



A Rare Complication Following Laparoscopic Umbilical Hernia Repair: Case Report and Review of the Literature

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Abstract

The incidence of postoperative infection following laparoscopic surgery is approximately 5 percent. These infections tend to involve the wound and underlying subcutaneous tissue. We report a case of severe infection following laparoscopic umbilical hernia repair. To date there are no such documented infections. A literature review of uncommon complications after laparoscopic surgery will follow. Surgeons should be aware of such rare complications and their subsequent management.

Keywords: Umbilical hernia; Infection; Laparoscopic repair

Introduction

Infection following umbilical hernia repair is rare. Investigations of mesh versus suture repair report a wound infection rate of one percent or less [1,2]. Documentation of intra-abdominal collections is not evident within the published literature.

Case Presentation

A forty-five year old company director presented to an Accident & Emergency department with symptoms and signs suggestive of an acute abdomen. He was a fit gentleman with no history of Diabetes mellitus. He underwent an emergency laparotomy for appendectomy and saline washout; the intraoperative findings were generalized pus, within the abdomen, and an inflamed appendix. He made an uneventful recovery and presented, a year later, to another hospital with an umbilical hernia. This was repaired with Prolene mesh using a standard three-port technique. The operation was uneventful but five days later he was complaining of severe abdominal pain and rigors. A computerized tomographic scan revealed a collection around the mesh. He therefore underwent an open procedure; the mesh was removed and two drains were placed in-situ. After a course of intravenous antibiotics against Multi-Resistant *Staphylococcus aureus* (MRSA), the drains were removed and the patient discharged.

One month later, he re-presented to the Accident & Emergency department of our hospital with an umbilical swelling that was painful, tender and fluctuant. He showed a neutrophilic leucocytosis (leukocyte and neutrophil count, 11.2 and 8.0). An abdominal CT scan did not show a collection within the peritoneal cavity. Consequently, the patient underwent incision and drainage of an umbilical abscess. Pus cultures revealed MRSA and the patient was commenced on intravenous Vancomycin. Although he improved on the first postoperative day, the next day pus was seen to be pouring out of the surgical wound. He had a further CT scan of the abdomen which showed a large collection between the Internal and External Oblique muscles. The antibiotic regime was altered to Daptomycin and Rifampicin and the wound allowed draining freely. He continued on this management plan for two weeks. Pus draining from the wound reduced in volume and a CT scan showed a marked reduction of pus volume within the intermuscular plane. A sinus beginning at the intermuscular plane and opening into the surgical wound could also be seen. The patient was discharged and reviewed, on a weekly basis, at the outpatient clinic. The wound eventually closed but the patient complained of abdominal pain on movement, coughing and straining. A CT scan showed no pus collection within the intermuscular plane and abdominal cavity.

Discussion

Mesh repair of umbilical hernia is associated with minimal recurrence rates; in fact, recurrence is less than suture repair [3]. However, there are reports of unusual complications, following mesh repair, such as enterocutaneous fistula [4]. A infection, as serious as this one, following laparoscopic umbilical hernia repair is not reported. The case report highlights the serious impact such a

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complication can have to a young, fit individual.

The cause for intermuscular infection cannot be categorically determined but it is likely that the mesh, acting as a foreign body, is one of the factors. The time elapsed after appendectomy, when the hernia repair was performed, is unlikely to be contributory to his clinical problem of intermuscular pus.

The pain that he now experiences may be due to the scar tissue formed between the External and Internal Oblique muscles.

Severe infections following laparoscopic hernia repair are few. There are reports of major vessel injury, fistulae and visceral strangulation. Randomized trials report major injuries to vessels and viscera to be in the range of 0 to 0.12 percent [5]. This type of infection is extremely rare but must be considered if a patient presents with a tender umbilical swelling post hernia repair.

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