Role of diagnostic laparoscopy in penetrating anterior abdominal wall trauma

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DESCRIPTION

A man aged 38 years who underwent assault, presented with a stab wound to the anterior abdomen, LLQ (figure 1A). He was haemodynamically stable, no peritoneal signs on abdominal examination, FAST and local wound explorations were inconclusive. CT scan of the abdomen/pelvis did not show any obvious evidence of small bowel injury (figure 1B). Owing to the proximity of the small bowel to the abdominal

wall, the patient was admitted and monitored for delayed diagnosis and injury in our level I trauma centre. Over the next 6 hours, the patient gradually became more tachycardic, with mild abdominal distension. Emergent diagnostic laparoscopy was performed, yielding a knuckle of small bowel protruding into the abdominal wall (figure 1C) and an enterotomy in the distal jejunum (figure 1D), which was resected and a primary anastomosis was performed.

A. Stab wound to LLQ Anterior Abdominal Wall

B. CT ABD/Pelvis

D. Jejunal Enterotomy

C. Eviscerated small bowel

Figure 1 Note the LLQ abdominal stab wound seen (A) that failed to show any signs of eviscerations of fascia violation on examination. CT ABD/pelvis (B) shows the small bowel abutting the abdominal wall, close examination shows the abdominal wall haematoma, and in hindsight evidence to raise suspicion for bowel injury and evisceration. (C) Diagnostic laparoscopy confirms fascial violation and small bowel enterotomy (D).

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Learning points

- ▶ A management algorithm for anterior abdominal wall stab wounds has evolved over the years from conservative management which were managed non-operatively in the 19th century to mandatory laparotomy during World War I. Pendulum swung the other way in the 1960s to decrease the rate of negative abdominal explorations and morbidity associated with a laparotomy. Over the years, algorithms to better select patient population who can benefit most from mandatory exploration have been refined.¹
- ▶ The Eastern Association for the Surgery of Trauma currently recommends as a level 1 recommendation that non-operative management (eg, local wound exploration examining defects in fascia, diagnostic peritoneal lavage, FAST ultrasound examination, CT imaging and serial abdominal examination) are best suited for patients who are haemodynamically stable without overt signs of peritonitis.^{2 3}
- ▶ Laparoscopic surgery is clearly becoming common practice as surgeons are progressing along the learning curve. We anticipate incorporation of laparoscopic techniques early on in the management algorithm of anterior abdominal wall stab wounds as they become second nature and incorporate into the evolving armamentarium of the minimally invasive trauma surgeon.

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