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Heart failure due to prosthetic mitral leaflet thrombosis

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DESCRIPTION

A 54-year-old patient presented with a 2-week history of progressive dyspnoea. The patient previously underwent mitral valve replacement with a mechanical prosthesis (CarboMedics, Austin, Texas, USA) for rheumatic mitral valve stenosis and coronary artery bypass grafting. Examination revealed absence of prosthetic valve click. The patient's INR was 1.3 on admission. Subsequent investigation including echocardiography and screening fluoroscopy confirmed obstructed leaflet of the prosthetic valve (video 1). The patient was then brought to the operating theatre. Intraoperatively, a large thrombus was found on the atrial surface of the prosthetic valve leaflet obstructing leaflet motion. The obstructed prosthetic valve was then removed and replaced (figure 1). Postoperative recovery was uneventful.

Video 1 Fluoroscopy revealing single leaflet motion in a bileaflet valve indicating valve dysfunction.10.1136/bcr.03.2011.3969v1

Progress in the design and structure of mechanical prostheses over the years has led to a considerable

improvement in their haemodynamic features and durability; however, acute thrombosis of mechanical prosthetic heart valves is one of the major complications of valve replacement.¹ The risk of thrombosis is dependent on valve design, materials and host-related interface. Clinical finding and loss of valve clicks raise suspicion of mechanical valve thrombosis, which is confirmed by echocardiography. Transoesophageal echocardiography allows accurate visualisation of echos emanating from the atrial surface of the prosthesis corresponding to thrombi. Mortality from re-operation for mitral valve thrombosis is reported to be 29.4%.²

Competing interests None.

Patient consent Obtained.

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Figure 1 Mechanical mitral valve with pannus obstructing the leaflet.

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