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Traumatic Tricuspid Valve Rupture after Blunt Chest Trauma - A Case Report and Review of the Literature

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Abstract
Introduction: Despite the high frequency of thoracic injuries secondary to traffic related accidents, the blunt cardiac valve rupture is extremely rare.
Method: Case report and review of the literature using PubMed/MEDLINE and EMBASE databases.
Result: A 38 year old female patient, victim of car accident was admitted. On primary survey the patient was conscious, cooperative and hemodynamic and respiratory stable. On secondary survey was found a bilateral open leg fracture and a “seat belt” sign. Whole body Computed Tomography revealed minimal haemorrhagic contusion of the cortex, left hemo-pneumothorax and right pneumothorax, bilateral rib fractures, liver contusion, left femoral neck fracture and fracture to the lumbar spinal column. After bilateral pleurostomy, the patient becomes hemodynamically unstable, but with no signs of external bleeding. The transthoracic echocardiography revealed an acute severe tricuspid regurgitation with hepatic veins reflux. After orthopaedic surgeries, the tricuspid valve rupture was managed by replacing the valve with a bio-prostheses. The hospital stay was 122 days.
Conclusion: Only a high index of suspicion may reveal blunt cardiac lesions as a cause for hemodynamic instability in acute setting.
Key words: tricuspid valve, rupture, blunt trauma