

A rare chordal anomaly of tricuspid valve in a patient with ventricular septal defect

Ventriküler septal defektli bir hastada triküspid kapağın nadir bir kordal anomalisi

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A 5-year-old male case was referred to our institution with complaints of early fatigue and dyspnea. Echocardiographic examination revealed a perimembranous ventricular septal defect (VSD). There was no evidence of any valvular insufficiency. Cardiac catheterization demonstrated that a mean pulmonary artery pressure was 38 mmHg. In the operation, it was seen that the tricuspid valve (TV) septal leaflet chordae were attached beneath the aortic noncoronary cusp (Fig. 1). To provide clear visualization tricuspid septal leaflet was incised and VSD was closed using a patch. (Fig. 2). Because this anomaly was not the cause of tricuspid and aortic valve insufficiencies, we did not perform surgical correction. Postoperative period was uneventful. The patient's echocardiographic study revealed a normal aortic and tricuspid valve functions. Serial echocardiographic examinations were normal in his clinical follow-up.

Congenital TV anomalies are found as spectrums of disease in which both the leaflets and subvalvar apparatus are often involved (1). The normal anatomy of the tricuspid valve chordal apparatus is complex (2-4). Five types of TV chordae have been described named as fan-shaped, rough zone, basal, free edge and deep chordae (5). To

the best of our knowledge, there is no similar case in the English literature. The defined case; however, there is no need for any surgical procedure, the similar patients should undergo a clinical and regular echocardiographic examination in the clinical follow-up.

References

1. Arnaout S, Diab K, Al-Kutoubi A, Jamaledine G. Rupture of the chordae of the tricuspid valve after knotting of the pulmonary artery catheter. *Chest* 2001; 120: 1742-4.
2. Silver MD, Lam JH, Ranganathan N, et al. Morphology of the human tricuspid valve. *Circulation* 1971; 43: 333-48.
3. Perloff JK. The clinical recognition of congenital heart disease. 4th edition. Philadelphia: WB Saunders; 1994. p. 247-72.
4. Escande G, Guillot M, Tanguy A, et al. Anatomy of the right atrioventricular valve (valva atrio-ventricularis dextra or valva tricuspidalis). Description of a new type of chordae: the mixed chordae. *Bull Assoc Anat (Nancy)* 1980; 64: 73-82.
5. Kocak A, Govsa F, Aktas EO, Boydak B, Yavuz IC. Structure of the human tricuspid valve leaflets and its chordae tendineae in unexpected death. A forensic autopsy study of 400 cases. *Saudi Med J* 2004; 25: 1051-9.

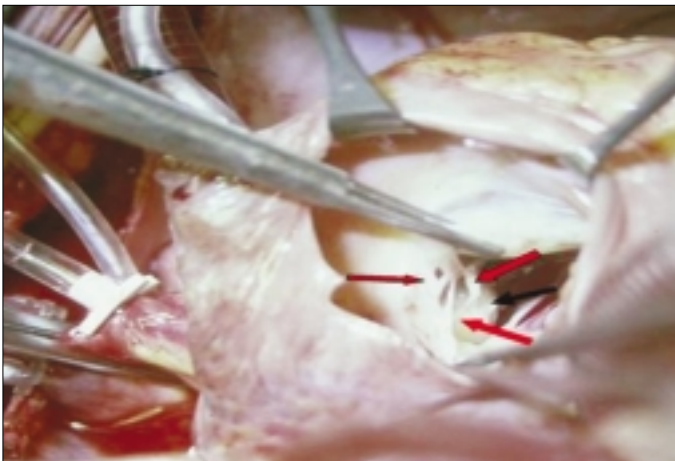


Figure 1. Intraoperative view is showing anomalous chordal attachment of tricuspid valve to the aortic right coronary cusp (red colored arrowhead). Black colored arrowhead demonstrates the aortic right coronary cusp

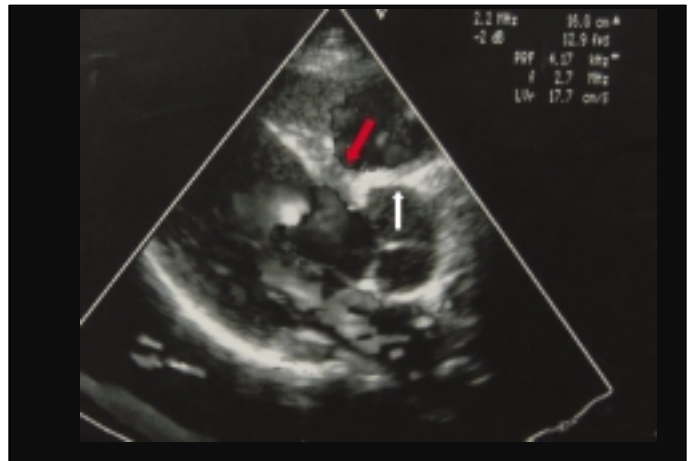


Figure 2. Postoperative echocardiography view is demonstrating no valvular insufficiency and normally functioning tricuspid valve. White and red arrowheads indicate normal tricuspid valve and closed ventricular septal defect, respectively