

Vomiting in a 22-day-old firstborn male

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A 22-day-old healthy appearing male infant presented with persistent vomiting after feeding with onset shortly after birth. This is the father's second child and the mother's first. Switching formulas had been unsuccessful. Abdominal X-ray (AXR) revealed a dilated air-filled stomach with a nonspecific bowel gas pattern (Fig. 1). Ultrasound (US) demonstrated a thick and elongated pylorus, confirming the diagnosis (Figs. 2 and 3).

Pyloric stenosis is an important cause of gastric outlet obstruction and vomiting in infants. Peak incidence occurs between 2 and 5 weeks of age with an incidence of 1–8 per 1,000 live births. Male infants are predominantly affected 4:1 over female infants [1]. There is a familial component, with sons of affected fathers carrying a 5% risk of pyloric stenosis [2].

The cardinal feature of this disorder is projectile, non-bilious vomiting that occurs anywhere from the end of feeding up to 30 min after. Afterwards the infant exhibits a desire to feed more. Persistent emesis results in hypokalemic hypochloremic metabolic alkalosis with dehydration. Palpation of an olive-shaped, muscular, mobile, and non-tender mass in the left upper quadrant is pathognomonic of this condition. During feeding, gastric peristaltic waves can

sometimes be observed from left to right upper abdominal quadrants.

Radiographic signs of pyloric stenosis include gastric distension with air, a maximal gastric diameter of 7 cm or greater, and thick walled gastric antrum [3]. Abdominal US confirms the diagnosis by illustrating the increased length and thickness of the pyloric muscle.

Before surgical treatment, correction of dehydration and serum electrolytes is necessary. Definitive therapy is pyloromyotomy with an excellent outcome [4].



Fig. 1 AXR showing a dilated and air-filled stomach

All work was completed at SUNY Upstate Medical University. Institutional Review Board exemption for a case report was obtained. Brian T. Kloss, DO, JD, PA-C has ultimate control of the submitted abstract and case report/clinical image.

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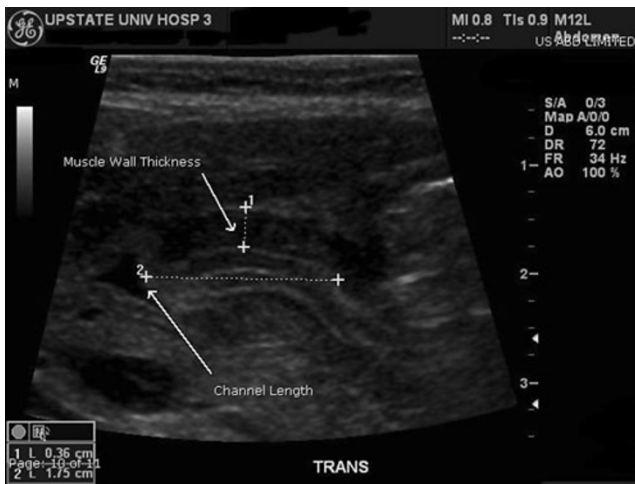


Fig. 2 US showing an elongated and thickened pylorus

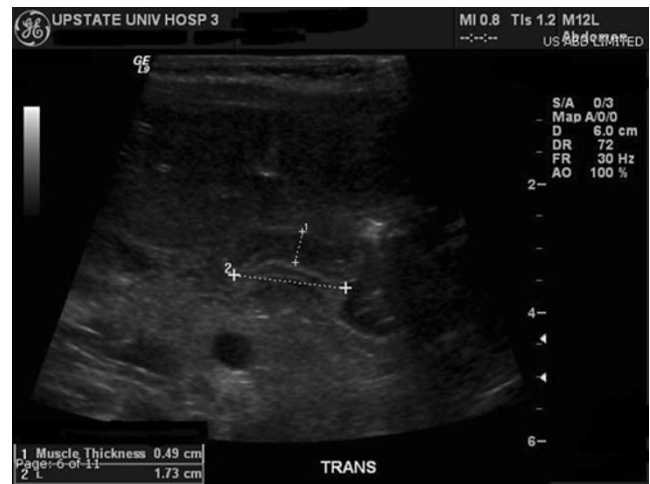


Fig. 3 US view from a slightly different angle confirms the measurements

References

1. Liao Z, Li Z, Zhang W et al (2007) Education and imaging. Gastrointestinal: infantile hypertrophic pyloric stenosis. *J Gastroenterol Hepatol* 22(10):1692
2. Hernanz-Schulman M (2009) Pyloric stenosis: role of imaging. *Pediatr Radiol* 39(Suppl 2):S134–S139
3. Haller JO, Cohen HL (1986) Hypertrophic pyloric stenosis: diagnosis using US. *Radiology* 161(2):335–339
4. Aspelund G, Langer JC (2007) Current management of hypertrophic pyloric stenosis. *Semin Pediatr Surg* 16(1):27–33