Abdominal wall injury from laparoscopic trocar insertion

Alex Tse, MD, Jason D'Cruz, MD

Mount Sinai South Nassau, Oceanside, NY

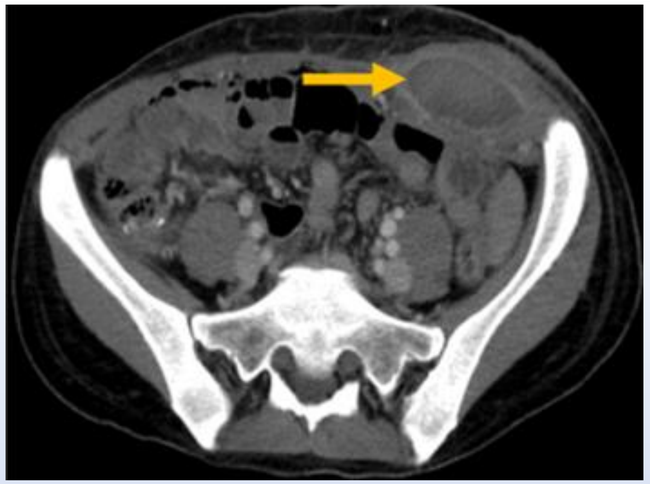


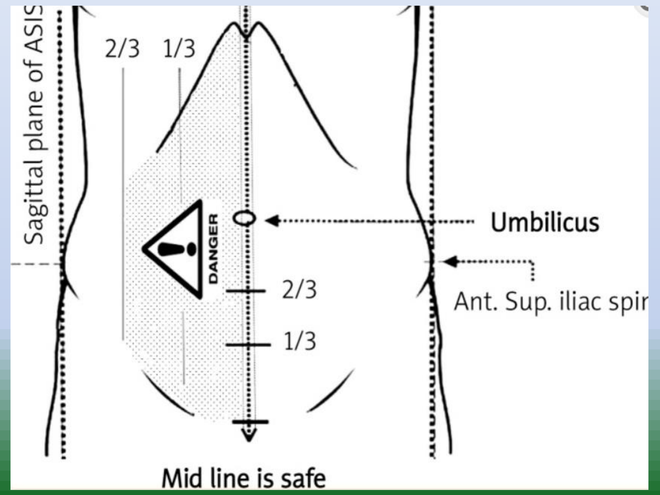
BACKGROUND

Trocar insertion is an essential part of laparoscopic surgery. Vascular injury and gastrointestinal perforation are the most common access-related complications from Veress needle and placement of primary trocar. We present a case of an abdominal wall hematoma resulting from a 5mm port insertion and review the literature.

CASE REPORT

A 43-year-old female underwent laparoscopic appendectomy for acute appendicitis. Access to the abdomen was achieved using a Veress needle at the left upper quadrant. A supraumbilical midline incision was made, and a 10mm optical trocar was inserted into the abdomen. Subsequently, two 5mm bladed trocars were inserted in the left lower quadrant and suprapubic region. The rest of the procedure was carried out in a routine fashion. Notably, the trocars were removed under direct visualization and with no apparent bleeding from the port sites. A few hours later, a 10 x 15 cm swelling was found over the lateral abdominal wall port site associated with skin ecchymosis. The swelling was asymptomatic, and the patient was discharged the next day. She presented to the emergency room 10 days later with pain associated with swelling and fever. CT imaging confirmed an abscess collection associated with the hematoma which was percutaneously drained. The patient was discharged 3 days later after removal of the drain.





CONCLUSIONS

The reported rate of vascular injury is about 1 to 6 per 1000 laparoscopic surgeries. Abdominal wall vessels, most commonly the inferior epigastric artery, or larger mesenteric vessels may be injured. Bleeding is rarely observed during surgery as the insufflated abdomen creates a tamponade effect over the vessel. A hematoma, as seen in our case, develops in the recovery room or up to 2-3 days postoperatively. Bladed trocars are more likely to cause vascular injury than smooth trocars. Abdominal wall hematomas may be managed conservatively unless causing hemodynamic instability. Mortality associated with intraabdominal injury is about 15%. Knowledge of the abdominal wall anatomy, transillumination of the abdominal wall before introducing trocars, and entering the abdomen at the correct angle can decrease the possibility of vascular injury.

REFERENCES

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