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Rare case report of duodenal atresia associated with situs inversus and fallot's physiology

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Introduction: Situs inversus is a rare condition with a frequency of about one in 10,000 of the normal population. [1, 2] This condition is found to be associated with cardiac and splenic malformations. [3] However, the association of duodenal atresia with situs inversus is very rare. We report a rare case of Reverse Double Bubble Sign associated with situs inversus abdominis associated with duodenal atresia with single ventricle pulmonary stenosis.

Case Report: A preterm IUGR born of normal vaginal delivery to a primigravida mother was referred to our tertiary care NICU on day of life 19 with complaints of duodenal atresia and suspected congenital heart disease. Pt was admitted since birth under IV fluids and was referred for further management. On examination pt was PR-110/min and RR-77/min with 74% Spo2 under O2 prongs. CVS exam was s/o pansystolic murmur with Xray suggestive of reverse double bubble sign and USG abdomen was s/o situs inversus abdominalis, 2D Echo was done for this patient which was s/o severe infundibular valvular PS with large inlet VSD with dilated RV and small LV (Fallots physiology). Pt was advice for urgent BT shunt followed by duodenal atresia corrective surgery but despite all efforts patient could not survive and expired despite utmost care.

Discussion: The embryological explanation for the occurrence of duodenal atresia is the theory of "failure to recanalise" in the 12th week of intrauterine life from the solid cord stage. This can lead to duodenal stenosis, a web with or without central aperture or a complete atresia. The diagnosis can be made with a plain radiograph of the chest and abdomen, which reveals "reverse double-bubble. The treatment does not differ whether or not duodenal atresia is associated with situs inversus. Duodenoduodenostomy remains the surgery of choice. BT shunting remains the palliative treatment for the Fallots physiology.

Conclusion: Recognition of this condiotion is important as surgical incision can be planned preoperatively. The "mirror anatomy" should be kept in mind while performing the surgery. Though situs inversus does not change the outcome of duodenal atresia, the underlying cardiac disease gravely alters the prognosis and morbidity for the patients.

References:

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Biography

Aditya Bhatt is a second year postgraduate resident in dept of pediatrics in GMC surat. He has done his undergraduate studies from the same institute. A national Mixed Martial arts champion he is also an contributor in PG entrance exam books. He was as national ex academic president for the IMA-JDN.