

# Gastric Volvulus in 11-Month Old Male

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## Visual Case Discussion

11-Month old male brought in by mother for 1-day history of abdominal distension and anorexia associated with increased fussiness and multiple bouts of non-bloody diarrhea. Mother denied any associated vomiting but did endorse recent URI like symptoms. The child was born prematurely at 33 weeks secondary to cervical length insufficiency and spent 1-month in the neonatal intensive care unit. All other past medical and surgical history was unremarkable.

On physical exam, vital signs remarkable for Temperature of 99.5 F, Pulse 140, and blood pressure of 157/83. Patient was awake and sobbing, noted to have a distended abdomen with diffuse tenderness and hypoactive bowel sounds. The rest of the physical exam was unremarkable. A kidney, ureter, and bladder radiograph (Image. 1) showed severe gastric distension with normal bowel gas pattern concerning for gastric volvulus.

In the emergency room the patient was placed on monitors and intravenous access was established. Patient was given 5mcg of Fentanyl IV for pain. A nasogastric tube was inserted and set to suction with 200cc of gastric content return. Repeat KUB status post nasogastric tube insertion (Image. 2) shows NG tube in place with little resolution of distension.

## Case Imaging



Image 1. KUB of a 11-month old male with evidence of severe abdominal distension indicative gastric volvulus.



Image 2. KUB with evidence of severe abdominal distension status post nasogastric tube placement (white arrow)



Fig. 3. Sonographic image demonstrating small bowel intussusception as the classic "target sign".

The patient was transferred to Valley Children's Hospital in Madera for higher level of care. Repeat KUB upon arrival was performed which showed gastric decompression with NG tube extending into stomach. An abdominal ultrasound showed transient small bowel to small bowel intussusception in the left lower quadrant which spontaneously reduced during the course of the examination (Image. 3).

Given the initial findings of gastric dilatation concerning for volvulus and the transient intussusception found on ultrasound, an upper gastrointestinal series-small bowel follow through (UGIS-SMFT) was performed to rule out malrotation. The UGIS-SMFT was reported as negative for malrotation but showed evidence of GERD. Patient was discharged the following day with diagnosis of abdominal distension concerning for gastric volvulus with intermittent intussusception and moderate dehydration.

## Discussion

There have been 581 cases of gastric volvulus in children published in English between 1929 and 2007 of which 252 were acute and 52% were younger than one year of age.<sup>2</sup> The most common presentation of acute gastric volvulus is a child <5years old with non-bilious emesis, abdominal distension, abdominal pain, and is often associated with deformities of adjacent organs or abnormalities of one of the four gastric ligaments.<sup>1</sup> Acute diagnostic modalities include an acute abdominal film, chest x-ray, upper GI series with contrast, and abdominal ultrasound.<sup>3-4</sup> A nasogastric tube should be placed to decompress the proximal obstruction created by the closed loop. Definitive treatment for acute gastric volvulus remains emergent surgical repair in the form of gastropexy.<sup>5</sup> Some authors have advocated for consideration of emergent endoscopic reduction,<sup>6</sup> however this approach seems to be associated with a high rate of early recurrence even when successfully performed.<sup>7</sup>

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