

Case Report

Incarcerated umbilical port site hernia

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ABSTRACT

With increase in the number of laparoscopic procedures being performed, the incidence of port site complications has also increased proportionately. Infection and port site hernia are the commonest of the complications. Port site hernias are more prone to complications in view of the irregularity and narrowness of the defect. A case of an incarcerated umbilical port site hernia is presented to highlight the complexity of the problem and the surgical challenge that it poses.

Keywords: Complicated umbilical port site hernia, Hernia management

INTRODUCTION

The advent of laparoscopy has revolutionised the treatment of various abdominal diseases. Though the morbidity and mortality associated with minimally invasive surgery is substantially low, yet when complications develop the outcome may be unpredictable. The incidence of port site hernia especially at umbilical site has increased over a period of time.¹ A case of a incarcerated umbilical port site hernia with exposed omentum is presented to highlight the complexity of complications of port site hernias.

CASE REPORT

A 35 years old female patient presented with an open lesion discharging sero-purulent fluid in the periumbilical region (Figure 1). Patient has undergone laparoscopic tubal ligation six months back following which she developed infection at umbilical port site. She sought treatment from the local practitioner. Regular dressings were done with no therapeutic effect. Patient was then referred to my surgical unit for further treatment.

Physical examination revealed a pouting soft tissue mass. There was an ethilon stitch adjacent to the pouting lesion (Figure 1).



Figure 1: Pouting omentum (green arrow) at the site of the defect.

Wound was infected. Contrast enhanced computed tomography (CECT) was done which revealed omentum attached to the under surface of anterior abdominal wall.

The patient was treated conservatively by regular dressings and course of antibiotics till the purulent discharge stopped.

The patient then underwent surgical intervention. An anatomical tissue repair using a double breasting technique with component separation was done. Adherent omentum was seen connected to the pouting mass (Figure 2). Herniotomy was done after disconnecting the adherent portion of the omentum. Flaps were created from the rectus sheath by separating individual anatomical components of the rectus sheath complex after incising the anterior rectus sheath vertically. A new midline was created by approximating the medial cut edges of the anterior rectus sheath flaps (Figure 3). This was then followed by approximating the lateral edges of the anterior rectus sheath flaps (Figure 4A & 4B).



Figure 2: Adherent underlying omentum (black arrows) in continuity with the pouting mass.



Figure 3: Creation of a new midline at the site of the defect (interrupted black line) by approximation of the flaps created from the anterior rectus sheath.

The placement of mesh was differed in view of previous infection at the site of the defect. Suture removal done on 10th post-operative day with complete healing. The

patient is following up for last 3 months with no complications.



Figure 4A: Lateral cut edges of the anterior rectus sheath approximated by interrupted non-absorbable sutures.



Figure 4B: Final outcome after securing the sutures.

DISCUSSION

Umbilical port site is one of the common sites for development of incisional hernia. A variety of factors may play a significant role.¹⁻³

The size of port is a very important factor. Usually a 10 mm port is placed at the umbilicus. Inadequate closure may lead to dehiscence and development of incisional hernia. Infection is also common at the umbilical site especially in cases where skin has been inadequately prepared prior to surgery. Infection can lead to poor wound healing and dehiscence. Older age and higher body mass index may contribute significantly to the development of incisional hernia. Proper technique for port removal is as important and deserves special mention and necessitates meticulous technique. The port should ideally be removed under direct vision.^{4,5} The approximating suture should preferably be taken under vision using the port closure cone and needle technique which ensures good area of the tissue bite being taken by the needle. The other method consisting of retraction of

skin with approximation of cut edges will lead to missing of the firm aponeurotic edge as the edges are usually obscured by the subcutaneous fat. Thereby leaving behind the tissue defect. Deflating the pneumoperitoneum should be done after edges have been secured before approximating the edges. A blunt obturator should be introduced into the trocar followed by lifting up the anterior abdominal wall before removal of the trocar.⁵ This ensures that neither intestine nor omentum gets sucked into the trocar. The stitch is then tightened while gently lifting the anterior abdominal wall at the site of the incision. Irrigation of the subcutaneous tissue with diluted Hydrogen peroxide solution adds to the efficacy of the aseptic process.

Treatment of port site hernia may pose a surgical challenge in selected cases as in the case presented. If intestine is caught at the site it usually presents with clinical features of a Richter's hernia.⁴ Onset of symptoms in the immediate post-operative period is highly suggestive. A CT scan of the abdomen is mandatory to confirm the diagnosis.^{4,5} Once the diagnosis of an entrapped bowel loop is confirmed, an emergency laparotomy is indicated. Omentum is one of the most common content of the sac in port site hernias.^{4,5} Wound dehiscence with superadded infection leads to exposure of the content as was seen in the case presented. Assuming the pouting omentum to be granulation tissue by virtue of its close resemblance, the family physician is inadvertently prompted to overlook the seriousness of the complication. Usually the patient continues to be treated for a long time by just dressings without any cure. In the case presented omentum was seen pouting at site of defect with superadded infection.

An anatomical repair in such a scenario is the best option especially in cases with open wounds as in the case presented. Placement of mesh should be avoided at any cost as chances of the mesh getting infected are extremely high leading to disastrous septic complications. Component separation with good approximation of flaps in layers offers a good cure rate in such cases.^{6,7}

CONCLUSION

Meticulous closure of the umbilical port is of utmost importance. The cut edges should be approximated under vision by any method preferably by using the cone and needle technique.

Utmost precautions with respect to surgical site infection prophylaxis should be exercised. A CT scan should be performed in all cases of port site incisional hernia. Open surgical intervention with anatomical repair is the safest and most preferred modality of treatment especially in cases with open wounds. A prosthetic mesh should not be used in case of infected or incarcerated port site incisional hernia.

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