

Traumatic Rupture of the Tricuspid Valve

Rotura accidental de la válvula tricúspide

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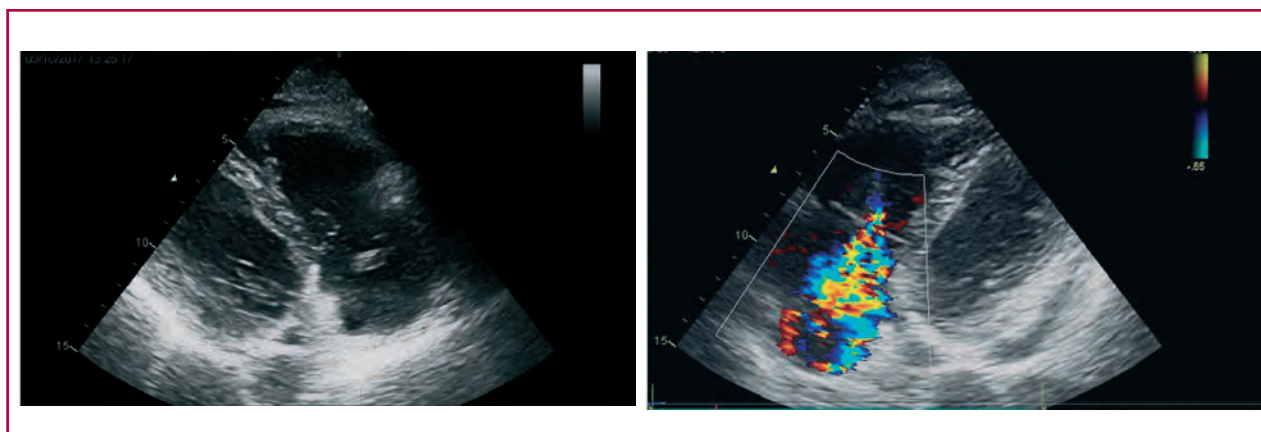
Traumatic rupture of the tricuspid valve is a rare and difficult entity to diagnose as it usually courses asymptomatic; therefore, clinical suspicion is key to identify it. We report the case of a 48-year-old male patient who was admitted due to closed thoracic trauma after falling from 4 meters high. The echocardiography performed in the Emergency Room was normal. The patient was transferred to the Intensive Care Unit due to pulmonary contusion and multiple rib fractures.

Lab tests revealed elevation of myocardial necrosis markers, and ECG showed RBBB. A new echocardiography, performed 48 hours later to rule out complications secondary to myocardial contusion, targeted the tricuspid valve with papillary muscle rupture and eversion of the anterior leaflet causing massive tricuspid regurgitation (TR) (opacifying the right atrium; Doppler triangular flow did not allow pulmonary pressure measurement; there was systolic inversion in suprahepatic vein flow, paradoxical septal motion associated with volume overload), slightly enlarged right chambers with preserved right ventricular systolic function, and mild pericardial effusion.

The evolution was torpid with complicated flail chest and multiple organ failure; therefore, given the absence of signs of right heart failure, cardiac surgery was delayed. Tricuspid valve annuloplasty with neochord repair of the anterior leaflet, and plication at the level of the commissure between the septal and the anterior leaflet were performed six months later. The patient made good clinical and echocardiographic progress, with TR (grade II/IV) and normalization of right chamber dimensions.

Conflicts of interest

None declared (See authors' conflicts of interest forms on the website/ Supplementary Material).



See additional video in: <https://youtu.be/TYYUzjJB2XQ> - https://youtu.be/szx_kwaiFe0