

Crash Complications: Navigating the Challenges of Traumatic Diaphragmatic Hernia

Introduction

Traumatic diaphragmatic hernia, resulting from blunt or penetrating trauma, can cause life-threatening complications. Therefore, prompt diagnosis is crucial to avoid significant consequences.

Case description

A 40-year-old woman was involved in a motor vehicle accident, struck by a lorry while driving. Extricated by emergency services, she arrived at the Emergency Department restless, with GCS of 13 and unequal pupils. Diagnosed with left hemothorax by E-FAST (Extended Focused Assessment with Sonography in Trauma), she underwent chest tube insertion and extensive resuscitation. CT revealed left diaphragmatic hernia, liver injury, multiple intracerebral bleed and fractures. A total of 4 pints packed cells, 1 cycle of DIVC, and subsequently CPR was done on the patient. Despite damage control resuscitation with ICU support, patient succumbed to death after 14 hours of resuscitation.

Discussion

Complicated traumatic diaphragmatic hernia (TDH) is the most common form of diaphragmatic injury that is caused by high impact injury leading to lethal complications. It occurs in 1%-7% of blunt abdominal traumas, indicating catastrophic damage. Compression of the lungs due to intrathoracic abdominal contents results in a decrease in lung reserve, respiratory compromise and mediastinal shift. In cases of bag-and-mask ventilation, a lack of awareness and delayed suspicion combined with vigorous breathing will exacerbate the condition by filling the intrathoracic organs and creating a viscous cycle. Clinically, TDH is suspected when there is an abdominal injury with reduced breath sounds and gurgling sounds on chest examination. A nasogastric tube curled up in thoracic cavity is also a pathognomonic for TDH. Diagnosis is often delayed due to its rarity and nonspecific symptoms, with clinical guidelines being sparse. Hence, CT (Computed Tomography) scans are essential for suspected cases. Early surgical intervention is crucial, with laparoscopy preferred for stable patients and open surgery for unstable ones. Damage Control Surgery is vital for critically unstable patients. In ED settings, early nasogastric tube insertion aids in decompressing intrathoracic abdominal contents, improving ventilation and circulation.

Conclusion

Recognizing diaphragmatic rupture is crucial due to the severity of associated injuries, necessitating an aggressive diagnostic approach in at-risk patients.

Keywords

Diaphragmatic hernia, trauma, nasogastric tube