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Letter to Editor

Annular pancreas presenting as duodenal obstruction in a neonate: Report of successful management of 2 cases of a rare anomaly

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Cite as: Kakal P, Bharadwaj B, Yadav N. Annular pancreas presenting as duodenal obstruction in a neonate: Report of successful management of 2 cases of a rare anomaly. J Pediatr Adolesc Surg.2026; 4: 4.

Dear Editor

We present two cases of neonatal duodenal obstruction caused by annular pancreas, a rare congenital anomaly characterized by pancreatic tissue encircling the duodenum. This condition can lead to feeding intolerance and vomiting in neonates, necessitating early diagnosis and surgical intervention.

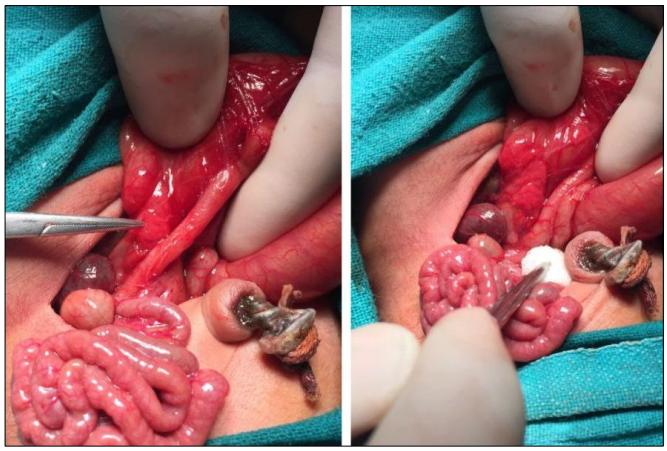

Figure 1: Showing Annular pancreas.

The first case involved a five-day female neonate with persistent vomiting and poor feeding. Physical examination revealed severe dehydration and irritability. A plain abdominal X-ray displayed a characteristic double bubble sign. Intraoperative findings confirmed a ring of pancreatic tissue encircling the duodenum, leading to near-complete obstruction (Fig.1). Additionally, features of intestinal malrotation were identified. Duodenoduodenostomy with Ladd's procedure was performed, and the post-operative course was uneventful. The neonate demonstrated significant weight gain at a one-month follow-up.

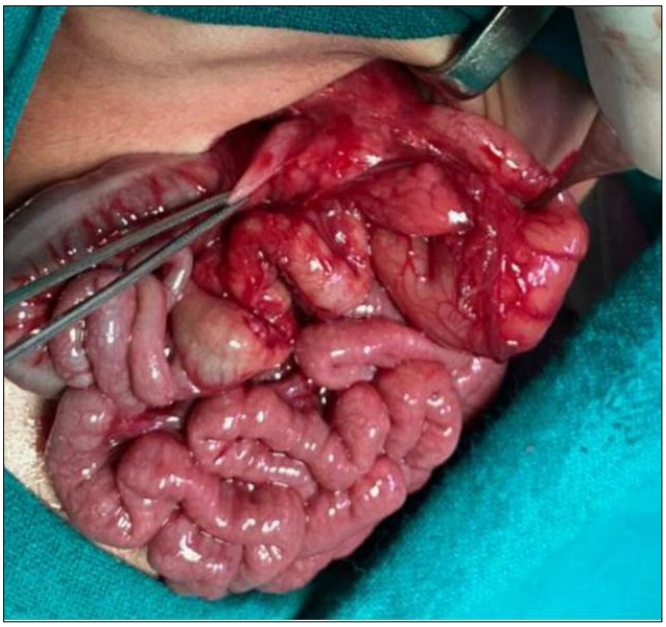

Figure 2: Showing Annular pancreas.

The second case concerned a 16-day-old female neonate presenting with recurrent vomiting and poor feeding. Antenatal ultrasonography had indicated a double bubble sign and polyhydramnios. Postnatal imaging reaffirmed duodenal obstruction. Intraoperatively, a rim of pancreatic tissue encircled the middle part of the duodenum, causing significant obstruction (Fig. 2). Duodenoduodenostomy was performed, and the patient was discharged on the fifth postoperative day following the initiation of oral feeds.

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Submitted on: 21-02-2024 Accepted on: 28-01-2026

Annular pancreas is reported in 1 per 20,000 live births. It is associated with Down syndrome, duodenal atresia, and intestinal malrotation. The etiology remains speculative, with theories by Baldwin, Lecco, and Verga proposing developmental anomalies in the ventral pancreatic bud. Mutation in genes like FOXF1 and RFX6 may also contribute to its formation [1-3].

Radiological assessment plays a crucial role in diagnosis. A double bubble sign on X-ray is suggestive but not pathognomonic. Upper gastrointestinal contrast studies can delineate the obstruction, while ultrasonography and CT provide additional structural details [1-3]. Laparotomy remains the definitive diagnostic modality.

Surgical correction via duodenoduodenostomy is the preferred approach, offering a physiological and durable solution with minimal complications [1-5].

Our cases underscore the importance of early recognition and timely surgical intervention in neonatal annular pancreas. Both patients had successful recoveries, aligning with survival rates exceeding 90% in contemporary literature. The absence of trisomy 21 in our cohort is noteworthy, as previous studies report its association in 30–50% of cases [3-5].

Conflict of Interest: Nil

Source of Support: Nil

Consent to Publication: Author(s) declared taking informed written consent for the publication of clinical photographs /material (if any used), from the legal guardian of the patient with an understanding that every effort have been made to conceal the identity of the patient, however it cannot be guaranteed.

Authors Contribution: Author(s) declared to fulfill authorship criteria as devised by ICMJE and approved the final version. Authorship declaration form, submitted by the author(s), is available with the editorial office.

Acknowledgements: None

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