Case Report
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PRIMARY PERCUTANEOUS INTERVENTION (PCI) IN A SAPHENOUS VEIN GRAFT

Shahid Abbas, Qurban Khan

Armed Forces Institute of Cardiology (AFIC) / National Institute of Heart Diseases (NIHD) Rawalpindi Pakistan

INTRODUCTION

Occlusion and degeneration of saphenous vein grafts (SVGs) poses significant problems in patients who have undergone coronary artery bypass graft (CABG) surgery. In the first year post-CABG SVG occlusion rate is approximately 15%. SVG 10-year patency is only 60%[1-3]. SVG failure is associated with a significant increase in major adverse cardiovascular events (MACE), including death, myocardial infarction (MI), and the need for repeat revascularization[4]. Factors predicting venous graft occlusion include hypertension, dyslipidemia, use of tobacco, and small target vessel (diameter <2 mm)[5].

CASE REPORT

The patient, a 65 year old man, had a history of diabetes (well controlled with oral hypoglycaemic therapy), hypertension, and was an ex-smoker. In 2004 he had undergone CABG. He received a left internal mammary graft (LIMA) to the left anterior descending (LAD) artery, and two SVGs to the major obtuse marginal branch and the posterior descending artery (PDA) branch of the right coronary artery (RCA).

He presented to the Armed Forces Institute of Cardiology with symptoms of angina (Canadian Cardiovascular Society Class II). CT Coronary Angiogram was performed which revealed a critical stenosis in the SVG to the PDA. The other grafts were patent. Coronary angioplasty was planned, and the patient was admitted to hospital. Echocardiography revealed an ejection fraction of 55%. His chest X-ray was unremarkable. Haematological and biochemical investigations were normal.

Correspondence: Dr Syed Shahid Abbas, Cardiology Department, AFIC Rawalpindi, Pakistan
Email:shahabbas0@gmail.com

During admission, the patient experienced sudden onset severe central chest pain, dyspnea, and vomiting. 12 lead ECG showed ST segment elevation in leads II, III and aVF, with reciprocal ST depression in the anterior leads. His cardiac markers were elevated. Acute inferior wall myocardial infarction was

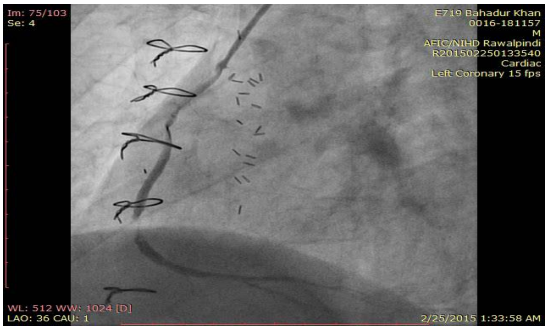

Figure-1: Saphenous veinous graft to posterior descending artery before stenting.

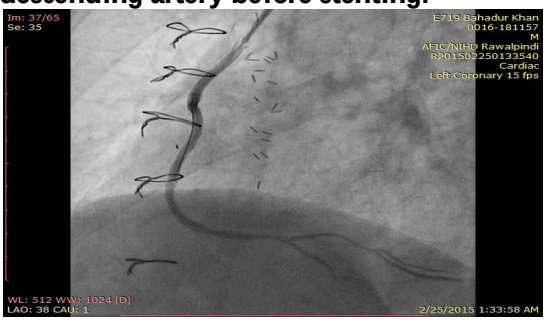

Figure-2: : Saphenous veinous graft to posterior descending artery after stenting

diagnosed. He was transferred to the cardiac

catheterization laboratory for primary PCI, after informed consent was obtained and pretreatment with aspirin, clopidogrel, and heparin.

Vascular access was obtained via the right femoral artery. A 6F Multipurpose Guide Catheter (Cordis Corporation, Florida, USA) was used as a guide. Angiography revealed critical proximal disease and a subtotally

occluded distal portion of the SVG to the PDA. The lesion was crossed with a runthrough wire (Terumo Corporation, Tokyo, Japan). The distal lesion was pre-dilated with a 2.0 X 15mm PDA was stented with a 2.5 X 18mm Excel drug eluting stent (JW Medical Systems, Shandong, Sequent balloon (B.Braun Group, Melsungen, Germany). The distal portion of the SVG to the China), inflated to 14 atmospheres for 20 seconds. The proximal part of the SVG was stented with another 2.5 X 18mm Excel stent overlapping with a 2.5 X 15mm Multi-Link Vision bare metal stent (Abbott Vascular, California, USA); both inflated to 14 atmospheres for 20 seconds. A successful angiographic result with final Thrombolysis in Myocardial Infarction (TIMI) Grade III was achieved. The remainder of the patient's hospital stay was uneventful. He was asymptomatic and there was no elevation in post interventional CK-MB and troponin. He remained asymptomatic at 6-month follow up.

CONFLICT OF INTEREST

This study has no conflict of interest to declare by any author.

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