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Management of Excessive Long Segment Coronary Artery Stent Restenosis

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Coronary artery disease has been seen much encountered last decades. Despite advances in percutaneous coronary intervention, stent designs, balloon technology and adjunctive medical therapy, restenosis still occurs for long segment stenting of the coronary arteries [1].

A 60 year old male was presented with NYHA class II dyspnea and mild exertion occurring over the preceding week who had a history of percutaneous coronary intervention and stent placement 1 year ago. On admission his vital signs were in normal limits. Electrocardiography and troponin examination were unremarkable. The ejection fraction was revealed 45% by transthoracic echocardiography. Severe long segment stenosis was confirmed by coronary angiography on the Left Anterior Descending Artery (LAD). We decided to perform CABG surgery. Routine preparation for surgery was made and informed consent was taken. Under general anesthesia with cardiopulmonary bypass (CPB) long segment stent was extracted, 10 cm patchplasty and bypass was performed with

saphenous vein graft (Figures 1A, 1B). True chronic occlusion is defined as the duration of the lesion more than 6 months and long segment occlusion is defined as more than 50 mm of the lesion [2].

Multiple stent placement for long segment lesions is associated with thrombosis and late restenosis. However, short segment stent placement reduces restenosis rate [3]. Excessive long segment stent placement, distal collateral circulation, degree of the stenosis, diabetes mellitus and plaque volume are the independent predictors. Long segment restenosis after 6 months is 56% [4,5]. Taking into account, placement of multiple and long segment stents may close the tributaries and restenosis rate correlated with the lenght of stent and the lesion. Optimal stent has not yet produced for long segments.

Figures 1: (A) External view of the extracted excessive long segment stent.

(B) Intraoperative image of the LAD patchplasty and bypass with saphenous vein graft showed by white arrow.

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