Rare disease

Isolated cavernous haemangioma of the stomach in a 3-year-old child: an unusual cause of upper GI bleeding

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Summary

We present a rare case of a 3-year-old child with a history of recurrent attacks of haematemesis, melena and severe anaemia. Upper gastrointestinal endoscopy revealed a vascular mass at the fundus and greater curvature of the stomach, CT revealed an ill-circumscribed mass of mixed attenuation in the left upper abdomen, which was related to the fundus and greater curvature of the stomach, extending to the spleen, greater omentum and transverse colon with a homogeneous enhancement following contrast injection suggesting the diagnosis of haemangioma. Explorative laparotomy was done and partial gastrectomy together with splenectomy and omentectomy was performed. Histological examination confirmed the diagnosis of cavernous haemangioma.

BACKGROUND

Cavernous haemangiomas are congenital hamartomatous lesions that originate from the mesodermal tissues, which are composed of large dilated blood vessels and contain large blood-filled spaces that are caused by dilation and thickening of the walls of the capillary loops. They have been reported in different organs, including the liver, colon, retroperitoneum, spleen, adrenal glands, soft tissues, bone, central nervous system and mediastinum.¹ Gastric haemangioma, a rare tumour occurring mostly in the antrum, was first described by Lammers in 1893. It represents approximately 1.7% of all gastric benign tumours.²

In this case report, we present the clinical presentation, diagnosis and treatment of a rare case of an isolated cavernous haemangioma originating from the stomach that was diagnosed and managed successfully in our hospital.

CASE PRESENTATION

A 3-year-old male child with a history of recurrent attacks of haematemesis, melena and severe anaemia. He had been born of a full-term pregnancy by spontaneous vaginal delivery and was in good health until 4 months ago, when he began to vomit 'coffee-coloured' material, which sometimes contained specks of bright red blood together with passing dark colour stool. He had no abdominal pain, no jaundice and no fever.

He was admitted to the paediatric unit three times for severe anaemia (haemoglobin: 4.8, 5.6, 5.3 g/l). The medical, surgical, social and family history were unremarkable.

Previous laboratory tests revealed a hypochromic microcytic anaemia with no other haematological abnormalities. Upon examination the child was pale without jaundice and without lymphadenopathy, abdominal examination was unremarkable.

INVESTIGATIONS

Upper gastrointestinal (GI) endoscopy revealed a vascular mass at the fundus and greater curvature of the stomach.

A Doppler ultrasound examination excluded the presence of portal hypertension. CT (figure 1) revealed an ill-circumscribed mass of mixed attenuation in the left upper abdomen, that was related to the fundus and greater curvature of the stomach, extending to the spleen, greater omentum and transverse colon with a homogeneous enhancement following contrast injection suggesting the diagnosis of haemangioma (figure 2). There was no other lesion in the abdomen, chest and brain of the patient.

Laboratory investigations were negative for haematological abnormalities apart from a hypochromic microcytic anaemia.

Figure 1 CT showing a mass of mixed attenuation in the left upper abdomen, that is related to the fundus and greater curvature of the stomach, extending to the spleen, greater omentum and transverse colon 173×168 mm (72×72 DPI).

Figure 2 Homogeneous enhancement following contrast 174×168 mm (72×72 DPI).

TREATMENT

Explorative laparotomy through a midline incision was performed after resuscitation and antibiotic prophylaxis, the mass was found at the fundus and greater curvature of the stomach involving part of the greater omentum, the short gastric vessels were dilated and the hilum of the spleen was involved (figure 3). Splenectomy was done, excision of the involved greater omentum then partial gastrectomy in a longitudinal way, resembling sleeve gastrectomy, was performed removing the involved part of the stomach.

OUTCOME AND FOLLOW-UP

The child was kept on intravenous fluids and nil per os (NPO) for 48 h after which a postoperative gastrographin study of the stomach and small intestine was obtained

to exclude leak and oral intake was resumed gradually to be discharged in the sixth postoperative day. Histopathological examination confirmed the diagnosis of cavernous haemangioma of the stomach (figure 4).

DISCUSSION

Haemangiomas of the stomach are frequently asymptomatic and discovered incidentally at imaging, surgery or autopsy; yet they can have serious consequences. The clinical presentation of such a lesion varies depending on its location. Our patient presented with recurrent attacks of haematemesis, melena and severe anaemia for which he needed frequent admissions and blood transfusions in the paediatric unit. In other case reports, these lesions presented as intermittent abdominal pain and dyspepsia,³ palpable abdominal mass^{4 5} or as an acute gastric haemorrhage.⁶

Since our patient presented with upper GI bleeding, the diagnostic work-up of our case started with endoscopy, which was so useful in suggesting the possible diagnosis, and with the aid of CT scan, both native and contrast enhanced, we were able to make the diagnosis of haemangioma of the stomach with almost certainty, and this was so helpful since we were able to take all the precautionary measures before embarking on the surgery for such a rare lesion. This supports the findings of previous studies which have shown that the best diagnostic procedure is CT scanning and MRI, which demonstrate the location and relationship of the lesion to neighbouring structures.⁶ The final diagnosis in the present case was obtained by postoperative histopathology.

Endoscopic resection of a cavernous haemangioma of the stomach has been reported,⁷ but that lesion was confined to the mucosa and sub-mucosa. With full thickness gastric wall involvement, together with involvement of adjacent organs as in our case, the only option for complete removal was surgical excision. Recurrence after complete resection of cavernous haemangiomas of the stomach has never been reported.

Figure 3 Operative specimen image showing the haemangioma originating from the fundus and greater curvature of the stomach and involving part of the spleen, greater omentum and transverse colon 19×14 mm (300×300 DPI).

Figure 4 Pathological section with H&E staining showing large tortuous arterial vessels located in the sub-mucosa with simple squamous epithelium in the lining of lumens 176×132 mm (72×72 DPI).

Learning points

- In conclusion, keeping in mind that rare pathologies do occur and most importantly they can present in a common format and should not be forgotten; we can say that although cavernous haemangiomas of the stomach are rare tumours, they should be considered in the differential diagnoses of patients, especially children, presented with gastrointestinal bleeding of obscure origin.
- Imaging with ultrasonography, CT scanning and MRI might be helpful in achieving a primary diagnosis without the need for a tissue prove, which is not feasible for such vascular and easily bleeding lesions.

Competing interests None.

Patient consent Obtained.

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