

## LETTER TO EDITOR (VIEWERS CHOICE)

# PSEUDOANEURYSM OF LEFT VENTRICLE AS A LATE MANIFESTATION OF THORACIC TRAUMA BY HOOF KICK OF A HORSE

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### KEYWORDS

chest trauma, pseudoaneurysm, tricuspid insufficiency

### ARTICLE HISTORY

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A 14 years old boy presented with left sided chest pain, breathlessness and ecchymosis at the left side of his chest 4 hours after a chest trauma by a hoof kick of a horse. On examination, there was cardiovascular failure with hypotension (blood pressure 80/50 mm of Hg) and tachycardia (heart rate 140/min), dyspnea and ecchymosis at the left side of his chest. On the day of admission, CT chest was normal. Electrocardiogram (ECG) showed a right branch block on V1 and V2 leads. Transthoracic echocardiography (TTE) demonstrated an interventricular communication of 5 mm in size, large tricuspid valve leak with probable dislocation of the tricuspid valve. Cardiac MRI on second day of admission showed Magnetic resonance imaging (MRI) performed 2 days after the injury demonstrated traumatic tricuspid insufficiency, dilation of the right-side cavities and prolapse of the septal leaflet with left ventricular ejection fraction of >60%. Five days after the injury, an open-heart surgery was performed. Interatrial communication was closed and reimplantation of the anterior pillar of the tricuspid valve with tricuspid valvo plasty was done. However, the interventricular communication was inoperable. He had an uneventful post-operative period. Six months later, left and right cardiac catheterization was performed which showed 3 mm muscular restrictive media septal interventricular communication with normal intra-cardiac pressures and saturations. bTTE performed after 2 years showed dilatation of the left ventricular with conservation of its function with post-traumatic communication of the left ventricular with the infundibulum without signs of endocarditis. Three years after injury, he had dyspnea with asthenia. Thoracic MRI showed a communication of the left ventricular with the infundibulum (false aneurysm of left ventricle). A cardiac catheterization was performed with closure of the interventricular communication by a 6 mm prothesis (LIFETECH heart R VSD occlude). There was disappearance of the dyspnea, asthenia and murmur in a few days.

Thoracic blunt trauma to the heart occurs much more frequently than one would suspect.<sup>1</sup> Valvar lesions occur

in less than 1% of the cases and are predominantly of the aortic and mitral valves. Ventricular and atrial septal defects occur even more rarely in thoracic blunt trauma. Lesions of the coronary arteries (laceration, thrombosis, dissection of the ostium) have been found in less than 2% of cases in an autopsy series.<sup>2</sup> In our patient, there was the tricuspid insufficiency with interventricular communication. These lesions cannot be congenital because he had no dyspnea or breathlessness previously. The evolution of cardiac complication in a thoracic trauma can be chronic. In our case, the pseudoaneurysm had been discovered 2 years after injury. The pseudoaneurysm of the left ventricular are often asymptomatic. The interval between the chest trauma and the symptomatology can go from five days to twenty years.<sup>3,4</sup> Thus, in post trauma, cardiac lesions should be monitored for a long period to detect complications at earlier stages.

### Compliance with Ethical Standards

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**Conflict of Interest:** None

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