Medical Case Study Format - Single and Multiple Authors

Title – The title is a summary of the abstract itself and should convince the reader that the topic is important, relevant, and innovative.

Authors – Include name, degree and institutional affiliation. The authors included should be those who contribute significantly to the intellectual content of the case report.

Introduction - Describe the context of the case and explain its relevance and importance

- Describe whether the case is unique. If not, does the case have an unusual diagnosis, prognosis, therapy or harm? Is the case an unusual presentation of a common condition? Or an unusual complication of a disease or management?

- Describe the instructive or teaching points that add value to this case. Does it demonstrate a cost-effective approach to management or alternative diagnostic/treatment strategy? Does it increase awareness of a rare condition?

Case description – Follow the basic rules of medical communication. Report the case in sequence.

- Describe the history, examination and investigations adequately. Is the cause of the patient's illness clear-cut? What are other plausible explanations?

- Describe the treatments adequately. Have all available therapeutic options been considered? Are outcomes related to treatments? Include the patient's progress and outcome.

Discussion – Discuss rationale for decisions that were made and the lesson from the case.

- Report a literature review of other similar cases. Describe how this case is different from those previously reported.

- Explain the rationale for reporting the case. What is unusual about the case? Does it challenge prevailing wisdom?

- In the future, could things be done differently in a similar case?

Title: **Diaphragmatic Rupture Secondary to Blunt Thoracic Trauma**

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Introduction: Diaphragmatic rupture is a relatively rare injury with a reported incidence of 1 to 7% of all patients following significant blunt trauma.[4] In a review of 1589 patients, Asensio et al reported that 75% had left sided injuries, 23% had right-sided injuries, and 2% had bilateral injuries.[1] This preponderance for left-sided injuries is thought to be related to the protective effect of the bare area of the liver in contact with the diaphragm in the right thorax.[3] The pathophysiology in blunt trauma is due to the abrupt change in intraabdomonial pressure that is thought to cause the majority of injuries, although shearing and/or avulsion can also occur especially following lateral trauma.[2]

Case Presentation: We present a case of a 71-year-old African American male who was involved in a high speed motor vehicle collision, as an unrestrained back seat passenger. He was transferred from a local hospital to a Level-1 trauma center 5 hours after the injury. His chief complaint was left anterior chest wall pain.

On primary survey, his airway was patent, respiratory rate was 16 breaths per minute with an oxygen saturation of 98% on 2 liters oxygen via nasal cannula. Decreased breath sounds as well as bowel sounds were auscultated in the left thorax. Heart rate was 76 beats per minute with a blood pressure of 130/84 mm Hg. Clinically, the patient appeared calm and hemodynamically stable; neurologically, he was non-focal without any deficits. Secondary survey was grossly unremarkable aside from left anterior chest wall tenderness to palpation. Trauma bay chest X-ray demonstrated significant injuries to the left thorax including multiple rib fractures, hemothorax, and diaphragmatic rupture with herniation of bowel loops into the chest cavity (Fig. 1). Pelvis X-ray and FAST exam were grossly unremarkable. Upon insertion of a nasogastric tube, repeat chest X-ray demonstrated the nasogastric tube to be in the left upper abdomen coursing upwards into the left thorax and terminating at the level of the left third rib (Fig. 2). The patient underwent emergency laparotomy for repair of the diaphragmatic defect. Incidentally, a splenic laceration of the inferior pole was identified, with significant intra-operative bleeding. Successful repair of the diaphragmatic injury as well as splenectomy was achieved without incident.

Discussion: This case illustrates the prompt and accurate diagnosis of diaphragmatic rupture leading to optimal patient outcome.

Perfect Words