Case Report

A case report of enteric duplication cyst in adult

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Abstract

Background: Enteric duplication cysts are rare and uncommon congenital malformations formed during the embryonic period of the development of human digestive system and are mainly encountered during infancy or early childhood, but seldom in adults. We report a case of enteric (jejuna) duplication cyst in a 35year old male patient in this article.
Key Words: Enteric duplication cysts, USG- ultra sonography, CT- computed tomography and CECT-contrast enhanced computed tomography.

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INTRODUCTION

Enteric duplication cysts are uncommon congenital abnormalities that originate anywhere along the alimentary tract from the tongue to the anus. A small bowel duplication cyst is the most common type of enteric duplication cyst, and the ileum is the most common location [1, 2]. The prevalence of duplication cysts is 2-fold higher in women, and they show no familial aggregation [3]. Diagnosis is made in more than half of the cases during early childhood because duplication cysts tend to be symptomatic in this age group. Conversely, these cysts are usually asymptomatic during adulthood, and the diagnosis is mostly incidental. In almost half of the cases, duplication cysts are associated with other malformations, mainly located in the esophagus and vertebrae. Complications, such as bleeding, fistulization, and even malignant degeneration, are associated with duplicationcy Enteric duplication cysts are uncommon congenital abnormalities that originate anywhere along the alimentary tract from the tongue to the anus. According to Metehan *et al*., 2011 a small bowel duplication cyst is the most common type of enteric duplication cyst, and the ileum is the most common location.[1] The prevalence of duplication cysts is 2-fold higher in women, and they show no familial aggregation. Diagnosis is made in more than half of the cases during early childhood because duplication cysts tend to be symptomatic in this age group. Conversely, these cysts are usually asymptomatic during adulthood, and the diagnosis is mostly incidental. In almost half of the cases, duplication cysts are associated with other malformations, mainly located in the esophagus and vertebrae. Complications, such as bleeding, fistulisation, and even malignant degeneration are associated with duplication cysts [1]. Steric duplication cysts are uncommon congenital abnormalities that originate anywhere along the alimentary tract from the tongue to the anus. A small bowel duplication cyst is the most common type of enteric duplication cyst, and the ileum is the most common location [1, 2]. The prevalence of duplication cysts is 2-fold higher in women, and they show no familial aggregation [3]. Diagnosis is made in more than half of the cases during early childhood because duplication cysts tend to be symptomatic in this age group. Conversely, these cysts are usually asymptomatic during adulthood, and the diagnosis is mostly incidental. In almost half of the cases, duplication cysts are associated with other malformations, mainly located in the esophagus and vertebrae. Complications, such as bleeding, fistulization, and even malignant degeneration, are associated with

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CASE PRESENTATION

A 35year old male presented with a one day history of colicky left upper quadrant abdominal pain with progression to nausea, vomiting. On examination there was palpable abdominal mass. On laboratory investigations elevated WBC count with normal RBC and platelet count. He had no history of any previous abdominal surgery. USG abdomen and CECT abdomen and pelvis done. On ultrasound single well-defined anechoic cystic lesion noted in relation with small bowel in left upper quadrant with the "double- wall" or muscular rim sign (gut signature sign) with a hyper echoic focus in it seen in Figure-1.

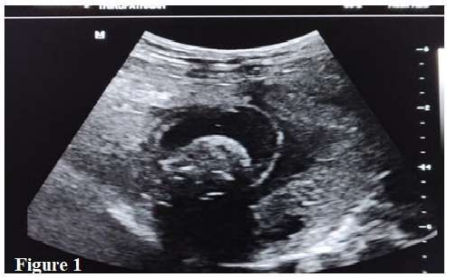

Figure 1: Ultrasound of abdomen showing single well defined anechoic cystic lesion with heterogeneously hyperechoic focus in it.

On plain CT abdomen well defined cystic density lesion with few calcifications and air pockets noted arising from the small bowel in left upper and mid quadrant of abdomen measuring approx 5x5x5 cm showing narrow communication with lumen of the bowel shown in figure-2a. On contrast enhanced CT a mild peripheral enhancement of cyst wall noted similar to bowel wall with heterogeneously enhancing necrotic component in it shown in figure – 2b)

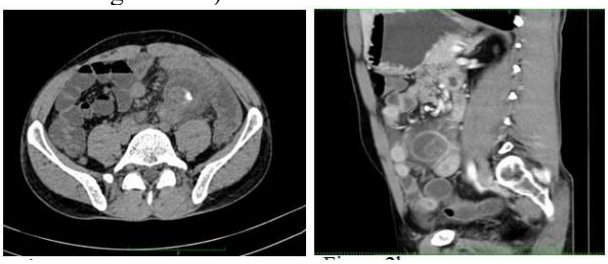

Figure 2a: Plain CT axial section showing cystic lesion with calcification and heterogeneous component in it attached to small bowel. **2b)** post contrast coronal image shows enhancement of cystic wall with heterogeneously enhancing necrotic component in it.

PROVISIONAL DIAGNOSIS: Provisional diagnosis of enteric duplication cyst was given.

Patient was then operated (resection and end on anastomosis) (Figure-4).

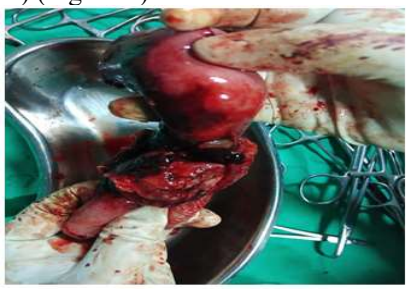

Figure 4: Showing resected enteric(jejunal) duplication cyst. Specimen was sent for histopathology.

Histopathology Report

Sections from the cystic lesion showed necrotic mucosa with focal intestinal epithelium, sub mucosa with lymphoid aggregates, muscularis propria and serosa.

Neutrophilic infiltrate in all the layers shown in (Figure 5a and 5b). Was consistent with enteric duplication cyst.

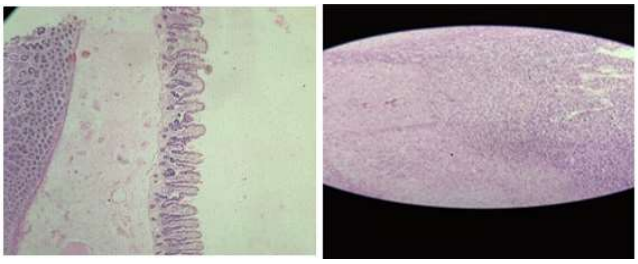

Figure 5a and 5b: Histology specimen showing intestinal epithelium with lymphoid and necrotic aggregates.

Final- Diagnosis: Enteric Duplication Cyst

DISCUSSION

Enteric duplication cysts are rare congenital anomalies found anywhere along the gastrointestinal tract from the mouth to the rectum; most commonly ileum (33%), followed by oesophagus(20%),colon (13%), jejunum (10%),stomach (7%), and duodenum (5%).The incidence is 1:4,500 births, found in 0.2% of all children ,with a slight predominance [2]. Enteric duplication cysts are hallow, epithelium-lined, cystic, spherical, or tubular structures that are basically attached to the wall of the gastrointestinal tract (often sharing the serosa) mesenteric border and supplied by common mesenteric blood vessels [1]. Over 80% are diagnosed in the paediatric population and they are often present with obstruction or a palpable mass. In adulthood, they are often asymptomatic and diagnosed incidentally. The clinical presentation of symptomatic enteric duplication cysts varies according to their location and proximity to adjacent structures; symptoms include abdominal pain, distension, mass and dysphasia. They may also present secondary to complications such as haemorrhage, volvulus, perforation, obstruction and malignancy.[3] Ultrasound plays a critical role in the evaluation of duplication cysts. Classic duplication cysts have a characteristic appearance on the ultrasound: that of the double layered wall, the so called “gut signature,” as in our case (Figure-1). The inner layer is hyperechoic mucosa and the outer layer is hypoechoic muscle. Unfortunately, with inflammation, the layers may be obscured, lessening the specificity. Nonetheless, the demonstration of a cystic mass adjacent to the bowel should prompt the consideration of a duplication cyst. However, the double-wall sign may be seen with other cystic lesions. This finding can be misleading [4]. Computed Topography (CT) typically is not performed to evaluate a duplication cyst, but it may depict the location and extent of the cyst, as well as complications and other associated anomalies. At CT, a gastrointestinal duplication cyst manifests as a fluid filled cystic mass with a thick, slightly enhancing wall that either arises from or is extrinsic to the gastrointestinal wall [2]. Associated gastrointestinal bleeding due to heterotopic gastric mucosa is detected by technetium scans [5].

MANAGEMENT

Excision is the preferred treatment of alimentary tract duplications. Because of the mesenteric location of most duplication, they share a common blood supply with the normal organ. If feasible, segmental resection may be performed. Otherwise, one may excise or shell out the cyst if an adequate plane is present [6]. The outcome of surgical or medical management of gastrointestinal duplications is favourable. Metaplastic changes that have been reported in untreated gastrointestinal duplications can be prevented, depending on the location of the duplication, by appropriate surgical intervention.[7]

CONCLUSION

Enteric duplication cysts are uncommon congenital abnormalities arising anywhere along the gastro intestinal tract. Ultrasound, CT and MRI are used for the diagnosis. Surgery is necessary because of the severe complications they can develop. The diagnosis is confirmed by histological examination.

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