Huge pannus formation on a mechanical bileaflet mitral valve prosthesis 23 years after a third operation on the mitral valve

Thomas Strecker⁎, Michael Weyand and Abbas Agaimy

⁎ Center of Cardiac Surgery, Friedrich-Alexander University Erlangen-Nuremberg, Erlangen, Germany

Keywords: Mitral valve • Reoperation • Cardiac surgery • Pannus • Imaging • Pathology

A 58-year-old man had undergone, at the age of 16 years, a commissurotomy of the mitral valve. Four years later, he received mechanical aortic and mitral valve prosthesis, which was replaced 15 years later. Now, this prosthesis failed due to pannus formation (Fig. 1 and Supplementary Videos 1 and 2).

Supplementary material (Videos 1 and 2) is available at EJCTS online.

Figure 1: (A) Transesophageal echocardiography showing a blockage of one of the leaflets of the mitral valve prosthesis with increased transprosthetic gradients (maximal gradient 24 mmHg, mean gradient 10 mmHg and velocity Vmax 2.5 m/s). (B) Coronary angiography confirmed the blockage of one of the leaflets of the 23-year-old 31-mm diameter mechanical bileaflet mitral valve prosthesis. (C) Intraoperative findings: the upper leaflet of the mechanical prosthesis was almost completely covered by a huge pannus formation, and the effective mitral orifice was significantly narrowed. (D) After resection of the attached pannus tissue, both leaflets of the mechanical prosthesis were visible and moveable. (E) Histology of the resected pannus reveals the paucicellular hyaline connective tissue associated with superficial fibrinous reaction.

© The Author 2013. Published by Oxford University Press on behalf of the European Association for Cardio-Thoracic Surgery. All rights reserved.