Abstract for Case Report

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**Title: From Shallow Wound to Deep Trouble: A Case of Liver Artery Laceration**

**Background**

Penetrating trauma, particularly stab wounds to the abdomen, represents a significant challenge in emergency and trauma departments. Such injuries can result in substantial internal damage, even when external wounds appear minor. Rapid and accurate assessment is crucial, as delays in intervention can lead to increased morbidity and mortality. Early evaluation and referral to the primary surgical team are essential in managing penetrating abdominal trauma.

**Case presentation**

A 64-year-old male presented to the emergency department following an assault resulting in a stab wound to the abdomen. The patient was hemodynamically stable upon arrival with a haemoglobin level of 13.9 g/dL. Physical examination revealed a 1 cm deep laceration in the epigastric region. An initial Extended Focused Assessment with Sonography for Trauma (EFAST) identified minimal free fluid in the hepatorenal angle. Despite initial stability, the patient’s condition deteriorated. He became drowsier, and repeated haemoglobin levels dropped to 10 g/dL with metabolic acidosis. A repeated EFAST showed a large amount of free fluid in the hepatorenal angle, indicating the potential for rapid progression in cases of internal bleeding. A CT scan was performed, revealing a grade 4 liver injury with active arterial bleeding from a pseudoaneurysm in the left hepatic artery. The patient underwent an emergency exploratory laparotomy. He received a total transfusion of 3 pints of packed red blood cells, 2 units of fresh frozen plasma, and 2 units of platelets, with an estimated blood loss (EBL) of 1.8 liters.

**Discussion**

This case illustrates the potential severity of seemingly minor abdominal stab wounds, particularly when involving vascular structures such as the liver. Despite the superficial nature of the initial injury, a stab wound can result in significant internal bleeding if an artery is compromised. Serial EFAST examinations provided crucial, real-time information that guided clinical decision-making and facilitated the timely identification of worsening internal bleeding.

**Conclusion**

In conclusion, this case underscores the importance of recognizing the potential severity of liver injuries, even from seemingly minor stab wounds.

Keywords;

Liver artery laceration, Penetrating abdominal trauma

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