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Title: Case report of a cold weapon wound to the chest

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Affiliations:

Topic:

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Background: Chest trauma accounts for 25% of trauma death causes. 70% of all chest traumas are blunt and usually request a conservative treatment, while open chest traumas must not be underestimated due to their impact on death and morbidity rates.

Aim: This clinical case involves the surgical treatment of an open chest trauma caused by a knife stuck in the left hemithorax, with severe post-traumatic lesions which had been not highlighted by chest CT scan.

Methods:

The male 48-years-old patient was taken to our E.R. showing hypotension (AP: 80/60), anemia (Hb:7g/dl) and tachycardia. He was alert but not cooperating. The cold weapon was stuck in the left parasternal region. In E.R. urgent blood tests were assessed, resuscitation and chest surgery consultancies were required, and plasma expander and fibrinogen were given. A.B.G. pH 7.33, pCO₂ 31 mmHg, pO₂ 101 mmHg (under a 7 Liters per minute oxygen flow with non-rebreather mask), Lactate 6, SpO₂: 99%. In order to define the most appropriate surgical approach, a thorax CT scan showed a left hemothorax and pericardial effusion without evident lesions of heart and large blood vessels. Upon the thoracic surgeon arrival, access to the surgical theatre was arranged to remove the knife and explore the pleural space. After opening the pleural space, the hemothorax was drained, revealing a damage of the internal mammary vessels in the left IV intercostal space on the parasternal line. Pericardium damage and blood clots in the pericardial sac were also evident. The pericardium opening was enlarged to remove the clots with evidence of right ventricle bleeding. Prolene 3/0 stitches apposition allowed the suture of the right ventricle wall.

Results:

Post-operative course was uneventful. The patient underwent echocardiography and dynamic electrocardiography checks with normal results.

Discussion:

This case highlights the need for chest surgical exploration when multiple elements are present: hypotension, tachycardia, haemothorax and pericardial effusion make the thoracotomy mandatory regardless of the absence of contrast medium leak at CT scan, in order to perform a complete examination of traumatic lesions and a safe and definitive control of bleeding.

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Position presenting author: underlined



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