GASTRIC OUTLET OBSTRUCTION IN CHILDREN: DON'T FORGET LYMPHOMA

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Introduction

Gastric obstruction secondary to primary gastric lymphoma is rare in children and may result in delayed diagnosis when the condition is not considered.[1] We present a case encountered in our center that was managed without surgery and discuss the approach for diagnosis.

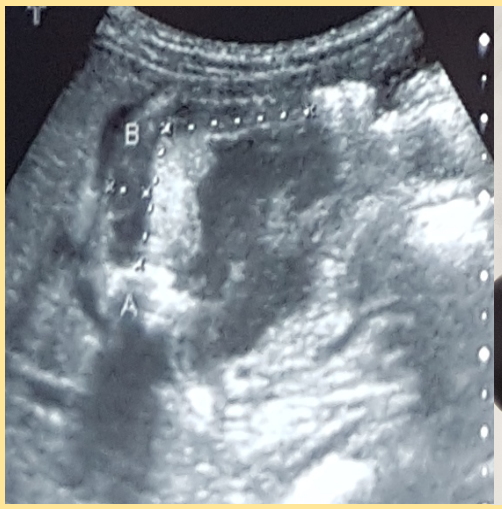

Fig. 1

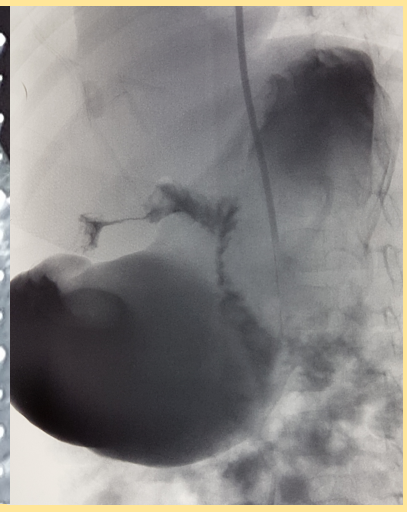

Fig. 2

Case Report

A 2 year-old girl presented with non-billious, projectile vomiting and poor feeding for 5 days with no abdominal pain or fever. She had no history of recurrent vomiting. She was lethargic and dehydrated at presentation. There was no palpable mass on abdominal examination. She had hypochloremic metabolic alkalosis with hyponatremia (Na: 127 mmol/L, Cl: 78 mmol/L, pH 7.4, HCO3: 27.2mmol/L, BE: 2.9). Other investigations were within normal perimeters. The patient was started on parenteral nutrition as she was unable to tolerate feeds.

Abdominal ultrasound revealed an elongated tubular structure measuring 40 mm in length and 5.7mm in width suggestive of pyloric stenosis (Fig. 1). Subsequent upper GI contrast study showed dilated stomach with narrowing at the pylorus (Fig. 2). CT scan of the abdomen showed circumferential wall thickening measuring 5.6cm long and 3.0 cm wide at the pylorus extending to the first part of the duodenum causing luminal narrowing (Fig. 3). Multiple enlarged paraaortic lymph nodes were seen.

Oesophagogastroduodenoscopy (OGDS) performed showed a small pyloric opening (Fig. 4). Punch biopsies obtained around the pylorus were reported as Burkitt's lymphoma.

The patient was referred to the pediatric oncologist for chemotherapy. A repeated CT scan after 3 cycles of chemotherapy showed marked regression of the pyloric tumour from the initial width of 3cm to 0.6cm. She was able to restart feeds without vomiting.

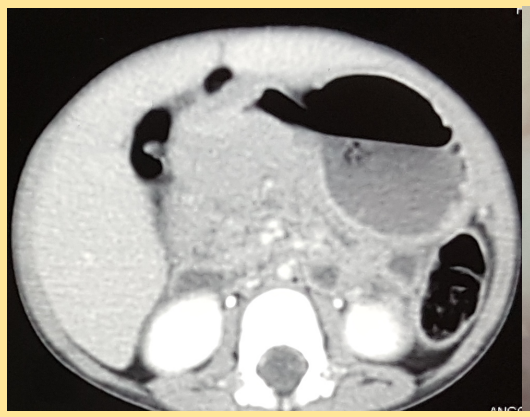

Fig. 3

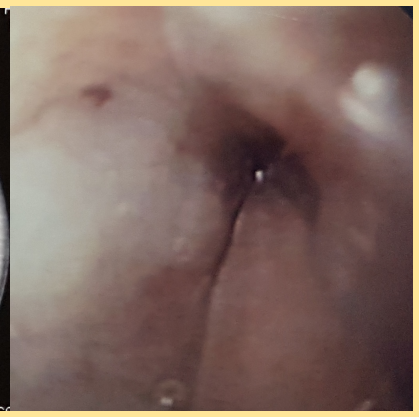

Fig. 4

Discussion

Gastric outlet obstruction outside of infantile hypertrophic pyloric stenosis is rare in children with the incidence of 1 in 100000.[2] Although lymphoma is the third most common malignancy in children, primary gastrointestinal lymphomas are rare contributing to less than five percent of pediatric tumours mostly within the small and large intestines.[3-4] GI lymphomas occurring primarily in the stomach are even rarer.[5] Most GI lymphomas are Burkitt's lymphoma. [1,5]

Primary gastric lymphoma has been reported in children between 2 to 14 years-old.[1,5-9,11] Most cases present with abdominal pain, vomiting and a palpable mass.[6,7] Other atypical presentations include hematemesis, hypoalbuminemia, and spontaneous perforation of the tumour.[1,8,9] The patient in our case presented with gastric outlet obstruction with hypochloremic metabolic alkalosis classical of pyloric stenosis. However due to the atypical age group for the diagnosis of hypertrophic pyloric stenosis, gastric lymphoma should be strongly considered despite the lack and abdominal pain and palpable mass. Ultrasound should be the first-line imaging to be performed in children with gastric outlet obstruction. CT scan may delineate the anatomy surrounding the pyloric obstruction more accurately and stage the disease.[7] OGDS is mandatory when imaging findings are suspicious as the pylorus is able to be visualized directly and biopsies taken for histological diagnosis.[5]

Currently there is no ideal management for primary gastric lymphoma in children.[1] Some authors suggest surgical resections in all cases.[10,11] Kassira recommended resection only in selected cases such as in obstructions and perforations.[12] Lymphomas are generally chemosensitive and may be treated without surgery with good outcome.[13] In our case the child responded to chemotherapy and was able to feed.

Conclusion

Primary gastric lymphoma is rare and should be considered in the differential diagnosis of gastric outlet obstruction in children despite the lack of abdominal pain or a palpable mass. Ultrasound should be done as the initial imaging to exclude this condition followed by endoscopy for histological diagnosis. Chemotherapy without surgical resection provides good outcome in these cases.

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