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GASTROINTESTINAL DUPLICATION CYST: AN UNUSUAL CASE

Radio-Diagnosis

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ABSTRACT

Gastrointestinal duplications are rare congenital anomalies characterized by cystic growths within the smooth muscle wall of the gastrointestinal tract, typically not completely isolated from the tract itself. Multiple theories on their embryological development have been proposed; however, none fully explain all observed variations. The most prevalent form of duplication involves the small intestine, often presenting as spherical or tubular structures along the mesenteric border.5 The clinical presentation of these duplications is largely dependent on the size and location of the cysts, with common symptoms in children including intestinal obstruction and subacute abdominal pain. This case aims to explain the etiology of duplication cysts, describe their clinical presentation and typical imaging findings, and rule out possible differentials such as Meckel's diverticulum, mesenteric cysts, and other cystic masses.

KEYWORDS

Gastrointestinal duplication cyst, enteric duplication cyst, ileocecal junction, abdominal pain, right hemicolectomy, histopathology.

INTRODUCTION

Gastrointestinal duplications are uncommon abnormalities that typically manifest as cystic growth inside the smooth muscle wall. They are rarely totally separated from the tract. Several theories have been put up regarding their embryological development, but none of them has been able to explain all the reported variants.[1,4]

The most prevalent kind of duplication is connected to the small bowel and appears as a spherical or tubular formation at the mesenteric border. Their size and location mostly determine their clinical symptoms, which vary.[2]

In youngsters, they most frequently result in intestinal blockage and subacute abdominal pain.[3]

We discuss the case of a male 21-year-old who was examined for abdominal pain in the right lower quadrant.

Clinical Findings

A 21-year-old male presented with complaints of abdominal pain for 4 days. Initially, the pain was only on the upper part of the abdomen but later progressed to the right iliac fossa.

The pain was insidious in onset, gradually progressive type, spasmodic, no aggravating factor, relieved on medication not associated with abdominal distension. The patient had no history of vomiting, nausea, burning maturation and lower urinary tract symptoms. No similar complaints in the past or history of any surgery. The patient was not a known case of hypertension, epilepsy, asthma or diabetes mellitus. No palpable mass was felt on examination.

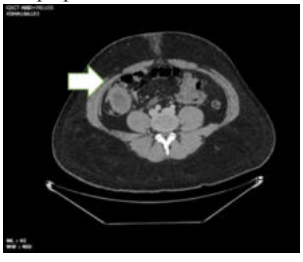

Figure 1: Axial CT image of the abdomen depicting a well-defined hypodense lesion (arrow) in the right iliac fossa.

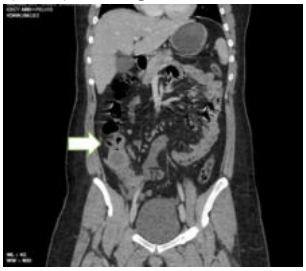

Figure 2: Coronal CT image of the abdomen depicting a well-defined hypodense lesion (arrow) in the right iliac fossa.

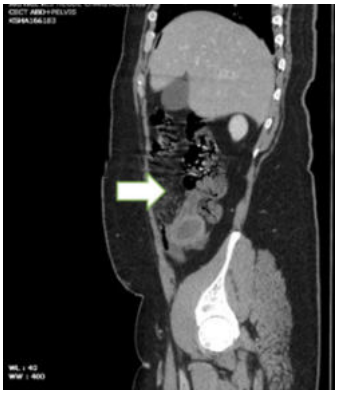

Figure 3: A sagittal CT image of the abdomen depicts a well-defined hypodense lesion (arrow) in the right iliac fossa.

Imaging Findings

Ultrasound

Ultrasound revealed a cystic mass highly suggestive of a mucocele of the appendix, with a rare possibility of an enteric duplication cyst.

Computed tomography

On a CT scan, a well-defined hypodense lesion measuring approximately 5 cm was found abutting the distal ileum with indistinct fat planes about 3.5cm proximal to the ileocecal junction. The appendix was visualised separately and appeared normal.

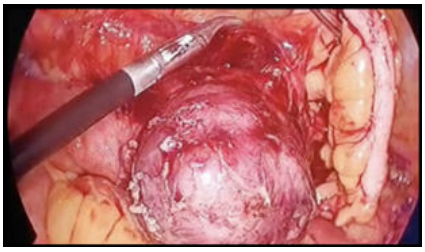

Figure 4: Intraoperative image of the enteric duplication cyst

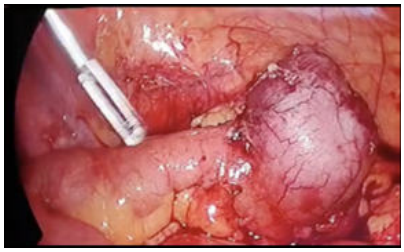

Figure 5: Intraoperative image of the enteric duplication cyst at the antimesenteric border

Post-operative Findings

Diagnostic laparoscopy revealed a cystic lesion in the terminal ileum involving the ileocolic junction. The appendix was noted to be normal. The patient later underwent laparoscopic-assisted right hemicolectomy.

CONCLUSION

Histopathology revealed the findings to be consistent with an enteric duplication cyst. Apart from its location on the antimesenteric border of the intestine, the cyst exhibited the features of a gastrointestinal tract duplication.

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