Brunner's gland adenoma, also referred to as Brunner's gland hamartoma, is a benign proliferative lesion of the duodenum. Until 1998, 143 cases had been reported in the English literature. These lesions may present with hemorrhage or obstruction or as incidental findings during laparotomy. Three macroscopic types are described: 1. diffuse nodular hyperplasia with lesions distributed all over the duodenum, 2. circumscribed nodular hyperplasia where a few small nodules may be present in the proximal duodenum, and 3. adenomatous hyperplasia where a single polypoidal lesion is encountered. Although the vast majority of these lesions have been treated surgically, endoscopic removal is now a popular alternative. We describe a patient with circumferential adenomatous hyperplasia that mimicked carcinoma and was not amenable to endoscopic treatment.

A 58-year-old man presented with one-year history of mild dyspepsia, and postprandial upper abdominal pain, nausea and vomiting of 3 months' duration. He had lost 15 kg body weight in these 3 months, which he attributed to decreased food intake. He had undergone upper gastrointestinal endoscopy 2 weeks and 3 weeks prior to referral to our center. Both examinations revealed a mass lesion in the duodenum with friability and ulceration. Biopsy on both occasions revealed nonspecific changes. As he tested H. pylori positive, he had been given medical therapy for the same without relief in symptoms. On examination, the patient was emaciated. Abdominal examination revealed a firm, tender, 8 cm x 5 cm mass in the right hypochondrium extending to the epigas-

trium. Per rectal examination was normal.

Upper gastrointestinal endoscopy at our center revealed a small hiatal hernia, a linear ulcer in the lower esophagus, grossly distended stomach with fluid residue, rosy first part of duodenum, and a circumferential polyoidal lesion extending for 3.4 cm in the second part of the duodenum. Multiple biopsies revealed inflammatory changes in the duodenal mucosa; there was no evidence of malignancy. Contrast-enhanced CT scan revealed a soft tissue mass involving the circumference of the first and second parts of the duodenum with obliteration of clearances planes between the mass and the inferior aspect of the head of the pancreas, inferior vena cava and left renal vein, suggesting local infiltration.

Laparotomy was performed through a right subcostal incision. A bulky growth involving the first and second parts of the duodenum was seen, adherent to but not infiltrating the inferior vena cava and left renal vein. There were hard retrocholedochal lymph nodes and fleshy hepatic artery nodes. The pancreas and bile duct were normal. There was no ascites or peritoneal/perihepatic nodules. With a diagnosis of duodenal carcinoma, the patient was subjected to proximal duodenectomy with cholecystectomy, trunci vagotomy, distal antrectomy, and clearance of retropancreatic, choledochal, mesentric and hepatic lymph nodes. Reconstruction was achieved by pancreaticogastronomy, hepaticocutaneous jejunostomy and gastrojejunostomy. A feeding jejunostomy was performed for early enteral feeding. The postoperative period was free of complications. At 2 months' follow up the patient is asymptomatic.

Cut section of the duodenum revealed a brownish, soft, papillary lesion in the second part, circumferential and extending longitudinally for 4 cm. Microscopy revealed lobules of hypertrophied Brunner's glands flattening the overlying mucosa. The duodenal wall showed fibrosis and diffuse infiltration by lymphocytes, plasma cells and eosinophils (Fig).

Although Brunner's gland adenomas are benign, there have been reports of carcinoma, dysplasia or carcinoid tumors in patients with Brunner's gland adenoma. Atypical glands with p53 expression have also been reported recently.
This case presents unusual features: the difficulty in achieving a pre-operative histologic proof despite three sets of endoscopic biopsies, and the circumferential nature of the duodenal involvement precluding endoscopic therapy. Since there was no biliary or pancreatic duct obstruction, the possibility of a benign lesion was high. Yet, CT scan and operative findings were suggestive of an invasive carcinoma and a Whipple resection was required to excise the lesion completely.

Brunner's gland adenomas should be considered in the differential diagnosis of duodenal lesions, especially where bile and pancreatic ducts are unobstructed. Establishment of a histologic diagnosis by endoscopy will permit endoscopic excision or conservative resection.

References

Correspondence to: Dr Ramesh, 31/543, Subhash Nagar, Edapally, Cochin 682 024. Fax: (484) 33 4691. E-mail: hramesh@vsnl.com
Received May 17, 2001. Accepted May 27, 2001

**Jejunal leiomyosarcoma presenting as chronic intra-abdominal abscess**

S SANKAR, G PONNUSAMY

Department of Surgery, PSG Institute of Medical Sciences and Research, Coimbatore 4

We report a 35-year-old man with jejunal leiomyosarcoma who presented with chronic intra-abdominal abscess. He underwent drainage of the abscess initially but was re-explored four months later when a mass developed. Total excision of the tumor was done. [Indian J Gastroenterol 2001;20:244-245]

**Key words:** Jejunum tumor

The usual presentations of jejunal leiomyosarcoma are with bleeding, pain in the abdomen, intestinal obstruction, peritonitis and cachexia. We report a patient with this tumor who presented with chronic intra-abdominal sepsis.

A 35-year-old man was admitted with abdominal distension for one year, rapidly increasing in the last two weeks. Pain in the abdomen, weight loss, low-grade fever, vomiting, and poor appetite were his other symptoms. His bowel habits were normal. He was hemodynamically stable. Pallor, pedal edema, abdominal fluid thrill and minimal tenderness were the positive signs elicited.

**Investigations:** Hemoglobin 8 g/dL, WBC count 13,000/μL with polymorphonuclear leukocytosis. Biochemical investigations were normal except for hypoaalbuminemia. Diagnostic paracentesis yielded thin purulent fluid; microscopy showed polymicrobial flora and *Candida albicans*. X-ray abdomen showed a large single air-fluid level. CT abdomen (Fig) showed a 20 cm x 12 cm fluid-filled cavity that enhanced with oral contrast, indicating a bowel communication. The small bowel was pushed to the right side. No mass lesion was detected.

At exploration by a midline incision, an abscess cavity was detected with its wall adherent to the linea alba; about two liters of pus and debris was evacuated. Since the remaining visera were plastered, further exploration was not done. A Malecot catheter was placed in the cavity. The patient’s general condition improved in the postoperative period. Cavitogram showed communication with the jejunum. Gradually, a mass was palpable in the abdomen. Re-exploration after four months showed a huge mass, 25 cm x 15 cm, arising from the duodenojejunal flexure with extensive adhesions. Total excision was done. Histology of the mass showed leiomyosarcoma with high mitotic activity. Sarcomas comprise about 10% of malignancies of the small intestine. They present with weight loss, anorexia, and abdominal pain. Leiomyosarcomas are highly vascular and tend to bleed into the lumen. The bleeding may be occult, presenting as anemia, or it may be overt and massive. Recurrent melena is the commonest symp-

![Fig: CT scan showing irregular fluid-containing lesion with mixed density, enhancing with oral contrast indicating bowel communication. Small bowel is pushed to right](image-url)