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Pyloric Duplication Cyst: A Rare Cause of Vomiting in a Child

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DEAR SIR

Duplication cysts are rare anomalies of alimentary tract and commonly encounter in intimate approximation with ileum.[1] Duplication cyst of the pylorus is scarcely reported in literature and may present with clinical features of gastric outlet obstruction.[2,3] Herein, we present a case of duplication cyst of pyloric canal presenting with recurrent episodes of non-bilious vomiting. A 2.5-year-old female patient, weighting 13 kg, referred from medical ward for vomiting and abdominal discomfort since six months of age.

Vomiting was non-bilious and projectile, 4-6 episodes a day, and occasionally foul smelling. Abdominal examination revealed a non-mobile and nontender palpable mass in the epigastrium. Ultrasound abdomen showed 3x3cm cystic area at level of head of pancreas, causing pressure on first part of duodenum. At surgery, there was a cyst arising from pyloric canal, about 4x3cm in size, along anteroposterior aspects of the pylorus (Figure 1). Aspiration of the cyst yielded straw colored fluid. The cyst was mobilized and opened; a small communication of cyst with lumen of the pylorus was appreciated. The free part of the cyst was excised and mucosal stripping was performed on the common wall shared with pylorus. The area of the pylorus communicating with cyst was closed transversely. Postoperative course was uneventful and patient was discharged on 8th postoperative day. On follow-up, the patient had no further episodes of vomiting. Histopathology showed duplication cyst with ectopic gastric mucosa.

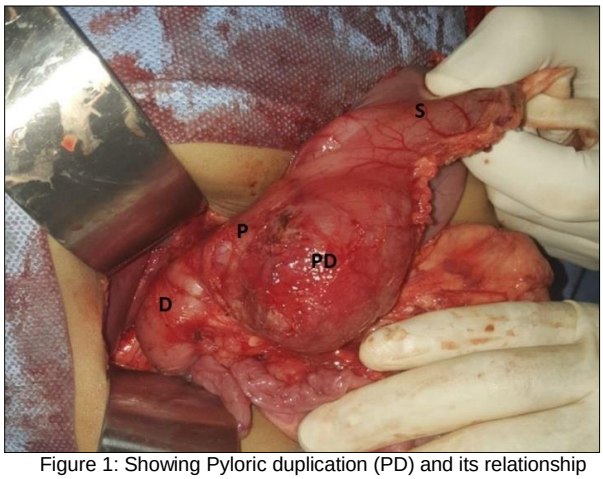

Figure 1: Showing Pyloric duplication (PD) and its relationship with stomach (S), Pylorus (P), and duodenum (D).

Clinical presentation in a case of duplication cyst depends upon various attributes of duplication cysts such as size, location, communication, presence of heterotrophic mucosa, and complications. Duplication cysts of upper alimentary tract usually present with vomiting. Duplication cyst of pyloric canal is extremely rare congenital anomaly and can present with gastric outlet obstruction.[2-4] Similarly, in the index case, the presentation was with recurrent non-bilious vomiting. Cyst at this location causes compression of the pylorus resulting in features of gastric outlet obstruction. The vomiting is recurrent thus the presentation is usually early. More than half of the reported case present in neonatal life [2]; nevertheless, few cases present in school going age.[5] In the index case too, the age of presentation was 2.5

years and our patient developed vomiting at the age of 6 month. A small communication in the index case could preclude the cyst to attain a size considerable for producing pyloric compression can explain delayed development of symptoms in the index case.

Various diagnostic modalities have been used to investigate a cyst at this location including ultrasound abdomen, contrast studies, CT scan etc.[2] In the index case, we planned for the MRI abdomen as CT scan was in process of upgradation in our hospital but the patient could not be sedated at the time of the test so we planned surgery on the basis of clinical presentation, examination, and ultrasound of the abdomen although our preoperative diagnoses were duodenal duplication cyst and choledochal cyst.

Surgery is the mainstay of treatment with a goal of complete excision of the cyst. Various surgical intervention have been done for these cyst including simple cyst excision, pyloro-antrectomy, gastroduodenostomy, and gastrojejunostomy.[2-5] In the index case, we excised the free part of the cyst and mucosal stripping was done on the shared wall. We managed the communicating portion of the pylorus by sewing it in transverse fashion similarly as we do in pyloroplasty.

Consent: Authors declared that they have taken informed written consent, for publication of this report along with clinical photographs/material, from the legal guardian of the patient with an understanding that every effort will be made to conceal the identity of the patient however it cannot be guaranteed

Authors' Contribution: All authors contributed equally in concept, design, literature review, drafting the manuscript, and approval of the final manuscript.

REFERENCES

1. Liaqat N, Latif T, Khan FA, Iqbal A, Nayyar SI, Dar SH. Enteric duplication in children: A case series. Afr J Paediatr Surg [serial online] 2014 [cited 2018 Jun 30];11:211-4. Available from: http://www.afrjpaedsurg.org/text.asp?2014/11/3/211/137327
2. Sharma D, Bharany RP, Mapshekhar RV. Duplication cyst of pyloric canal: a rare cause of pediatric gastric outlet obstruction: rare case report. Indian J Surg. 2013; 75:322-5. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3693378/
3. Shah A, More B, Buick R. Pyloric duplication in a neonate: a rare entity. Pediatr Surg int. 2005; 21:220-2.
4. Trainavicius K, Gurskas P, Povilavicius J. Duplication cyst of the pylorus: a case report. JMCR. 2013; 7:175. Available from: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3707747/
5. Arshad M, Jeelani SM, Siddiqui A, Rehan R. Duplication cyst of the pylorus: a rare cause of gastric outlet obstruction. BMJ Case Rep. 2018; 2018:bcr-2017.

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