Leiomyoma of the duodenum – an unusual presentation of a rare tumour

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Summary

A case of leiomyoma of the duodenum presenting with sub-acute intestinal obstruction and a palpable abdominal mass is described. Both the siting of the lesion in the duodenum and a presentation other than gastro-intestinal bleeding are unusual for this type of tumour.

Introduction

Leiomyomata comprise 13% of benign small bowel tumours and are rarest within the duodenum. Intestinal haemorrhage, abdominal discomfort and a palpable mass are the more usual modes of presentation and only rarely is sub-acute intestinal obstruction seen in the absence of gastro-intestinal bleeding (Hoffman and Grayzel, 1945; Starr and Dockerty, 1955; River, Silverstein and Tope, 1956; Charles, Kelley and Campeti, 1963).

Case report

A 51-year-old male presented with a 10-week history of epigastric discomfort and fullness, associated with effortless vomiting, recurring 3 times a week. There was no history of melaena or haematemesis, anorexia, dyspepsia or weight loss.

On admission he was afebrile. Abdominal examination revealed a non-tender cystic mass, 15 cm in diameter in the right lower quadrant which was mobile in all directions. Rectal examination was normal and faecal occult blood tests negative.

The laboratory findings included a normal full blood count and blood film, normal serum B₁₂, folate, iron and total iron binding capacity. Liver function tests and plasma proteins were normal. An intravenous pyelogram showed early obstructive changes on the right side and the barium enema was normal. The barium meal showed a curiously displaced stomach with reversal of the duodenal loop. The follow-through showed a mass in the lower abdomen on the right, displacing the terminal ileum downwards (Fig. 1). There was no suggestion of Crohn's disease.

Laparotomy was carried out and a multiloculate

cyst, 12.5 cm in diameter was found occupying the transverse mesocolon. The cyst was seen to arise from a necrotic mass of tissue in the wall of the supra-ampullary portion of the second part of the duodenum. The cyst was removed and the duodenotomy repaired transversely with 2 layers of catgut. The patient made an uneventful postoperative recovery and was asymptomatic one year later.

On pathological examination the inner surface of the cyst was seen to be covered by necrotic debris and altered blood. The cyst wall was 2 mm thick and histologically comprised of a smooth muscle tumour, the fibres of which were arranged in parallel bundles or whorls, and showed no evidence of mitotic activity (Fig. 2). The lesion was well differentiated and there was no pleomorphism or formation of giant nuclei.

Discussion

Although the small intestine comprises 75% of the length and over 90% of the surface area of the gastro-intestinal tract, the enigma remains that only 3–6% of all gut neoplasms are to be found within the small bowel. Centimetre for centimetre, the duodenum is the commonest site of small bowel tumours, although numerically the majority of tumours occur in the jejunum and ileum (Silberman, Crichlow and Caplan, 1974; Wilson *et al.*, 1975).

Primary duodenal tumours are usually adenomata of the Brunners glands and duodenal adenocarcinoma and leiomyomata have been reported much less frequently (Hoffman and Grayzel, 1945; Charles *et al.*, 1963; Raiford, 1932; Bruno and Fein, 1970). The mean age at presentation of small bowel leiomyomata is 49 years, significantly less than the mean age (60 years) of other small bowel tumours (Silberman *et al.*, 1974).

Recurrent bouts of severe melaena remain the most frequent presenting symptom for leiomyomata although sub-acute intestinal obstruction may co-exist. Malignant change has been recorded and in this context the most significant criteria of malignant potential are the size of the tumour and the number of mitotic figures observed on histological examination. The treatment of choice remains that

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FIG. 1. Barium follow-through showing a mass displacing the terminal ileum downwards.

FIG. 2. Leiomyoma showing fibres arranged in parallel bundles and whorls (HE, $\times 160$).

of complete surgical resection of the lesion and there is no indication for radiotherapy (Starr and Dockerty, 1955).

The case described demonstrates an uncommon presentation for this rare duodenal tumour and, despite the size of the lesion, no histological evidence could be found to support anything other than the benign nature of the tumour.

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