Gastric pneumatosis and portal venous gas: benign findings in hypertrophic pyloric stenosis

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A 6-week-old boy with progressively increasing non-bilious emesis was referred for evaluation of suspected pyloric stenosis. US revealed thickening and elongation of the pylorus, classic for pyloric stenosis, with reverberation artefact from the gastric wall. Echogenic foci compatible with portal venous gas were noted in appropriate distribution within the imaged liver (Fig. 1). Abdominal plain films confirmed gastric pneumatosis as the cause of portal venous gas (Fig. 2).

Gas in the bowel wall in infants is an alarming finding, raising concerns for gut ischemia and necrotizing enterocolitis. Gastric pneumatosis in the absence of ischemia has been reported in gastric outlet obstruction, including that from

Fig. 1 US image

Fig. 2 Lateral abdominal radiograph

duodenal and pyloric stenosis, suggesting a mechanical etiology for the finding. Pyloric stenosis presumably increases intraluminal pressure in the stomach, forcing gas through an intact mucosa [1]. Gastric pneumatosis in the presence of pyloric stenosis is a benign entity with rapid resolution following pyloromyotomy. Awareness of this constellation of findings will prevent unnecessary imaging and postponement of surgery [2].

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