



Unexpected life threat after incisional hernia repair

Mehmet Yildirim*; Ahmet Deniz Ucar; Hilmi Yazici; Burak Dede

University of Health Sciences, Izmir Bozyaka Education and Research Hospital, Turkey

***Corresponding Author(s): Mehmet Yildirim,**

University of Health Sciences, Izmir Bozyaka Education and Research Hospital, Izmir, Turkey

Tel: 0090-532-285-5557

Email: mehmetyildi@gmail.com

Abstract

Intraoperative diagnosis of iatrogenic bowel injuries is usually not exceedingly difficult, because intestinal loops are often visible during dissection procedure. However, when they are confused with dense adhesions, all effort to prevent damage may be useless.

We present a case of iatrogenic ileum perforation during the repair of an incisional hernia with polypropylene mesh and delayed postoperative diagnosis.

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Introduction

Repair of incisional hernia is one of the most common surgical procedures. In the last decades both laparoscopic and open hernia repair using prosthetic mesh have become increasingly popular [1]. A conventional hernia repair like the on lay technique has been proven to give excellent results. The fact that hernia repair for recurrent hernia is very traumatic than that for a primary abdominal closure. The trials show differences in the rate of complications after repair of incisional hernia [2]. Infection is a rare complication and it has been occurred at a rate of 5%. Meanwhile, a greenish color change of the skin is a useful sign for evaluating postoperative abdominal events, such as intestinal perforations, intra-abdominal infections and infection or hematomas of the Polypropylene mesh (PP).

In this paper, we present a case of iatrogenic small bowel perforation during the repair of an incisional hernia and postoperatively associated with abdominal wall necrosis.

Case Report

A 58-year-old female was admitted to the Department of General Surgery with abdominal pain and color change of the skin extending from the surgical site to the lateral abdominal quadrants. Furthermore, there was a swelling and crepitation at the abdominal skin. The patient had a history of repair of incisional hernia 2 days ago in another hospital. She was a comorbidities of diabetes mellitus. On physical examination, the abdomen was distended with tenderness and muscular defense. Laboratory tests showed elevated white blood count (12.8 mm³), alanine aminotransferase (438 U/l) and aspartate aminotransferase (784 U/l). Blood investigation showed a severe metabolic acidosis. The patient underwent an urgent laparotomy, and surgical findings demonstrated an ileal perforation with feculent peritonitis and muscular necrosis of the abdominal wall. A shriveled PP mesh was seen within the necrotic tissue (Figure 1). Furthermore, an intraabdominal collection was seen encased between the small bowel segments and mesh.



An ileostomy procedure was done from the small bowel segment containing the perforation site. Subsequently, the remaining mesh was completely excised from the abdominal wall. The ensuring fascial defect was not sutured, and an open abdomen procedure was done with Bogota bag. Unfortunately, the patient died 1 day after surgery with multiple organ failure.

Discussion

Iatrogenic small bowel perforation is a life-threatening complication after incisional hernia repair [3]. The mechanisms behind the perforation are extreme adhesions between the intestinal loops and hernia sac. The diagnosis of iatrogenic bowel perforation may be difficult intraoperatively because of confused intra-abdominal anatomy or surgical inexperience [4]. Because no intraoperative problems and clinical signs of peritonitis occurred, first surgeon did not consider this complication. While postoperative pain usually subsides 12-24 hours, pain associated with peritoneal irritation usually deteriorates within the time. Ultrasound and computed tomography can detect intra abdominal pathologies and muscular necrosis of the abdominal wall. Our patient was presented as a delayed patient with abdominal sepsis and multiple organ failure. This delay may be due to not have assistant physicians help to the surgeons or heavy workload in the hospital.

The diagnosis of abdominal catastrophic can be difficult due to confusion with the repair of the hernia. The studies showed that delayed repair of perforation and improper waiting time was associated with worse outcomes. To prevent this complication the patients have required prompt diagnosis and primary repair of the perforation or ostomy procedure.

As a conclusion definitive diagnosis of an iatrogenic bowel injury and repair must be done during the surgery. If the inside of the abdomen is clean, the abdomen wall should be closed using mesh. Patients should be followed closely after surgery not to miss a life-threatening condition.

Figures



Figure 1: Intraoperative appearance of infected PP mesh.

References

1. Bhuller JS, Gayagoy J, Chaudhary S, Kolachalem R. Delayed presentation of a bowel injury after laparoscopic ventral hernia repair. *JLS*. 2013; 17: 495-498.
2. Van der Voort M, Heijnsdijk EAM, Gouma DJ. Bowel injury as a complication of laparoscopy. *Br J Surg*. 2004; 91: 1253-1258.
3. Gray SH, Vick CC, Graham LA, Finan KR, Neumayer LA, Hawn MT. Risk of complications from enterotomy or unplanned bowel resection during elective hernia repair. *Arch Surg*. 2008; 143: 582-586.
4. Vincent C, Moorthy K, Sarker SK, Chang A, Darzi AW. Systems approaches to surgical quality and safety: from concept to measurement. *Ann Surg*. 2004; 239: 475-482.