



Pathology Biology Section – 2009

G87 Rupture of the Left Ventricle Due to Blunt Trauma - A Pediatric Case Study

Francois Paysant, MD, Chu, Hopital Michallon, BP 217, 38043 Grenoble Cedex 9, Grenoble, FRANCE*

The goal of this presentation is to describe cardiac rupture following thoracic or abdominal trauma, which is relatively unknown, particularly in the pediatric traumatology.

Cardiac tamponade due to traumatic rupture of the chambers of the heart, in particular the left ventricle, after blunt thoracic trauma is described only sparsely in the literature. Most cases involve multiple thoracic trauma following motor vehicle accidents. To the best of knowledge, blunt traumatic injury following a household accident has not been described.

The case study will be presented of a five-year-old victim of a household accident, in which two concrete basins apparently fell on him. He died quickly despite attempted resuscitation.

The autopsy showed an ecchymotic scrape in the lumbar region as the only external lesion, with no bone injuries, bilateral pulmonary contusions at the base of both lungs, hemorrhagic extravasation of the diaphragm and mediastinum, hemopericardium, and massive damage to the apex of the left ventricle. Pathological exam confirmed the traumatic origin of the cardiac rupture, with no underlying pathology.

The mechanisms described in the literature that result in such lesions, the mechanism which the authors believe most probable in this case, and the importance of background information will be discussed. In this case study, lack of specific information concerning the accident prevents a definitive conclusion of the exact mechanism that caused this massive trauma particularly due to the fact that the external examination couldn't find any lesion in favor of a thoracic or abdominal traumatism. It is unknown if such an isolated case of a lesion causing almost immediate death has previously been described in the literature.

Blunt Thoracic Trauma, Left Ventricular Rupture, Autopsy