

Umbilical port site hernia after laparoscopic hysterectomy – a lesson to be learned

Cátia Sofia Ferreira Pinto Lourenço* and Sandra Cristina Marcos Batista

Rua do Casqueira, n 307; 4505 472 Lobão, Portugal

Introduction

A rapid increase in the number and complexity of laparoscopic procedures has been accompanied by unique complications, many of which are specific to abdominal access [1-3]. One such rare complication is the development of port site hernias, with an incidence estimated to be between 0.02 to 3.6% and a cause of associated significant morbidity [3].

This case report aims to highlight this issue and also the investigation and management of this problem.

Case history

A 66-year-old patient, with prior history of hypothyroidism and hypertension, was scheduled laparoscopic surgery. She had an endometrial polyp and a six-centimeter simple cyst of the right ovary. The patient underwent a hysterectomy and bilateral adnexectomy by laparoscopy.

The Veress needle technique was used to create the pneumoperitoneum and then a 12-mm infraumbilical vertical skin incision for the main trocar was made to allow placement of the 10-mm laparoscope. Additional ports at the suprapubic region (10 mm) and at both iliac fossa (5 mm) were inserted. The scheduled surgery was performed, but it was complicated by the presence of firm adhesions between the uterus, the adnexa and the bowel.

On post-operative day three the patient developed progressive abdominal distension, crampy abdominal pain and bilious vomiting, with no fever. On examination, the abdomen was distended and diffusely tender. Her total white cell count had increased to 18.000cells/uL and CRP to 123. Plain radiographs of abdomen showed dilated small bowel loops with multiple air fluid levels and no gas in the colon. A Computed Tomography (CT) scan of the abdomen showed a small bowel herniation through the umbilical port site with dilated jejunum and proximal ileum and collapsed distal ileum and colon distal to that point.

A laparotomy was performed and the hernia into umbilical trocar site was noticed. The viability of the bowel was compromised and so, segmental enterectomy and anastomosis were performed, and the hernia orifice repaired.

The patient was well and discharged at the 5th post-operative day.

Discussion

The incidence of port site hernia after laparoscopic surgery is estimated to be between 0.02 to 3.6% [4].

The risk factors associated with the occurrence of trocar site hernias are related both to the patient's characteristics and the surgical

technique [2]. These include large trocar size, stretching the port site for specimen retrieval, midline trocars, pre-existing umbilical defects, coughing movements at the time of too early reversal of general anesthesia, obesity, pre-existing diseases such as diabetes mellitus and connective tissue disorders, advanced age, steroid therapy, poor nutrition, operation site infection and post-operative chest infections. However, the single most important factor in their development remains the improper closure of the fascial defects at the port sites, that was what happened in our case [2-5].

The clinical presentation of trocar site hernias is variable and depends on the extent and nature of the herniated content [3,4].

If a patient complains of nonspecific symptoms including nausea, vomiting, and vague abdominal pain, clinical imaging (i.e., plain radiography or computed tomography) may be helpful to diagnose port site herniation and differentiate it from post-operative ileus [3,5].

A study done by Tanouchi et al. showed that 86.3% of hernias occurred in sites where the trocar diameter was 10 mm or more, although rarely in 5 mm ports. Fascial closure is recommended for ports ≥ 10 mm; this has been found to decrease the incidence of herniation and significantly decreases postoperative morbidity and related costs [1,3]. Re-approximation of the fascia can be accomplished in a variety of ways. Ideally, the fascia is directly visualized with the aid of retractors. The fascial edges are grasped and closed with interrupted or continuous suture. A number of specialized instruments have been devised for fascial closure at the port site (e.g., Grice' suture needle, Carter-Thomson needle-point suture passer, Endo Close™ instrument, Reverdin suture needle). The benefit of these devices is yet to be proven [1].

In conclusion, it is necessary to repair the fascial and peritoneal layers to prevent port site hernia, especially if the port has ≥ 10 mm. Before a suspicion of a port site hernia prompt investigation and intervention should be engaged. CT scan is a helpful adjunct to diagnose port site herniation and differentiate it from postoperative ileus.

References

1. Karthik S, Augustine AJ, Shibumon MM, Pai MV (2013) Analysis of laparoscopic port site complications: A descriptive study. *J Minim Access Surg* 9: 59-64. [[Crossref](#)]

*Correspondence to: Cátia Sofia Ferreira Pinto Lourenço, Rua do Casqueira, n 307; 4505 472 Lobão, Portugal, Tel: 00351 968112230; E-mail: shiomara@sapo.pt

Key words: laparoscopy, complications, port site, hernia

Received: September 01, 2018; **Accepted:** September 27, 2018; **Published:** October 06, 2018

2. Pamela D, Roberto C, Francesco LM, Umberto M, Carla M, et al. 2011. Trocar site hernia after laparoscopic colectomy: a case report and literature review. *ISRN Surg* 2011: 725601.
3. Rammohan A, Naidu RM (2011) Laparoscopic port site Richter's hernia - An important lesson learnt. *Int J Surg Case Rep* 2: 9-11. [[Crossref](#)]
4. Singh P, Kaushik R, Sharma R (2006) Umbilical port hernia following laparoscopic cholecystectomy. *J Minim Access Surg* 2: 29-30. [[Crossref](#)]
5. Elshafie GA, Al-Wahaibi K, Al-Azri A, Al-Qadhi H, Al-Harhi A (2010) Port site herniation of the small bowel following laparoscopic-myomectomy: A case report. *Sultan Qaboos Univ Med J* 10: 106–113. [[Crossref](#)]