Tracheoesophageal fistula and anorectal malformation in an antenatally diagnosed duodenal atresia: A case report

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Introduction

- A constellation of abnormalities is rare, especially in triple atresia (Oesophageal atresia/ tracheoesophageal fistula (OA/TOF), duodenal atresia and anorectal malformation(ARM)).
- OA/TOF is often associated with other malformation in which a proposed term of VACTERL was used (vertebral, anal, cardiac, trachea, oesophagus, renal and limb abnormalities).
- There are only seven cases of reported triple atresia in the literature.

Case Summary

- We report a case of triple atresia in a child who was delivered at 36 weeks 6 days with birth weight of 2.3kg, which was antenatally diagnosed as duodenal atresia.
- Antenatally scan showed double bubble and polyhydramnios at 36 weeks of gestation in which required amnioreduction.
- Post delivery, child developed respiratory distress with excessive secretion.
- A size 8 Fr Ryle's tube was unable to pass through, with resistance at 10cm.
- Upon assessment, there was also no anal opening seen.
- Chest and abdominal x-ray at 11 hours of life showed double bubble sign without distal gas and coiling of Ryle's tube at T4.
- Child underwent right thoracotomy, tracheoesophageal fistula ligation with primary anastomosis of oesophagus, duodenoduodenostomy and transverse colostomy at 20 hours of life.
- Post operatively, child recovered well and was discharge home while awaiting for definitive surgery for ARM.

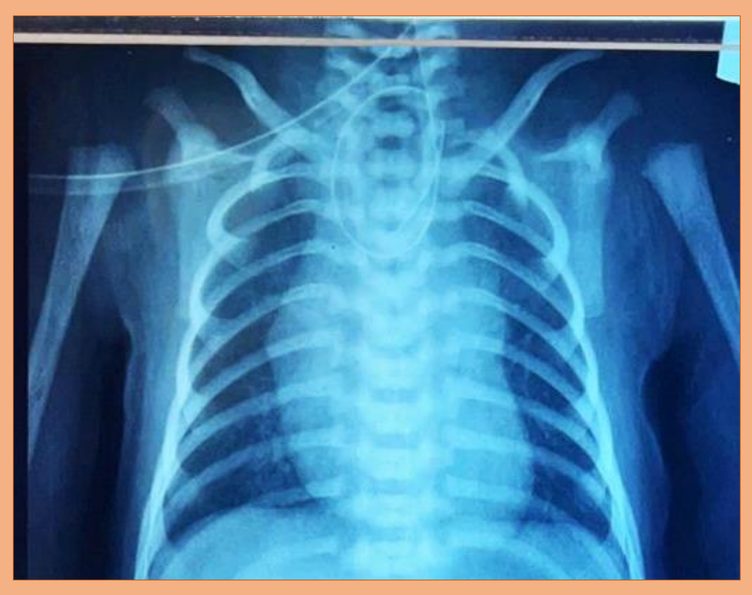

Figure 1.1: X-ray at 11 hours of life showed coiling of Ryle's tube at T4

Discussion

- Oesophageal atresia with tracheoesophageal fistula is commonly associated with ARM in about 10% of cases
- However, it's association with duodenal atresia is not so common.
- Timing and sequence of surgical intervention is the most pressing question for surgeons. Whether to utilize combined or staged approach, in addition to the likely prognosis for the infant.
- The decision regarding which operation to proceed first would be decided according to the most urgent anomaly that would be needed to be addressed first.
- In our case, we chose to operated on the TOF first to avoid the risk of the infant deteriorating while being ventilated with a TOF present – dangers of overdistended stomach/duodenum as in our case, the child also has duodenal atresia.
- In a recent case report and literature review by Jackson et al. (2021), there is by far 9 reported cases of triple atresia.

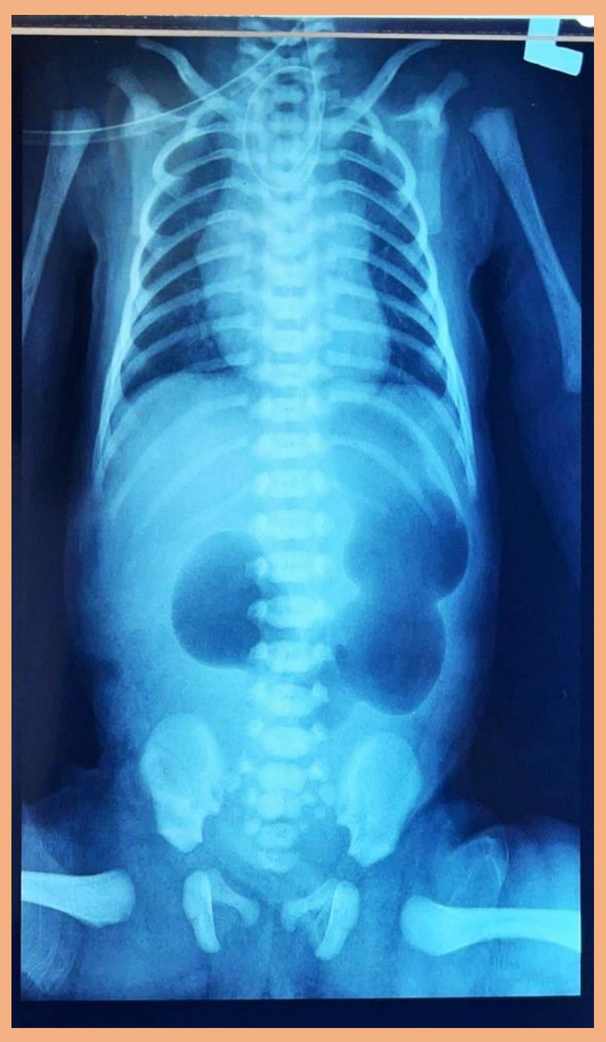

Figure 1.2: X-ray at 11 hours of life showed double bubble sign without distal gas

Conclusion

- Triple atresia remains a difficult and challenging combination of anomalies to manage.
- The associated anomalies often significantly alter treatment and affect the survival.
- A one stage surgery for repair of OA/TOF and duodenal atresia was successfully performed in this patient.

References

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