

Adult small intestinal duplication cyst presenting as a post appendicectomy abdominal mass

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Abstract

Gastrointestinal (GI) duplication cysts are rare congenital malformations. It may involve any level of the alimentary tract, but most commonly involves the ileum, oesophagus, and jejunum. Ileal duplication cysts represent approximately 4–8% of GI duplication cysts, the majority of which present in early childhood. We present a case of adult ileal duplication cyst in a 20-year-old male found to have an abdominal mass. There are several potential methods to diagnose GI duplication cyst and treatment of choice is complete surgical resection.

Introduction

Gastrointestinal duplication cysts are rare congenital malformations occurring in 1 in 4000-5000 live births. They can arise anywhere from mouth to anus and be spherical or tubular in type, having well developed smooth muscle coats, lined by GI mucosa and connected to the bowel. Several theories for its aetiology have been postulated. These structures tend to develop prior to complete differentiation of gastrointestinal epithelium and as such are often named after their organ of association [1, 2]. The most common gastrointestinal duplication cysts are those that involve the ileum, oesophagus, and jejunum [3, 4]. Majority of duplication cysts are detected in children and found rarely in adults. Symptoms of abdominal pain, intestinal obstruction, GI bleeding have been reported but however asymptomatic cysts have been incidental findings at endoscopy or laparotomy [4, 5]. Herein, we report a case of symptomatic duplication cysts of ileum in a 20-year-old male.

Case presentation

A 20-year-old male who underwent an appendicectomy

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2 years ago presented with a three-month history of progressively increasing central abdominal pain. It was associated with loss of appetite and nausea but no features of dyspepsia or alteration of bowel habits were present.

Abdominal examination revealed a mass in the middle and right lower quadrant regions measuring approximately 7 × 5 cm. It was soft, fluctuant and mobile horizontally, suggestive of a mesenteric cyst.



Figure 1. CECT showed a cystic mass in lower abdomen suggestive of a retroperitoneal or pancreatic origin.

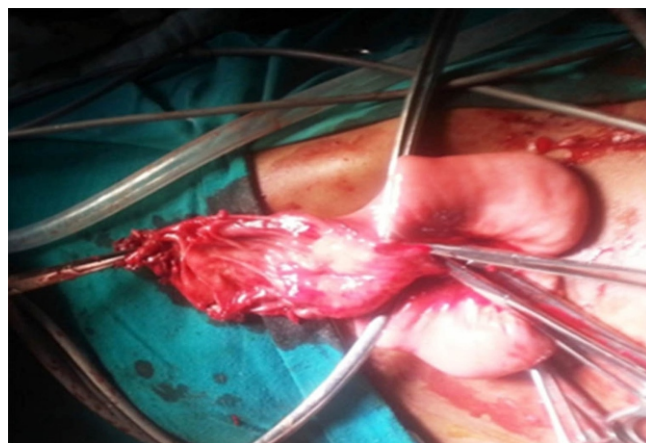


Figure 2. Excision of duplication cyst through previous appendicectomy scar.

The monitor was placed at the right foot end and the trendelenburg position of the patient aided bowel to move towards the epigastrium. Dissection of the RIF mass was carried with 2 working ports triangulated with a supraumbilical camera port. The cystic mass was sheeted over by the greater omentum with adhesions to small intestine and mesentery. Upon circumferential dissection using blunt and sharp techniques, a portion of the cyst was seen connected to the small intestine. The cyst was exteriorized through the previous appendectomy scar. The cyst and the involved part of ileum was resected and primary bowel anastomosis performed.

Discussion

GI duplication cysts are congenital malformations with 1:5000 prevalence and several aetiological theories postulated. They have been detected from mouth to anus and as in this patient, the ileum has the highest propensity. Its recognition in adults is uncommon. Disturbing GI symptoms like pain, gastritis and GI bleeding are the main indications for treatment though however rare malignant transformation has been reported. Definitive diagnosis using USS and CT is not always conclusive as it was with this patient. Hence surgery remains the mainstay in diagnosis and treatment.

Laparoscopy is a useful tool to diagnose when uncertain. Since duplication cysts have different sites of origin, preoperative imaging aids in patient positioning, monitor and port placement for feasible access. Thereby avoids unnecessary laparotomy in young and enhances patient recovery with minimal analgesic need.

Management of asymptomatic cysts remains controversial but many studies advise surgical excision owing to the potential complications.

Conclusion

Treatment of duplication cysts can vary depending on the presence of symptoms. In symptomatic patients, surgical resection is often the choice for symptom relief. In asymptomatic patients, surgical resection is controversial. While some authors advocate for resection due to possible malignant degeneration of the duplication cyst, others have advocated for observation. Since there have been case reports of stable duplication cysts on EUS surveillance, this may be a suitable method of outpatient follow-up and surgical resection can be considered if patient develops symptoms. In any case, surgical versus non-surgical management of asymptomatic duplication cysts is likely to remain controversial until we understand more about the time course and risk factors associated with their malignant degeneration.

References

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Key Points:

- Diagnostic laparoscopy is a useful technique for undetermined intra-abdominal masses. Consideration of human factors and ergonomics is important for proper access and successful dissection.
- Though controversial, excision and histological evaluation of asymptomatic duplication cyst is advised because of possible late complications and potential malignant change