Trans-Hiatal Repair Of Esophgeal Rupture In Blunt Trauma: A Case Report

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Objectives

Blunt traumatic injuries are a rare cause of esophageal rupture however they can be life-threatening. In the United States the incidence of traumatic esophageal injury is less than 1% of trauma patients. Prompt surgical interventions remain the cornerstone of effective management. Here, we present a rare case of esophageal rupture after a high-speed motor cycle collision (MCC).

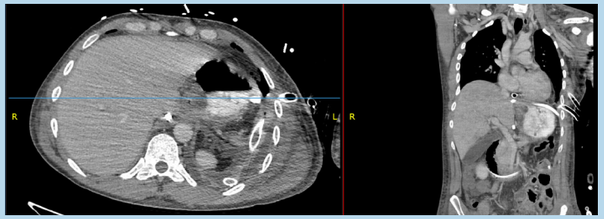
Methods

The patient is thirty-two year old male who was involved in a high-speed motor cycle collision. On arrival to trauma bay, the patient was alert and oriented, but hemodynamically unstable. Our initial evaluation revealed a Glasgow Coma Scale of 13 (E4, V4, M5), blood pressure 60/40 mmHg, heart rate 142 beats/min, breathing 15 breaths/min, and oxygen saturation 80% on non-rebreather with absent breath sounds on left side. An emergent left sided large bore chest tube was placed. Ultrasound (FAST) showed a large amount of intrabdominal fluid. Massive transfusion protocol was initiated. Secondary exam revealed left upper and lower extremity deformities and peritonitis on abdominal exam. The patient was taken emergently to the OR for exploratory laparotomy. Patient was found to have a grade five splenic injury underwent subsequent splenectomy. After this maneuver and adequate resuscitation, the patient became hemodynamically stable. Further inspection revealed multiple grade one gastric serosal injuries, a grade one left diaphragmatic injury and grade two esophageal injury at the gastroesophageal (GE) junction with gross contamination of left thoracic cavity with food contents. The esophagus was then fully mobilized at the GE junction and mucosal injury was fully evaluated after extending the muscularis layer. We performed primary repair with two layers over the EGD scope as a bougie. The repair was buttressed with a stomach fundus with Nissen fundoplication. The diaphragmatic injury was primarily repaired along with the gastric injury. It was noted that the vagus nerve was injured so a Heineke-Mikulicz pyloroplasty was performed. Nutritional access was established via G-J tube. Multiple drains were placed including chest tubes for wide drainage. The patient was placed on broad spectrum antibiotics.

Esophagus Injury Scale

Grade*	Description of Injury	ICD-9	AIS-90
I	Contusion/hematoma	862.22/32	2
	Partial thickness laceration	862.22/32	3
II	Laceration <50% circumference	862.22/32	4
III	Laceration >50% circumference	862.22/32	4
IV	Segmental loss or devascularization <2cm	862.22/32	5
V	Segmental loss or devascularization >2cm	862.22/32	6

**Advanced one grade for multiple lesions up to grade III.*



Results

He was eventually discharged to rehab after planned CT esophagogram on post operative day eleven revealed no leak and he tolerating a diet orally.

Conclusion

While blunt esophageal trauma is difficult to diagnosis, prompt surgical intervention has shown significant decrease in both morbidity and mortality. Given the location of injury, trans-abdominal repair was feasible. Outpatient interval follow-up will be mandatory to evaluate for long term complications.

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