Leiomyoma of the duodenum as a cause of recurrent post-gastrectomy bleeding

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EDITORIAL SYNOPSIS A patient with recurrent melena over a period of four years is reported. He underwent four laparotomies. At the fourth operation a leiomyoma of the second part of the duodenum was found and successfully resected. The clinical features of leiomyomatous tumours of the duodenum are reviewed, and recurrent unexplained gastrointestinal haemorrhage is emphasized as a common manifestation.

Tumours derived from the muscle coat of the duodenum are rare, and successful surgical treatment is even rarer (Weinstein and Roberts, 1953; Starr and Dockerty, 1955). A case of leiomyoma of the duodenum is presented because it illustrates some of the clinical features of leiomyomata, as well as an unusual pitfall which was encountered in the diagnosis of recurrent gastrointestinal haemorrhage. This case is one of the few recorded leiomyomatous lesions of the second part of the duodenum which have been successfully resected (Weinstein and Roberts, 1953).

CASE REPORT

NOVEMBER 1957 A 36-year-old man with no past history of dyspepsia was admitted to his local hospital with severe melena. The melena persisted and laparotomy was performed but no obvious cause for the bleeding could be found. As there was blood in the duodenum and small bowel, the duodenum was opened and a bleeding point on the medial wall of the second part was found and under-run. He made an uneventful recovery.

SEPTEMBER 1958 The patient was re-admitted to his local hospital with a severe, persistent melena which necessitated a laparotomy. No causal lesion was found, and a 'blind' Polya partial gastrectomy was done. The melena continued for several days and then stopped. His further convalescence was uneventful.

AUGUST 1959 He was admitted to hospital with a further melena, and a barium meal at this time showed normal post-gastrectomy appearances.

SEPTEMBER 1959 He was transferred to St. James's Hospital, where oesophagoscopy showed a normal oesophagus. Gastroscopy showed several black unabsorbed sutures hanging from the gastro-jejunal anastomosis. Those which could be seen were removed (using an attachment to the gastroscope) but it was thought possible that some sutures might not have been removed. At this stage it was assumed that the recurrent haemorrhages were due to ulceration around the unabsorbed sutures used in the gastro-jejunal anastomosis (Tanner, 1951).

JANUARY 1960 At St. James's Hospital gastroscopy showed that some unabsorbed sutures were still present, but as he had had no bleeding for six months he was kept under review.

OCTOBER 1960 The patient was re-admitted to his local hospital with melena, which stopped spontaneously. He was again transferred to St. James's Hospital and underwent laparotomy. This time the stomach was opened, all the unabsorbed sutures were removed, and the gastrotomy was closed with categut. The descending limb of the duodenum was not examined.

OCTOBER 1961 He was re-admitted to his local hospital with severe melena (Hb 30%) and after transfusion the melena stopped. The patient was transferred to St. James's Hospital. It was now obvious that the bleeding was not due to unabsorbed sutures.

JANUARY 1962 Laparotomy was performed with careful dissection of the blind loop. A lobulated vascular tumour, about 2½ in. diameter, was found in the head of the pancreas (Figs. 1 and 2). There were no obvious metastases in the regional nodes or liver. Pancreatic-duodenectomy was performed with some difficulty because the tumour was adherent to the portal vein. The afferent limb of the jejunum was resected with the duodenum and closed flush with the stomach. The common bile duct and body of the pancreas were implanted into a loop of jejunum, and entero-anastomosis

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FIG. 1. The operation specimen, cut in coronal section and viewed from behind, showing the tumour which had narrowed and ulcerated into the second part of the duodenum. The tumour, which was firm and lobulated, occupied the head of the pancreas and measured 2½ in. in diameter. The cut surface was whitish grey.

FIG. 2. Photomicrograph of a histological section of the tumour (× 70). The tumour was composed of well-differentiated spindle cells with eosinophilic cytoplasm. Mitoses were scanty and there was no suggestion of malignancy.
was performed between the proximal and distal limbs of
this loop. Apart from a slight pancreatic fistula which
persisted for about three weeks, the patient made an
uneventful recovery.

He was alive and well when seen 14 months after
operation. He had gained 16 lb. in weight and was
working full time. He was having no treatment and
passing two or three soft stools each day.

CLINICAL FEATURES

Although leiomyomas and leiomyosarcomas of the
duodenum are rare, sufficient cases have been
reported to enable their characteristic behaviour to
be studied (Foshee and McBride, 1939; Golden and
Stout, 1941; Olson, Dockerty, and Gray, 1951;
Weinstein and Roberts, 1953; Starr and Dockerty,
1955).

Gastrointestinal haemorrhage is the commonest
manifestation of these tumours. It occurs in almost
every case and may be the only symptom. In small
tumours the bleeding is often intermittent and even
in malignant tumours may be spread over several
years (Golden and Stout, 1941). Bleeding from large
tumours may be progressive and fatal because the
walls of the cavity are held open by rigid tumour
tissue (Smith, 1937).

Pain, which may mimic that of duodenal ulcer,
commonly occurs with small tumours (Rankin and
Newell, 1933), pain due to involvement of surround-
ing structures with more advanced tumours (Starr
and Dockerty, 1955). Occasionally rupture of a
necrotic tumour into the peritoneal cavity produces
diffuse peritonitis (Golden and Stout, 1941).

Jaundice secondary to ampullary obstruction has
been reported on four occasions (Wendel, 1925;
Seymour and Gould, 1936; McLean, 1948; Swartz
and Eckman, 1951), and steatorrhoea due to
pancreatic duct obstruction only once (Shackelford,
Fisher, and Firor, 1942).

Physical examination may be normal. Barium
studies occasionally show a filling defect or barium
outside the gut lumen, but more often show no
abnormality (Coombes, 1958).

Thus gastrointestinal bleeding without physical or
radiological abnormality is a common mode of
presentation of these tumours, and laparotomy may
be necessary to make the diagnosis.

TREATMENT

Surgical excision offers the only hope of cure as these
tumours are resistant to radium. Because of early
involvement of adjacent structures, successful
removal of leiomyomas and leiomyosarcomas of the
second part of the duodenum is rare, and only three
successful resections have previously been recorded
(Shackelford, Fisher, and Firor, 1942; Schwartz,
Swingle, and Raymond, 1951; Swartz and Eckman,
1951).

In the present case, the leiomyoma was no doubt
small and obscured by the head of the pancreas at
the time of the first two laparotomies. This is most
usual, as in all previously recorded cases the lesion
has been obvious at operation once it had reached
the stage of causing bleeding. Following the Polya
gastroectomy, barium studies were of no help in
the diagnosis as the lesion lay adjacent to the closed
duodenal stump and therefore did not show up.

It is well established that non-absorbable sutures
used in the 'all-coats' layer of a gastro-jejunal
anastomosis cause recurrent ulceration and bleeding
(Tanner, 1951; Bradbeer, 1962), and consequently,
the discovery of non-absorbable sutures in this
patient was a complete 'red herring' and delayed the
correct diagnosis for about eighteen months.

Whether this tumour is benign or malignant will
only be answered by the patient's future course. Its
rather large size was somewhat suggestive of
malignancy, but the long history before resection
and the patient's subsequent progress are against
it. The long intervals between the bouts of
haemorrhage is most unusual, but no doubt the
defunctioning of the duodenal loop after gastrectomy
may account for them.

Finally it is worth emphasizing the patient's
excellent health at present, despite pancreatic-
duodenectomy.

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Leiomyoma of the duodenum as a cause of recurrent post-gastrectomy bleeding


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