



Complex open chest trauma: an exceptional mechanism

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ABSTRACT

Chest trauma are frequent and often severe life-threatening. The therapeutic management depends on the clinical imperative sometimes requiring surgery. We report the therapeutic strategy in a patient with a complex open chest trauma due to an exceptional mechanism.

Keyword : complex open chest trauma; exceptional mechanism.

INTRODUCTION

Chest trauma are frequent and often severe. Whether open or closed, severe trauma may be responsible for respiratory distress and / or hemodynamics. The therapeutic strategy depends on the clinical picture.

MATERIALS AND METHODS

Observation:

Mr J.H, aged 45 years, with no special medical history, was snapped up some six hours earlier by a combine resulting in him a complex open chest trauma. The examination for admission is a conscious patient with a Glasgow score 15/15, superficial wounds on the face and right arm, shocked with a systolic blood pressure of 80 mm Hg and diastolic 60 mmHg, tachycardia at 100 beats / min, a respiratory frequency of 32 cycles / min with a paradoxical breathing. A quick review of the thorax objective hemi-thorax right with open skin defect. The count in the blood count showed anemia 8g / dl and leukocytosis with 21,500 white / mm³ elements. No radiological assessment could not be conducted. The patient underwent an energy requirement by up with a transfusion of three blood units, and delivery to the operating room to complete the assessment of the lesions under general anesthesia. We noted a complex cross wound from the chondro-sternal articulation to the rear right scapular region with a muscle tear interesting the pectoralis major, the large dorsal muscle and the large serrated. In addition to rib fractures of the anterior and lateral edges of the 3rd coast right up to the ninth right rib. This trauma has caused an opening in the chest with visible right lung (Figure 1). A kind of anterior thoracotomy was performed by trauma from the axilla to the sternum. The spacing of the flail chest allowed to objectify a wound of the right upper lobe that was sutured with an average abundance of hemothorax requiring the establishment of a chest tube. The rest of the pulmonary parenchyma and the diaphragm were intact. The end of surgery, we performed a reconciliation of ribs and a suture of the muscles with the realization of a

flap on the loss of costal substance (Figure 2). The patient was supported in surgical intensive care with good clinical and paraclinical evolution. The monitoring of the patient in consultation objective an asymptomatic patient with good wound healing, no other abnormalities on clinical examination (Figure 3). The radiological survey showed pleural effusion of low abundance with a left lower lobe atelectasis (Figure 4).



Figure 1a



Figure 1b



Figure 2



Figure 3



Figure 4

Discussion:

The thorax injuries are frequent. They represent one third of admissions and trauma are present in two thirds of road accident victims. Chest trauma are serious and life-threatening in 20 to 50% of traffic accidents [1]. This is the case in the polytrauma holding several violations of injury, including brain and abdominal level, or in case of high-energy trauma. The gravity is also due to the possibility of mediastinal vascular lesions which are real "time bombs" if they are ignored during initial charge. A chest wound is life-threatening in case of tension pneumothorax, massive hemothorax, tamponade or gas embolism. Lung parenchyma, airways, heart, large mediastinal vessels, internal intercostal and mammary arteries may be injured. These represent the most common cause of thoracotomy, which remains a necessary gesture for approximately 30% of patients [2]. Programming must be discussed according to other hemorrhagic extra-thoracic lesions. [3] If the patient is stable hemodynamically, a more comprehensive assessment is possible. If clinically significant hemothorax, pleural drainage is required. When haemothorax is asymptomatic, studies have not shown superiority of pleural drainage compared to a simple monitoring [4,5]. The prognosis is essentially determined by the nature of the wounding agent, hemodynamic status on admission and the presence of lesions within or outside the chest.

CONCLUSION

The management of traumatized severe chest should include a rapid and systematic initial assessment, a radiological assessment of the lesions in a stable patient if not stabilized or in the operating room in an unstable patient, and finally an army and close monitoring due to the dynamic gravity chest trauma.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

AUTHOR CONTRIBUTIONS

All authors contributed to the writing of this manuscript and read and approved the final version.

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