Leiomyoma of the mesentery in an infant

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ABSTRACT

Leiomyoma of the mesentery is an uncommon tumor among gastrointestinal stromal tumors. This has been documented in adults and children. However, there is only one case reported in an infant and we are presenting such a rare second case in a 6-month-old male infant. Exploration of the abdomen revealed a solid mass within the leaves of the mid-ileal mesentery that could be enucleated out entirely after careful dissection. Histopathology suggested it to be leiomyoma of mesentery.

KEY WORDS: Leiomyoma, mesentery

INTRODUCTION

Gastrointestinal stromal tumors (GISTs) formally classified as leiomyomas or leiomyosarcomas are mesenchymal tumors of the gastrointestinal tract (GIT) that differ from true leiomyomas and leiomyosarcomas. Classification of mesenchymal tumors of the GIT has been the subject of controversy for many years and several histological classification systems has been proposed. The GIST is now defined as spindle cell, epitheloid or occasionally pleomorphic mesenchymal tumors of the GIT without smooth muscle cell or Schwann cell differentiation.[1,2] The term GIST is also limited to tumors originating from pacemaker cells of Cajal located between myenteric plexus cells and smooth muscle cells of the GIT. The immunohistochemical marker “C-Kit” (CD-117) identifies these cells and appears to be the most specific diagnostic marker currently available.[1,2]

CASE REPORT

Since 1 month, abdominal distension was observed in a 6-month-old male child by his mother. The baby had no other complaints. His bowel habits were normal and there was no history of temperature. His 20-years-old mother was primiparous, and the child was born by normal delivery.

On examination the child appeared normal and active. There was a well defined, lobulated, tense solid mass, measuring approximately 8.5 cm × 7.5 cm × 6.5 cm occupying almost one-fourth of the abdomen, including the right lumbar, umbilical and right iliac fossa, encroaching onto the hypogastrium and left iliac fossa. The mass was relatively mobile on abdominal palpation and not palpable as per the rectal digital examination. There were no other associated congenital anomalies.

Hematological and biochemical investigations were normal except for a hemoglobin level of 9.7 gm%.

Ultrasonography (USG) of the abdomen revealed a predominantly hypoechoic mass measuring 8.5 cm × 7.5 cm × 6.5 cm.

Although the site of origin of the lesion could not be defined, it was separate from liver, pancreas, kidneys and spleen. The CT scan of the abdomen showed a large (8.5 cm × 7.5 cm × 6.5 cm) multilobular intensely enhancing intraperitoneal soft tissue mass in the mesenteric bed extending into pelvic cavity [Figure 1].

The lesion splayed the abdominal organs out; the coils of the small intestine could not be palpated and a definite shifting of the intestines could be palpated. The CT scan of the abdomen revealed a large (8.5 cm × 7.5 cm × 6.5 cm) multilobular intensely enhances intraperitoneal soft tissue mass in the mesenteric bed extending into pelvic cavity. The lesion splayed the abdominal organs out; the coils of the small intestine could not be palpated and a definite shifting of the intestines could be palpated.

Figure 1: CT scan of the abdomen

of the intestine were pushed to the left lower quadrant of the abdomen. The overall heterogenicity of echo pattern on USG and the suggestive CT scan findings helped us in arriving at a preoperative provisional diagnosis of a tumor mass possibly of mesenteric origin.

Exploration of the abdomen revealed a thick-walled mass located within the leaves of the ileal mesentery, adherent to small bowel at places. Mesenteric lymph nodes are not enlarged and the remaining abdominal viscera were normal. The entire mass could be enucleated out without injuring any mesenteric vessel [Figures 2, 3].

The postoperative recovery was uneventful and the patient was discharged on the eighth day. Histological examination showed a hypercellular tumor constituted of proliferating bundles of spindle-shaped cells, interdigitating and whorling at places. There was no atypia, and mitosis was rare [Figure 4].

**DISCUSSION**

The GIST is rare but nevertheless the most common mesenchymal neoplasms of the GIT. It is most frequently found in stomach (60-70%) followed by the small intestine (20-30%), the colorectum (10%) and the esophagus (65%).[3,4]

They account for 2-3% of all gastric tumors. They may also occur as primary tumors outside the gastro intestinal tract, particularly in the omentum, mesentery and retro peritoneum. The term stromal tumor has several accepted definitions in the literature. A general definition of mesenchymal tumors includes all the mesenchymal tumors originating from spindle cells; (irrespective of their differentiation into leiomyoma, leiomyosarcoma, schwannoma and tumors of autonomic nervous system) a more restrictive definition of GIST would include only tumors containing the spindle or epithelioid cells without smooth muscle cells or Schwann cell differentiation. Recently, the name gastrointestinal pacemaker cell tumor is used since most of these tumors would originate from pacemaker cells of Cajal. Pacemaker cells are identified by the immunohistochemical marker C-Kit and are located between the myenteric plexus and smooth muscle cells of the GI wall; however, the presence of the receptor in omental tumors questions the exclusive origin of stromal tumors from the pacemaker cells.[1,3-5]

The most common clinical manifestation of symptomatic stromal tumor in the GIT is the gastrointestinal bleeding caused by mucosal ulceration. Patients may present with hematemesis, melena, hematochezia or signs and symptoms of anemia caused by occult bleeding. Other symptoms are abdominal pain and a palpable mass or the patient may remain asymptomatic.[6,7] Leiomyoma rarely arise in the peritoneum, omentum and mesentery of children.[8]

Children with acquired immunodeficiency syndrome (AIDS) are at an increased risk for lymphoproliferative and neoplastic disorders. Smooth muscle neoplasms
such as leiomyomas and leiomyosarcomas are included among these.\textsuperscript{[9]}

However, to the best of our knowledge there have been only one case of leiomyoma of mesentry reported in an infant in the literature.\textsuperscript{[10]} In this study, we have presented a second case of such type.

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Source of Support: Nil, Conflict of Interest: None declared.