Journal of Cardiology Cases 6 (2012) e118–e120

Journal of Cardiology Cases

journal homepage: www.elsevier.com/locate/jccase

Case Report

Successful treatment for a giant coronary saccular aneurysm complicated with myocardial infarction in a patient with Behcet's disease: Case report

Durmuş Yıldıray Şahin (MD)[a,*], Zafer Elbasan (MD)[a], Mustafa Gür (MD)[a], Mehmet Hüseyin (MD)[b], Murat Çaylı (MD)[a]

[a] Department of Cardiology, Adana Numune Education and Research Hospital, Adana 01150, Turkey
[b] Department of Cardiology, Acıbadem Adana Hospital, Acıbadem University, Adana, Turkey

ARTICLE INFO

Article history:
Received 1 May 2012
Received in revised form 12 June 2012
Accepted 12 July 2012

Keywords:
Behcet's disease
Coronary aneurysm
Myocardial infarction

ABSTRACT

We report on a 35-year-old man, with known Behcet disease, who was admitted with the diagnosis of subacute anterior myocardial infarction. Coronary angiography revealed an isolated giant saccular aneurysm at the mid segment of left anterior descending coronary artery with a tight stenosis. The patient was successfully treated with covered stent on the first day of admission.

Introduction

Behcet's disease (BD) is a multisystem disease characterized by recurrent oral aphthae and any of several manifestations, including uveitis, skin lesions, neurological disease, arthritis and vascular involvement [1–3]. Vascular lesions in BD generally affect both arteries and veins [3]. Coronary artery involvement complicated with myocardial infarction (MI) is rare [4]. We present a case of a young BD patient with isolated giant saccular aneurysm and tight stenosis at the mid segment of left anterior descending (LAD) artery complicated with MI.

Case report

A 35-year-old male suffering from BD (diagnosed 10 years earlier) was hospitalized in intensive care unit due to subacute anterior MI. He had no major risk factors for coronary artery disease (CAD). The patient had been treated with warfarin due to deep venous thrombosis. Physical examination upon admission revealed pulse rate at 74 beats/min and blood pressure at 100/60 mmHg. Heart sounds and bilateral lung area were normal. The initial electrocardiogram showed sinus rhythm with 1–2 mm ST segment elevation and biphasic T waves in the anterior leads which was consistent with subacute anterior MI. Laboratory tests showed elevated plasma creatine phosphokinase-MB (73 ng/mL) and troponin-T (0.94 ng/mL). International normalized ratio (INR) was measured as 2.76. The protein C, protein S, homocysteine, serum cholesterol, and triglyceride levels were all within the normal limits. Anticardiolipin antibodies and antinuclear factor were negative.

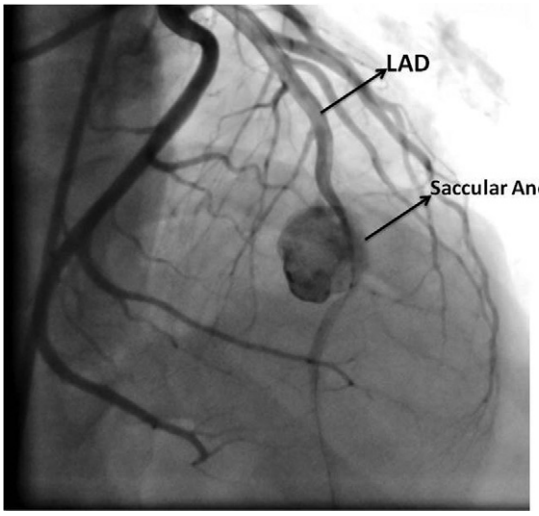

Fig. 1. Isolated giant saccular aneurysm with a tight stenosis at the mid segment of left anterior descending artery (LAD).

* Corresponding author. Tel.: +90 322 335 03 03; fax: +90 322 335 03 15.
E-mail addresses: cardiology79@yahoo.com, dysahin79@hotmail.com (D.Y. Şahin).

1878-5409/$ – see front matter
http://dx.doi.org/10.1016/j.jccase.2012.07.002

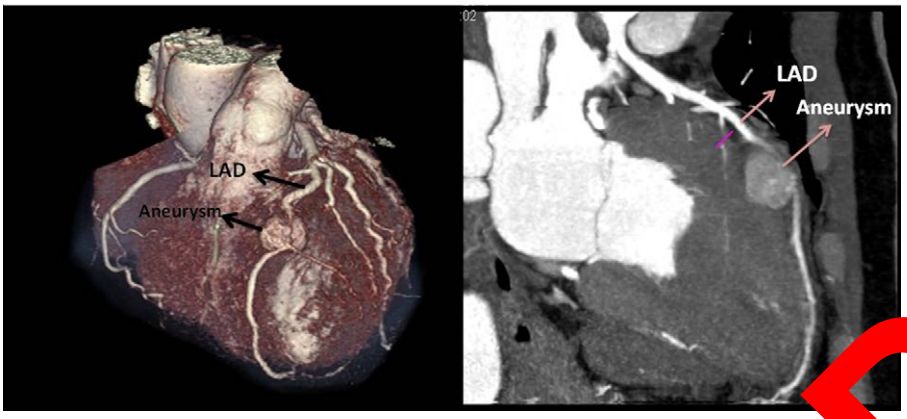

Fig. 2. Isolated giant saccular aneurysm with a tight stenosis at the mid segment of left anterior descending artery (LAD) in multislice computed tomography.

Echocardiography revealed anterior hypokinesis and decreased left ventricular systolic function. Coronary angiography showed an isolated giant saccular aneurysm with a tight stenosis at the mid segment of LAD (Figs. 1 and 2). We decided to perform percutaneous coronary intervention (PCI) with a covered stent. After predilatation with 2.5 mm × 15 mm balloon, a 3.0 mm × 26 mm covered coronary stent was successfully deployed at the mid segment of LAD. Coronary aneurysm disappeared after the covered stent was implanted (Fig. 3). The patient was treated according to current guidelines and discharged from the hospital four days later without any complication.

Discussion

BD is an autoimmune, multisystem disease involving arteries and veins [1–3]. Arterial involvement is frequent, presenting with peripheral arterial aneurysm, aortitis or thrombosis. Cardiovascular involvement due to vasculitis is extremely rare, but serious, complication which is associated with poor prognosis. Aneurysmal degeneration of coronary arteries occurs in approximately 0.5% of cases [3]. Coronary lesions can be either occlusive or aneurysmal degeneration [2,3–5]. Previous studies suggest that coronary vasculitis is a possible cause of MI in patients with BD [4]. Recently, Seyahi et al. [7] reported that increased coronary atherosclerosis is not a prominent feature of BD and coronary occlusion may be attributed to fibrous intimal thickening as a result of local vasculitis. The pathogenesis of the vasculitis is not well understood. The pathologic findings include vasculitis and inflammatory obliterative endarteritis of the vasa vasorum with fibrotic deterioration of the media, all of which predispose to arterial wall to aneurysm formation [3,8]. Our patient had no established risk factors for CAD and any coagulation and fibrinolytic system disorders and had been treated with warfarin due to deep venous thrombosis. Therefore, MI in our case may possibly be due to coronary vasculitis, rather than thrombotic occlusion.

Currently, there is no consensus on the treatment strategy for BD patients with coronary aneurysm and MI. Treatment of coronary aneurysm with both PCI and coronary artery bypass grafting is possible. However, current evidence does not favor surgery for those patients because of the technical difficulties and postoperative complications, which include false aneurysm, anastomotic dehiscence, and thrombotic occlusion [9]. Recently, Kasapis et al. [10] reported that covered stent is a good treatment option in a patient with BD and coronary aneurysm. We also successfully deployed covered stent at mid segment of LAD which included giant aneurysm and tight stenosis. The patient remained asymptomatic throughout 3 months of follow-up. Therefore, covered stents may be an alternative to other treatment options in such cases.

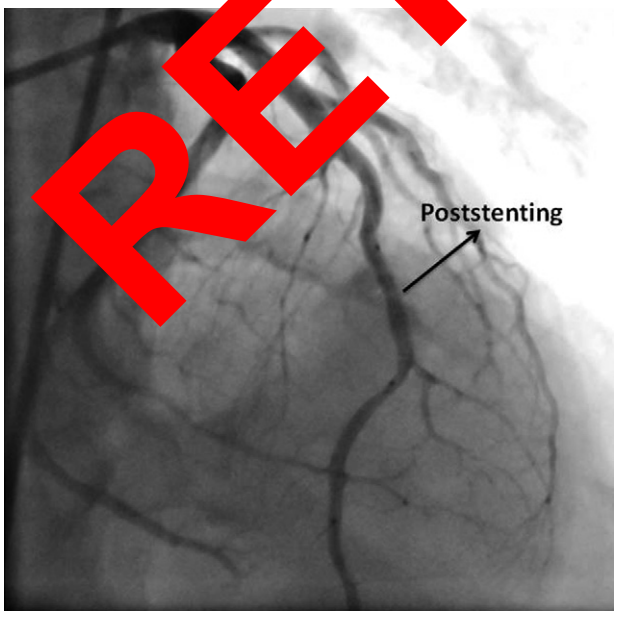

Fig. 3. Disappearance of aneurysm after implantation of the covered stent.

Conclusion

Isolated giant LAD aneurysm with tight stenosis complicated with MI in patients with BD is rare. Covered stents are a suitable treatment option for those patients.

References

[1] James DG, Thomson A. Recognition of the diverse cardiovascular manifestation in Behçet's disease. Am Heart J 1982;103:457–8.
[2] Zouboulis CC, May T. Pathogenesis of Adamantiades-Behçet's disease. Med Microbiol Immunol 2003;192:149–55.
[3] Ozeren M, Dogan OV, Dogan S, Yucel E. True and pseudo aneurysms of coronary arteries in a patient with Behçet's disease. Eur J Cardiothorac Surg 2004;25:465–7.
[4] Kraiem S, Fennira S, Battikh K, Chehaibi N, Hmem M, Slimane ML. Behçet disease: uncommon etiology of myocardial infarction. Ann Cardiol Angiol 2004;53:109–13.

[5] Wechsler B, Huong DLT, Kieffer E. Cardiovascular manifestations of Behçet's disease. Ann Med Intern 1999;150:542–3.
[6] Kosar F, Sahin I, Gullu H, Cehreli S. Acute myocardial infarction with normal coronary arteries in a young man with the Behçet's disease. Int J Cardiol 2005;99:355–7.
[7] Seyahi E, Ugurlu S, Cumali R, Balci H, Ozdemir O, Melikoglu M, Hatemi G, Fresko I, Hamuryudan V, Yurdakul S, Yazici H. Atherosclerosis in Behçet's syndrome. Semin Arthritis Rheum 2008;38:1–12.
[8] Matsumoto T, Uekusa T, Fukuda Y. Vasculo-Behcet's disease: a pathologic study of eight cases. Hum Pathol 1991;22:45–51.
[9] Sismanoglu M, Omeroglu SN, Mansuroglu D, Ardal H, Erentug V, Kaya E, Guler M, Ipek G, Yakut C. Coronary artery disease and coronary artery bypass grafting in Behcet's disease. J Card Surg 2005;20:160–3.
[10] Kasapis C, Grossman PM, Chetcuti SJ. Cardiovascular flashlight. Percutaneous treatment of a giant right coronary artery pseudoaneurysm in Adamantiades–Behcet's syndrome. Eur Heart J 2009;30:2630.