



Iatrogenic Dissection of Saphenous Vein Graft Treated Successfully with Angioplasty

Abdelghany M^{1*}, Chaudhary A² and Pratap T³

¹Department of Medicine, Division of Cardiology, Upstate Medical University, USA

²State University of New York, Upstate Medical University, Syracuse, NY, USA

³Syracuse VA Medical Center, Syracuse, NY, USA

Keywords

Dissection; Iatrogenic; Vein graft; Saphenous vein; Angioplasty; Stent; Coronary artery

Abbreviations

SVG: Saphenous Vein Graft; OM: Obtuse Marginal; 6Fr: 6 French; JR: Judkins Right; CD: Coronary Dissection

Clinical Image

An 82-year-old male presented complaining of dyspnea and edema for days. He had a history of coronary artery bypass grafting in 1998. Physical exam was significant for distended jugular veins and lung bases crackles. Echocardiogram showed new akinesia of the apex and distal anterior segments. Ejection Fraction deteriorated from 55% to 35%. Cardiac catheterization revealed 80% stenosis of the saphenous vein graft (SVG) to the left anterior descending artery and 90% stenosis of ostial SVG to obtuse marginal (OM) artery. Engagement of the OM graft using a 6Fr JR4 guide catheter caused dissection of the SVG's ostium (Figure 1 and Video 1), which was treated with an Everolimus eluting stent. Iatrogenic coronary dissection (CD) is a complication of angiography of vessels with abnormal integrity that occurs, very rarely, in aging vein grafts. Stiffer guide catheters can cause mechanical trauma to the vessel wall, especially with deep engagement. The hydraulic pressure of contrast injection can further elicit a tear [1]. CD is divided into 6 types (A-F); F is a dissection resulting in total occlusion. Predictors for complete occlusion include female gender, hypertension, unstable angina, hyperlipidemia, diabetes, smoking, age ≥ 60 and repeat angioplasty [2]. Patients with iatrogenic CD have higher in-hospital and post-discharge myocardial infarction [1]. A CD resulting in acute closure is associated with a 10-fold increase in mortality and nonfatal myocardial infarction [2]. Non-obstructive CD can be treated conservatively. Patients with ischemia, or who suffer total occlusion of the vessel should be considered for revascularization [3].

OPEN ACCESS

*Correspondence:

Mahmoud Abdelghany, Department of Medicine, Division of Cardiology, State University of New York, Upstate Medical University, 750 E Adams St, Syracuse, NY 13210, USA, Tel: +1-814-262-5620; Fax: +1-315-464-5985;

E-mail: abdelghm@upstate.edu

Received Date: 29 May 2017

Accepted Date: 30 Oct 2017

Published Date: 10 Nov 2017

Citation:

Abdelghany M, Chaudhary A, Pratap T. Iatrogenic Dissection of Saphenous Vein Graft Treated Successfully with Angioplasty. *Ann Cardiol Cardiovasc Med.* 2017; 1(2): 1010.

Copyright © 2017 Abdelghany M. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

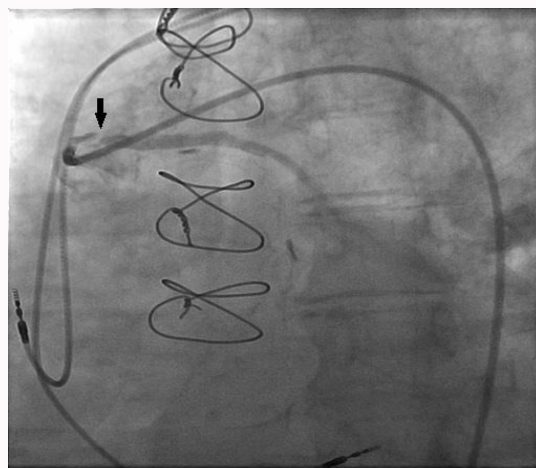
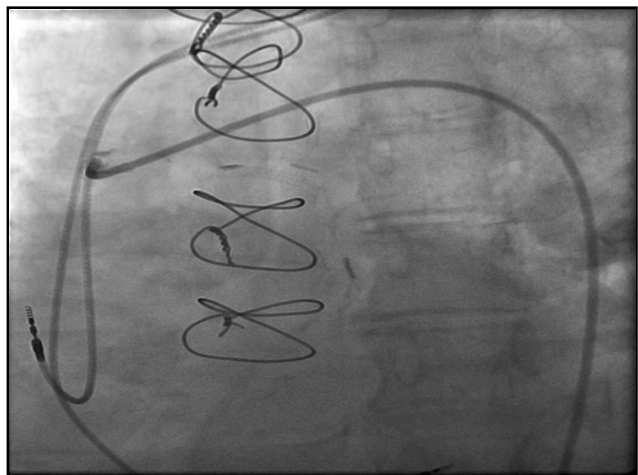


Figure 1: Angiography of a saphenous vein graft to the obtuse marginal artery showing a dissection of the ostium of the vein graft.



Video 1: Angiography of a saphenous vein graft to the obtuse marginal artery showing a dissection of the ostium of the vein graft.

References

1. Prakash R, Starovoytov A, Heydari M, Mancini GB, Saw J. Catheter-induced iatrogenic coronary artery dissection in patients with spontaneous coronary artery dissection. *JACC Cardiovasc Interv.* 2016;9(17):1851-3.
2. Ellis SG, Roubin GS, King SB 3rd, Douglas JS Jr, Weintraub WS, Thomas RG, et al. Angiographic and clinical predictors of acute closure after native vessel coronary angioplasty. *Circulation.* 1988;77(2):372-9.
3. Saw J, Aymong E, Sedlak T, Buller CE, Starovoytov A, Ricci D, et al. Spontaneous coronary artery dissection: association with predisposing arteriopathies and precipitating stressors and cardiovascular outcomes. *Circ Cardiovasc Interv.* 2014;7(5):645-55.