Caecal duplication: case report

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ABSTRACT

Gastrointestinal duplications and particularly caecal duplication are rare congenital malformations which presentation can mimic other surgical diseases, making their diagnosis difficult. It may present as intestinal obstruction in neonates and infants. A surgical management is the treatment of choice. The diagnosis can then be made or confirmed by histopathologic analysis. We describe a case of a 3 month-old boy with caecal duplication who reached our ward due to incoercible vomiting. On initial evaluation, vitals were stable. The abdomen was globular but soft and non-tender and painless on palpation. Eight hours after hospitalization, vomiting became bilious and the abdomen tender with gas and fecal matter obstruction. Abdominal X-ray has shown dilated ileal and colic loops with multiple fluid levels. The patient underwent abdominal laparotomy and we identified the caecal duplication which was very stretched and shared the same wall with the cecum. The histopathological examination of the resected specimen confirmed the diagnosis of caecal duplication. In conclusion, We recommend considering the diagnosis of intestinal duplication in cases of acute or subacute intestinal obstruction.

Key words : Duplication – Intestinal obstruction – Caecum

I. Introduction

Gastrointestinal duplications are uncommon congenital malformations that may be found anywhere from the mouth to the anus. They can be cystic or tubular. The ileum is the most common site of enteric duplications, followed by colonic cysts. Cecal duplications are very rare, only few cases are reported in the literature. The majority of cases are diagnosed within two years of life and the clinical presentation is variable. Most frequent symptoms are: vomiting, abdominal mass, abdominal distension or abdominal pain. We are going to present the case of a 3-month-old male infant with cecal duplication who was admitted for incoercible vomiting.

II. Case report

A 3-month-old boy, weighing 5 kg, with no significant medical history, reached our Emergency Room due to non-bilious vomiting and decreased appetite for 4 days. On further questioning, we discovered that the baby had 3 days without stooling.
On initial evaluation, vitals were stable with 38.7°C of temperature. The abdomen was globular but soft and non-tender and painless on palpation. Regarding the good condition of our patient, abdominal X-ray was not performed and he received an intravenous drip with no alimentation. Eight hours after hospitalization, vomiting became bilious and the abdomen tender with gas and fecal matter obstruction. Labs were all normal. Abdominal X-ray has shown dilated ileal and colic loops with multiple fluid levels (Figure1).

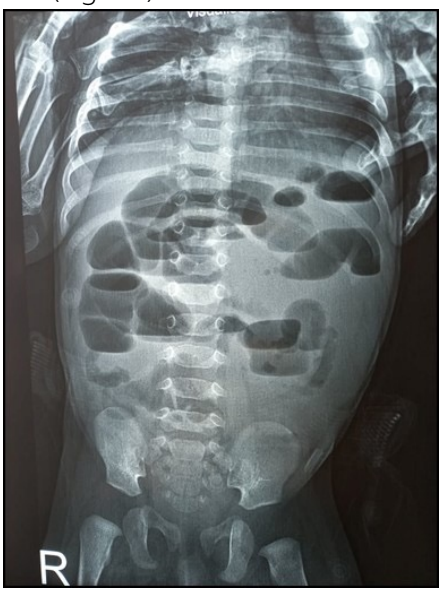

Figure 1 : DAbdominal X-ray showing multiple fluid levels without gaze in the rectum

Abdomen ultrasound was not suggestive of intussusception or intestinal malrotation or volvulus.
Based on the physical examination and the multiple fluid levels on abdominal X-ray, the patient was taken for an exploratory laparotomy to unveil the cause of the bowel obstruction. The abdomen was opened via an open mid-

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line incision; a cystic mass very stretched and sharing the same wall with the cecum, was identified (Figure 2).

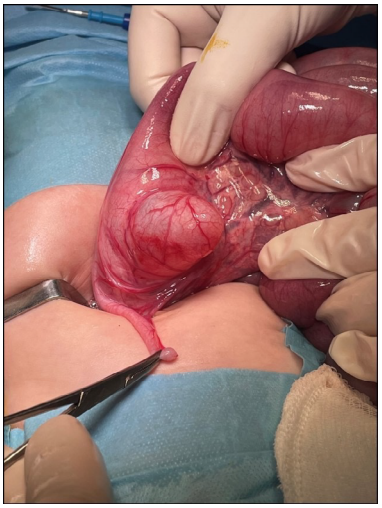

Figure 2 : Operative view of the cecal duplication cyst

The attempt of enucleation fragilized the cecal wall so ileocecal segment was resected with the appendix and an end-to-end anastomosis was done.
The histopathological examination of the resected specimen confirmed the diagnosis of cecal duplication with an ectopic gastric mucosa.
Postoperative recovery was uneventful, and the child remained symptom-free within 10-months of follow-up.

III. Discussion

Enteric duplications are unusual congenital malformations which can occur at any part of the gastrointestinal tract [1]. Their morphology can be tubular or cystic. The incidence of all gastrointestinal duplications is 1 in 4500 births [2].
The diagnoses can be done at any age but 80% present before 2 years of life. An association with congenital malformations of skeletal, gastrointestinal or genitourinary tract must be searched [3].
There are numerous theories about the etiology of duplications cysts but the exact one has not yet been established [4]. Small intestine is the most common site of duplications followed by esophagus. Only 13-15% of duplication are present in colon and cecal duplications are very rare with an incidence of 0.4%. Less than 50 cases have been reported in previous literature [5]. Clinical presentations may vary depending on site, size and morphology of duplication cyst. The most frequent symptoms are: vomiting, abdominal mass, intussusception, gastrointestinal hemorrhage and abdominal pain. It can also lead to intestinal obstruction, like our case.
Ultrasonography has high specificity and positive predictive value [5], even though the rate of correct preoperative diagnosis with ultrasound was only 57% in Temiz and al. 10-year retrospective review [6]. A diagnostic laparotomy is frequently needed to confirm the diagnosis [1].
The treatment of choice is a resection and end to end anastomosis, which was done to our patient because enucleation was impossible [1].

IV. Conclusion

The clinical presentation of cecal duplication is variable. Our case was challenging due to the first unspecific symptoms. We recommend considering the diagnosis of intestinal duplication in cases of acute or subacute intestinal obstruction.

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