

COMPLICATIONS OF CARDIAC CONTUSION DIAGNOSED USING MULTIMODALITY IMAGING

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A 32-year-old male with a history of end-stage renal disease on hemodialysis presented to Houston Methodist Hospital with chest pain and hypotension following a motor vehicle accident. Echocardiography revealed severe right ventricular (RV) enlargement with akinesis of the RV free wall and a pericardial mass (Image 1: arrow). He had severe restriction of the posterior tricuspid leaflet and no coaptation of the tricuspid leaflets, resulting in severe tricuspid regurgitation (Image 2: dashed arrow demonstrating V wave cut-off sign). Cardiac computed tomography angiography revealed a 2 cm x 7 cm intrapericardial loculated nonenhancing fluid collection (HU 15-25 likely exudative) located anteriorly and extending superiorly to the level of the aortic arch (Image 3: H).

The patient was taken to the operating room, and the fluid collection was evacuated and sent to pathology. A 37-mm St. Jude Attune™ adjustable tricuspid annular ring (St. Jude Medical, Sylmar, CA) was placed. Pathology was consistent with a subacute hematoma (Image 4: HE sections demonstrating cardiac myocytes with myxoid change, fibrosis, chronic inflammation, fibrin deposition, and hemosiderin laden-macrophages). Patient did well and was discharged home. Follow-up imaging revealed persistent significant tricuspid regurgitation, small residual pericardial hematoma (RH), and significant dilation of the right atrium (RA) and RV (Image 5, 6: arrow points out 37-mm St. Jude Attune adjustable tricuspid annular ring).

