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An interesting case of rare isolated non-communicating enteric duplication cyst

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Abstract

A very uncommon type of gastrointestinal duplication known as a completely isolated duplication cyst lacks communication with the rest of the normal intestine segment and has its own blood supply. Here, we present a case of an adult male with an ileal duplication cyst that is non-communicating.

Case Presentation: A 40-year-old male was admitted to our hospital with a chief complaint of lower abdominal pain and distension, and a palpable mass which had been more evident within the last month. On physical examination, there was tenderness and a semi-mobile mass in the right lower abdomen. In abdominal contrast-enhanced computed tomography: A large cystic mass lesion measuring approximately 22.9×13.4 cm with average (HU=18) with multiple enhancing septae in the right side of the abdomen. The patient was monitored after the procedure and showed no signs of any postoperative problems. Inconclusions: When determining a differential diagnosis for abdominal cystic lesions, replication cysts should be considered. As shown in our example, resection of completely isolated duplication cysts can be safely performed without the need for intestinal resection.

Keywords: Enteric cyst, Gastrointestinal duplication cyst, Rare congenital anomalies

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Introduction

Rare congenital anomalies called enteric duplication cysts can develop anywhere along the gastrointestinal tract, from the tongue to the anus. The ileum is the most typical site for a small bowel duplication cyst, which is the most prevalent kind of enteric duplication cyst [1, 2]. Women have a 2-fold higher prevalence of duplication cysts than men, and there is no evidence of family aggregation [3]. Due to the symptomatology of duplication cysts in young children, diagnosis is made in more than half of cases during this period. On the other hand,

during adulthood, these cysts are typically asymptomatic, and the diagnosis is typically accidental. Duplication cysts are accompanied by additional anomalies in about half of the cases, which are typically found in the oesophagus and vertebrae. Duplication cysts are connected with complications like hemorrhage, fistulisation, and potentially malignant degeneration. A very uncommon type of gastrointestinal duplication known as a completely isolated duplication cyst lacks communication with the rest of the normal intestine segment and has its own blood supply [5-7]. Here, we present a case of an adult male with an ileal duplication cyst that is non-communicating.

Case Report

A 40-year-old male was admitted to our hospital with a chief complaint of lower abdominal pain and distention, and a palpable mass which had been more evident within the last month. On physical examination, there was tenderness and a semi-mobile mass in the right lower abdomen. In abdominal contrast-enhanced computed tomography (Image 1): A large cystic mass lesion measuring approximately 22.9×13.4 cm with average (HU=18) with multiple enhancing septae in the right side of the abdomen.

The lesion is causing a mass effect in the form of posterior displacement of small and large bowel loops. Anteriorly the lesion is closely abutting abdominal wall muscles resulting in its outward bulge, however, there is no evidence of infiltration of the subcutaneous plane. Posteriorly the lesion is closely abutting the rectum with loss of the prerectal fat pad however there is no evidence of intraluminal extension. Laterally, the lesion is reaching up to bilateral iliac blades. However fat planes are well maintained. The lesion is closely abutting bilateral common, internal, and external iliac vessels with loss of planes at places however there is no evidence of luminal compromise or thrombosis noted.

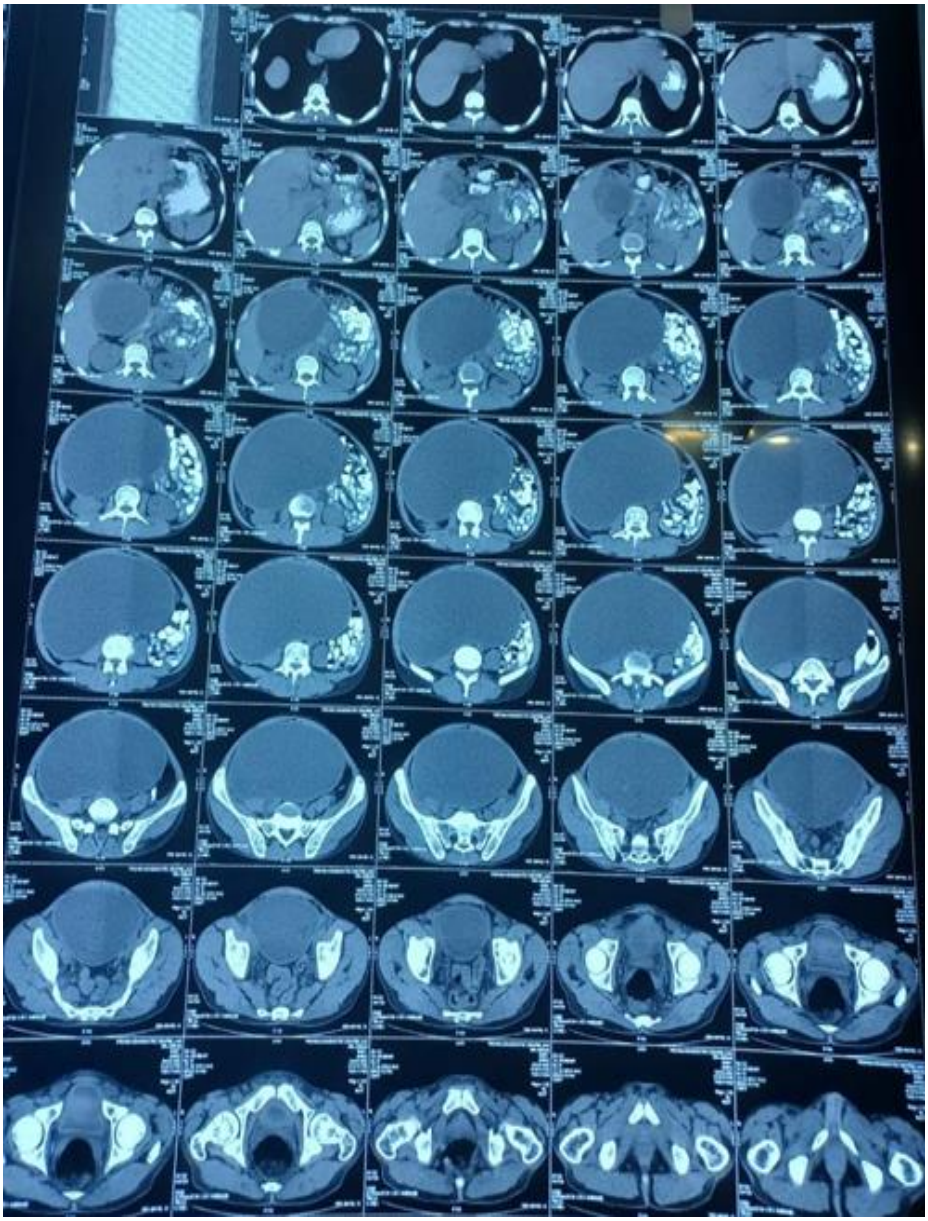

Figure 1.

CT Abdomen showed a large cystic mass lesion measuring approximately 22.9×13.4 cm with average (HU=18) with multiple enhancing septae in the right side of the abdomen.

Without altering the normal bowel or mesenteric anatomy, the entire cyst was removed. The ileal and cystic lumens had no link to one another. Grossly (Image 2): The mucosal layer was intact after the cyst was removed, although there was a tiny defect on the serosal layer. An intestinal duplication cyst was discovered after the tissue underwent a histopathologic

evaluation. The patient was monitored after the procedure and showed no signs of any postoperative problems.

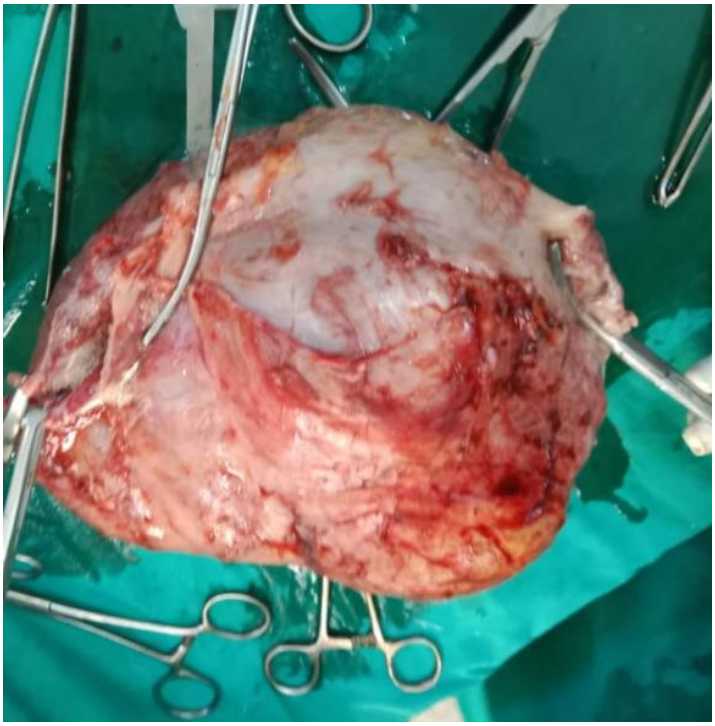

Figure 2.
Specimen

Discussion

Wendel originally characterized duplication cysts in 1911, and since then, only a small number of cases have been documented [3]. Basically linked to the wall of the digestive system (sometimes sharing the serosa), enteric duplication cysts are hollow, epithelium-lined, cystic, spherical, or tubular structures that receive their blood supply from shared mesenteric blood arteries [7]. It is necessary to remove the neighbouring bowel segment together with the duplication cyst because enteric duplication cysts typically share a similar wall and blood supply with the normal intestine [5, 7].

In our situation, the isolated duplication cyst was isolated from the surrounding alimentary segments, had a separate vascular pedicle, and rested on the mesentery. Within the first year of life, intestinal blockage or a palpable mass are typically present together with intestinal duplication symptoms. Similar symptoms can occur in adults, and acute presentations have been linked to recent ulceration-related bleeding or malignant change within the duplication [4, 8].

Adenocarcinoma in adults can develop from unnoticed, asymptomatic cysts. Malrotation and the intestinal duplication cyst can coexist [7]. There are accompanying deformities in

50% of instances, with oesophageal duplications being the most common followed by vertebral abnormalities [3]. In our situation, there was no malrotation or deformities such as oesophageal duplications or spinal abnormalities. These lesions are difficult to identify and are poorly characterized by imaging techniques including computed tomography (CT) and magnetic resonance imaging. However, according to recent studies, endoscopic ultrasonography (EUS), which has greater accuracy rates than conventional imaging methods, may be crucial in the diagnosis of this illness [3].

Duplication cysts' cystic nature may be confirmed by CT scanning and ultrasound. An echogenic mass caused by bleeding and inspissated material within the duplication is visible on ultrasound as a hypoechoic mass with strong posterior wall echoes and good through transmission. In our instance, the cyst contained a clear fluid. The diagnosis of a duplication cyst can be made if the usual inner echogenic mucosal and outer hypoechoic muscle layers are visible on ultrasonography [4, 9]. On a CT scan, duplication cysts can be identified as fluid-filled, smoothly rounded cysts or as tubular entities with thin, slightly enhancing walls in or near the wall of a portion of the gastrointestinal system [4].

In our case, a small intestinal duplication cyst was tentatively identified based on CT and sonographic features. All cystic intraabdominal masses, including mesenteric and omental cysts, pancreatic pseudocysts, and ovarian cysts [4, 8], are included in the differential diagnosis. There isn't a treatment plan for duplication cysts that is generally approved. For symptomatic patients or when a problem develops, surgery is advised. On the care of asymptomatic cases, there isn't agreement yet [3]. In our situation, the patient underwent surgical excision for a symptomatic duplication cyst.

Conclusion

When determining a differential diagnosis for abdominal cystic lesions, replication cysts should be taken into account. As shown in our example, resection of completely isolated duplication cysts can be safely performed without the need for intestinal resection.

Ethical Approval

Not required.

Conflicts of Interest

The authors declare that he has no competing interests.

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None

Study registration

Not required.

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