Parachute tricuspid valve

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Abstract Parachute abnormality of mitral valve frequently occurs with left sided obstructive lesions though occasionally may occur as an isolated lesion. Symptoms depend upon the severity of stenosis and associated lesions. Parachute abnormality of the tricuspid valve has rarely been reported and its association with left to right shunts has not been described so far.

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Case report

A 21-year old lady was evaluated for class II dyspnoea (NYHA). She had history of poor weight gain and congestive cardiac failure in infancy and early childhood, which improved with passage of time. On examination she was 166 cm tall, with a weight of 47 kg. Cardiovascular examination revealed a wide fixed split of second heart sound and a grade 3/6 pan-systolic murmur in the left lower parasternal area.

Echocardiography revealed normal segmental analysis. There was a large (35 mm) secundum atrial septal defect (ASD) and a restrictive (6 mm) perimembranous ventricular septal defect with left to right shunt. There was a gradient of 120 mm Hg across the ventricular septal defect. The right ventricle was mildly dilated. The tricuspid valve annulus (22 mm) was smaller than the mitral valve annulus (24 mm). The right ventricle had a single papillary muscle on the septum and all the tricuspid valve leaflets were attached to it. There was mild prolapse of septal leaflet of the tricuspid valve. The tricuspid valve was functionally normal. The other valves were normal with normal ventricular function. The patient is waiting to undergo surgery (Figs. 1–3).

Discussion

Parachute abnormality of mitral valve is a known entity, and is usually associated with left sided obstructive lesions. There has been only one
report of parachute abnormality of tricuspid valve in association with right sided obstructive lesions. Ariza et al.\(^1\) described presence of parachute abnormality of the tricuspid valve in association with Fallot’s tetralogy. The tricuspid valve in this case was stenosed and manifested with congestive cardiac failure. Milo et al.\(^2\) have reported parachute abnormality of tricuspid valve in a patient with double outlet right ventricle. Here the presence of abnormal valve was of no consequence in the final management of the patient.

To the best of our knowledge presence of parachute abnormality of tricuspid valve in association with left to right shunts has not been described. In our patient, the presence of parachute abnormality of tricuspid valve was seen in a functionally intact valve despite the presence of increased flow due to a large ASD. The atrial shunt was left to right and there was presence of right ventricular volume overload.

References