

A Male Infant with Vomiting

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1. Case Presentation

A 22-day-old full-term previously healthy male infant, presented to the emergency department with persistent non-projectile, non-bloody, non-bilious vomiting for 4 days. His parents reported

that he drank only 60 to 70 ml of formula per feed, as compared with the 90 to 110 ml per feed he had drunk in the previous day. Physical examination was unremarkable. Point-of-care ultrasound (POCUS) of the abdomen revealed thickening of the pylorus canal (Figure1).



Figure 1: Longitudinal plane of right upper quadrant abdomen showing thickening of pylorus (Bold arrow) muscular layer. Single muscle wall thickness measures 3.85mm. Stomach (Asterix) was not distended after patient vomited.

2. Discussion

Hypertrophic pyloric stenosis (HPS). Point-of-care ultrasound (POCUS) of the abdomen revealed thickening of the pylorus canal with single muscle thickness measuring up to 3.85 mm (Figure 1). Ramstedt pyloromyotomy was performed and revealed hypertrophic muscle surrounding the pyloric canal with luminal stenosis (Figure 2). The postoperative period was uncomplicated and the patient was discharged at 4 days. Hypertrophic pyloric stenosis

(HPS) is the most common cause of vomiting in infants, characterized by thickening of pyloric muscles with luminal stenosis, which requires surgery [1]. Ultrasound is the preferred image modality, as it is non-invasive and provides detail and real-time image of the pylorus [2]. Ultrasound diagnostic measurements include single pyloric muscle thickness of more than 3mm, and the pyloric channel length (longitudinal measurement) of greater than 15mm make the diagnosis, and the feasibility of POCUS performed by emergency physicians to diagnose HPS has been proved [3].



Figure2: Ramstedt pyloromyotomy was performed and revealed hypertrophic muscle surrounding the pyloric canal with luminal stenosis.

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