

INTRAPERICARDIAL VENA CAVA INJURY BY FIREARM PROJECTILE

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INTRODUCTION

Firearm projectile injuries (PAF) are the cause of thousands of deaths in Brazil every year, being responsible for 75% of homicides that occurred in 2012 in underdeveloped countries in the Americas¹, in Brazil, 30825 homicides were committed by PAF, 1878 in Minas Gerais. Despite observing a drop of approximately 25%. Vascular injuries are the main causes of death in FAP trauma, with a mortality rate of up to 90%², making timely management in trauma reference centers a challenge.

CASE REPORT

Male patient, 17 years old, admitted to ``Hospital João XXIII`` in Belo Horizonte from Rio Piracicaba by helicopter after 12 hours of trauma. In the emergency room, an initial assessment was carried out and the patient was found to be hemodynamically stable. On examination, PAF perforations were observed in the anterior chest wall, in the second parasternal intercostal space on the right and a hole in the seventh right intercostal space in the midclavicular line, a tangential hole in the left hypochondrium, holes in the left arm, right forearm and right leg with open fractures. of the left humerus, right tibia and right ulna. Distal pulses were present and without motor deficits. The chest X-ray showed hypotransparency in the right hemithorax with the presence of two projections in this topography. In FAST, the presence of free fluid (LL) was detected in the four quadrants and a small amount of LL in the pericardial sac. Referred to the surgical

center (SC), chest drainage was performed on the right, draining 1.5 L of blood. Xyphopubic midline laparotomy revealed grade III liver injury in segment VIII with active bleeding, tamponade with compresses, pericardial window positive for blood, followed by sternotomy and opening of the pericardial sac, with profuse bleeding from a lesion in the superior vena cava (SVC). Partial clamping of the SVC was performed with Satinsky forceps and the wound was raffiated with 4.0 polypropylene. Then, the mediastinal pleura on the right was opened, revealing a diaphragmatic injury and transfixing injury of the lower lung lobe, without active bleeding, hepatorrhaphy and abdominal drainage after synthesis of the cavities, cleaning and temporary fixation of the bone fractures and sent to the ICU. On the 6th day he developed pericarditis, responding well to clinical treatment, returning to the CC on the 17th day for definitive treatment of the fractures.

DISCUSSION

For Naidoo and Hardcastle (2021), injuries in the region of confluence between the right atrium and the SVC are potentially fatal. According to Westphal (2009), the involvement of large vessels is one of the main factors for the lethal outcome after thoracic trauma. The patient remained hemodynamically stable for 12 hours due to the presence of a clot that formed plugging the SVC lesion. Cardiac tamponade did not occur due to communication between the pericardial sac and the pleural space on the right. Hemothorax is justified by both intrapericardial injury and liver injury.

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