

## GASTRIC TERATOMA: A RARE CAUSE OF UPPER GASTROINTESTINAL BLEEDING IN NEONATES

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Gastric teratoma is a very rare tumor, accounting for less than 1% of all teratomas in infants and children.<sup>1</sup> Upper gastrointestinal tract bleeding in newborns is a rare event and is usually caused by a benign lesion. Gastric teratoma has been reported as a cause of gastrointestinal bleeding on a few occasions.<sup>1</sup>

### Case Report

The patient was a four-day-old male, the product of a full-term pregnancy and spontaneous vaginal delivery with birth weight of 2.8 kg, who presented with recurrent hematemesis associated with melena. There was no family history of bleeding disorders.

Physical examination showed a pale newborn with stable vital signs and in no distress. Systemic examination revealed no abnormalities. The hemogram showed a hemoglobin of 4 grams and a normal platelet count. Urea and electrolytes, hepatic profile, prothrombin time and partial thromboplastin time were normal. Abdominal plain x-ray showed no calcifications. Urgent upper GI contrast studies showed a filling defect in the stomach (Figure 1).

The patient received a blood transfusion and after stabilizing his condition, an exploratory laparotomy was performed. A mass measuring 10x5x3 cm and weighing 210 grams was found arising from the anterior wall of the stomach. The tumor had extra- and intragastric extension (Figure 2). Simple excision including the involved stomach wall was performed. The infant had an uneventful postoperative course and was followed up for two years with no signs of recurrence. Histological examination showed the tumor to be a mature cystic teratoma.

### Discussion

Gastric teratoma is very rare; approximately 50 cases have been reported in the literature.<sup>1,2</sup> The first case of gastric teratoma was reported in 1922 by Eusterman.<sup>3</sup> Gastric teratoma is seen most often in males. In 1979, Purvis et al.<sup>4</sup> reported the first case in a female infant; since then, five more cases have been added to the literature.<sup>5</sup> In 1977, Moriuchi et al.<sup>6</sup> reviewed 44 cases and found that 85% of the patients were below the age of one year and all were males. More than 90% of teratomas arose along the greater curvature of the stomach and 100% were histologically benign.

Gastric teratoma most commonly presents with abdominal mass or abdominal distention.<sup>6</sup> Other associated findings have included premature labor, dystocia and respiratory distress in the newborn.<sup>1</sup> Gastric teratoma has been shown to be responsible for upper GI bleeding on a few occasions,<sup>1,6,7</sup> but has not been reported as a cause of gastrointestinal bleeding in two large reviews concerning this topic in newborns.<sup>8,9</sup> The diagnostic workup in a newborn with upper GI bleeding should include a history and physical examination, complete blood count, coagulation profile, plain abdominal x-rays and an Apt test. Further diagnostic studies depend on the clinical condition of the patient and include endoscopy, upper GI contrast studies and angiography.<sup>10</sup> Abdominal plain x-rays may be normal or show a soft tissue mass. Approximately 50% of gastric teratomas reported in the literature showed calcification on plain abdominal x-rays.<sup>11</sup> Upper GI contrast studies usually reveal deformity and displacement of the stomach, small bowel and colon by an extrinsic mass.<sup>11</sup> Although the gastric teratoma is a very rare cause of upper GI bleeding, the diagnosis can be suspected in the presence of a palpable abdominal mass with a differing pattern of calcification in the plain abdominal x-rays. Gastric teratomas are almost always of a benign nature, although malignancy has been reported in two cases.<sup>12</sup>

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FIGURE 1. An upper GI contrast study showing a large filling defect in the anterior wall of the stomach.

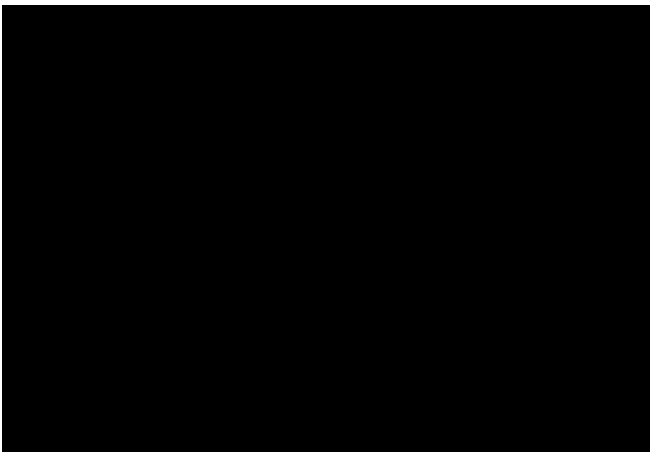


FIGURE 2. An operative view showing the tumors arising from the anterior wall of the stomach.

Total excision and primary closure of the gastric wall is the treatment of choice. Partial, subtotal and total gastrectomies have been performed as dictated by the extent of stomach involvement.<sup>13</sup> The prognosis following surgical excision of a gastric teratoma has been shown to be excellent. It appears that gastric teratoma in the newborn can present as significant upper GI bleeding. The definitive diagnosis is always made after surgery, and total excision of the tumor is curative.

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