Unusual Non-Communicating Isolated Enteric Duplication Cysts

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Abstract:

Introduction

Enteric duplication cysts are uncommon congenital abnormalities that originate anywhere along the alimentary tract from the tongue to the anus. Majority occurs in the small intestine and present in the first year of life. The duplications share its muscular wall and blood supply with the adjacent intestine and reside in the leaves of the mesentery. Signs and symptoms due to small intestinal duplications may vary but abdominal distension and/or mass are the most common presentations.

Case Report

A six month old boy presented with recurrent vomiting since almost one month. Per abdomen examination revealed a mass in the right hypochondrium, mass was cystic in consistency, non tender, intra abdominal, not significantly mobile, and not bi-manually palpable. Ultrasound and CECT abdomen revealed large elongated thick walled cystic lesions suggestive of possibility of enteric duplication cysts. Exploratory laparotomy was done. A meticulous dissection of the cysts and enucleation of the cysts was done. The post operative period was uneventful.

Conclusion

Duplication cysts should be considered in the differential diagnosis of abdominal cystic lesions. In the case of completely isolated duplication cysts, resection can be accomplished safely without requiring bowel resection, as demonstrated in our case.

I. INTRODUCTION

Duplications are rare congenital anomalies which can occur anywhere in gastrointestinal tract from mouth to anus. Only few cases are reported. As Gray remarked “gastrointestinal tract is a fertile field for various and curious congenital malformations are fascinating to study for both surgeon and pathologist” [1].

A small bowel duplication cyst is the most common type of enteric duplication cyst, and the ileum is the most common location [2,3]. The prevalence of duplication cysts is 2-fold higher in women, and they show no familial aggregation [4]. They are either cystic or tubular. Complications, such as bleeding, fistulization, and even malignant degeneration, are associated with duplication cysts [5].

Completely isolated duplication cysts are an extremely rare variety of gastrointestinal duplications with their own blood supply, and they do not communicate with the normal bowel segment [6–8].

Signs and symptoms due to small intestinal duplications may vary but abdominal pain, distension and/or mass are the most common
presentations. Small cystic duplications can act as a lead point for small bowel intussusception or result in localized volvulus. Large duplications can cause compression of adjacent intestine and cause obstructive symptoms.

Here we present a case of six month old boy brought to hospital with complaint of vomiting and lump in abdomen. He was diagnosed with enteric duplication cysts and excision of duplication cyst was done.

II. CASE REPORT

A six month old boy presented with recurrent vomiting since almost one month. Per abdomen examination revealed a cystic, non tender, non compressible lesion of size 5x3 cm in the right hypochondrium extending to right lumbar region. Mass was cystic in consistency, non tender, intra abdominal, not significantly mobile, not bimanually palpable. Rest of the abdomen was normal, both testes in scrotum, penis was normal.

Ultrasound revealed a thick walled cystic lesion measuring 4x3.5 cm close to second part of duodenum. Another lobulated cystic lesion close to the above of size 7x4 cm. No definite communication noted. He was further evaluated with CECT abdomen and MRCP.

CECT (Photo 1) abdomen revealed large elongated thick walled cystic lesions (sizes 5x3cm and 9x3cm) in right para-duodenal, porta, right paracolic and subhepatic region compressing displacing adjacent structures suggestive of possibility of enteric duplication cysts.

Photo 1

MRCP (Photo 2) revealed:
- Duplication cyst (esophageal and duodenal enteric duplication cyst).
- Lower esophageal duplication cyst measures 2cc.
- Pancreatic head is compressed & displaced medially by second largest cyst.

Photo 2

Patient was planned for surgery. On exploration there were 2 cystic lesions (Photo 3, 4). First cystic lesion (5x3 cm) was adhered to anterolateral wall of duodenum 2nd part. Second lesion (9x3 cm) adhered to 3rd of duodenum medio-lateral and adhered to pancreas. Both lesions were non-communicating to each other.
and duodenum. Both cystic lesions were excised with meticulous dissection (Photo 5, 6). The post operative period was uneventful. Patient was discharged in satisfactory condition. The histopathological examination revealed focal cuboidal to flattened cells lining the cyst wall. The tissue showed inflammatory changes.

III. DISCUSSION

Alimentary duplication cysts were first described by Wendel in 1911. They are uncommon congenital lesions with a reported incidence of 1 in 4500 [9]. By definition, they are located in or adjacent to the wall of part of the gastrointestinal tract, they have smooth muscle in their walls, and they contain some type of intestinal mucosal layer within the lumen. The mucosal lining within alimentary tract duplications may display components of several different types of GI tract or respiratory tract mucosa [10].

Enteric duplication cysts usually share a common wall with the normal intestine and have a common blood supply. “Isolated duplication” or “completely isolated duplication” of the alimentary are an extremely rare variety of gastrointestinal duplications.

More than 80% of enteric duplications present before the age of two years, usually with intestinal obstruction or a palpable mass [11, 12]. Most of the adult intestinal duplications are asymptomatic and remain undiagnosed for years. Acute onset or chronic complaints or both are possible presentations in adults. Common findings are palpable mass and bowel obstruction [13]. Rare presentations are bleeding from ulceration within the duplication, fistula formation with nearby structures [14], and infection of the cyst. Also it has been reported that enteric duplication may be the site of adenocarcinoma [15].

In our case, based upon CT and sonographic findings, a small bowel duplication cyst was tentatively diagnosed. MRCP was done to look for
presence of CBD and hepatobiliary pathology if any.

The differential diagnosis includes all cystic intraabdominal masses, such as mesenteric and omental cysts, pancreatic pseudocysts, and ovarian cysts [16,17]. There is no worldwide accepted therapeutic algorithm for duplication cysts.

IV. CONCLUSION

Duplication cysts should be considered in the differential diagnosis of abdominal cystic lesions. In the case of completely isolated duplication cysts, resection can be accomplished safely without requiring bowel resection, as demonstrated in our case.

REFERENCES


