A Case of a Port Site Abdominal Wall Haematoma Following a Diagnostic Laparoscopy

Anderson I[1]
[1]The Women's and Children's Hospital, Adelaide, Australia

Background

Vascular injury from trocar insertion during laparoscopic surgery is a relatively rare complication. Perforation of abdominal wall vessels by secondary trocars occurs in 0.3 to 2.5% of laparoscopic procedures[1]. It can result in acute bleeding at the time of laparoscopy or a delayed haematoma formation. If hemodynamically stable, with no signs of haematoma expansion, patients can be managed conservatively. However, rapidly expanding, or infected haematomas often requiring surgical intervention.[2]

Case

A 37-year-old woman was admitted for an elective laparoscopy and excision of endometriosis for pelvic pain and heavy menstrual bleeding. She was otherwise healthy and well with no significant past medical history.

Three ports were used – a 5-mm umbilical port, and two 5-mm accessory ports at the left flank and left iliac fossa. The procedure was uncomplicated with no evidence of endometriosis. The ports were removed under direct vision. The incisions were closed with 3-0 monocryl subcuticular sutures and glue to skin. She recovered well and was discharged home four hours later.

She represented to the emergency department two hours later with increasing pain and swelling over her left iliac fossa. Examination showed a large 15 x 12cm haematoma over the left lower port site with overlying bruising. Her pain continued to increase significantly, and the haematoma was noted to expand over the following hour. The decision was therefore made for surgical management.

She returned to theatre for a laparoscopy and evacuation of a haematoma. There was no intra-abdominal bleeding seen on laparoscopy, the left inferior epigastric artery was identified and intact with no bleeding evident. A haematoma was visible above the rectus sheath, lateral to the inferior epigastria artery. The left iliac fossa port site was extended to 4cm, with 100ml clot evacuated. An arterial bleeding vessel was identified and tied with 2/0 vicryl for haemostasis.

Her haemoglobin the following morning had dropped from 122 to 91, however she was feeling well and mobilising with only minimal pain. She was discharged home later the same day.

Discussion

Trocar insertion is an essential part of any laparoscopic procedure. Whilst uncommon, complications can arise due to vascular injury at the time of insertion, even with lateral placement of 5mm trocars. Knowledge of vascular anatomy, visualisation of superficial vessels via transillumination, insertion of ports under direct vision, entering the abdominal cavity at a right angle, and use of the smallest trocar possible can reduce the rates of vascular injuries. Bleeding may not be identified with the ports in place and the abdomen insufflated due to tamponade. It is therefore also important for ports to be removed under direct laparoscopic vision.[3]

References:

1. Wong, C., & Merkur, H. (2016). Inferior epigastric artery: Surface anatomy, prevention and management of injury. *The Australian & New Zealand journal of obstetrics & gynaecology*, *56*(2), 137–141
2. Martín-Malagón, A., Arteaga, I., Rodríguez, L., & Alarco-Hernandez, A. (2007). Abdominal wall hematoma after laparoscopic surgery: early treatment with selective arterial transcatheter embolization. *Journal of laparoendoscopic & advanced surgical techniques. Part A*, *17*(6), 781–783.
3. Pryor, A., Mann, W., & Bates, A. (2023). Complications of laparoscopic surgery. *UpToDate*. Retrieved April 24, 2024, from www.uptodate.com/contents/complications-of-laparoscopic-surgery