Conclusion

NT-proBNP is related to severity of valvular AS and provides independent prognostic information for an adverse outcome. However, this predictive value is limited to conservatively treated patients. Thus, our data suggest that NT-proBNP assessment may be of incremental value in deciding on the optimal timing of valve replacement. In contrast, NT-proBNP assessment provides no additional prognostic information for patients undergoing valve replacement.

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Authors' affiliations

M Weber, M Hausen, H Nef, H Moellman, A Berkowitsch, A Elsaesser, R Brandt, V Mitrovic, C Hamm, Kerckhoff Heart Center, Bad Nauheim, Germany
R Arnold, University Valladolid, Valladolid, Spain

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IMAGES IN CARDIOLOGY

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Carbomedics bi-leaflet aortic valve prosthesis: a sticky problem

A 46-year-old Asian woman was under regular follow up for an aortic valve replacement in 2002 for aortic stenosis. The valve was a Carbomedics 19 mm bi-leaflet aortic valve prosthesis for which she had adequate anticoagulation since implantation. She had a past history of end stage renal failure, type 2 diabetes, hypertension, cerebrovascular disease, and systemic lupus erythematosus. She was asymptomatic and had a routine transthoracic echocardiogram performed which revealed her aortic valve prosthesis was well seated with an elevated velocity across the valve; the aortic valve leaflets were poorly visualised but appeared to be mobile. A transoesophageal echocardiogram confirmed the notably increased forward velocity across the aortic valve (maximum velocity 4.6 m/s) with small aortic root, raising the possibility of pressure recovery phenomenon. Once again the leaflets were not clearly seen but appeared mobile. The patient had cineradiography which demonstrated that one of the leaflets of the Carbomedics valve was stuck in the closed position (panels A and B). The most likely cause

of this was pannus formation causing the leaflet to stick in the closed position.

Prosthetic valve dysfunction caused by pannus formation has been reported for St Jude Medical aortic valves; the sewing cuff of the Carbomedics valve is coated in biolite carbon, which is an anti-thrombotic agent that prevents adhesion of thrombus or pannus on the sewing cuff. There are a few reports of Carbomedics valve dysfunction by

pannus formation in the mitral position, but none in the aortic position.

Prosthetic valve dysfunction caused by a stuck valve leaflet can be more easily visualised by cineradiography and can provide additional information on prosthetic valve function, thereby complementing data obtained from echocardiography.

F Osman, P Ludman, R Steeds
f.osman@bham.ac.uk