Malignant Fibrous Histiocytoma of Mesentery with Ischemic Gangrene of Small Bowel

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Abstract
A patient with malignant fibrous histiocytoma of the mesentery presenting with ischemic gangrene of the small bowel leading to perforation and peritonitis is described. (Indian J Gastroenterol 1992; 11: 149)

Key Words: Small intestine ischemia

Mesenteric tumors usually present with a palpable mass and cause symptoms because of their size. We present a patient with a small malignant fibrous histiocytoma (MFH) of the mesentery with vascular changes leading to gangrene of the small bowel.

A 32 year old man presented with sudden onset of central abdominal pain, distention, obstipation and vomiting for four days. His past medical history was unremarkable. The patient was toxic and febrile, his pulse rate was 110/min and blood pressure was normal. Abdominal examination revealed generalized distension, rigidity and tenderness. Liver dulness was obliterated. There was rebound tenderness and free fluid in the abdominal cavity. Bowel sounds were present. Per rectal examination showed tenderness and bulge of the anterior rectal wall. Examination of the other systems was normal.

Hematological and biochemical parameters were normal. Abdominal X-ray showed free air under the diaphragm, multiple air-fluid levels and boxed wall edema. Emergency laparotomy was done with a clinical diagnosis of intestinal perforation and peritonitis.

Two liters of feculent material was present in the abdominal cavity. A tumor was seen within the mesentery and about 40 cm of jejunum was gangrenous with complete transection in one place. Liver and other viscera were normal. The tumor was resected along with 50 cm segment of jejunum and primary anastomosis was done. On the seventh post-operative day the patient developed septicemia at the site. The abdomen was reexplored and fibrin and necrotic fat were removed. Subsequently, the patient had an uneventful recovery and was discharged 7 days after the second operation.

The specimen showed a well circumscribed, 4.5 cm diameter, grey white, nodular, hard tumor within the mesentery. The mesenteric lymph nodes were grossly unremarkable. However, a 1 cm diameter satellite tumor nodule was identified 1 cm from the main tumor mass within the mesentery. Both the edges of the resected specimen were grossly viable. Histological examination showed a malignant spindle cell neoplasm with frequent storiform pattern, high mitotic rate and areas of necrosis. The spindle cells had plump nuclei and occasional giant cells were seen (Fig). The tumor was very close to the serosa at places but did not invade the bowel wall. Sections from the gangrenous segment of the intestine showed focal transmural necrosis of the bowel wall with abscess. Extensive surface ulceration with feet of granulation tissue formation was also noted. The blood vessels in the submucosa beneath these ulcers showed medial hyperplasia and intimal proliferation with occasional fibrin thrombi in the lumen. Some vessels showed the presence of recanalized thrombi. Elastic van-Gieson stain showed intimal proliferation and medial chasms of the vessel wall. The vessels within the tumor showed similar changes.

MFH occurs most frequently on the extremities and retroperitoneum, and is uncommon in the mesentery. In one study of primary solid neoplasms of the mesentery, only 3 of 44 cases were termed as 'xanthogranuloma with malignant features', which are basically MFH. Because of the mobility of the mesentery, mesenteric tumors usually grow to a very large size before causing any symptoms. Obliterative elastotic sclerosis of mesenteric blood vessels leading to small bowel gangrene has been reported in carcinoid tumors. In our case a relatively small MFH produced ischemic gangrene with perforation and peritonitis by causing vascular changes.

References