



Use of Dedicated Bifurcation Drug Eluting Stent BioSS® in Coronary Bifurcation Stenosis: Case Report

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Abstract

This case illustrates easy technique of bifurcation coronary lesion treatment with use of dedicated bifurcation drug eluting stent BioSS®.

Keywords: Percutaneous coronary intervention; Bifurcation stenosis

Introduction

The frequency of coronary bifurcation lesions reaches 15% to 20% in the structure of percutaneous coronary interventions [1]. The anatomical and physiological features of coronary bifurcations are associated with different angles diameters of its constituent branches, turbulent blood flow in the region of the carina, an inhomogeneous distribution of the endothelial shear stress, which determines the complexity and diversity of these types of stenosis. Various methods of endovascular interventions for bifurcation stenosis have proposed with use of common coronary stents and specialized devices [2].

Case Presentation

A 68-year-old man with hypertension and dyslipidemia was referred to our center because of a 5-year history of chronic angina on effort. Results of an exercise stress test were positive for chest pain and ischemic electrocardiographic changes. Coronary angiography showed a prolonged stenosis in proximal segment of circumflex branch of the left coronary artery and true bifurcation lesion in circumflex and marginal arteries 1.1.1 by Medina A et al. [3] classification (Figure 1).

A percutaneous coronary intervention was performed under local anesthesia. The left coronary artery was cannulated by Judkins Left 6F guiding catheter via right transradial approach. Two light polymer coronary guidewires were passed in distal segment of circumflex and marginal arteries. After balloon dilatation a dedicated bifurcation drug eluting stent BiOSS® (Balton, Poland) was implanted in area of bifurcation and regular stent was implanted proximally. Figure 2 shows the final result of percutaneous coronary intervention and restoration of a lumen. The patient was discharged and at the 6-month clinical follow-up, the patient was asymptomatic.

Discussion

An important aspect of bifurcation interventions is the patency of the lateral branch, which is in risk of occlusion after carina plaque shift. Due to the special design of the balloon delivery

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Figure 1: Coronary angiogram of bifurcation lesion in circumflex and marginal arteries.

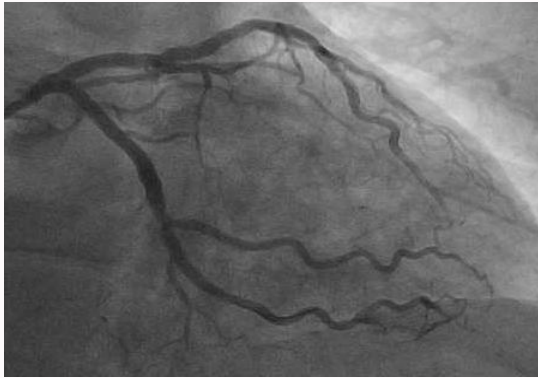


Figure 2: Final coronary angiogram.

system and the stent BiOSS[®] (Balton, Poland), which reproduces the geometric parameters of coronary bifurcation, the patency of the lateral branch was preserved very simple without kissing balloons and proximal optimization technique [4-6]. The BiOSS[®] (Bifurcation Optimization Stent System) Clinical Programme began in 2008. The first-in-man study was made by Robert J. Gil et al. [5].

Conclusion

Use of dedicated bifurcation drug eluting stent BiOSS[®] (Balton, Poland) is very simple and comfortable technique of bifurcation coronary lesion treatment.

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