Perforated duplication cyst in the ileum presented with acute abdomen

Tarek Talaat Harb Elkadi*

Pediatric Surgery Unit, Surgery Department, Sohag University, Egypt

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**Abstract**

Duplication cyst is a rare condition of the gastrointestinal tract. It is asymptomatic or may be presented with complications simulating other common pathology like acute appendicitis. It is most commonly diagnosed accidentally during exploration for another cause or when complications occur, such as bleeding, intestinal obstruction or perforation. We presented here a case report of 11 years old child presented with sudden acute abdominal pain and localized peritonitis.

**1. Case report**

An eleven years old boy presented to us with one day history of generalized abdominal pain associated with vomiting. On admission, he was febrile and the abdomen was tender with guarding. The white blood cell count was normal. There was picture of dilated small intestinal loops with no air under the diaphragm detected on erect chest and abdomen x-ray. Abdominal ultrasound showed amalgamated intestinal loops with encysted collection 2.3 x 2.1 cm lesion in the right lower abdomen separated from the bladder with minimal free fluid in the abdomen. Based on the clinical and radiological findings, a diagnosis of acute peritonitis was made and an exploratory laparotomy was planned. On exploration, we found moderate amount of purulent collection within the peritoneal cavity. The appendix was normal. On further inspection, we found amalgamated small intestinal loops after blunt dissection with fingers we found perforated duplication cyst at the mesenteric border of the intestine, about 50 cm from the ileocecal junction. Segmental bowel resection (Figs. 1–3) and primary anastomosis was performed. The patient’s post-operative recovery period passed undisturbed. Patient was discharged in the 6th day after the operation. The histopathological report described small intestinal duplication cyst with gastric metaplasia and heterotopic pancreatic tissue with perforation. The patient is still followed in out patient clinic with no complications.

**2. Discussion**

Enteric duplication is a rare cause of an acute abdomen. It may be asymptomatic, or present with vague non-specific symptoms or symptoms of complications [3]. It is difficult to diagnose pre-operatively as symptoms are non-specific and usually mimic other more common causes of acute abdomen. It should be considered especially in the young patient presenting with vague symptoms of acute abdomen. Enteric duplication can arise at any site along the entire length of the alimentary tract. It can be divided into 2 types; a) communicating and b) non-communicating [4]. The exact etiology of enteric duplication is unknown; however, various theories have been postulated. Abortive attempts of twinning, phylogenetic...
reversion, split notochord, persistence of embryonic diverticula, and recanalization and fusion of longitudinal folds have all been blamed as the origin of this rare congenital anomaly. Enteric duplication can present with vague abdominal pain such as epigastric pain which usually leads to the diagnosis of gastritis, peptic ulcer disease or GERD by most clinicians. This may be due to co-existing diseases or may be due to the inflammation of heterotropic mucosa which is a common association and can be present in up to 30% of the cases [2–4]. However, most patients present with symptoms and signs of complications such as gastro-intestinal bleeding, obstruction or perforation.

Radiological imaging such as transabdominal ultrasonography and computed tomography may help in the diagnosis, especially in cases with non-acute presentation. Endoscopic ultrasonography has the advantage of providing additional diagnostic information which is extremely helpful in the proper management of the disease. Unfortunately, it was not done in our case as the patient already had acute complications which required emergency surgical intervention [5]. Enteric duplication presenting as acute appendicitis is even rarer [6]. There are only five cases reported in the literature up till the year 2000 including only one adult case. Enteric duplication can be treated surgically by simple excision or by dissecting the common wall between the intestine and the cyst [7]. Alternatively, selective mucosal resection will be helpful in patient with a long segment of enteric duplication as it will preserve the common shared blood supply to the native bowel [8]. Other methods such as marsupialization has also been reported [3]. In our patient, a segmental resection of the bowel with primary anastomosis was performed as the cyst had already ruptured and the surrounding bowel was unhealthy. The patient recovered well post operatively without any complications.

In conclusion, enteric duplication is a rarely encountered condition. It usually presents with vague symptoms suggestive of other pathology, making diagnosis difficult. It should be a differential diagnosis in patients presenting with acute abdominal pain.
References


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