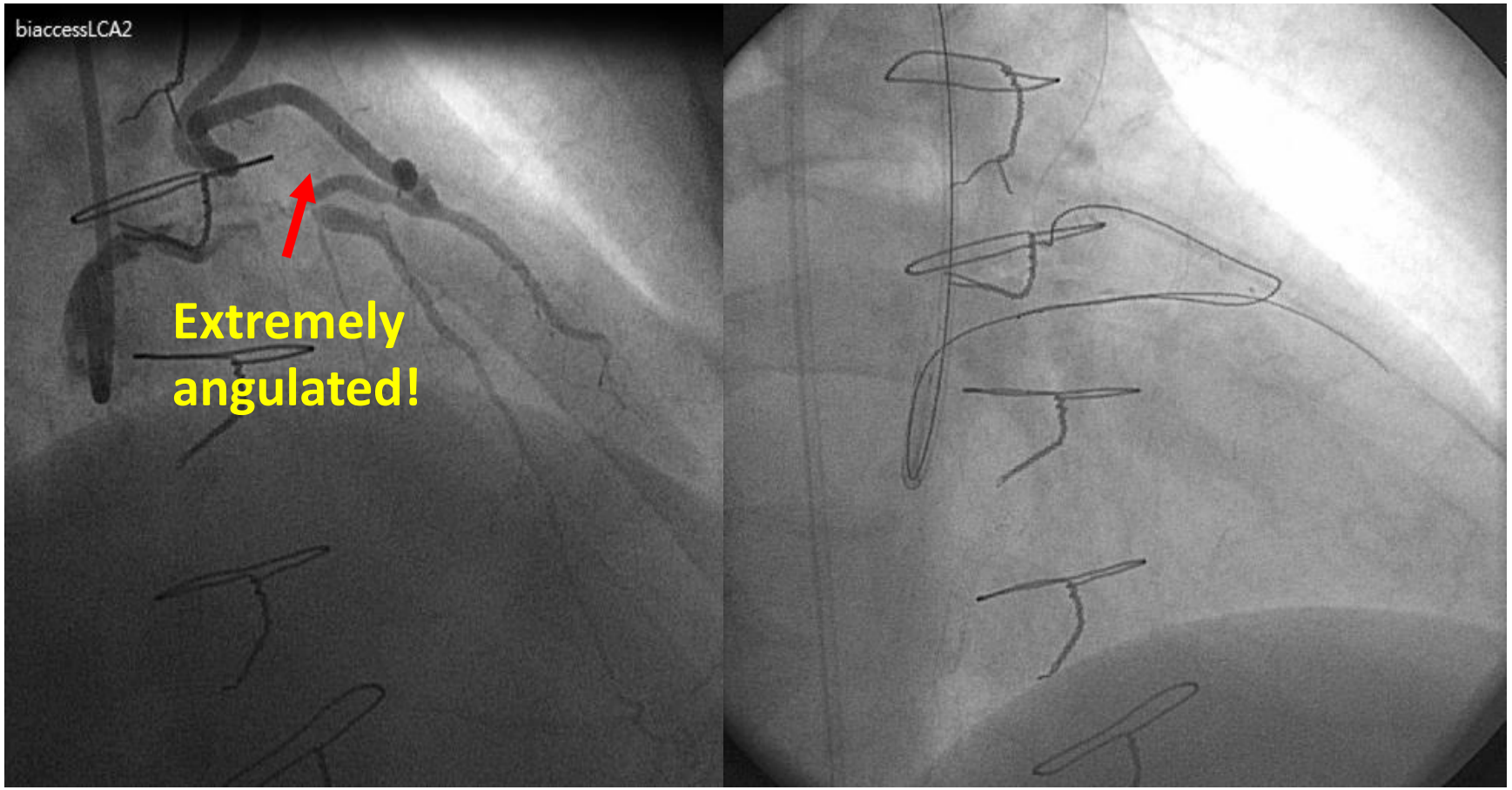
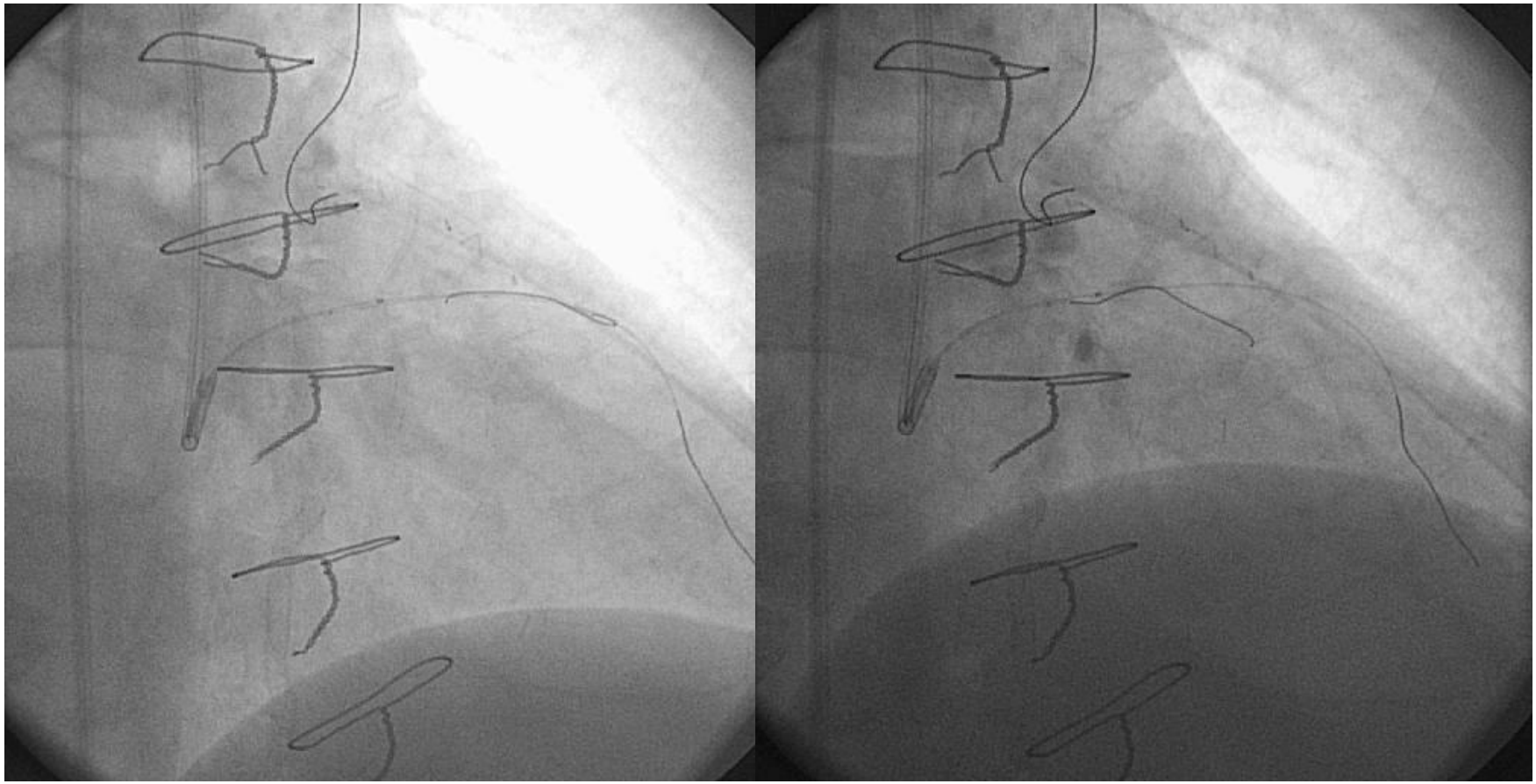




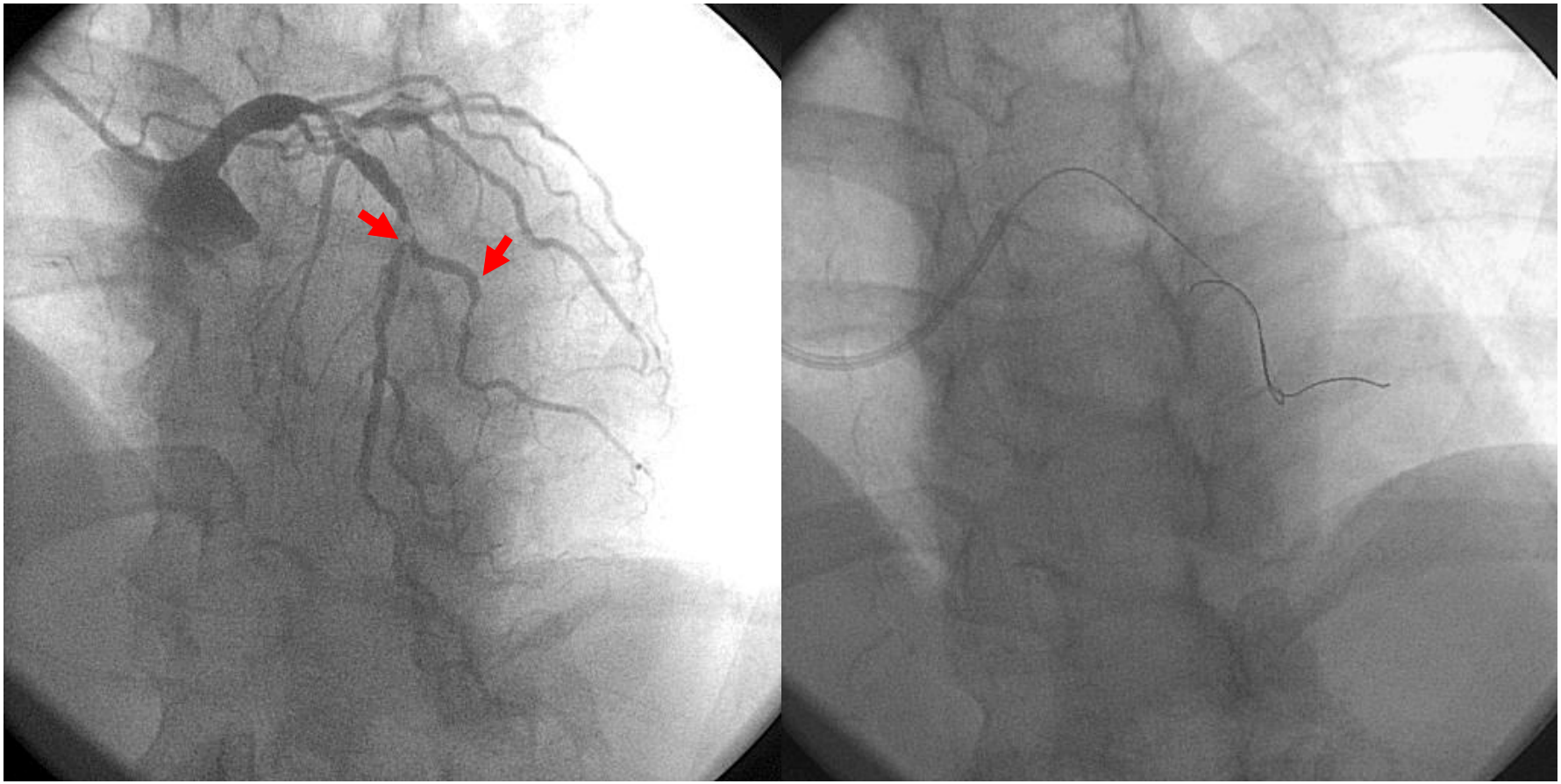
s/p CABG with LIMA to D1 with tight stenosis at m-LAD/DB bifurcation



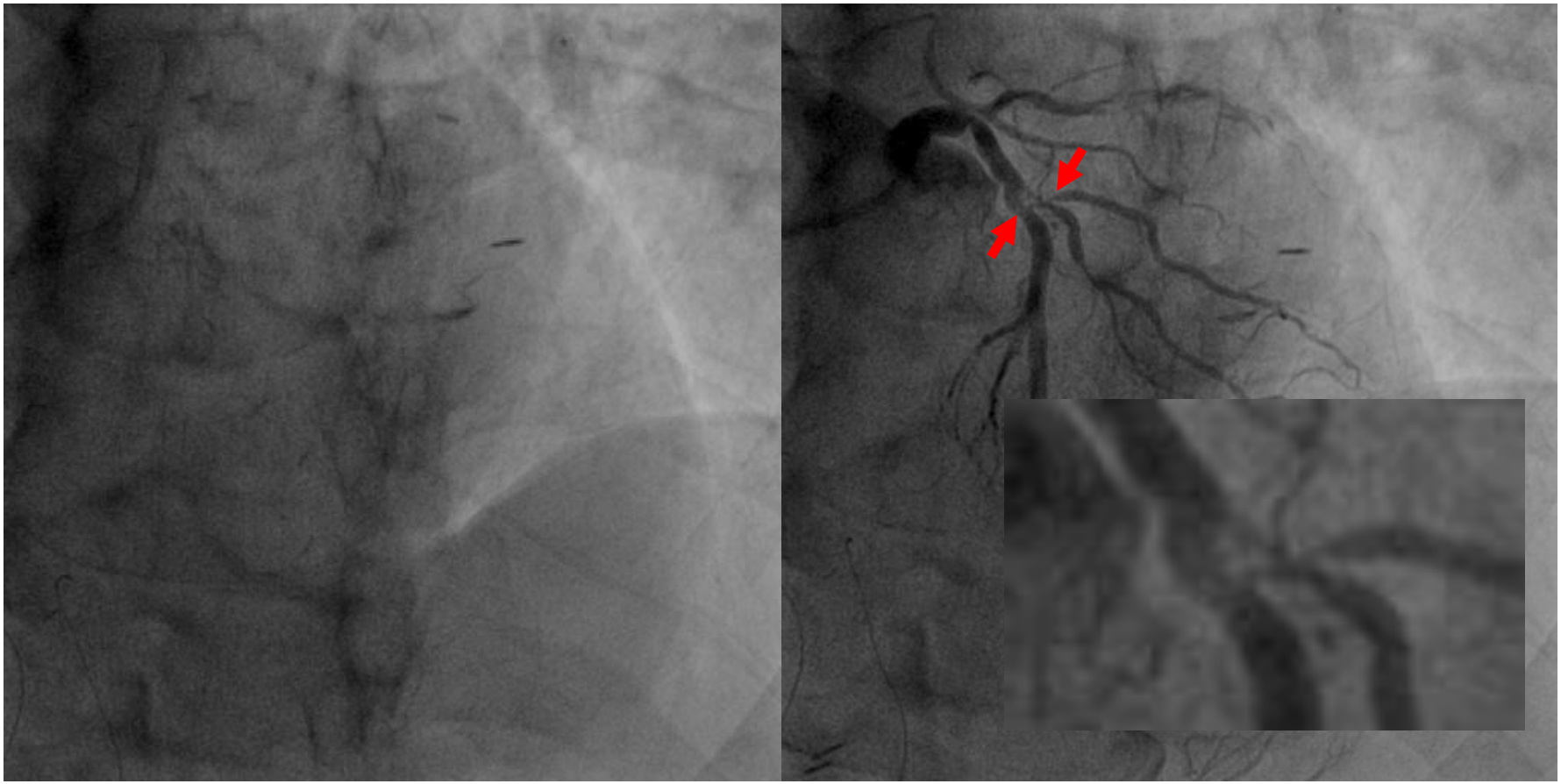
Reverse wire to overcome the acute angle



Diseased and tortuous DB is still suitable for application of reverse wire

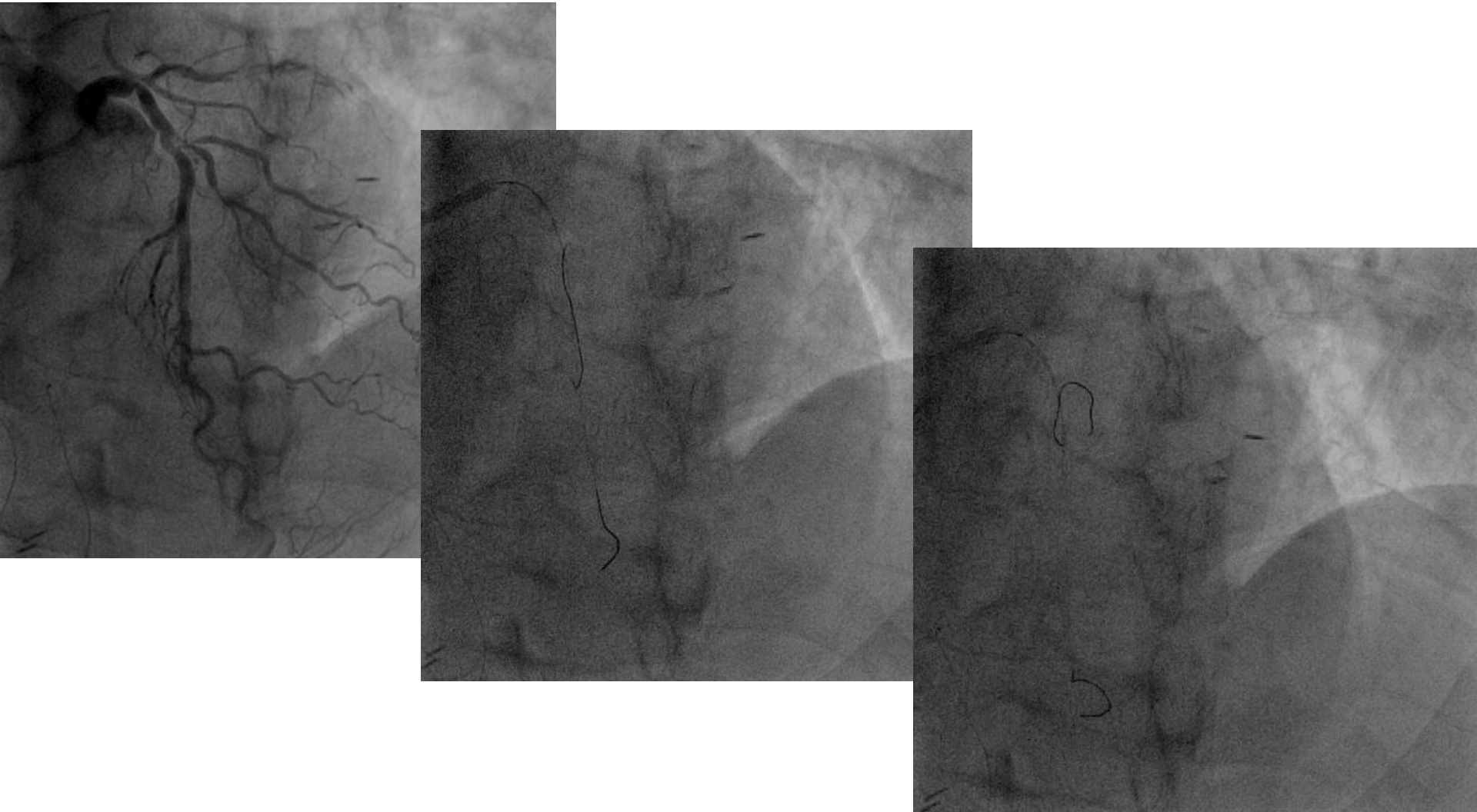


Not all procedures are straight forward

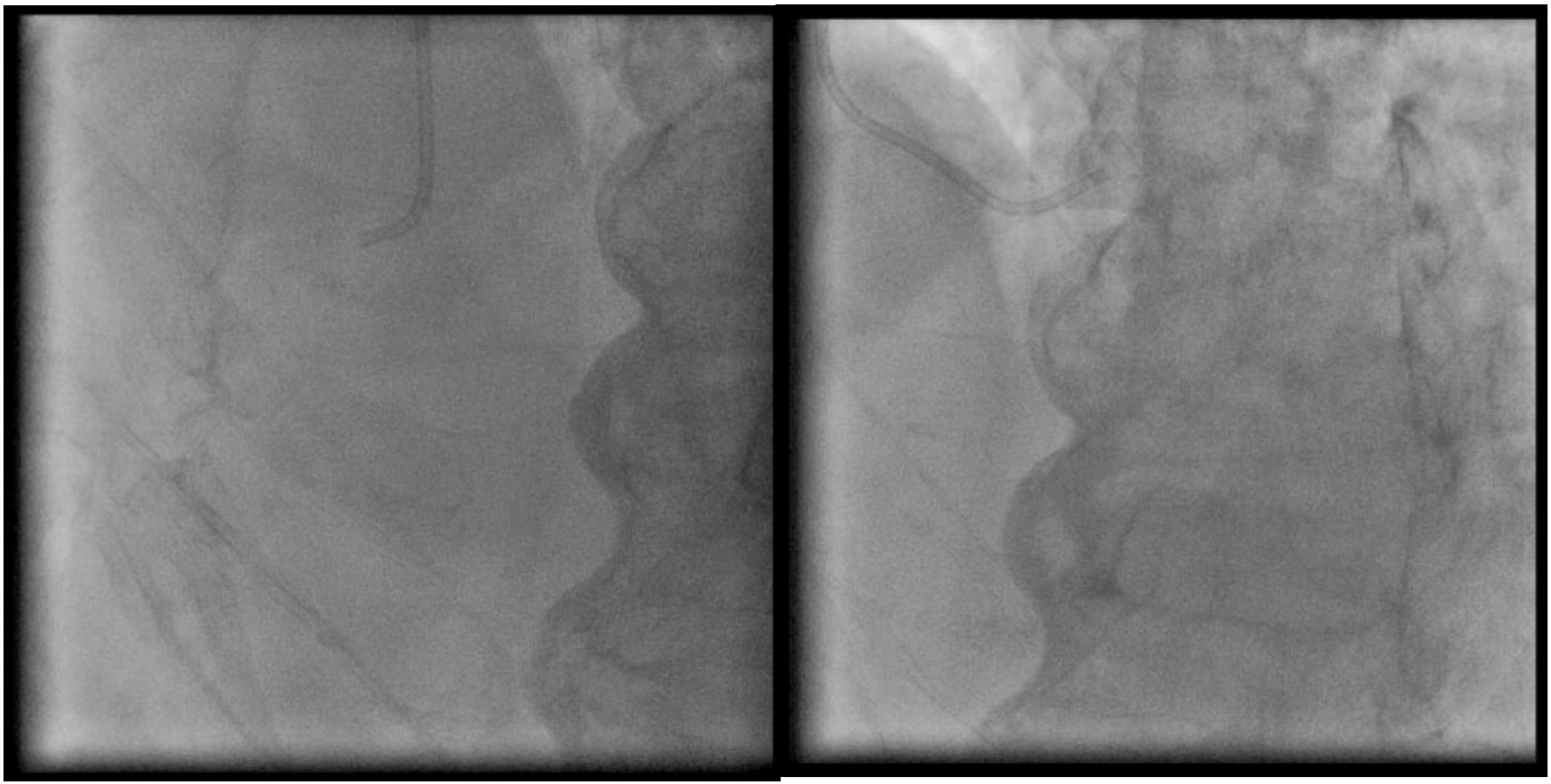


The wire tip was caught around the bifurcation

Make the tip curve more acute to overcome the anatomy

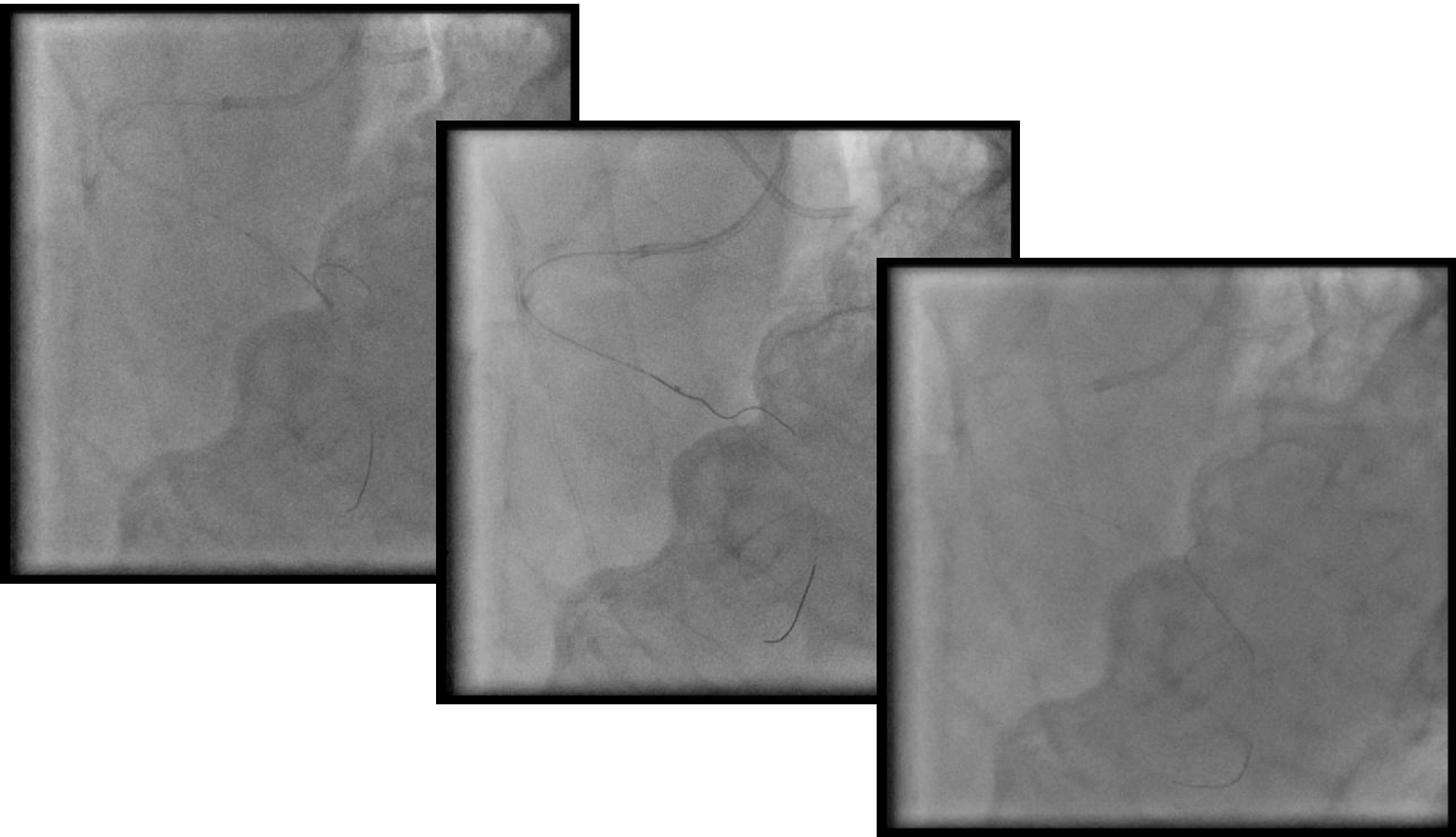


RCA CTO
The morphology of distal bifurcation can not be demonstrated clearly



Conventional wiring failed to approach the PL br

Make the tip curve less acute to avoid selection to the small branch

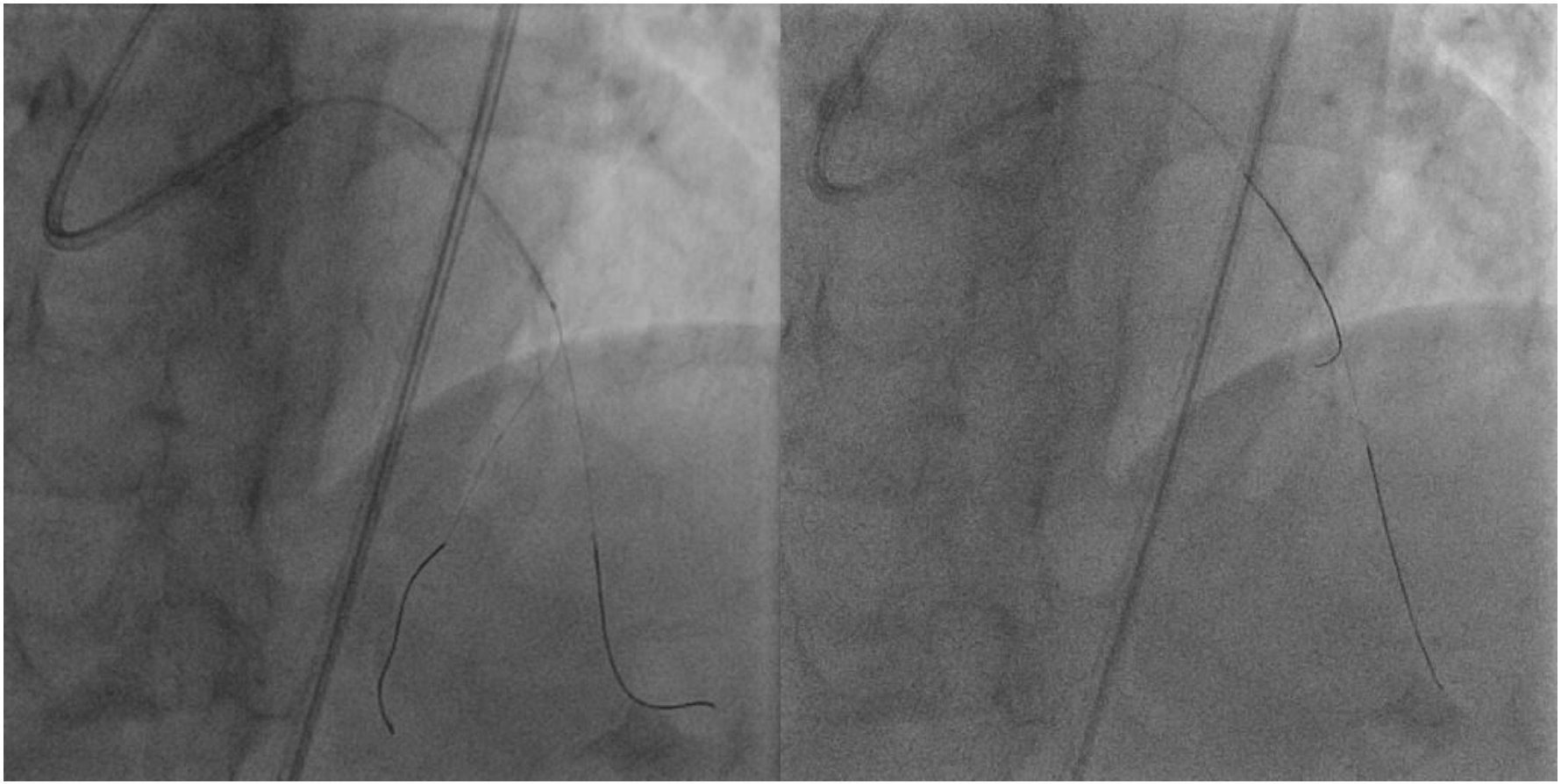


Sometimes the reversed wire goes preferentially to the unpreferred branch

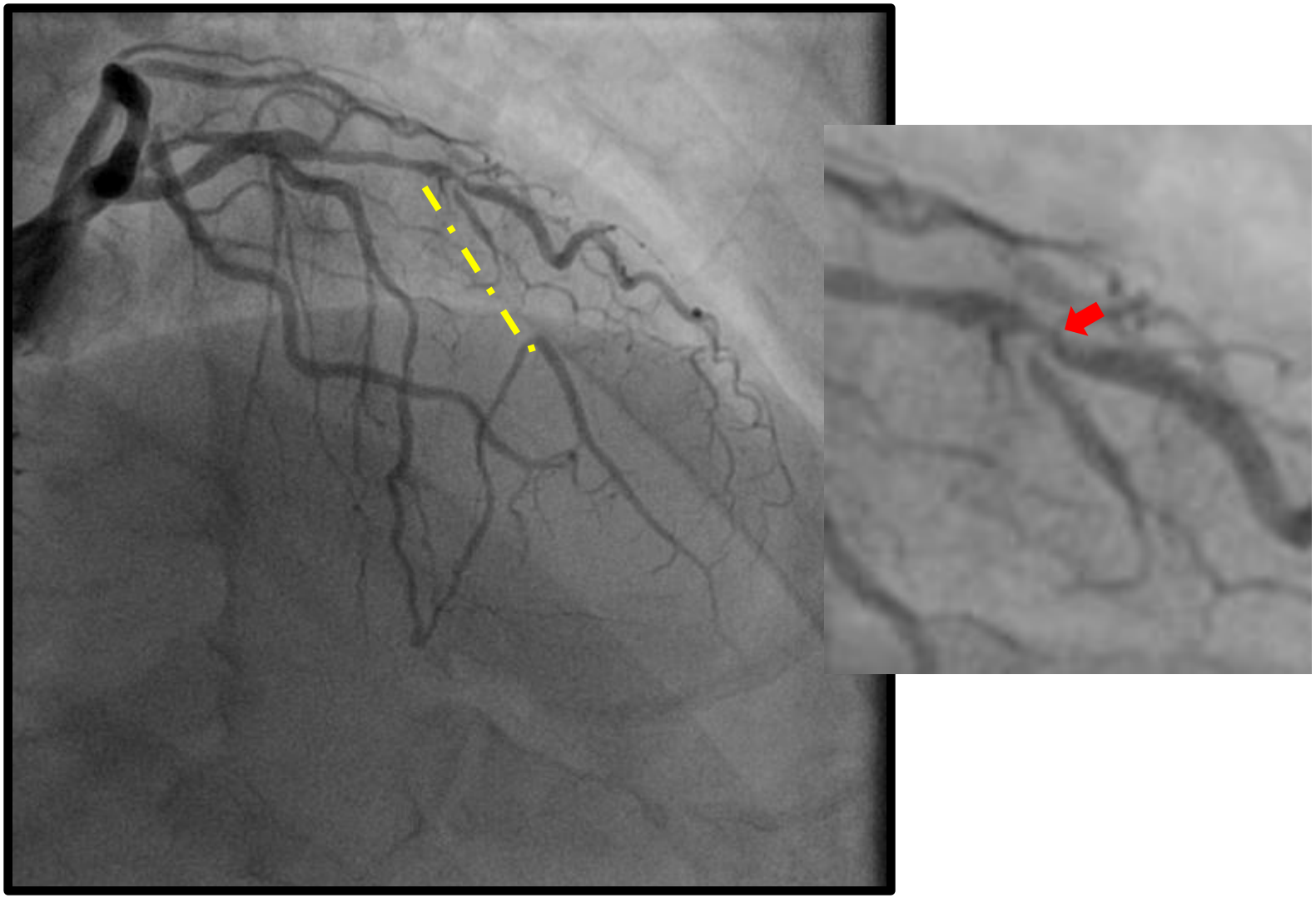
Angulated LAD after CTO segment

The reversed wire preferentially went to the septal branch

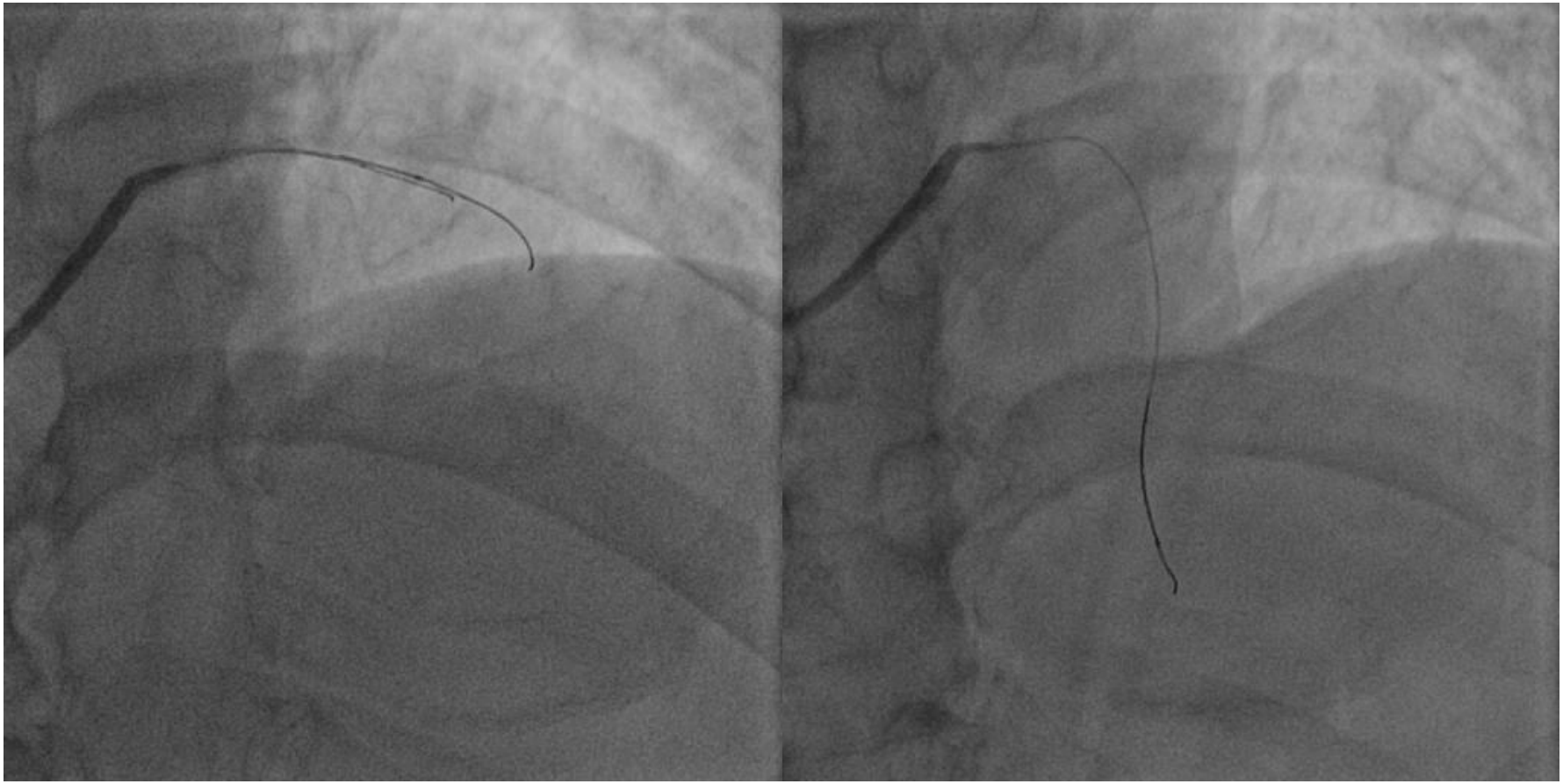
Rewiring to the LAD proper under the support of an inflated small balloon



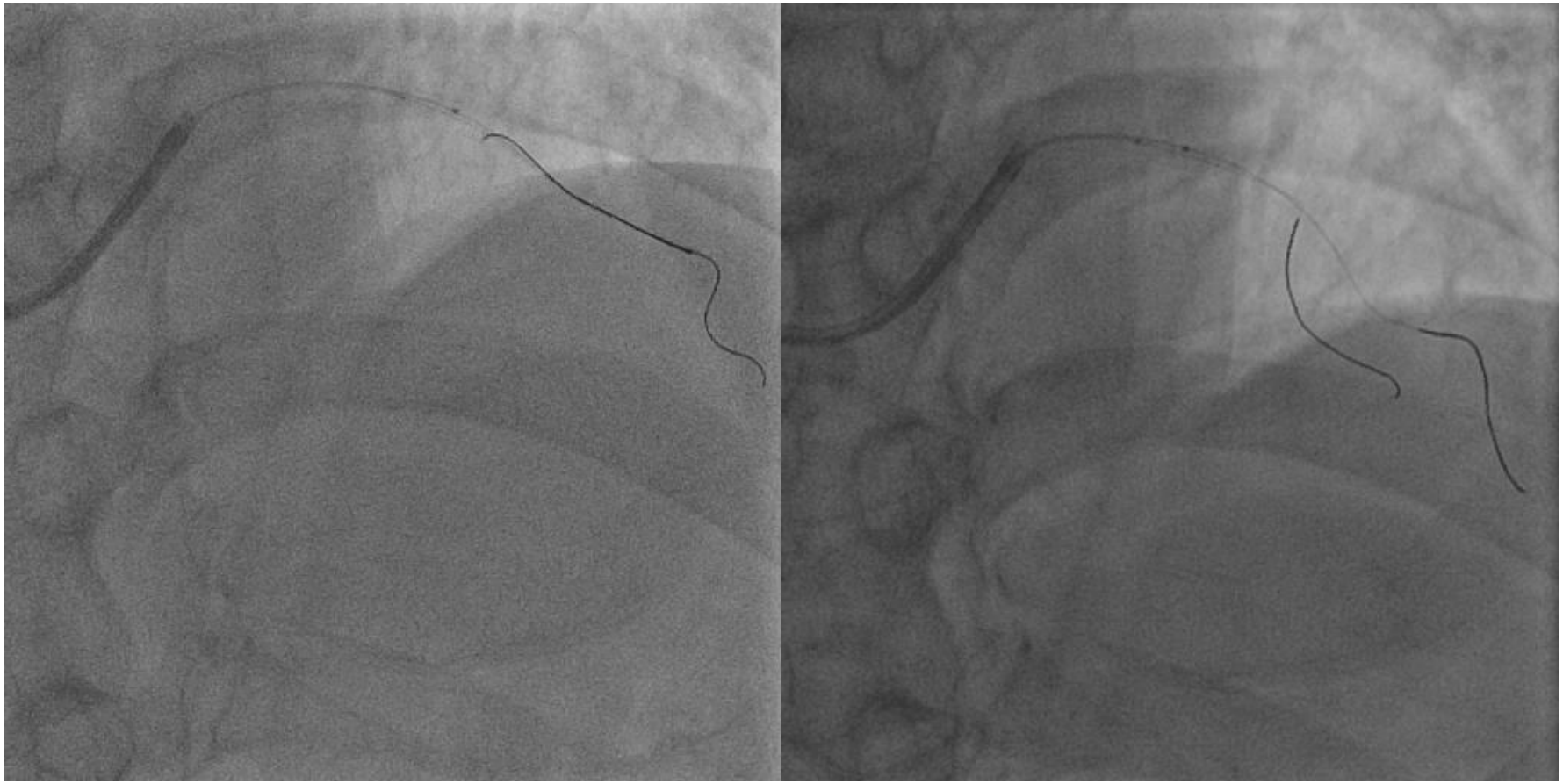
Extremely angulated take-off of LAD distal to the major diagonal br



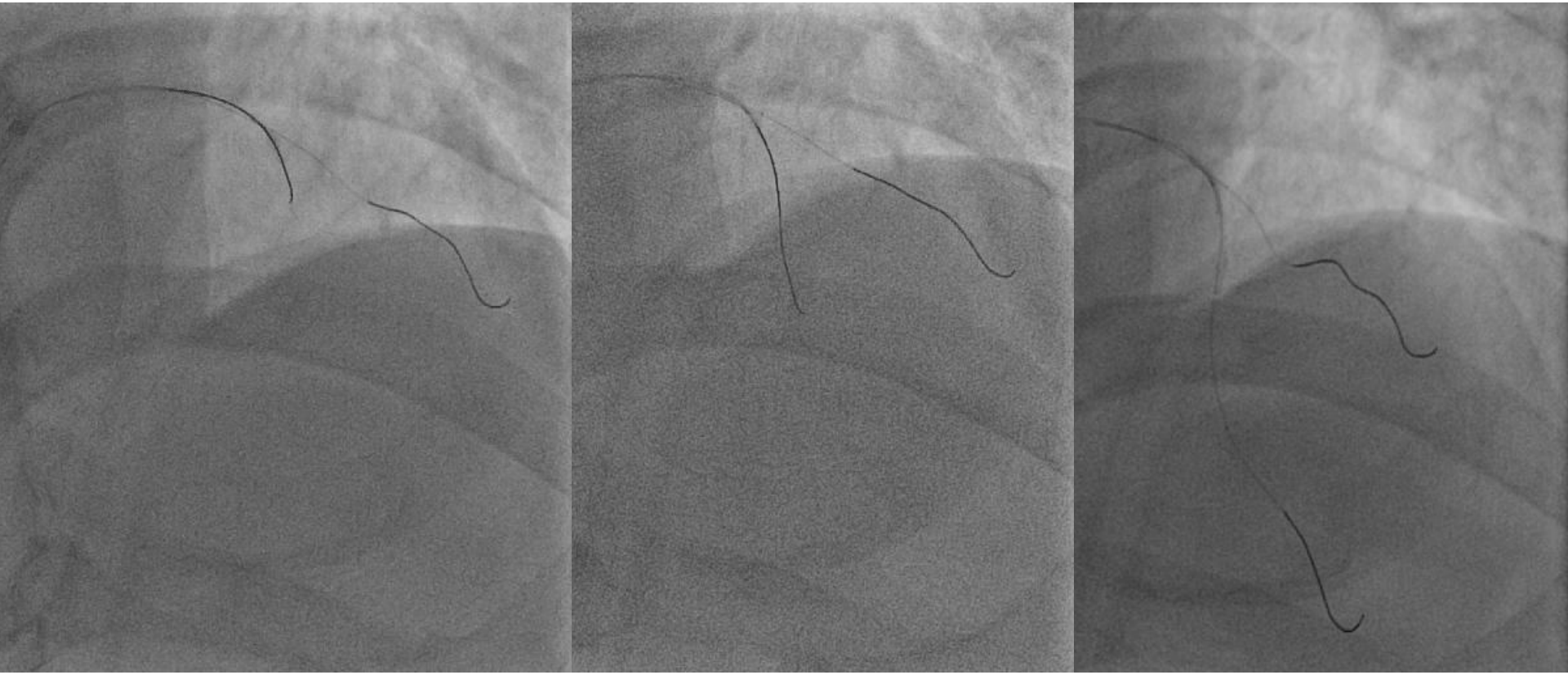
Antegrade and retrograde wiring failed



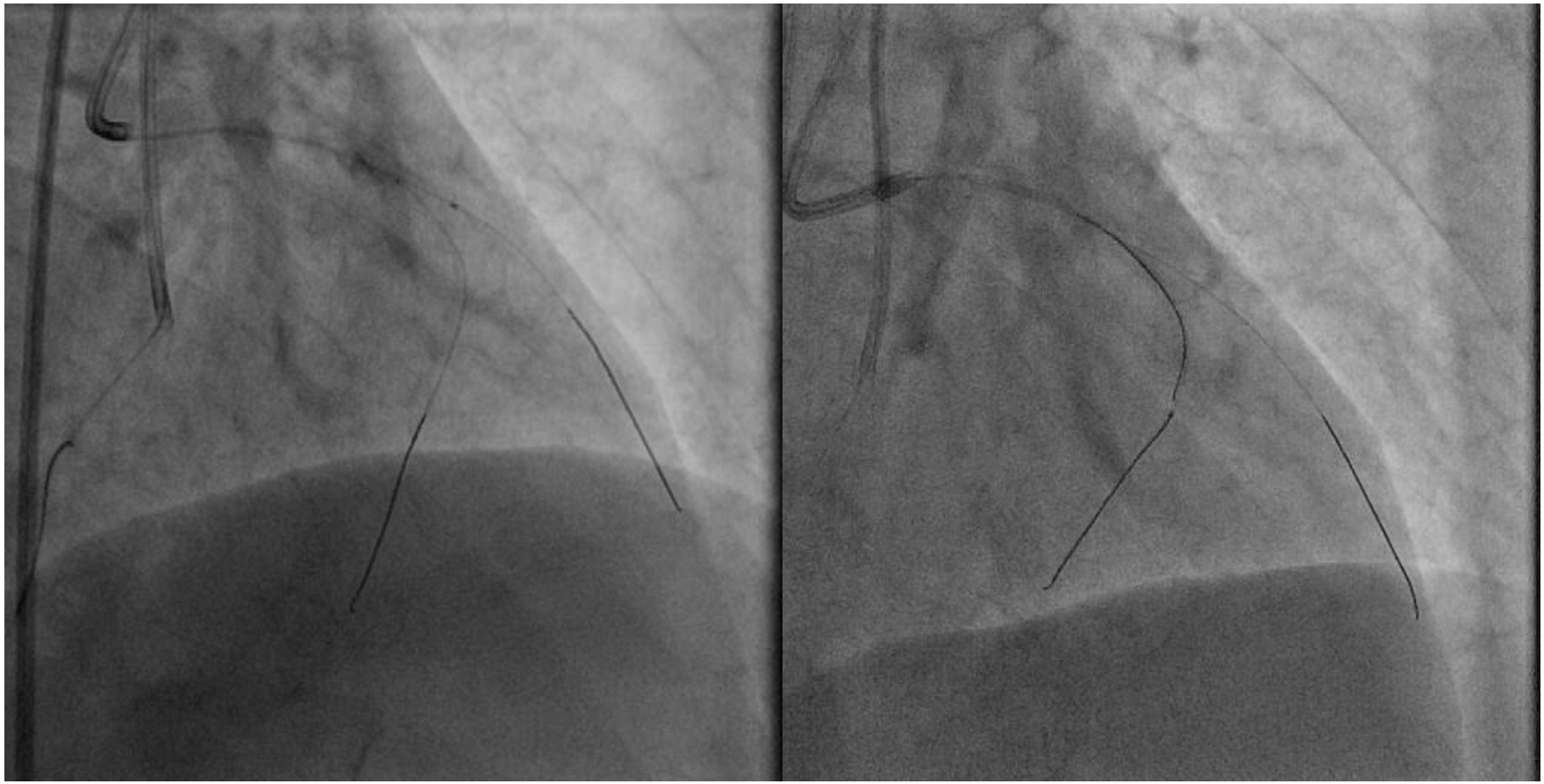
Reverse wire approach the angulated LAD easily



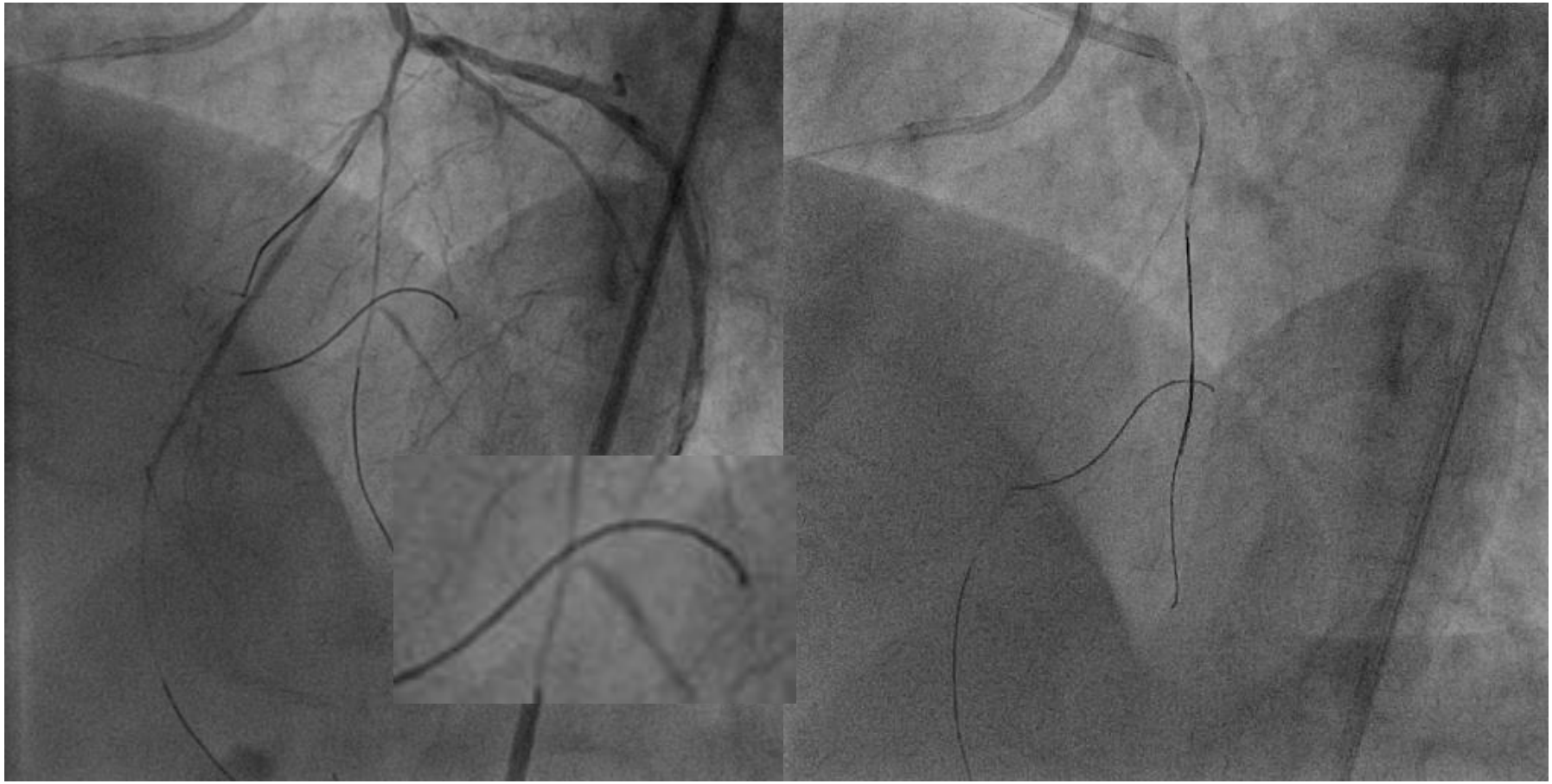
Rewiring to the LAD proper under the stable support of an inflated small balloon



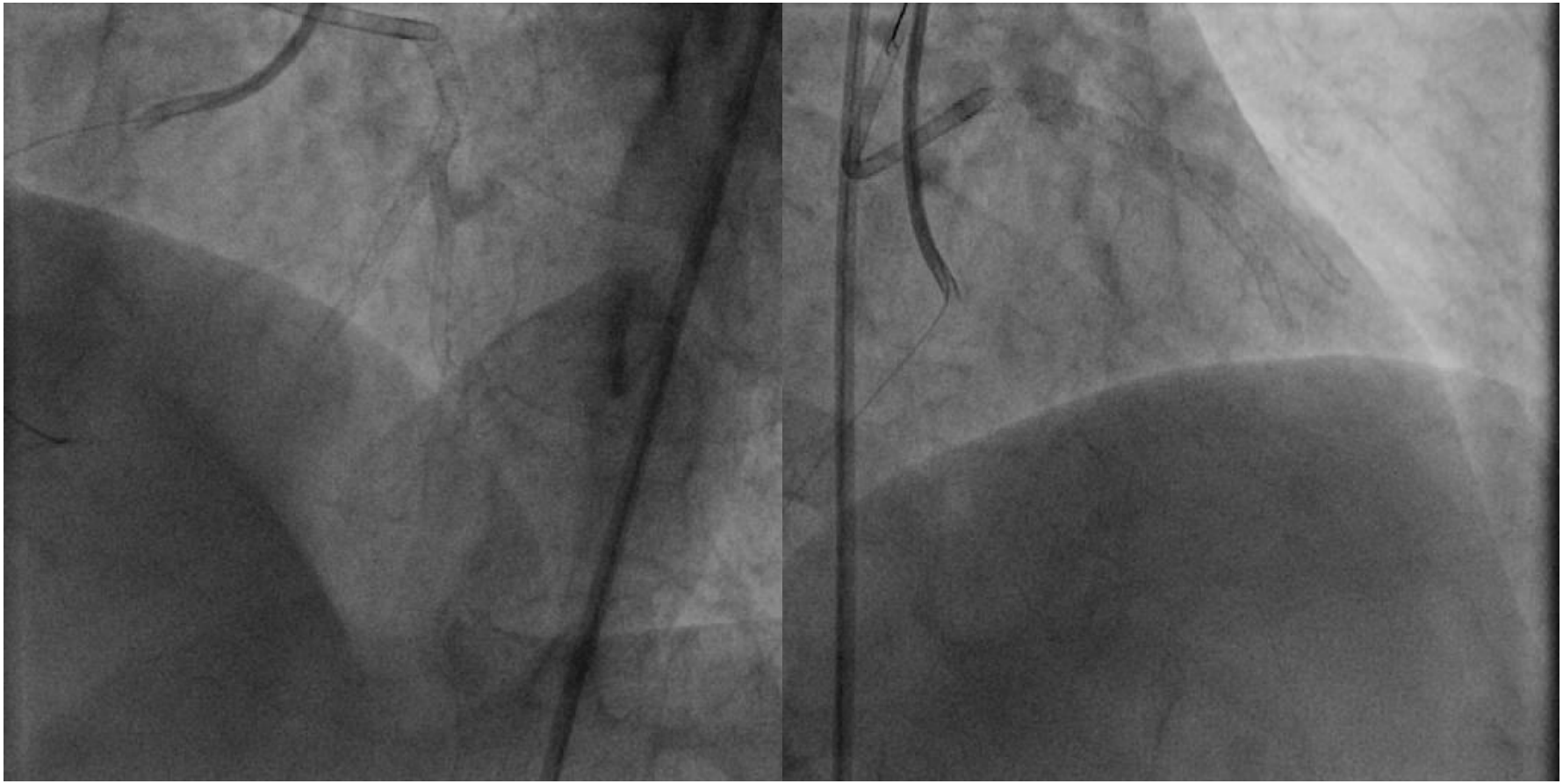
Pull back technique



Pull back technique



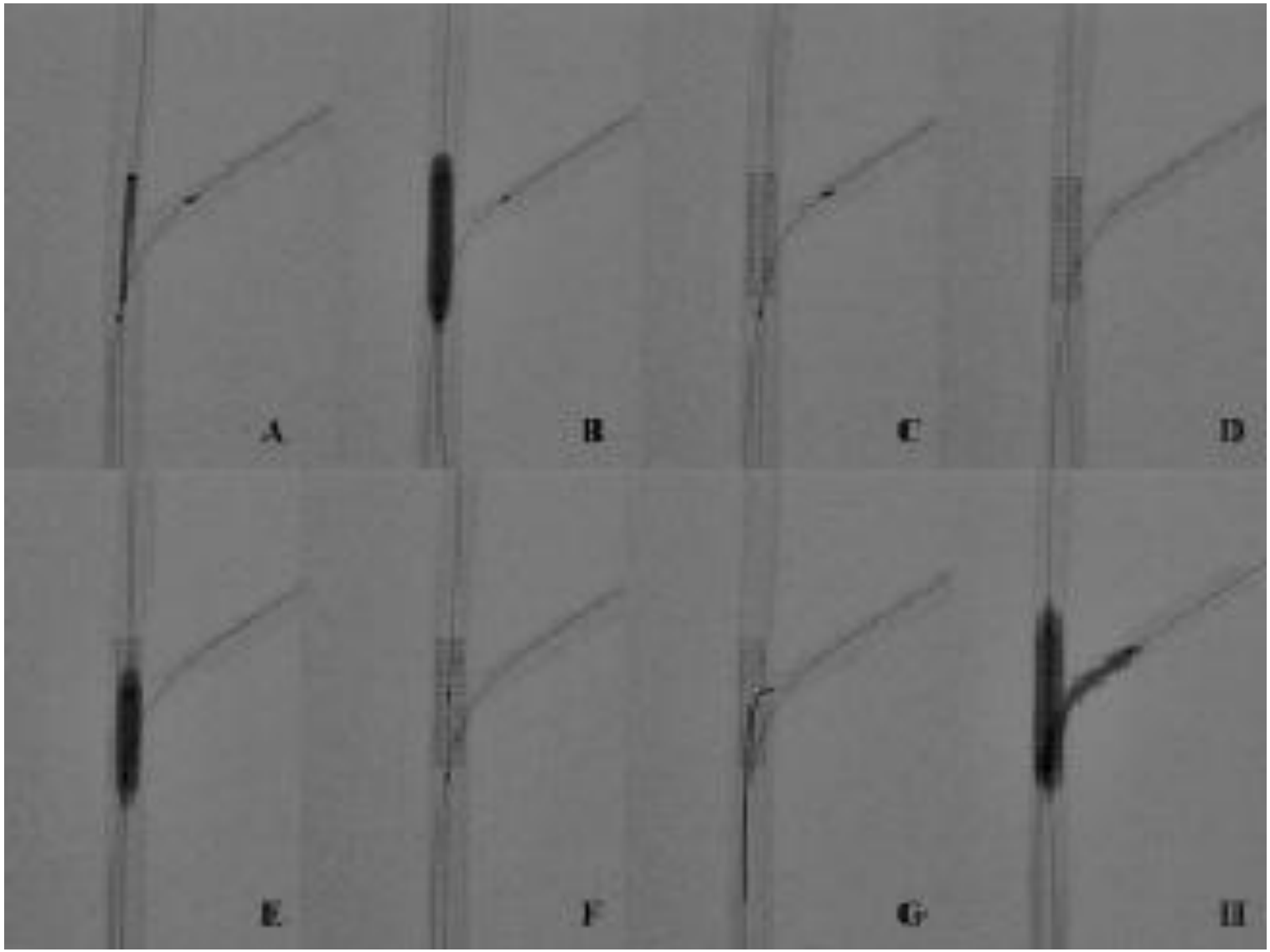
All the branches were presered



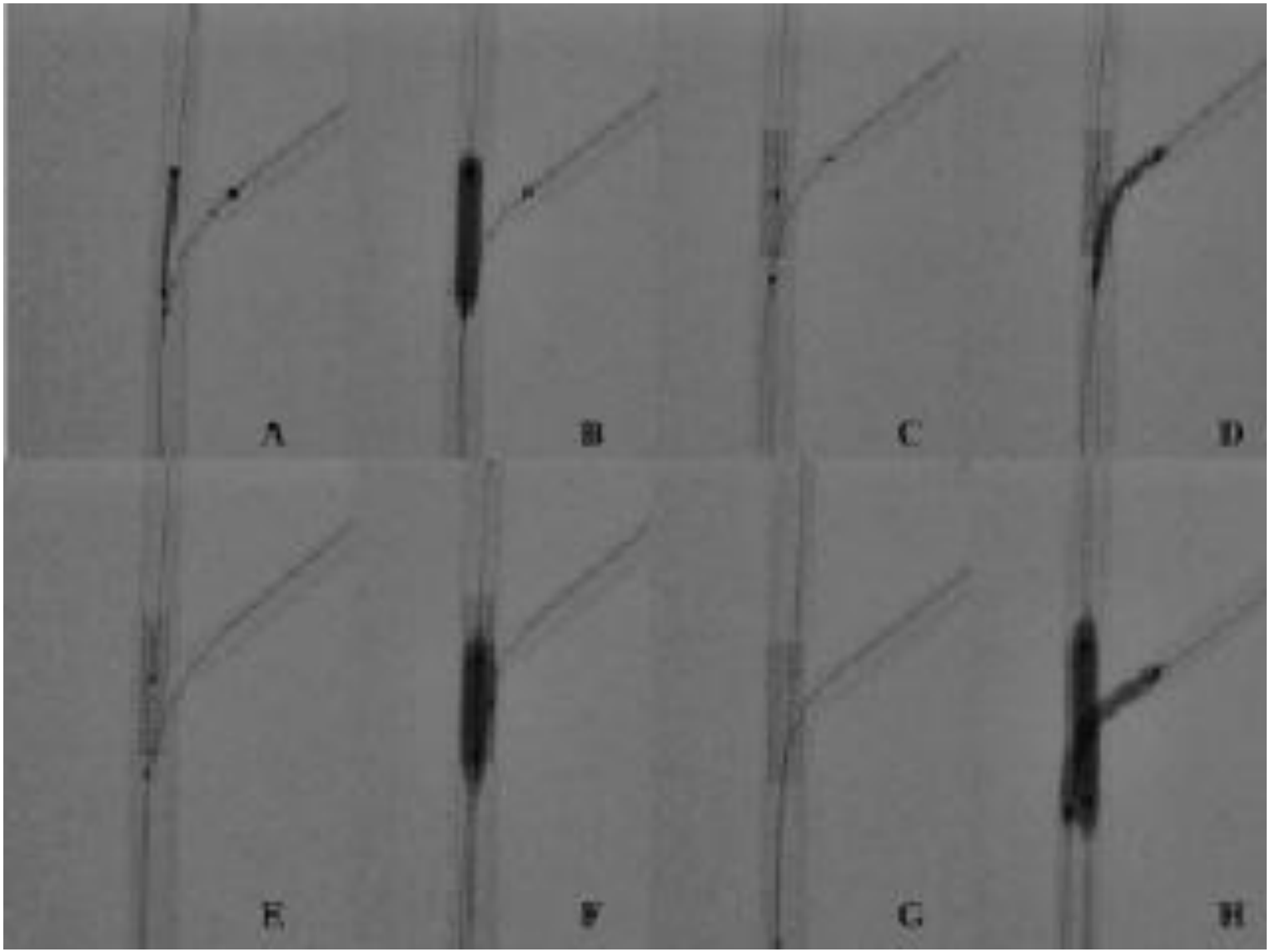
Jailed Balloon Technique

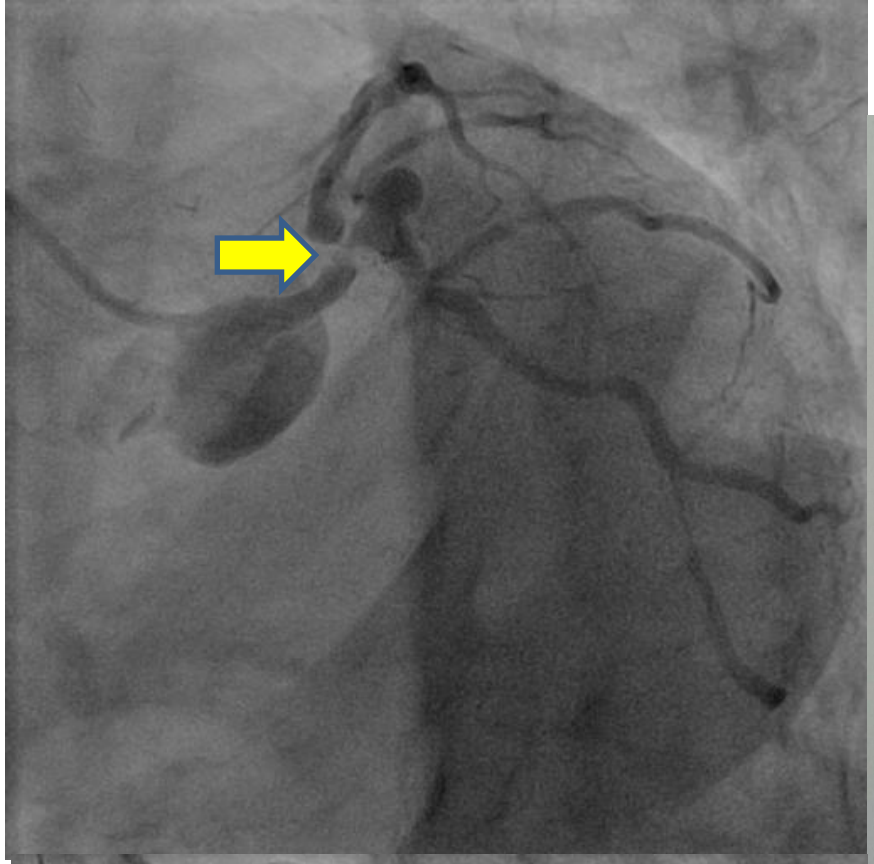
to protect SD during stenting for the other branch

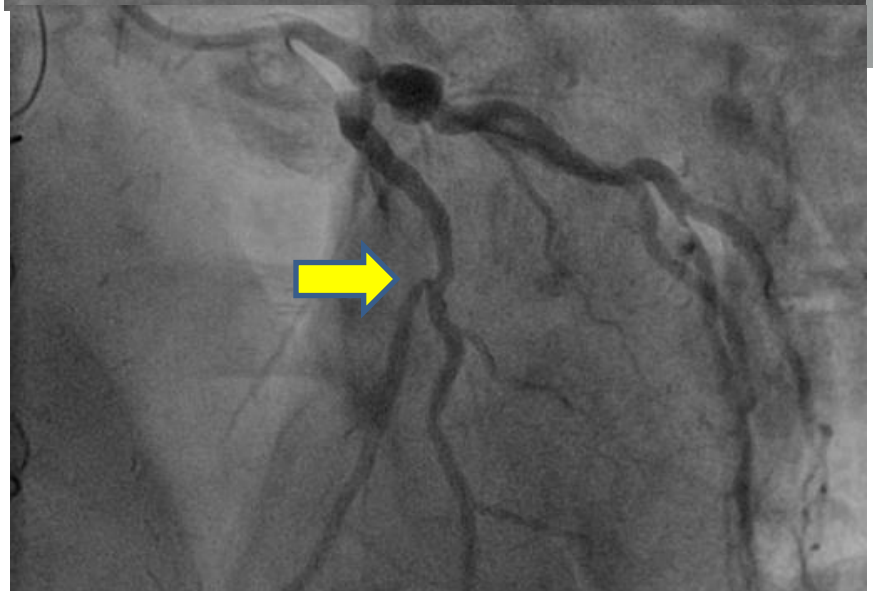
Jailed Balloon Technique: with the jailed balloon uninflated

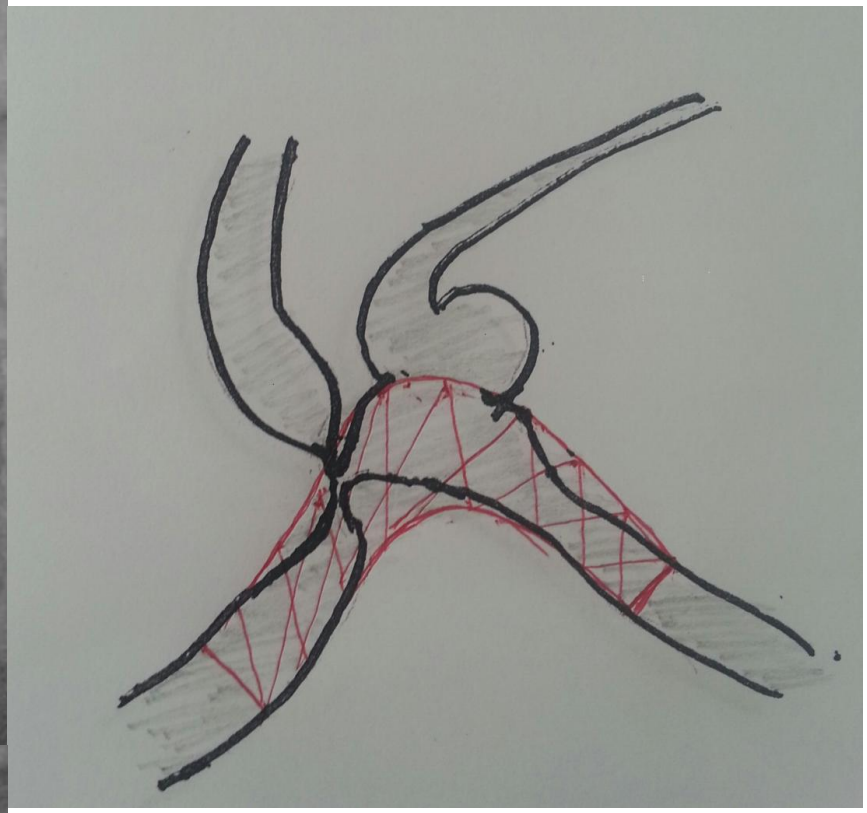


Jailed Balloon Technique: with the jailed balloon inflated









• Stenting for Lcx to LM first to secure the LM which provides a safe platform for handling the m-LAD bifurcation lesion with acute angulation.

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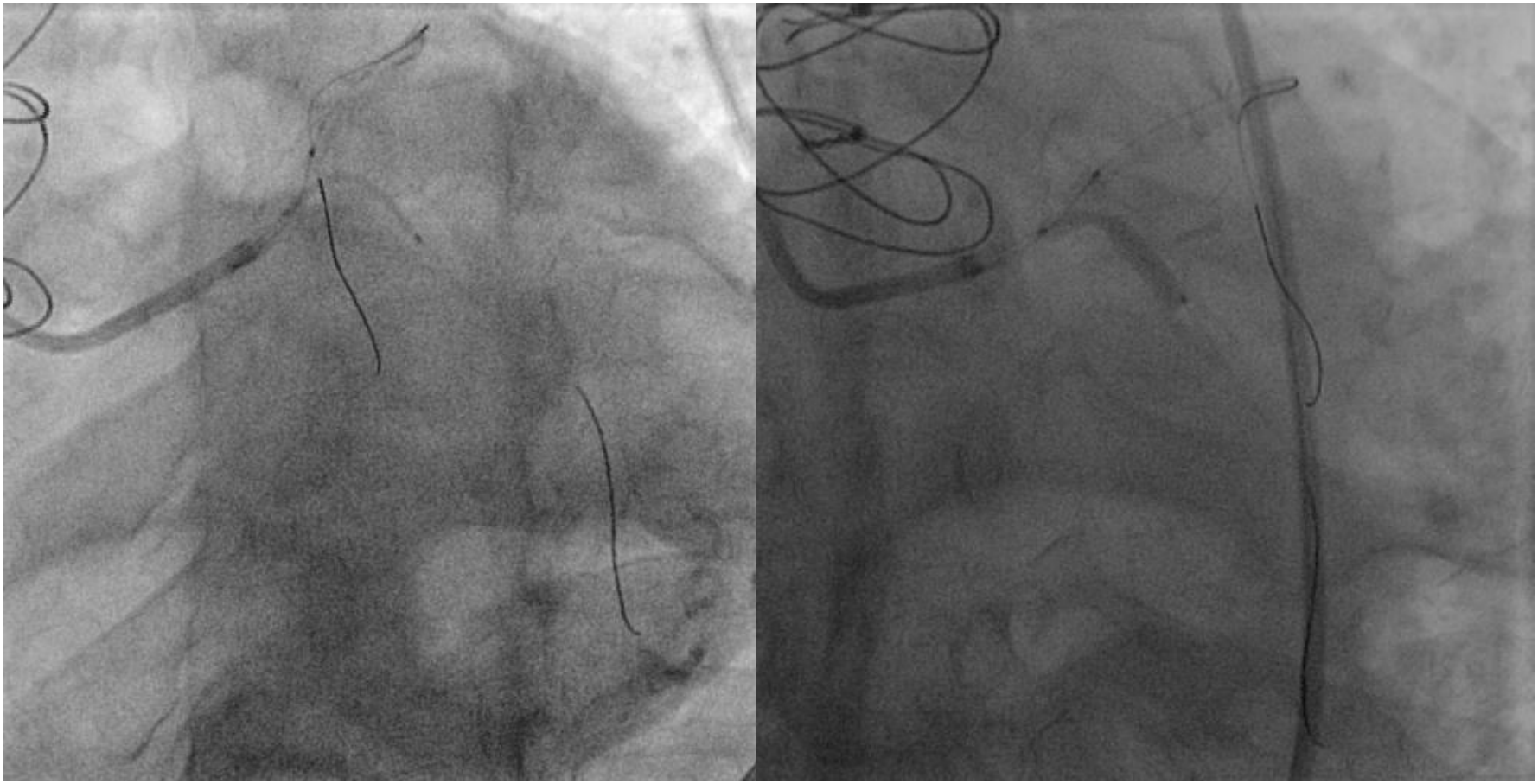
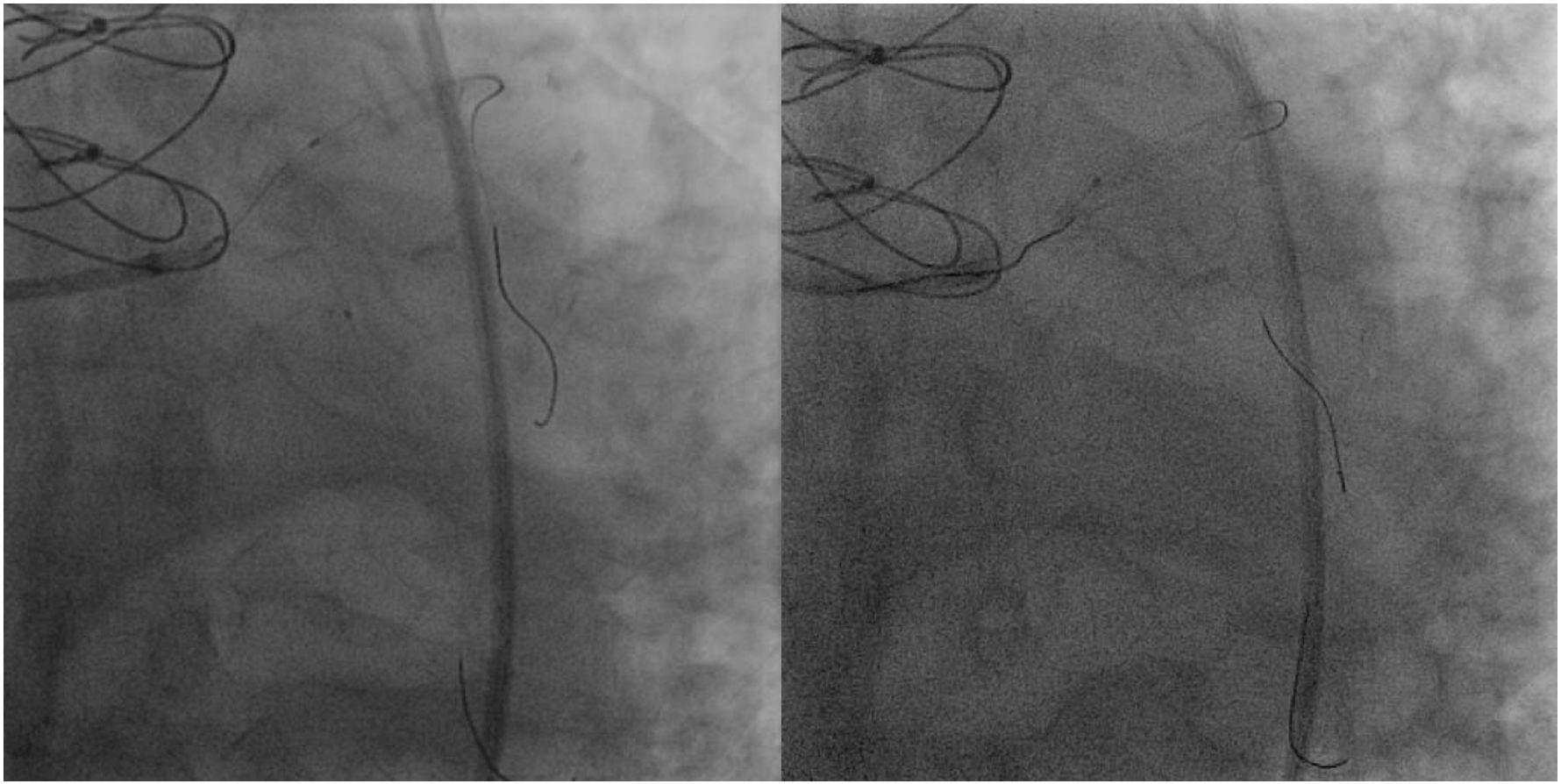
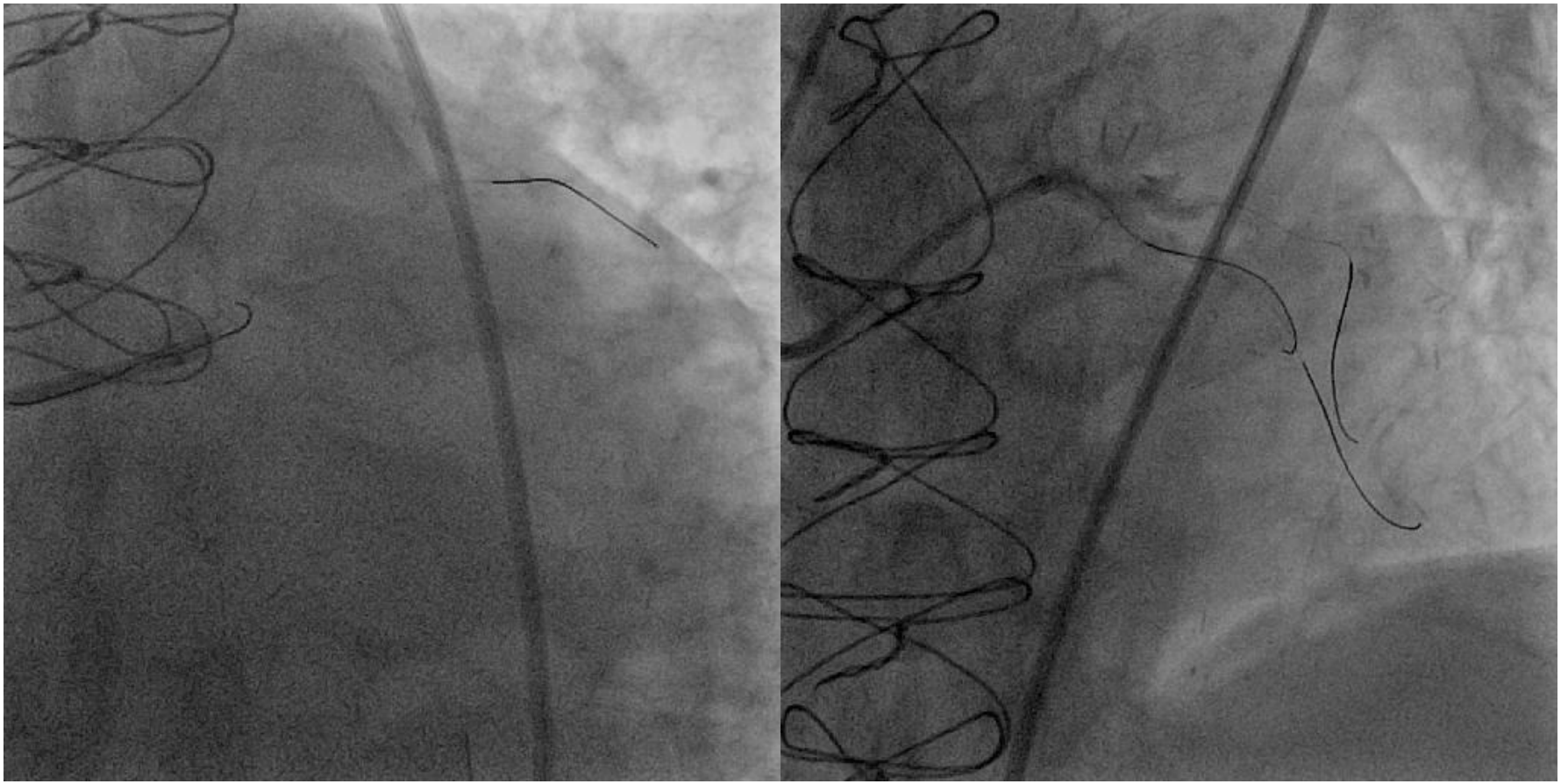
Balloon at LAD jailed during stenting LCX/LM



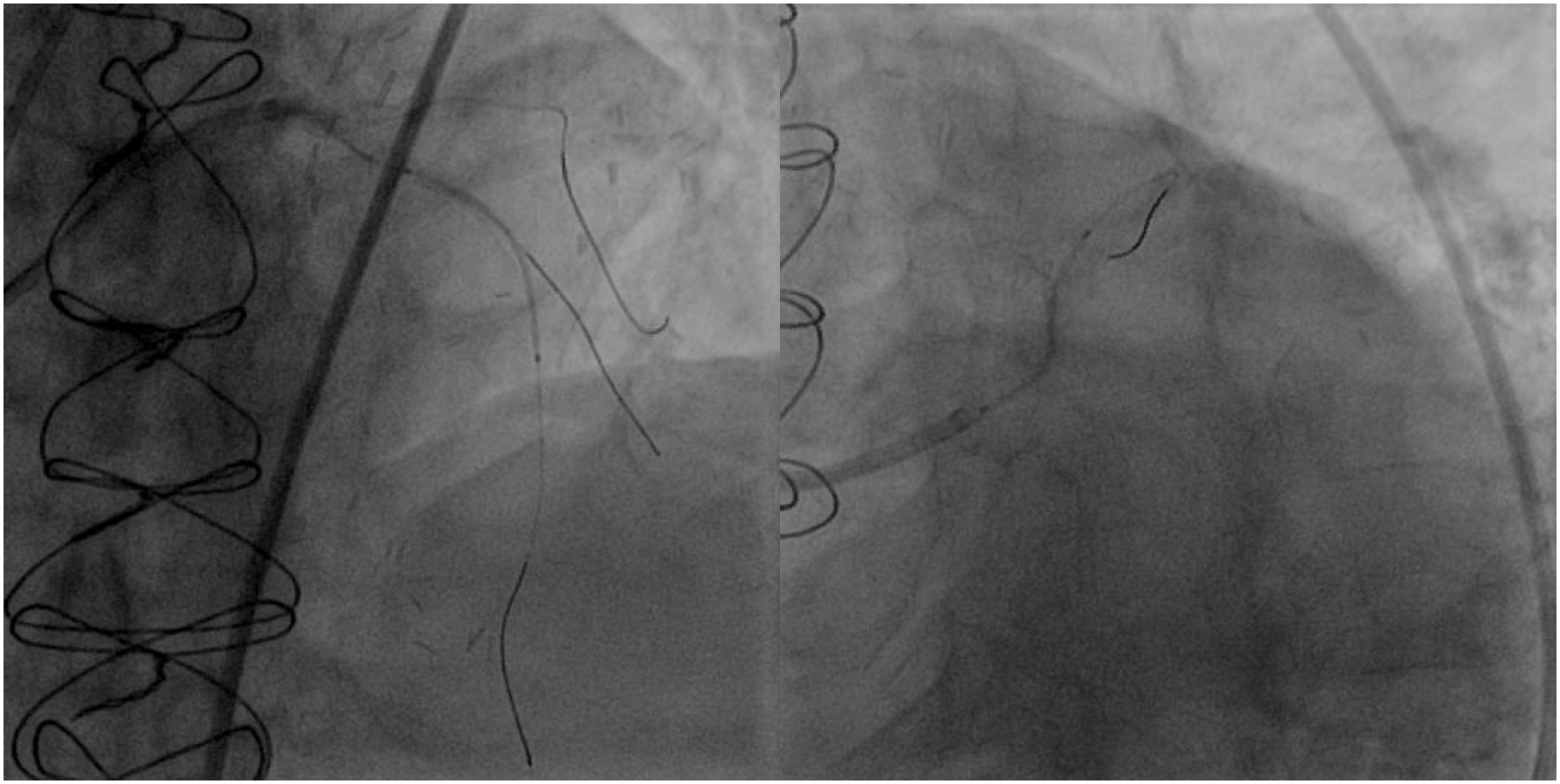
Rewiring to cross the stent struts with jailed balloon remained



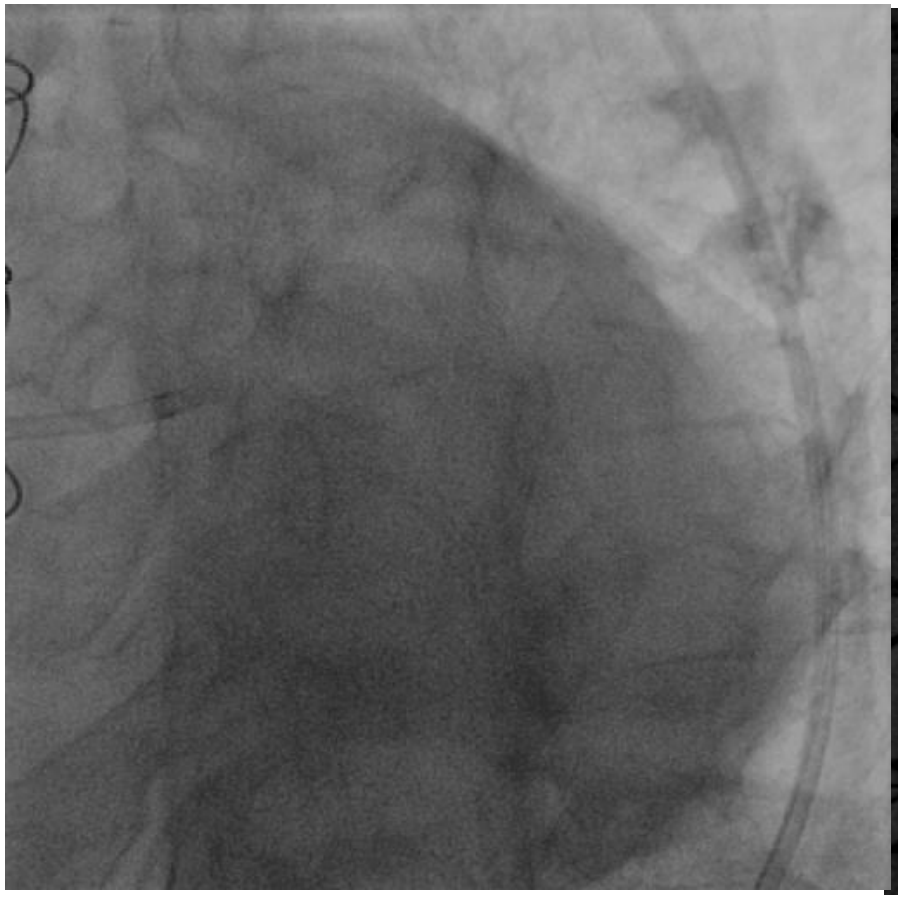
Wiring for angulated LAD

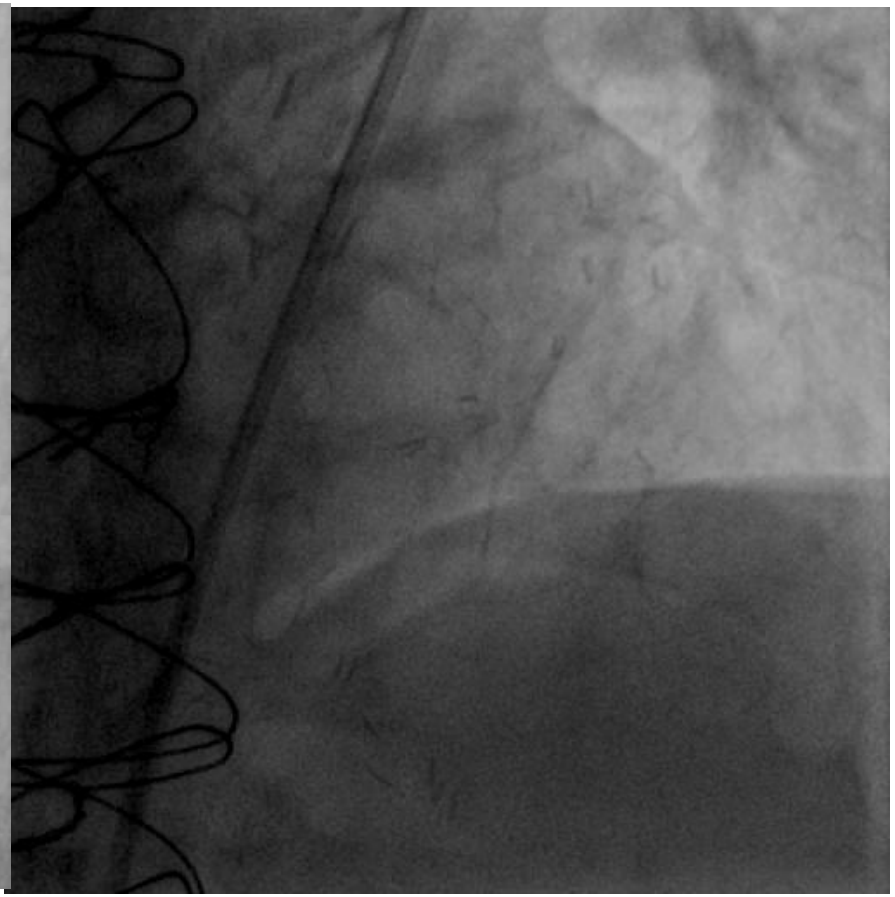


Sequential stenting for LAD and LAD/LM

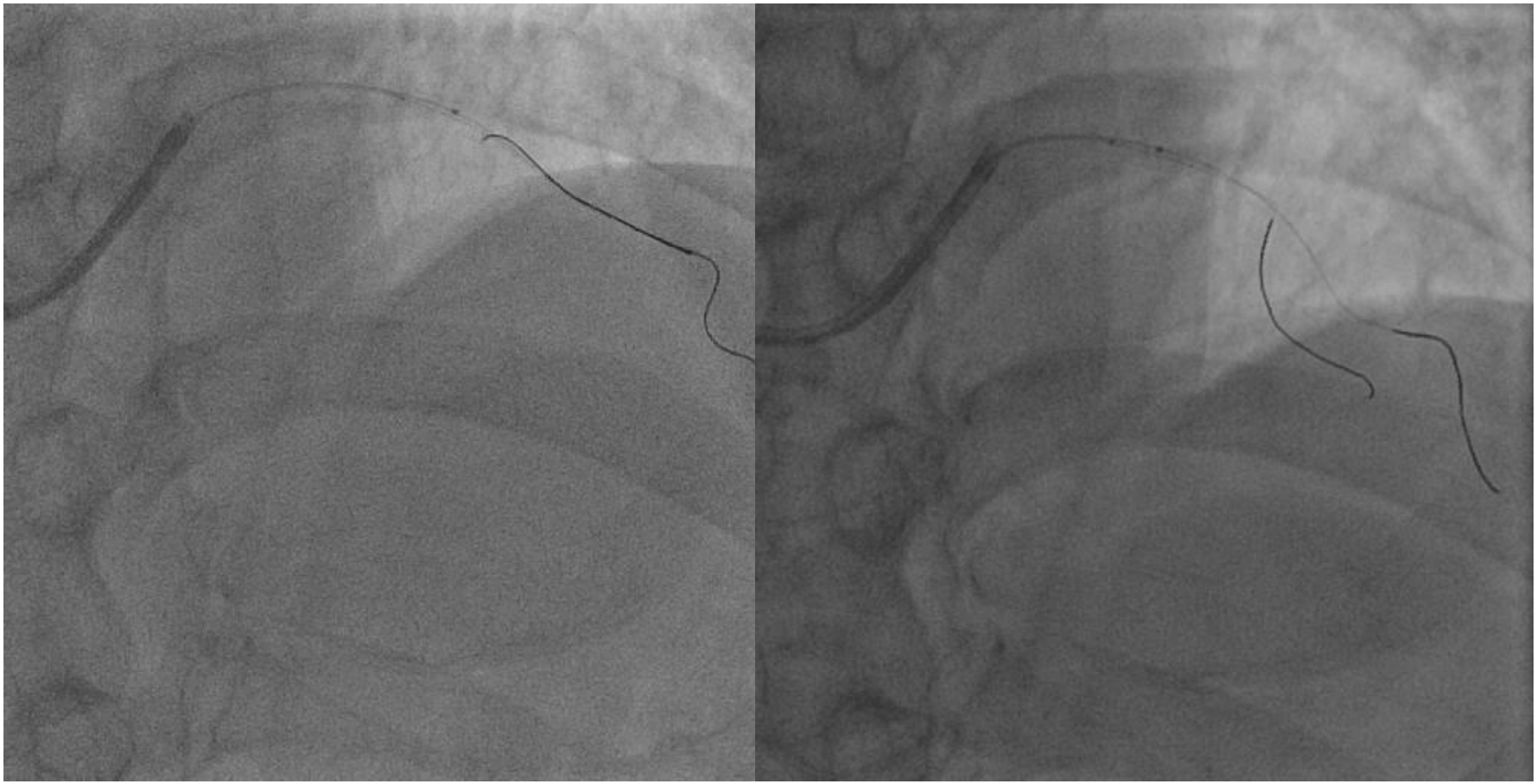


Successful revascularization without any branch jeopardized

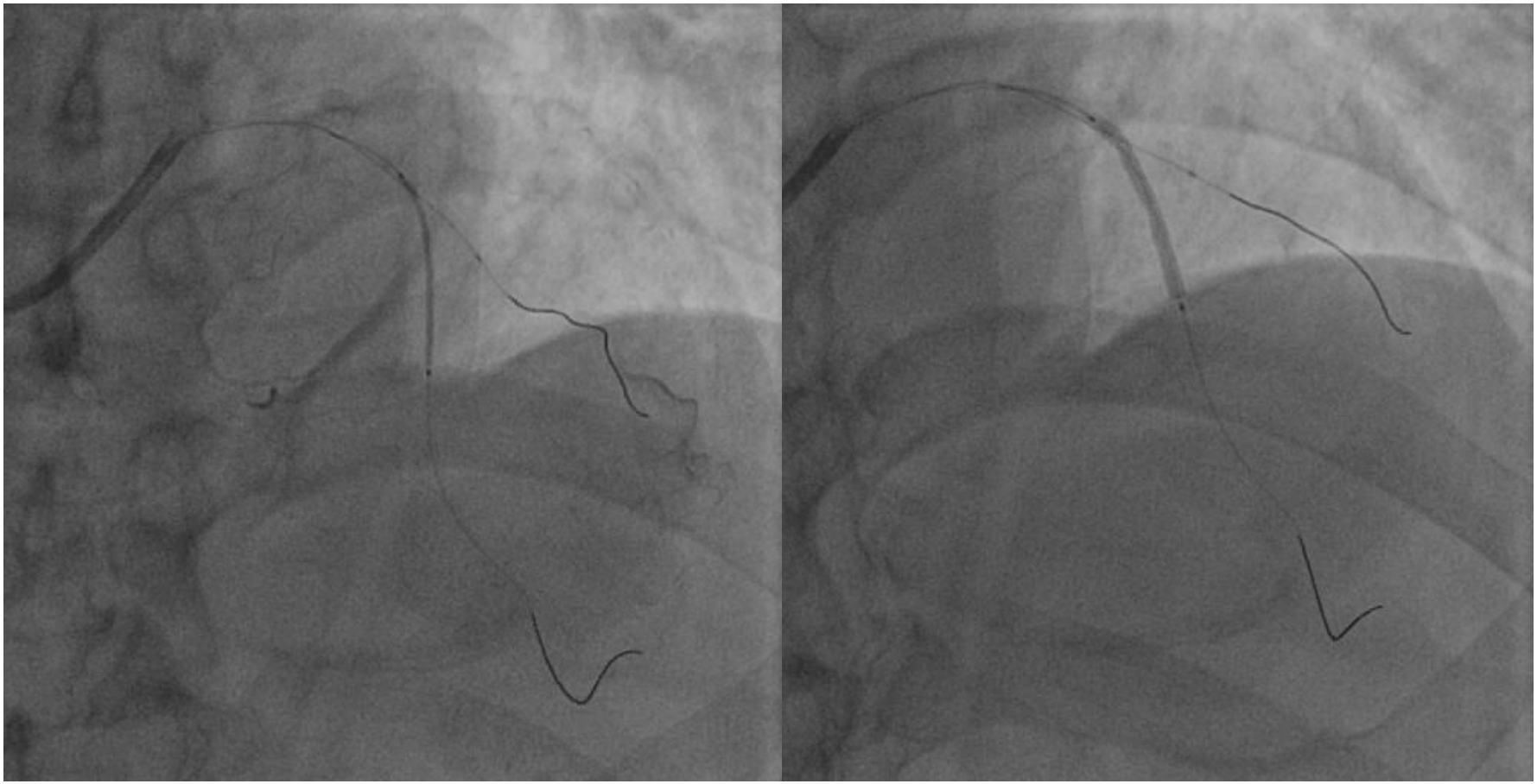




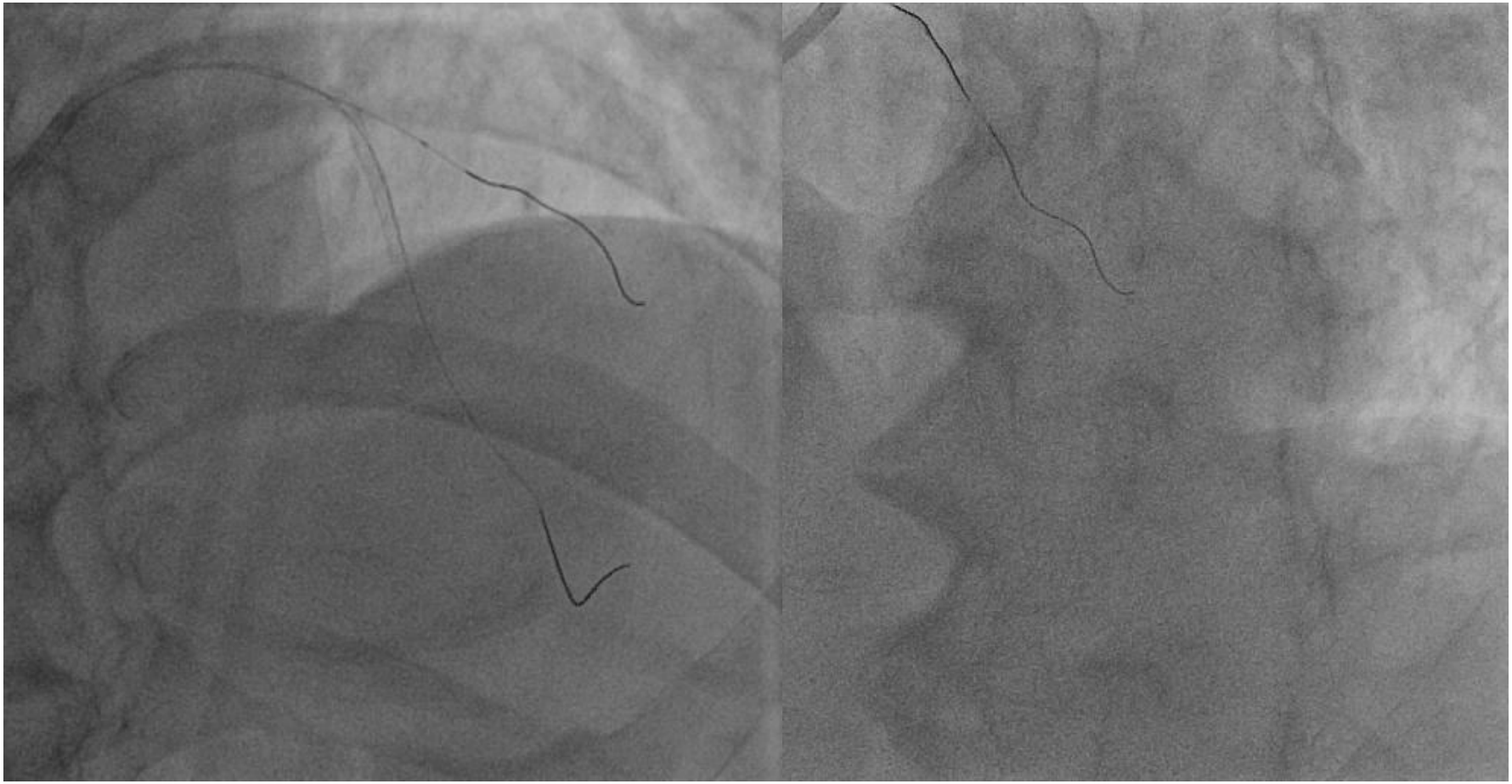
Reverse wire to approach the challenging bifurcation first



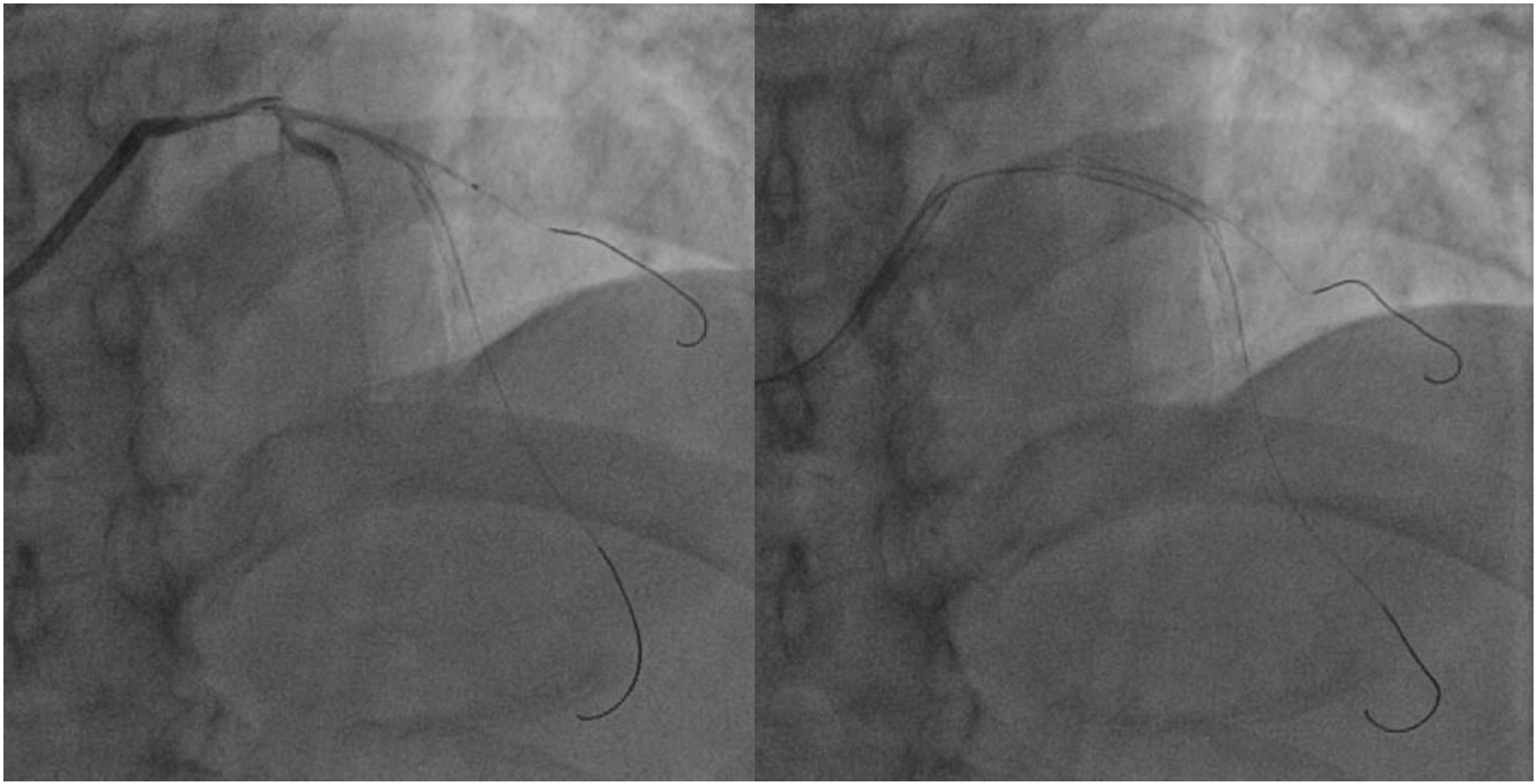
Jailed balloon technique to protect DB during stenting for LAD then



Rewiring the nearly occluded DB



Culottes stentiing for the bifurcation



Conclusions

- The reverse wire technique could be helpful in approaching SBs with acutely angulated take-off.
- For a SB of which the take-off is angulated but the curve is small, the pull back technique could be helpful.
- The jailed balloon technique could be effective in protecting the SB from acute closure during stenting for the other branch.