IMAGES IN CARDIOLOGY

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Intermittent chordal entrapment following mitral valve replacement: diagnosis from the arterial pressure waveform

A 61 year old lady underwent uneventful mitral valve replacement with a 27 mm Medtronic Hall valve prosthesis with partial chordal preservation. On the first postoperative day a cardiac arrest was resuscitated by external cardiac massage. The diagnosis of intermittent obstruction of the prosthesis was suspected from the arterial blood pressure trace on the cardiac monitor (right), which showed gross variation in the arterial pressure waves despite sinus rhythm. The diagnosis was confirmed with transoesophageal echocardiography. Successful re-operation was performed. A retained chorda adjacent to the original antero-lateral commissure had avulsed the tip of a papillary muscle and the papillary muscle tip was prolapsing through the orifice of the prosthesis adjacent to one of the lateral struts. This prolapsing piece of papillary myocardium had clearly been interfering with the normal function of the disc. It was excised together with the attached chorda, following which the disc moved freely. Postoperative recovery was complete and the patient was discharged and reviewed in the out-patient clinic with good recovery.

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Arterial blood pressure variability (red).