

Case Report

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Obstructed post-appendectomy incisional hernia - an uncommon finding occurring over a decade after surgery

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Abstract

Incisional hernia is a rare finding following Mc Burney muscle splitting incision of appendectomy which commonly occurs within 5-10 years of the surgery. It can complicate any prior intra-abdominal surgery irrespective of the incision used. We report this case which occurred over a decade after appendectomy.

Keywords: Incisional, Hernia, Post-appendectomy

Introduction

Improvements in surgical access, wound closure techniques, sutures and suturing techniques have not eliminated the occurrence of incisional hernia. Incisional hernia can complicate any prior intra-abdominal surgery irrespective of the incision used – conventional incisions, keyhole incisions and laparoscopic port [1]. Open appendectomy is a common surgery but incisional hernia following appendectomy is uncommon, occurring in 0.12 to 0.7% of patients [2,3,4]. This may be because surgical incision for appendectomy is commonly only few centimetres wide and transverses several layers of split or non-cutting muscles.

Case Report

A 46-year-old woman presented to our emergency ward with complains of right lower abdominal swelling of two years duration that was initially reducible but had become irreducible and painful for a week, associated with non-bilious and mostly postprandial vomiting. There was no constipation or abdominal distension. She had appendectomy 26 years earlier

with no immediate complication and she has had 4 vagina deliveries after the surgery. Physical examination revealed an overweight woman (body mass index, BMI = 28.2 kg/m²) with a firm and mildly tender right iliac fossa mass measuring about 10 x 12 cm and a well healed Lanz incisional scar at the lower edge of the mass. There were neither visible nor palpable cough impulses. Bowel sounds were normal. Plain abdominal x-ray done showed multiple air fluid levels without bowel dilatation. Abdominal ultrasounds (USS) showed a large loculated subcutaneous sac on the right iliac region, containing omentum, a loop of bowel and about 212mls of trapped fluid. A diagnosis of obstructed post-appendectomy incisional hernia was made and she was counselled and booked for surgery. At surgery, a re-entry incision extended about 2-3cm on both ends was made. The hernia sac was identified in the subcutaneous layer, dissected and incised open to reveal a portion of viable omentum attached to it and brownish coloured fluid. The bowel within as revealed by the USS had reduced spontaneously. There was a 2cm defect in the anterior abdominal wall muscle complex through which the contents had herniated. The omentum was freed from its attachment and reduced. The defect was closed using vicryl 2-0 for the redundant peritoneum and

muscles and nylon 1 for external oblique aponeurosis. She had an uneventful postoperative course. She was followed up for 1 year and there was no evidence of recurrence.



Figure 1: Picture showing the healed surgical scar (2-3cm medial and lateral extension of previous Lanz incision) as well as the wound drain exit scar lateral to it.

Discussion

Incisional hernia is common worldwide, occurring after any intra-abdominal surgery and occurs commonly within 5-10 years of the surgical operation or later [3,4,5,6]. This reported case occurred 24 years after an uncomplicated appendicectomy performed with a Lanz incision. It is estimated that 2-11% of patient will develop an incisional abdominal wall hernia [7,8,9]. The true incidence in Sub-Saharan Africa is unknown [10].

Post appendicectomy incisional hernia is rare and occurs in two varieties [4,7,11]. In the more common type, the hernia passes through all the layers of the anterior abdominal wall muscle to become a subcutaneous mass. This type was encountered by the patient we reported above. In the less common variety, it is intraparietal or interstitial, with the hernia dissecting between the layers of the muscles. Like other hernia, the swelling may be reducible, irreducible or obstructed.

Generally, the occurrence of incisional hernias depends on a number of factors including patient factors such as old age, obesity, smoking, diabetes mellitus and steroid use; surgical factors such as emergency bowel surgery, suture type and technique, placement of surgical drains through the incision, strangulating knot tying, abdominal distention and wound infection [3,7]. Significant wound infection after appendicectomy is considered the most implicated risk factor for post-appendicectomy incisional hernia [12,13,14,15]. There was however no history to suggest wound infection in the case presented. Being itself an uncommon complication with uncertain predictability, it might be difficult to investigate the role of peritoneal closure versus non-closure, suture apposition versus non-suture apposition of transversus abdominis and internal oblique muscles,

absorbable versus non-absorbable sutures closure of external oblique aponeurosis, in the aetiology of post-appendicectomy incisional hernia. While there is no evidence to buttress this claim, it may be expedient to pre-emptively close aponeurotic fibres of the external oblique muscles with non-absorbable sutures in difficult cases of appendicectomy and in obese patients.

Repair of incisional hernia can be undertaken surgically as an emergency when complicated or planned electively. Anatomic repair of the defect is done either by approximating with sutures or with the use of surgical mesh. The latter provides a tension free repair obviating the difficulties and high recurrence rate associated with primary repair due to attenuated fascia around the hernia defect [3]. Biologic mesh is used for complicated hernias where the risk of infection is significant. Our patient had simple anatomic suture repair because the surgery was done as an emergency and there was no biologic mesh.

Conclusion

Incisional hernias can occur several years even after a minor procedure like appendicectomy and this can occur in the absence of serious wound infection which is implicated as the major risk factor. In this case report, a case of an incisional hernia which occurred over a decade after appendicectomy is reported. The current management for all incisional hernia is hernioplasty. However, in an emergent situation and in rural setting where this desirable technique is not feasible, anatomic tissue repair should be considered.

List of abbreviations

None provided

Declarations

Ethics approval and consent to participate

Not provided

Consent for publication

Not applicable.

Availability of data and materials

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Competing interests

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Contribution of Authors

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