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Trauma

Woman with nausea and abdominal pain after a motor vehicle collision

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1 | PATIENT PRESENTATION

A 41-year-old woman presented to the emergency department with nausea, anorexia, and persistent abdominal pain after a motor vehicle collision 25 days prior. On the day of her motor vehicle collision, a contrasted computed tomography (CT) of the chest and abdomen (Figure 1) revealed multiple, non-operatively managed liver lacerations and rib fractures. She was ultimately discharged after an uneventful hospital course. On her repeat visit, physical exam was notable for moderate upper abdominal pain without rebound, guarding, or ecchymosis. Despite normal vital signs and laboratory work, a repeat contrasted CT of the chest and abdomen revealed abdominal contents in the left hemithorax (Figure 2). The patient underwent laparoscopic repair of her diaphragm with successful reduction of her abdominal contents.

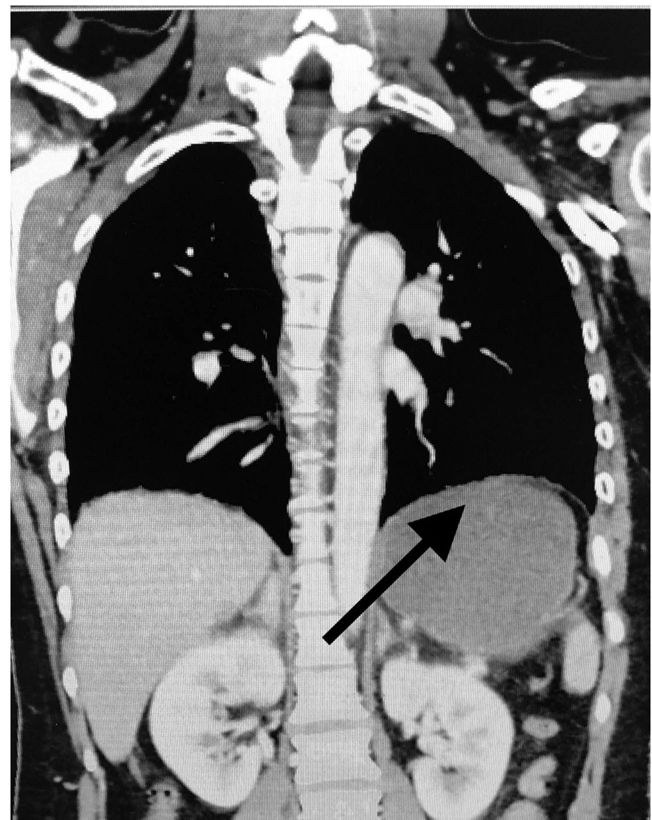

FIGURE 1 A coronal slice of a contrasted computed tomography on the day of the motor vehicle collision without evidence of diaphragmatic injury (black arrow)

2 | DISCUSSION

Diaphragmatic ruptures are uncommon and occur in 0.8%–5% of blunt abdominal trauma, with up to 30% of cases presenting with delayed symptoms.[1,2] The timeframe from injury to presentation ranges from days to years after the inciting event, with the longest reported delay being 50 years.[3] Sensitivities of X-ray alone for diaphragm injury without herniation is 25%–50%.[4] With the use of newer generation CT scanners, the diagnostic sensitivity for detecting diaphragmatic injuries at the time of injury is 71%–90%.[5] Despite improved sensitivities with CTs, in the setting of recent blunt trauma and new or worsening abdominal pain, a low threshold should be maintained to initiate workup for delayed diaphragmatic injury because of its associated morbidity and mortality of 40%–60% if missed.[6]

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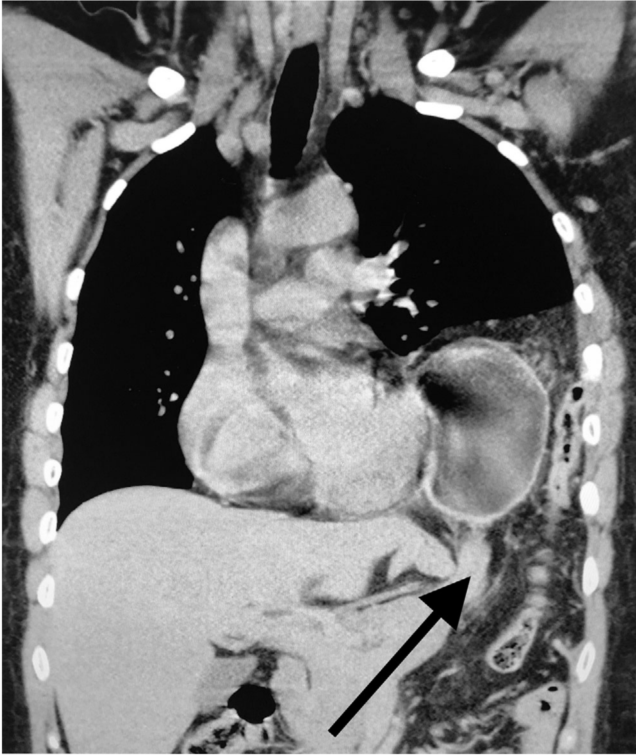

FIGURE 2 A coronal slice of a contrasted computed tomography on the day of her repeat visit demonstrating abdominal herniation into the left hemithorax through the diaphragm defect (black arrow)

DISCLAIMER

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