A Rare Association of Pyloric Stenosis and *Situs Inversus:* Impact on Diagnosis and Treatment

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ABSTRACT

A rare case of 23 days old boy is reported having congenital hypertrophic pyloric stenosis with situs inversus. Incidentally detected secondary diagnosis obscured the primary diagnosis by altering the physical examination findings. Diagnosis was made by ultrasonography (USG) which revealed congenital hypertrophic pyloric stenosis with situs inversus. Clinical details, diagnosis and management are discussed.

Key words:
Hypertrophic pyloric stenosis, situs inversus, congenital conditions

Hypertrophic pyloric stenosis (HPS) has incidence of about 2-4/1000 live births in Western populations.[1] Dextrocardia with *situs inversus* has incidence of 0.09/1000 live births.[2] The combination of these two rare and entirely distinct entities is extremely rare. Only one case[3] reported previously world-wide, we are reporting here the second case of the combination of these two congenital conditions.

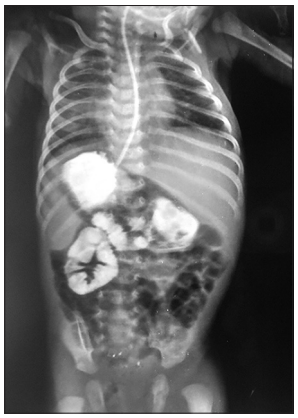

Figure 1: Contrast study showing hypertrophied pylorus on the left side, liver shadow is also seen on the left side

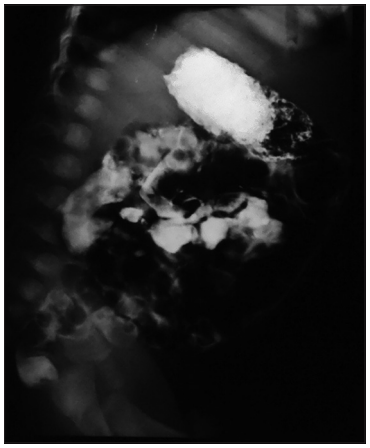

Figure 2: Contrast study showing hypertrophied pylorus with delayed emptying

A 23-day-old male infant presented with a history of vomiting for last 5 days. Vomiting was non-bilious and non-projectile in nature and occurred 15-20 min after each feeding. There was no history of loose stools, constipation; or fever. On physical examination, baby was dehydrated. He was tachycardic at 170/min. There was no abdominal distension or any visible gastric peristalsis. We could not feel any pyloric olive in the epigastrium or right hypochondrium even after careful physical examination. His blood investigations were normal. In view of non-projectile, non-bilious vomiting with unremarkable physical findings, the presumptive diagnosis of gastro-esophageal reflux was made. The baby was kept on anti-reflux measures. Symptomatic improvement was seen initially but after 2 days vomiting recurred. In view of the persistent symptoms ultrasonography (USG) was ordered which revealed dilated stomach with thickened

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pylorus (muscle thickness-4.2 mm) on the left side. Pyloric channel length (19.3 mm) was also elongated. The liver was on the left side and the heart was on the right side. After the USG diagnosis we palpated the abdomen with special emphasis on left hypochondrium. A typical pyloric tumor was found. Echocardiogram was normal. Barium meal follow-through was done for academic interest after taking parental consent. Initial plain film showed heart on the right side and liver shadow on the left. The film after giving contrast revealed elongated pylorus on the left [Figures 1 and 2]. Ramstedt pyloromyotomy was done by open method using left supra-umbilical transverse incision. Baby was allowed orally next morning (after 16 h) and discharged on day 4. *Situs inversus* with HPS is an extremely rare condition in which secondary diagnosis obscures the primary diagnosis and poses a diagnostic dilemma. It also alters the approach (incision site) to primary diagnosis. The ultrasonography helps in the diagnosis of both the primary and secondary conditions.

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