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Reply to Letter to the Editor: "Management of Coronary Ostial Stenosis with Drug Coated Balloons: Technical and Clinical Aspects"

To the Editor,

We want to thank the authors for their interest in our article[1] entitled "Drug-coated balloon combined with provisional drug-eluting stent implantation for the treatment of de novo Medina 0,1,0 or 0,0,1 left main coronary bifurcation lesions: A proof-of-concept study" and for taking time to express their opinions. The authors' letter to the editor mentions potential concerns of managing coronary ostial stenosis with drug-coated balloons (DCB).

Optimal management of Medina type 0,1,0 and 0,0,1 left main stem (LMS) bifurcation lesions is an unresolved issue.[2] The 15th consensus document from the European Bifurcation Club recommends ostial or cross-over stenting to treat these lesions[2]; however, both techniques have important limitations, as mentioned largely in our paper.[1] We described a new technique (Yao technique) with 2 options for these lesions. Y represents bifurcation(Y-shaped bifurcation), "ao[凹]" spelling in Chinese means "implantation 1-2 mm distally." The 2 options are as follows: (1) drug-coated balloons combined with provisional drug-eluting stent (DES) implantation 1-2 mm distally to the left anterior descending artery (LAD) or left circumflex artery (LCx) ostium whenever this was required (DCB + pDES strategy) and (2) drug-eluting stent implantation 1-2 mm distally to the LAD or LCx ostium followed by DCB to treat the ostial lesion (DES + DCB strategy). Before the procedure, the 2 different treatment options, potential risks, and benefits of these approaches and the conventional approaches (cross-over technique and ostial stenting) were fully discussed with the patients and patients' family members. Drug-coated balloons + pDES strategy was recommended for all patients, while the DES + DCB strategy was performed in those patients who declined DCB + pDES given the possible post-procedure risks associated with DCB treatment alone. Seven patients who declined the DCB + pDES and a patient who had type C dissection after DCB underwent the DCB + DES strategy. New stenosis (diameter stenosis >30%) of the side branch (SB) was one of the clinical endpoints and was not seen in any patients as DCB maintains the carina's original anatomy and diminishes the risk of abnormal flow patterns into the SB.

To our knowledge, our study is the first that investigated the feasibility, clinical safety, and short-term efficacy of DCBs for the treatment of Medina 0,1,0 and 0,0,1 LMS bifurcation lesions. We also used DES plus DCB to manage other types of LMS bifurcation lesions, including Medina types 0,1,1 and 1,1,1; DES from LAD to LM, and DCB for LCx. According to the current guidelines, DES should be the treatment of choice for true bifurcations,[2] but we commonly use DCB for LCx lesions. Additionally, to prove our results, we will propose a randomized controlled trial to deeply investigate the Yao technique in ostial LAD and LCx lesions in the next step.

Stent edge dissection is a potential complication of placing a stent into the plaque.[3] However, to avoid this, we adequately prepared the plaque before stenting. Moreover, our major technique was the DCB + pDES strategy, which does not require a stent in 95% of the cases.[1]

LETTER TO THE EDITOR REPLY

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