

Percutaneous Treatment of Iatrogenic Left Main Ostial Stenosis

after a Bentall Operation

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A 58-year-old man underwent a Bentall operation with prosthetic aortic valve replacement (Carbomedics Carboseal® 27, Sorin S.p.A.; Milan, Italy) for severe aortic regurgitation associated with a bicuspid valve and an ascending aortic aneurysm. One month after discharge from the hospital, he developed exertional angina confirmed by a treadmill test. Coronary angiography showed iatrogenic post-anastomotic left main ostial stenosis (Fig. 1). Given the high risk of re-operation, the cardiothoracic surgeon referred the patient for percutaneous coronary intervention (PCI). Predilation was performed, followed by the deployment of a Cypher® sirolimus-eluting stent (Cordis Corporation, a Johnson & Johnson Company; Warren, NJ) in the left main coronary artery ostium (Figs. 2 and 3).

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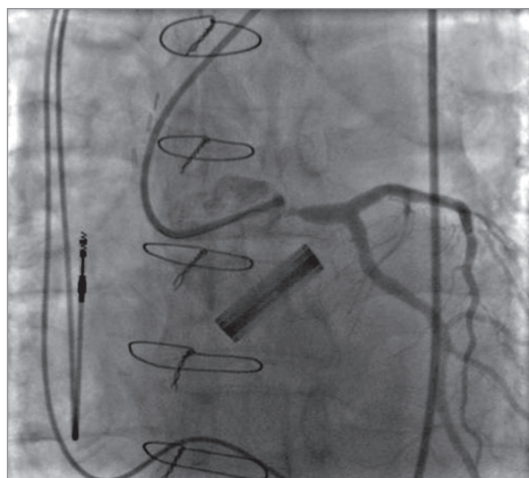


Fig. 1 Selective left coronary angiogram shows left main ostial stenosis in a patient who had undergone a Bentall operation.

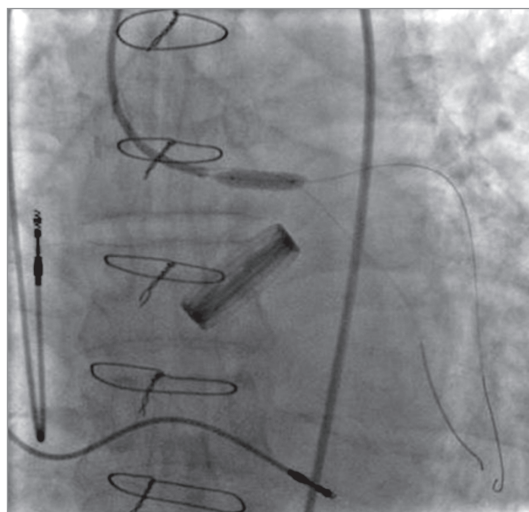


Fig. 2 Coronary angiogram shows sirolimus-eluting stent placement in the left main coronary artery ostium.

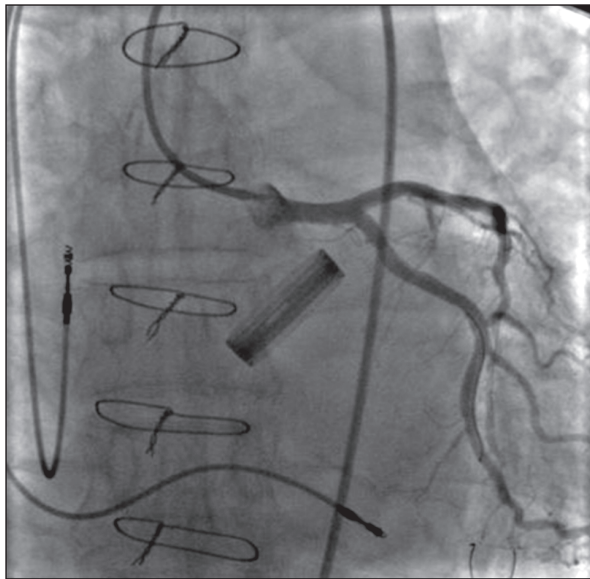


Fig. 3 Final coronary angiogram shows complete resolution of the iatrogenic stenosis.

Comment

The Bentall operation, involving a valved graft conduit with coronary reimplantation, is considered the gold standard for the treatment of combined aortic valve pathologic conditions and ascending aortic aneurysm. Coronary ostial stenosis after Bentall procedures occurs in less than 2% of cases.¹ It may be related to suture techniques that cause stretching and kinking of the vessel; to instruments used in the coronary ostia for direct antegrade cardioplegia; or to the use of tissue glues, with a subsequent inflammatory response of the coronary wall and late stenosis.² This life-threatening complication is usually treated by high-risk reoperation involving coronary artery bypass grafting.¹ Although the American College of Cardiology/American Heart Association/Society for Cardiovascular Angiography and Interventions guidelines do not recommend elective left main PCI,³ the procedure proved to be an effective and safe treatment in our high-risk patient, with persistently good clinical results at 18 months.

References

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