

Post appendectomy incisional hernia: a case report

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ABSTRACT

A 31-year-old man presented to the outpatient clinic at United Mission Hospital with colicky abdominal pain and bulge over the incision site which was more prominent on coughing. There was no fever. The abdomen was soft with no tenderness over the incision site and an expansive though reducible swelling was present over the right iliac fossa. The patient had undergone open appendectomy recently for acute appendicitis twenty days back. Ultrasonography revealed a 2.21cm muscle defect- findings consistent with interstitial incisional hernia. The patient underwent exploration through the same incision site electively. The subcutaneous tissue was found to be healthy. Anatomical repair with mesh placement was done. The postoperative period was uneventful and he was discharged on third postoperative day with instructions regarding dressing, removal of sutures on tenth postoperative day and avoidance of heavy weight lifting or straining and to follow up after a month.

Keywords: Appendectomy, incisional hernia, interstitial hernia

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INTRODUCTION

Appendectomy is a very common surgical procedure and post-appendectomy incisional hernia is a very rare complication that occurs in less than 0.12% of patients.^{1,2} An interstitial incisional hernia is one in which the hernia sac is located between the layers of the abdominal wall. In 1911, Hogue first called attention to the occurrence of right inguinal hernia following appendectomy with drained wounds. Many of these had not only a right inguinal hernia but also an associated postoperative hernia at the site of the appendectomy scar. Hogue and Watson attributed the occurrence of the inguinal hernia to a weakening of the abdominal wall following injury to the ilio-inguinal and ilio-hypogastric nerves.³ We report a case of post appendectomy incisional hernia diagnosed using ultrasonography.

Case Report

A 31-year-old man presented to the outpatient clinic with colicky abdominal pain and bulge over the incision site which was more prominent on coughing. There was no fever. The abdomen was soft with no tenderness over the incision site and an expansive though reducible swelling was present over the right iliac fossa. The patient had undergone open appendectomy recently for acute appendicitis 20 days back. Ultrasonography revealed a 2.21cm muscle defect in the internal oblique and transversus abdominis muscles, through which the hernia sac penetrated to the undersurface of the external oblique aponeurosis (Fig. 1a & b). A diagnosis of interstitial incisional hernia was made.

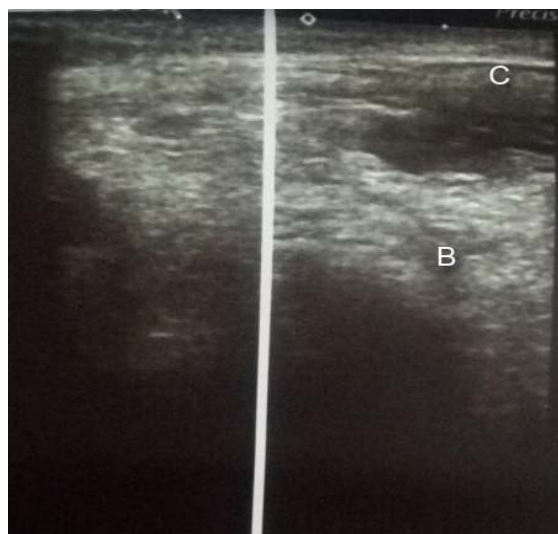


Figure 1a. Preoperative ultrasonography of the abdomen shows a herniation of a knuckle of bowel loop (B); C: Camper's fascia



Figure 1b. Preoperative ultrasonography of the abdomen shows a knuckle of bowel loop (B) on the undersurface of the external oblique aponeurosis (EO). A 2.21 cm defect is seen in the internal oblique (IO) and transversus abdominis muscles.



Figure 2. Intraoperative photograph showing a healthy loop of herniated bowel (B) located between the muscle layers- internal oblique (IO)

The patient underwent exploration through the same incision site electively. The subcutaneous tissue was found to be healthy. The intact external oblique aponeurosis was opened up, and an underlying defect in the muscle layer with a knuckle of bowel caught in the muscle defect was seen (Fig.2). The small bowel was healthy. Anatomical closure of the internal oblique muscle and the external oblique aponeurosis was performed. Mesh of size 56cm² was kept underneath the external oblique. A single dosage of intravenous Ceftriaxone 1gm was given approximately an hour prior to surgical incision. The postoperative course was uneventful. He was managed post operatively with analgesic – intravenous Paracetamol 1gram q6h for first 24 hours then for remaining two days, oral Paracetamol 1gram q6hr and oral Pantoprazole 40mg q 12h was given. Post operatively antibiotics were deferred owing to the finding of healthy bowel loop. He tolerated soft diet well about 4

hours post operatively. He was discharged well on postoperative Day 3 with instructions regarding dressing and suture removal on 10th postoperative day. He was advised not to engage in high intensity sports activities, heavy weight lifting or straining for at least 3 months. He was advised to follow up after 1 month but he was unable to do so owing to his abroad stay.

DISCUSSION

Incisional hernias usually manifest during the first few months after surgery.⁴ The occurrence of these hernias depends on a number of factors, including patient factors such as old age, male sex, obesity, smoking, diabetes mellitus and steroid use, and some surgical factors such as emergency surgery, bowel surgery, infection, and suture type and technique.⁵ In our case, the contributing factors were male sex, emergency surgery. It is possible that in our young patient, infection in the deep muscle layers leading to muscle dehiscence and subsequent hernia formation was the cause of the hernia, which occurred about nine days' post appendectomy.

Two types of incisional hernias can occur after appendectomy. In the more common type, the hernia passes through all layers of the abdominal wall. In the less common interstitial type, the hernia passes through a defect in the transversus abdominis and internal oblique muscles, but not through the intact aponeurosis of the external oblique muscles.² This less common type of hernia can be easily missed. In patients suspected to have this condition, ultrasonography of the abdomen or Non contrast CT abdomen helps confirm the diagnosis. CT can easily demonstrate defects in the abdominal wall muscles and common complications of hernias such as intestinal obstruction, incarceration and strangulation.³ In our case, ultrasonography showed a muscle defect in the internal oblique and transversus abdominis muscles through which the hernia sac penetrated to the undersurface of the intact external oblique

aponeurosis. Treatment of post-appendectomy incisional hernia consists of either anatomical repair or application of a sheet of polypropylene mesh between the peritoneum and transversus abdominis muscle.⁶ Our patient underwent anatomical repair with mesh placement.

CONCLUSION

This case assumes significance, as it involves the interstitial type of post-appendectomy incisional hernia, which should be considered as a rare but important complication of post appendectomy and not many cases are mentioned in review of literature. Early diagnosis and management of such hernias help prevent complications.

Consent

A signed consent was taken from the patient regarding the publication of the case report.

Conflict of Interest

None

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