MODIFIED CULOTTE STENTING FOR TREATMENT OF UNPROTECTED LEFT MAIN CORONARY BIFURCATION LESIONS: IMMEDIATE OUTCOMES

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Background and Objectives The optimal stenting strategy for the treatment of unprotected left main coronary bifurcation lesions (UPLMCBLs) remains uncertain. Present study observed the technical feasibility and immediate outcomes of the modified culotte stenting (MCS) for the treatment of UPLMCBLs with drug-eluting stents.

Methods Forty patients with true UPLMCBLs according Medina's classification were included in the study. The MCS main steps were described as follows: (1) pre-imbedding a balloon in the larger branch (LB) and stenting the smaller branch (SB) first with mini-protrusion of 1–2 mm into the left main stem, (2) removing the stent balloon out of the SB and wiring the LB via a side-hole of the expanded SB stent, (3) removing the pre-imbedded balloon out of the LB after successfully wiring the LB, (4) deploying the LB stent and rewiring the SB, (5) performing sequential high pressure dilation of each branch followed by a final balloon kissing (FBK).

Results The immediate success angiographically (residual stenosis <20% with grade 3 TIMI flow) or procedurally (an angiographic success without in-hospital major clinical complications) was achieved in all patients with 100% successful FKB and no biomarker elevation and in-stent thrombosis peri-procedurally. The immediate angiographic data showed that in-stent residual stenosis was −1.7±10.7% in LM, −2.1±11.1% in LAD, −4.3±11.3% in LCX, 6.8±5.3% at LAD ostium and 8.2±4.5% at LCX ostium.

Conclusions MCS for the treatment of UPLMCBLs was technically safe and feasible, readily to complete final balloon kissing, and was associated with high immediate angiographic and procedural success rate.