

## CASE IMAGE

# Acute gastric volvulus mimicking features of gastroenteritis in a 5-year-old girl

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## Key Clinical Message

Acute gastric volvulus is a life-threatening condition. Especially, a history of adjacent organ deformities in children with intermittent vomiting and abdominal pain should suggest gastric volvulus, even if the symptoms resemble gastroenteritis.

## KEYWORDS

abdominal pain, acute gastric volvulus, diaphragmatic hernia, gastroenteritis, life-threatening, vomiting

## 1 | CASE DESCRIPTION

A 5-year-old girl presented to a hospital at night with intermittent vomiting and abdominal pain since the morning. She was exhausted and unable to drink or eat properly but had a normal bowel movement that day. The physician performed abdominal X-ray imaging, which revealed abnormal gas distribution (Figure 1A,B). However, her symptoms remained stable. Thus, she was diagnosed with early gastroenteritis, and the physician decided to discharge her. But she was transferred to our hospital the next day with worsening symptoms. She had a history of undergoing surgery for a congenital diaphragmatic hernia at birth. Her physical examination indicated a distended abdomen with periumbilical tenderness on palpation. Furthermore, abdominal X-ray revealed the absence of gas (Figure 1C,D), and contrast-enhanced abdominal computed tomography scan revealed an enlarged stomach with rotation and a right-sided spleen (Figure 2). An indwelling nasogastric tube was successfully inserted under fluoroscopy, and the symptoms of the patient dramatically

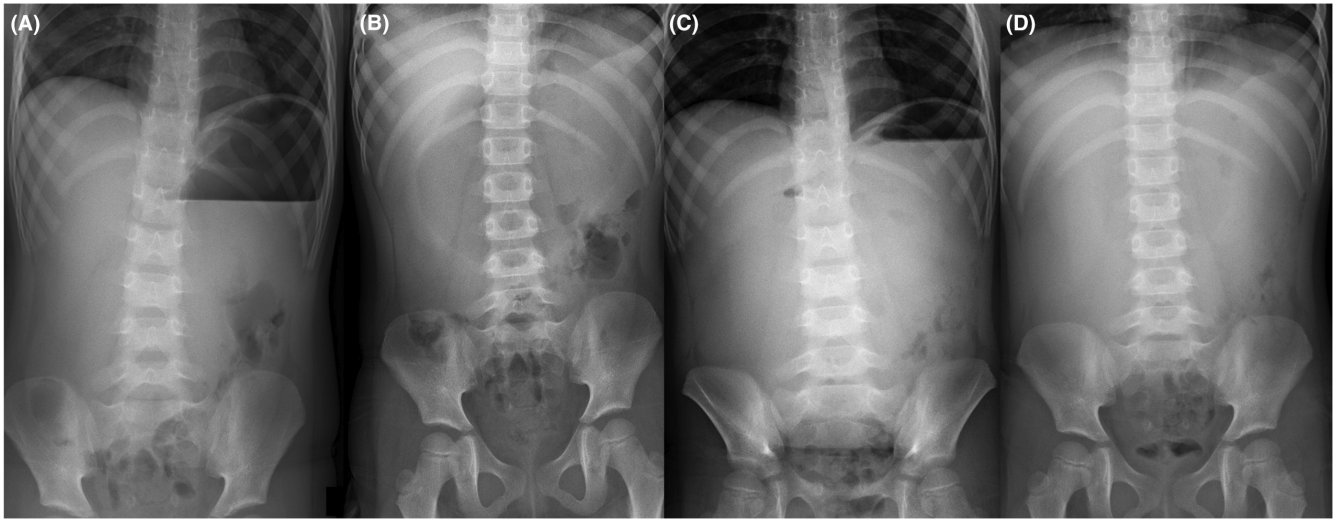
improved after removing >1 L of gastric contents. Finally, she was diagnosed with acute gastric volvulus and a wandering spleen.

## 2 | DISCUSSION

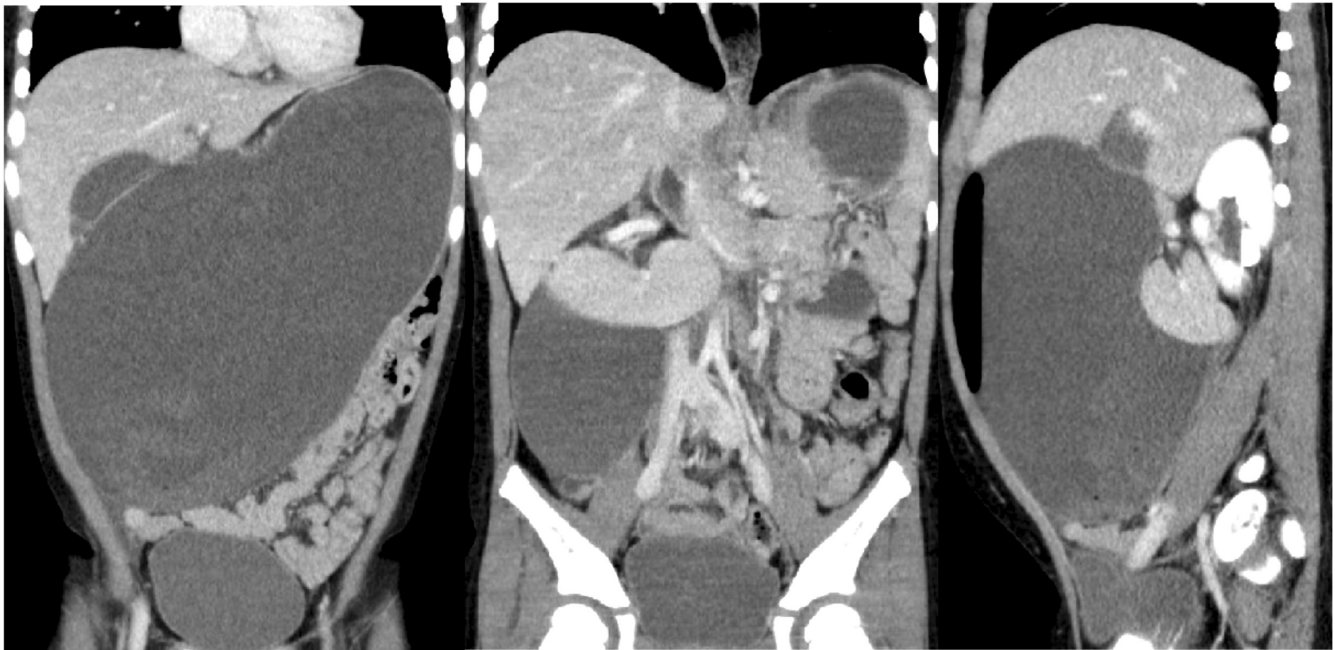
Vomiting and abdominal pain are common symptoms of gastroenteritis in children. However, it is important to carefully examine them in cases of intestinal obstruction. Notably, intussusception is the most widely recognized disease causing these symptoms in young children.<sup>1</sup> Nevertheless, acute volvulus may also occur, especially in children with adjacent organ deformities.<sup>2</sup> In the present case, the patient had a history of undergoing surgery for a diaphragmatic hernia. Her symptoms worsened dramatically without treatment, and this was a life-threatening condition.<sup>3</sup> A history of surgery, in particular for congenital diaphragmatic hernia in a child with intermittent vomiting, abdominal pain, pallor, and hypoactivity, should suggest gastric volvulus.

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**FIGURE 1** Abdominal X-ray images in (A) erect and (B) supine positions at the first visit and (C) erect and (D) supine positions on the next day showing the absence of gas, which worsened the next day.



**FIGURE 2** Contrast-enhanced abdominal computed tomography images showing a grossly enlarged stomach with rotation and a right-sided spleen.

Therefore, such patients must be observed in the hospital. Additionally, if intestinal obstruction is suspected, we recommend not hesitating to perform additional diagnostic imaging.

#### **AUTHOR CONTRIBUTIONS**

**Manami Ueshima:** Conceptualization; data curation; writing – original draft; writing – review and editing.

#### **FUNDING INFORMATION**

None declared.

#### **CONFLICT OF INTEREST STATEMENT**

The authors declare no conflicts of interest.

#### **DATA AVAILABILITY STATEMENT**

Data sharing is not applicable to this article as no new data were created or analyzed in this study.

#### **CONSENT**

Written informed consent was obtained from the patient's parent to publish this report in accordance with the journal's patient consent policy.

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