Malignant Tumor at the Fourth Part of Duodenum Mimicking Wilkie Syndrome

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Received: 1 March 2008 / Accepted: 11 March 2009 / Published online: 9 April 2011
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Introduction

Duodenal adenocarcinoma is rare, accounting for only 0.35% of all gastrointestinal carcinomas, and carcinoma of the fourth part of the duodenum constitutes approximately 10% of all duodenal adenocarcinomas [1]. It is usually diagnosed by barium series, CT scan and intraoperative finding. The treatment is surgical resection which in the 2nd part of duodenum may require pancreaticoduodenectomy.

Case report

A 60 year old gentleman presented with the history of recurrent bilious vomiting, weight loss, postprandial fullness for the last 2 months. Examination revealed anemia and a hugely dilated stomach. Endoscopy showed dilated stomach and duodenum. Barium series showed megaduodenum with abrupt cut off at the 3rd part of duodenum (Fig. 1). CT scan confirmed obstruction at the 3rd part of duodenum (Fig. 2) with no mass lesion suggesting a diagnosis of superior mesenteric artery syndrome. The patient was prepared by gastric lavage, correction of anemia, malnutrition, electrolyte imbalance. Surgery was planned in the form of diagnostic laparoscopy and bypass if SMA syndrome was confirmed.

Laparoscopy detected a stenosing growth in the 4th part of duodenum at the angle of treitz (Fig. 3). The tumor was

assessed and mobilized laparoscopically (Fig. 4). Subsequently open exploration was done and the tumor resected with macroscopic clear margins. G.I. continuity was restored by end to end duodenojejunostomy in two layers. A distal feeding jejunostomy was done. Postoperative recovery was uneventful. The histopathology suggested a diagnosis of grade 2 adenocarcinoma with infiltration upto serosal fat (Fig. 5). Resection margins were free. There was no perineural or angiolymphatic invasion.

Discussion

A review of the literature indicates that survival, which is related to nodal status, the grade of the tumor, and surgical results, seems to be longer in patients with carcinoma in this part of the duodenum compared to those with carcinomas in other parts of the duodenum. Moreover, segmental resection has been reported to achieve a favorable outcome [1].

Primary duodenal carcinoma is a distinct entity with a better prognosis than pancreatic cancer after radical resection. It favours the descending duodenum and is closely linked with villous adenoma and epithelial dysplasia [2].

Radical surgical resection of these tumors, even by segmental resection, provides a more favorable prognosis for duodenal carcinoma than for pancreatic tumors [3].

The method of treatment is pancreaticoduodenectomy for the upper part and segmental resection for the distal part of the duodenum [4].

Sixty-six patients with primary adenocarcinomas of the duodenum recorded by the Swedish Cancer Register during

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Fig. 1 Barium series shows megaduodenum with abrupt cut-off at 3rd part.

Fig. 2 CECT abdomen shows megaduodenum

Fig. 3 Laparoscopic view of growth at D-4 before mobilization

Fig. 4 Laparoscopic view of growth at D-4 after mobilization

1958–1973 were reviewed. The mean age was 66 years, and female:male ratio 1.2:1.0. The predominant symptom was duodenal obstruction. Correct diagnosis was made in 68% by conventional barium meal examination. Hypoton duodenography and duodenoscopy were necessary diagnostic aids. In 25% of the patients the diagnosis was first made at postmortem examination. Thirty-two patients had metastases at first diagnosis. Forty-three per cent were radically operated and 43% palliatively. The operative mortality after curative operations was 25% with no difference related to operative methods with the exception of pure polyp extirpation where no patient died. The overall one-year survival was 67% and five-year 18%. There was a tendency for longer survival time for patients with more distally situated carcinomas. Pancreatoduodenectomy gave a longer survival time than duodenal resection [5].

Fig. 5 Microscopic picture of adenocarcinoma of D-4

The survival of patients with adenocarcinoma of the distal duodenum is surprisingly good, and segmental resection is the procedure of choice [6].

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