

## Case images

## Olgu görüntüsü

## Ruptured chorda tendinea of the tricuspid valve following blunt chest trauma

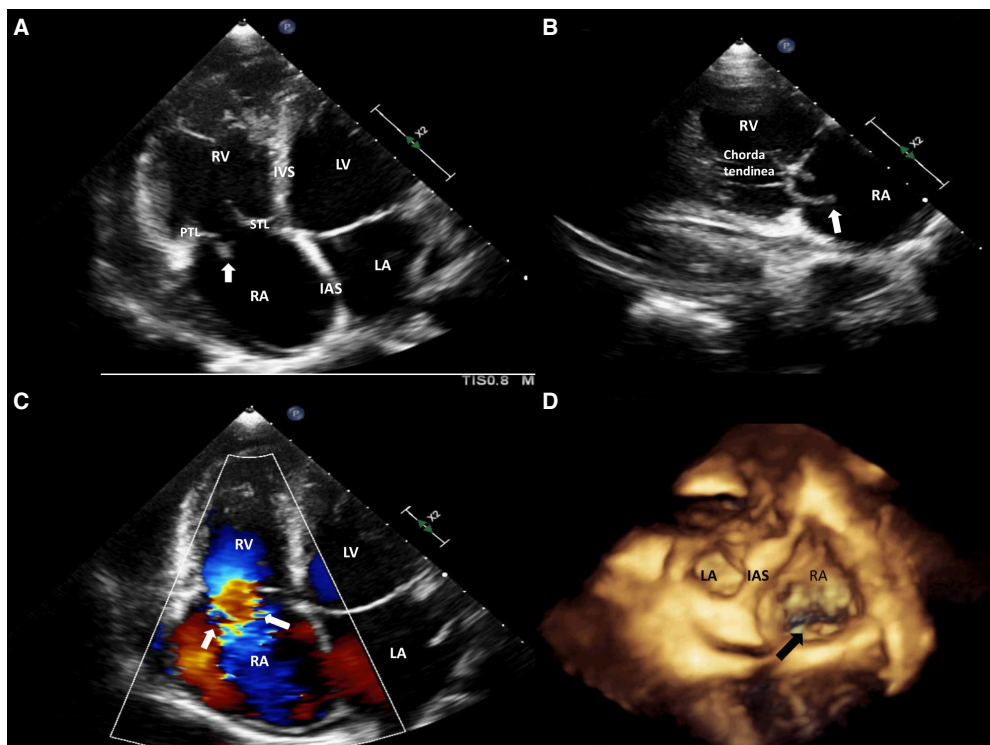
## Künt göğüs travmasını takiben triküspit kapağın korda tendine rüptürü

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A 19-year-old male patient was referred to the hospital with signs and symptoms of right heart failure beginning shortly after a motor vehicle accident that had occurred 6 months earlier. A physical examination revealed distended jugular veins, pretibial edema, and a holosystolic murmur at the left

sternal border. Electrocardiography indicated sinus tachycardia with a right bundle branch block. Two-dimensional transthoracic echocardiography (TTE) revealed moderate dilation of the right ventricle with preserved systolic function and a flail posterior tricuspid leaflet (Figures A and B). Color-flow Doppler echocardiography illustrated severe tricuspid regurgitation (Figure C). Transesophageal echocardiography (TEE) was performed for a detailed tricuspid valve

assessment and prolapse of the posterior tricuspid leaflet into the right atrium was confirmed. Real-time 3-dimensional TEE clearly depicted the prolapsing posterior tricuspid leaflet along with a ruptured chorda (Figure D). After comprehensive imaging, no structural abnormality of the tricuspid apparatus that might have caused chordal rupture could be defined. Therefore, the previous chest trauma was considered to be the likely reason for the rupture of the chorda. The administration of intravenous loop diuretics relieved the signs of congestion. Since the patient was symptomatic, surgical repair of the tricuspid valve was recommended; however, the patient declined to have surgery and was lost to follow-up thereafter. Traumatic tricuspid valve regurgitation is a very rare clinical entity. TTE and TEE, including 3-dimensional imaging, are the methods of choice for accurate evaluation of the tricuspid valve apparatus. Although isolated tricuspid regurgitation may be well tolerated for a long time, surgical intervention may be required when right heart failure develops.



**Figures–** (A) Transthoracic echocardiography (TTE) apical 4-chamber view shows an enlarged right ventricle with a flail posterior leaflet of the tricuspid valve (white arrow). (B) TTE modified parasternal long axis view revealed the flail leaflet of the tricuspid valve (white arrow). (C) Color-flow Doppler echocardiography shows severe tricuspid valve regurgitation (white arrows). (D) Three-dimensional TEE view illustrates that the posterior leaflet is flail and that there is a definite coaptation defect (black arrow).

IAS: Interatrial septum; IVS: Interventricular septum; LA: Left atrium; LV: Left ventricle; PTL: Posterior tricuspid leaflet; RA: Right atrium; RV: Right ventricle; STL: Septal tricuspid leaflet; TEE: Transesophageal echocardiography; TTE: Transthoracic echocardiography.