Recurrent inflammatory pseudotumor of small bowel mesentery presenting as perforative peritonitis

DHRAMESH J BALSARKAR, N U RANADIVE,* MADHURI A GORE, MOHAN A JOSHI

Departments of General Surgery and *Pathology, L T M Medical College and L T M General Hospital, Sion, Mumbai 400 022

A 62-year-old man with recurrent inflammatory pseudotumor of the small bowel mesentery presented with perforative peritonitis; such a presentation has not been reported. The mass was excised successfully. [Indian J Gastroenterol 2002;21:79-80]

Key words: Inflammatory myofibroblastic tumor

Inflammatory pseudotumor or inflammatory myofibroblastic tumor (IMT) is a spindle cell proliferation of disputed etiology, with distinctive inflammatory and even pseudosarcomatous appearance.1 The lung is the best known site, followed by the mesentery.1,2 Accurate diagnosis before surgical excision is difficult.

A 62-year-old man presented with sudden onset and continuous abdominal pain for one day. He gave history of being operated on for an abdominal lump two years ago. No operative details were available at the time of presentation. On examination, he was hemodynamically stable, with tachycardia (pulse rate 120/min) and blood pressure 130/90 mmHg. The abdomen was guarded and a midline scar of previous laparotomy was seen. X-ray of the abdomen showed gas under the right hemidiaphragm. A diagnosis of perforative peritonitis in a previously operated patient was made.

At emergency exploratory laparotomy, there was 400 mL of pus in the abdominal cavity, which was evacuated. There was a clogged mass of distal jejunum and proximal ileum with a firm tumor extending till the root of the mesentery (Fig). The distal jejunum and proximal ileum were resected till the root of the mesentery. The proximal jejunum was anastomosed to the distal ileum. The patient had an uneventful postoperative recovery.

The gross specimen showed a loop of jejunum and terminal ileum measuring 75 cm in length and a mesenteric mass of 8 cm x 5 cm x 3 cm, inseparable from the serosa of the intestine. The mass was multinodular, bosselated, grayish brown in color. On cut section, it was a gray-white, firm, myxoid, fleshly lobulated tumor, which was protruding from the serosa and extending up to the mucosa at few places. The rest of the jejunal and ileal mucosa showed edematous folds, and the serosa had a dirty yellow exudate.

Multiple sections revealed a tumor composed of variable histological patterns. The predominant pattern was of loosely arranged stellate to plump cells in an edematous myxoid background, with an irregular network of blood vessels intimately admixed with inflammatory cells, producing a granulation tissue-like appearance. The inflammatory infiltrate consisted predominantly of eosinophils, lymphocytes and mature plasma cells. The blood vessels varied in size from small venules to large vessels. Some of the capillaries were dilated and congested. The second pattern was of cellular areas showing spindle-shaped and plump cells arranged in vague fascicular pattern. The spindle-shaped cells had nuclei with blunt ends whereas the plump cells had abundant eosinophilic cytoplasm and indistinct cytoplasmic borders. The nuclei were vesicular with predominant nucleioli resembling myofibroblasts. No significant mitotic activity was seen. In few sections the pseudotumor was seen reaching up to the mucosa. Immunohistochemistry was positive for vimentin, smooth muscle actin and myoglobin.

Previous operative specimen report was also available. It described, a large, globular, well-encapsulated mass, 10 cm in diameter, grayish white in color, with congested blood vessels; it had been excised completely from the small bowel mesentery. Sections had revealed microscopic features similar to the present histology, but the inflammatory infiltrate consisted mainly of polymorphs, with the pseudotumor restricted to the mesentery and not involving the bowel wall.

Inflammatory pseudotumor is a pseudosarcomatous inflammatory lesion that occurs in soft tissues and visceras of children and young adults. Extrapulmonary inflammatory pseudotumor has many morphologic similarities with the plasma cell granuloma.1 Fever, weight loss, pain, mass and site-specific symptoms are the chief presenting complaints.1 Common extrapulmonary sites are abdomen, retroperitoneum, pelvis, head, neck, trunk, and extremities.1 Our patient presented with perforative peritonitis, a feature not reported previously.

Laboratory abnormalities include anemia, thrombocytosis, polyclonal hypergammaglobulinemia and elevated erythrocyte sedimentation rate. Three basic histological patterns are recognized: myxoid, vascular and inflammatory areas resembling nodular fasciitis; compact spindle cells with intermingled inflammatory cells (lymphocytes, plasma cells and eosinophils) resembling fibrous histiocytoma; and dense plate-like collagen resembling a desmoid or scar.

In our patient, all three patterns were seen at histology. The inflammatory infiltrate was composed mainly of eosinophils, as compared to the previous tumor, which
showed mainly polymorphs. Immunohistochemistry demonstrates the presence of vimentin, muscle-specific actin, smooth muscle actin and cytokeratin consistent with myofibroblasts.\textsuperscript{1}

Inflammatory pseudotumor is a benign, non-metastasizing proliferation of fibromatosis.\textsuperscript{1} The histological transformation can be from a benign appearance to an undifferentiated sarcomatoid proliferation.\textsuperscript{2} In our patient, at previous surgery, the inflammatory pseudotumor was restricted to the mesentery, but recurrence showed tumor cells separate muscle fibers and infiltrate up to the mucosa, suggesting an aggressive behavior.

Complete excision of the lesion is the treatment of choice.\textsuperscript{1}\textsuperscript{3}\textsuperscript{4} Recurrence after complete excision can occur in very large pseudotumors that are located in areas difficult to excise, such as the heart, upper respiratory tract, and retroperitoneum, omentum, peritoneum, pelvis and mesentery.\textsuperscript{1} Though extrapulmonary tumors occur at a younger age, they are more aggressive with a recurrence rate of 24\% and a mortality rate of 7\%.\textsuperscript{2} Chemotherapy with agents like cytoxan, vincristine, dacarbazine, adriamycin, 5-fluorouracil, cisplatin, ifosfamide, etoposide, carboplatin and radiation therapy have been tried, with varied response.\textsuperscript{1}

References

Correspondence to: Dr Balsarkar, C-501, Bafna Apartments, Moghul Lane, Mahim, Mumbai 400 016. E-mail: djbalsarkar@yahoo.com

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Degloving injury of small intestine
DHARMESH J BALSARKAR, SATISH B DHARAP, MOHAN A JOSHI

Department of General Surgery, L T M Medical College and L T M General Hospital, Sion, Mumbai 400 022

Self-inflicted stab wounds are seldom very grave. We report a 25-year-old man who inflicted stab wounds with a glass piece under the influence of alcohol. This led to evisceration and later degloving injury to the small bowel. He recovered following surgery. [Indian J Gastroenterol 2002;21:80-81]

Key words: Stab wound

Small intestinal injury is more common following penetrating abdominal trauma than blunt trauma. Stab injuries tend to be less severe than gunshot wounds, due to the mobility afforded to the small bowel by its mesentery.\textsuperscript{1} We report a man with self-inflicted stab wound of the abdomen that led to evisceration and transection of the jejuno-ileal junction with degloving of the jejunum along the subserosal plane.

A 25-year-old man presented with evisceration of the bowel which he supported with his own hands. This had occurred following a stab wound that was self-inflicted with a glass piece, under the influence of alcohol. The patient was hemodynamically stable. Examination revealed 3 meters of stretched intestine with complete loss or proximal and distal connection (Fig). There was a full-thickness penetrating wound in the periumbilical region and multiple superficial incised wounds over the rest of the abdomen. On closer look, the eviscerated contents consisted of about 30 cm of full-thickness bowel; the rest was stretched-out bowel completely devoid of its serosa.

The patient underwent emergency laparotomy, which revealed complete transection at the jejuno-ileal junction. The jejunum distal to the duodeno-jejunal flexure was devitalized and consisted only of serosa. At the distal end approximately 75 cm of viable terminal ileum was present, with minimal contamination of the peritoneal cavity. There was no other hollow viscus or solid organ injury. Kocher's and Cattie's maneuvers were performed to completely expose the third part of the duodenum. The devitalized jejunal serosa was disconnected at the duodeno-jejunal flexure and excised. The fourth part of the duodenum also appeared devitalized; it was excised. The terminal end of the third part of the duodenum and the stump of the proximal ileum were closed and a side-to-side duodeno-ileal anastomosis was performed in two layers with 3-0 silk. A gastrostomy was performed and a feeding tube was positioned.

Fig: Patient on presentation with degloved bowel lying outside abdomen and remaining intestine protruding out of incised wound

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