Pyloric Duplication Cyst in Newborn Male

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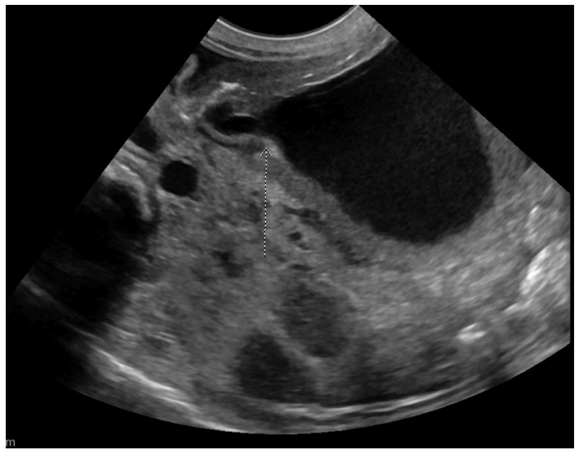
Introduction

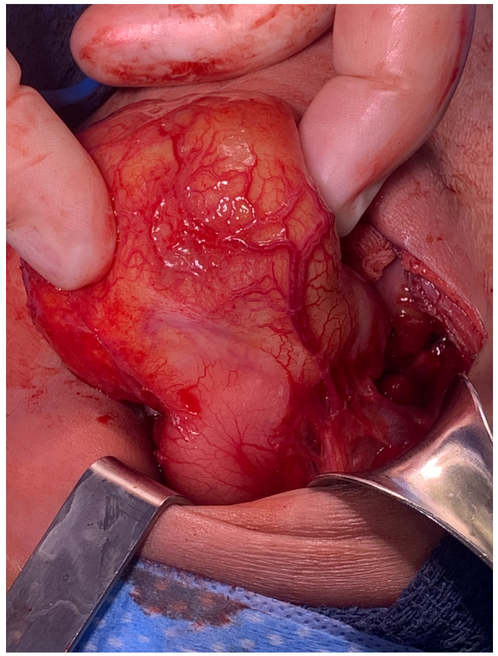
- Enteric duplication cysts are rare congenital malformations formed during the embryonic development of the alimentary tract.[1]
- EDCs have an incidence of 1 in 4500 births with a slight male predominance. [1]
- Although EDCs can occur at any point throughout the GI tract, they are most reported in the ileum and only about 5-7% are of gastroduodenal origin. [1] Limited literature exists surrounding pyloric duplication cysts, which are extremely rare subtypes.

Case Description

Our patient was a 3-hour old male born at 35 5/7 weeks gestation who presented with a cystic abdominal mass initially detected on prenatal ultrasound (US). After birth, a palpable mass was noticed on physical exam in the right upper quadrant. Abdominal US was performed which showed a predominantly hypoechoic well-circumscribed mass in the right lower quadrant with probable trilaminar wall. The mass exhibited a small tubular connection suspicious for communication with existing bowel, suggesting an enteric duplication cyst. The patient tolerated oral intake without obstructive symptoms. Based on clinical presentation and ultrasound findings, an EDC was suspected, and the patient was scheduled for surgical intervention.

During diagnostic laparoscopy, a five-centimeter (cm) mass was identified in the right upper quadrant. It was isolated from the liver but had some attachment to the duodenum. We proceeded with a right upper quadrant transverse laparotomy and the cyst was identified at the anteroinferior pylorus without obstruction.





The cyst at the anteroinferior pylorus included a common wall and was clearly proximal to the ampulla of vater. Due to the location of the mass, an intraoperative transcystic cholangiogram was performed to ensure there were no communications with the biliary tree. All images were negative. The pyloric duplication cyst was then resected en bloc with the pylorus. A primary hand sewn end-to-end gastroduodenostomy was performed. Final pathology confirmed an enteric duplication cyst with benign gastric tissue and duodenal mucosa without dysplasia or malignancy. Post-operatively, patient did well and was tolerating oral intake prior to discharge. At follow-up visits, the patient continues to do well with no apparent complications and has appropriate weight gain.

Conclusion

- Although limited literature exists surrounding pyloric duplication cysts specifically, enteric duplication cysts are known to become symptomatic early in life and current results of surgical therapy are good.
- This rare case supports increased prenatal screenings for potentially earlier diagnoses of EDCs which results in earlier surgical treatment with hopes of prevention of future symptoms.

References

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Image 1: Pre-operative ultrasound showing cystic mass with likely connection to existing bowel
Image 2: EDC identified intraoperatively