Giant left ventricular saccular true aneurysm at posterobasal localization

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Abstract
Postinfarction ventricular aneurysms may be either true or false. In this study, we report a case of giant left ventricular saccular true aneurysm at posterobasal localization.

INTRODUCTION
“True” aneurysm is a progressive dilatation and thinning of the ventricular wall, with parietal fibrotic degeneration(1,2). We present a case because of the rarity of a saccular configuration of a left ventricular aneurysm.

CASE PRESENTATION
A 49-year-old male was admitted to our Department of Cardiology with complaints of chest pain and shortness of breath. His past medical history was significant for myocardial infarction experienced 20 years ago. His transthoracic echocardiography revealed a true aneurysm located at inferobasal part of the left ventricle, with a wide neck of 32x30 mm. Subsequent coronary angiography and left ventriculography showed a large saccular aneurysm located posterobasally (Figure 1).

Figure 1
Figure 1: View of the large true aneurysm located posterobasally shown at preoperative left ventriculography.

Our case was taken to the operating room with ongoing symptoms and known large left ventricular aneurysm. His heart was elevated upwards and to the right, exposing the aneurysmal sac completely (Figure 2).
Then, a longitudinal incision was made to open the aneurysmal sac. A large amount of thrombus material was observed within the aneurysmal cavity with a sac orifice of 2.5 cm in diameter. Thrombotic material was then removed (Figure 3).

Figure 3
Figure 3: Large amount of thrombotic material observed after opening of the saccular wall.

A polytetrafluoroethylene (Goretex®, W.L. Gore & Associates, AH1382-ML1) patch was placed according to endoventricular circular patch plasty technique to repair the saccular orifice, without disrupting the ventricular geometry (Figure 4).

Figure 4
Figure 4: Repair of the orifice of the aneurysmal sac according to endoventricular patch plasty technique

Surrounding aneurysmal tissue walls were sutured linearly with teflon felts to cover the patch. Postoperative histopathologic investigations confirmed a true aneurysm. Transthoracic echocardiography showed a rise in left ventricular ejection fraction from 45% to 55% (Figure 5).

Figure 5
Figure 5: Postoperative control transthoracic echocardiographic view (LV: left ventricle, LA: left atrium, P: patch)

DISCUSSION
A true aneurysm is thinning of the left ventricular wall as a consequence of progressive ventricular dilation due to fibrotic degeneration. Five-year survival rate is about 8-12% with medical therapy, whereas it reaches 75-90% with surgical correction (p<). Endoventricular circular patch-plasty is a safe technique used for repair of left ventricular
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aneurysms with low mortality- and morbidity rates. This technique provides both hemodynamic improvement and, in long term, a better functional capacity(,).

References

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