Pouch of Douglas internal hernia successfully treated laparoscopically

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Abstract

A rare case of internal herniation of a peritoneal defect in the pouch of Douglas is being reported. It presented as a case of intestinal obstruction, which after investigation, on laparoscopic exploration was found to be a case of internal hernia getting obstructed in the pouch of Douglas. It was successfully treated by marsupialisation of the defect laparoscopically. A 33-year-old female presented with pain abdomen and vomiting. On investigations, she was found to be having a small intestinal obstruction. Conservative trial failed and then diagnostic laparoscopy was done, which revealed a peritoneal defect in the pouch of Douglas with the incarcerated distal ileal loop. Contents were reduced, and laparoscopic marsupialisation of the peritoneal defect was done. A rare case of defect in peritoneum with no defect in muscular layer in the pouch of douglas. Internal hernia is being reported and successfully treated laparoscopically by marsupialisation for the first time.

Keywords: Diagnostic laparoscopy, internal hernia, intestinal obstruction, pouch of Douglas

INTRODUCTION

Internal hernias are not so uncommon cause of intestinal obstruction across all age groups. Para duodenal fossae hernias are the most common type of congenital internal hernia. Internal hernias of foramen of Winslow, transomental, pericaecal and supravesical are other rare subtypes of internal hernia. The pouch of Douglas defect with peritoneal defect presenting as internal hernia with intestinal obstruction has been rarely published in literature.

CASE REPORT

A 33-year-old female with a history of lower segment cesarean section 4 years ago was admitted with pain abdomen along with bilious vomiting. On examination, the abdomen was distended and tender. Plain X-ray erect abdomen [Figure 1a] showed multiple asymmetric central air-fluid levels suggesting distal ileal obstruction. Contrast-enhanced computed tomography showed [Figure 1b] dilatation of proximal ileal and jejunal loops, and ileal loop that was seen going into pelvis. The trial of conservative treatment for 2 days was unsuccessful. The diagnostic laparoscopic evaluation revealed a terminal ileal loop going into a peritoneal defect in the pouch of Douglas region [Figure 2a]. The edge of the defect was well formed and seemed to be avascular. Ileal loop was released by widening the defect using the harmonic...
scalpel. Laparoscopic marsupialisation of the defect was done [Figure 2b]. The post-operative period was uneventful.

**DISCUSSION**

Internal hernia can be congenital or acquired. Congenital internal hernias are described as above, and acquired defects are common and mostly seen in the mesentery.\(^3\)

The difference between congenital and acquired defects is usually based on the site of the defect, type of the defect and lined by vascular elements or not.

Most of the internal hernias have characteristic clustering on imaging.\(^4\) The inlet of most of the paraduodenal fossae is lined by vessels, hence blind enlargement of defect results in vascular injury. The treatments of most of the internal hernias are operative reduction and closure or obliteration of defect,\(^3\) whereas in this case, we have successfully attempted marsupialisation. The primary aim should be at the prevention of recurrence.

If diagnosed early operative reduction is simple.\(^6\) It is necessary for all surgeons to have adequate knowledge of various internal defects and their anatomy to avoid per-operative confusion, inadvertent vascular injury around the rim of the defect. The prognosis is usually good.

**CONCLUSION**

A rare case report of the pouch of Douglas defect causing internal hernia is being reported. This is the first reported laparoscopically successful reduction of the pouch of Douglas internal hernia, by doing marsupialisation.

**Declaration of patient consent**

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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**Conflicts of interest**

There are no conflicts of interest.

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