

Isolated Accessory Tricuspid Valve Leaflet in Asymptomatic Adult.

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September 29, 2022

Abstract

Accessory tricuspid valve (ATV) is a rare congenital anomaly that is often seen in complex congenital anomalies in children with very few reported cases in adults. We report a case of isolated ATV in an asymptomatic adult with no other congenital defects along with illustrative transesophageal echocardiographic 2D, 3D, high-resolution photo-realistic images.

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Acknowledgment: None.

Conflict of interest disclosure: None.

Funding Disclosures: None.

Ethics Approval: N/A.

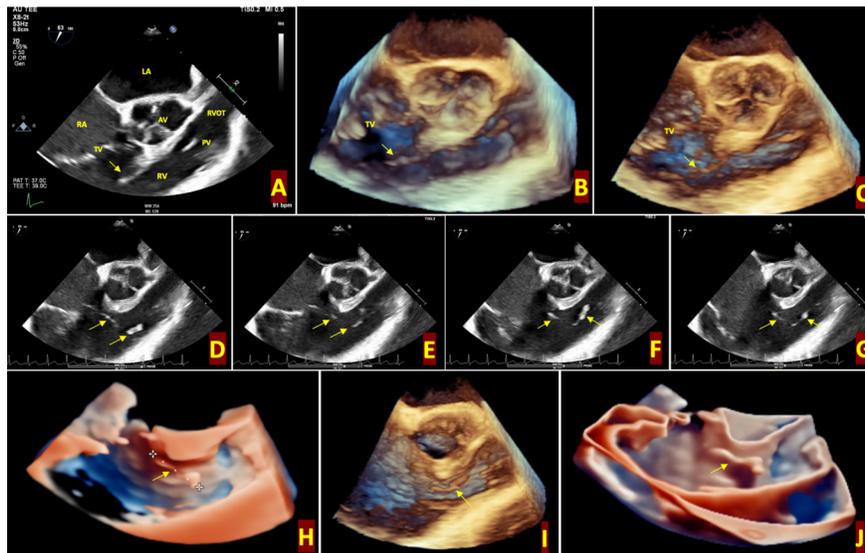
Abstract:

Accessory tricuspid valve (ATV) is a rare congenital anomaly that is often seen in complex congenital anomalies in children with very few reported cases in adults. We report a case of isolated ATV in an asymptomatic adult with no other congenital defects along with illustrative transesophageal echocardiographic 2D, 3D, high-resolution photo-realistic images.

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Case presentation: A 40-year-old male patient presented with level I trauma after a self-inflicted gunshot wound to the head. The patient was declared brain dead, and a transesophageal echocardiogram (TEE) was performed for consideration of organ harvest. TEE showed a long (>4 cm) highly mobile accessory chord arising from the subvalvular region of the septal tricuspid valve leaflet that traverses the right ventricular outflow tract (RVOT) and the pulmonic valve with no obstruction of the flow, most consistent with accessory tricuspid valve (ATV) leaflet and no other anomalies were detected on the TEE (Figure 1 and Videos 1,2, and 3).

Discussion: ATV is a rare congenital cardiac anomaly that is often observed in complex congenital anomalies in children. However, it has been reported in asymptomatic adults and to our knowledge, only two cases of ATV in asymptomatic adults have been reported in the literature. ATV is classified into ‘mobile’ or ‘fixed’ types. Mobile type is tethered by long chordae which freely floats in the right ventricle with a potential for RVOT obstruction. Fixed type is anchored to interventricular septum by short chordae with a potential for VSD obstruction if present. Papillary fibroelastoma is an important imaging differential diagnosis to consider, as it can cause embolization that is linked directly to its size and mobility. However, it is unclear if the same applies to ATV. Although a definitive diagnosis of ATV is done through surgical excision with histopathological analysis, cardiac imaging is a cornerstone for making a diagnosis. Our case illustrates key echocardiographic findings of an isolated ATV anomaly in absence of coexisting complex anomalies.



Supplementary material:

Video 1: Transoesophageal Echocardiogram midesophageal right ventricle inflow-outflow view showing the accessory tricuspid valve leaflet originating from the subvalvular region of the septal tricuspid valve leaflet and its movement in the right ventricle and across the pulmonic valve into the right ventricle outflow tract

Video 2: Three-dimensional (3D) Transoesophageal echocardiogram midesophageal right ventricle inflow-outflow view showing the accessory tricuspid valve leaflet originating from the subvalvular region of the septal tricuspid valve leaflet.

Video 3: Three-dimensional (3D) Transoesophageal echocardiogram midesophageal right ventricle inflow-outflow view showing the accessory tricuspid valve leaflet originating from the subvalvular region of the septal tricuspid valve leaflet.

Data availability statement:

The data underlying this article are available in the article and in its online supplementary material.