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## TRIPLE KISSING BALLOON TECHNIQUE WITH DRUG COATED BALLOON FOR LEFT MAIN TRIFURCATION DISEASE: A CASE REPORT

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**Rational:** A 79 years old male was admitted to our cardiology department for acute myocardial infarction (N-STEMI). His past medical history included previous coronary percutaneous revascularization (6 years before he received DES implantation in left main-proximal anterior descending artery and right coronary artery). Coronary angiography performed early after admission revealed good result with patency of left main-LAD previous stenting, circumflex artery ostial and proximal sub-occlusion and ostial significant lesion of a discrete intermediate branch. Also, non-significant in stent restenosis of previously implanted stent on right coronary artery. Angioplasty of left main trifurcation poses the challenge of preserving intermediate branch patency. Excessive overlap and multiple struts layers are discouraged, leaving old plain balloon as the most adopted strategy for IB. Triple kissing balloon has been proposed as possible solution, thus requiring further validation. In this case, we explored triple kissing balloon with DCB for IB angioplasty as a possible solution for left main trifurcation.

**Technical resolution:** A 7 Fr right femoral catheter was adopted to cannulate left main and IABP by left femorale access was used as upfront strategy. Work-horse guide-wires in LAD, IB e CX were placed. After predilation of LCX a Resolute Onyx 2,75x26 mm stent was implanted in short overlap (reverse TAP technique) with left main stent. Rewiring and pre-dilation of IB was then performed. Then, a DCB (Prevail, Medtronic, 2,25x15 mm) was inflated for 50 seconds in IB, followed by 10 more inflation seconds with concomitant triple kissing (n.c. 3,5x15 mm for LAD and n.c. 2,75x15 mm for LCX).

**Clinical implications:** A good angiographic result was provided with patency of left main-anterior descending, LCX and IB. At 1 year follow-up the patient was free from clinical events.

**Perspectives:** Depending on further validation, the adoption of DCB as part of triple kissing balloon technique could represent a solution to provide side branches patency avoiding excessive struts layers in left main trifurcation.