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Transpyloric prolapse of a pedunculated polypoid gastric carcinoma

Osamu ARAI, Hiroji NISHINO, Katsusuke SATAKE, and Kaoru UMEYAMA
First Department of Surgery, Osaka City University Medical School, Osaka 545, Japan

Summary: A patient with transpyloric prolapse of a pedunculated polypoid gastric carcinoma is reported. Only three previous cases have been reported in the international literatures. However, in Japan, 33 cases of prolapsed gastric carcinoma have been reported during the past 30 years. Prolapsed gastric carcinoma should be included in the differential diagnosis of localized intraluminal filling defects in the duodenal bulb. Endoscopy and biopsy are essential for correct diagnosis. *Gastroenterol Jpn 1990;25:249–252*

Key words: *polypoid gastric carcinoma; transpyloric prolapse*

Introduction

Most gastric tumors prolapsing into the duodenum are benign. A review of more than 600 cases of benign tumor of the stomach, found only 48 pedunculated tumors, 13 of which prolapsed through the pylorus[1]. Transpyloric prolapse of primary gastric carcinoma is not commonly recognized. Only four cases have been reported, two of which were pedunculated, the others being sessile in foreign literature[2].

However, in Japan, 33 cases of prolapsed gastric carcinoma have been reported during the past 30 years[3]. Even in Japan, this condition is rare.

Here we report a recent case of transpyloric prolapse of pedunculated primary gastric carcinoma and discuss the preoperative diagnosis.

Case Report

A 74-yr-old Japanese male was found to have stools positive for occult blood during treatment for hypertension in a private hospital. There were no specific abdominal complaints. An upper gastrointestinal tract examination revealed an intraluminal filling defect in the duodenal bulb. He was transferred to our department for further evaluation and treatment.

On admission, no abnormal physical findings were found. The hematological screen showed a white blood cell count of 4,800/mm^3, red blood cell count of 4,850,000/mm^3, hemoglobin of 13.6 g/dl and hematocrit of 41.5%. Liver function was within normal limits. Carcinoembryonic antigen (1.2 ng/ml) and α-feto-protein (9 ng/ml) were both within normal limits. Gastric acid studies were unremarkable.

An upper gastrointestinal series showed a discrete, lobulated filling defect within the duodenal bulb (**Fig. 1**). This defect remained throughout the period of examination and there was no evidence of a pedicle or associated abnormality of the distal antrum of the stomach. Endoscopy demonstrated an incarcerated 4 to 5 cm tumor, which had a peduncle extending from the body of the stomach into the duodenal bulb (**Fig. 2**). There was a deformity of the antrum and dilatation of the pyloric ring. Biopsy of the tumor revealed adenocarcinoma. Abdominal ultrasonography demonstrated a mass in the duodenal bulb (**Fig. 3**). These findings were confirmed at operation, when a 4 to 5 cm tumor was found in the duo-

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Address for correspondence: Katsusuke Satake, M.D., First Department of Surgery, Osaka City University Medical School, 1-5-7 Asahi-machi, Abeno-ku, Osaka 545, Japan
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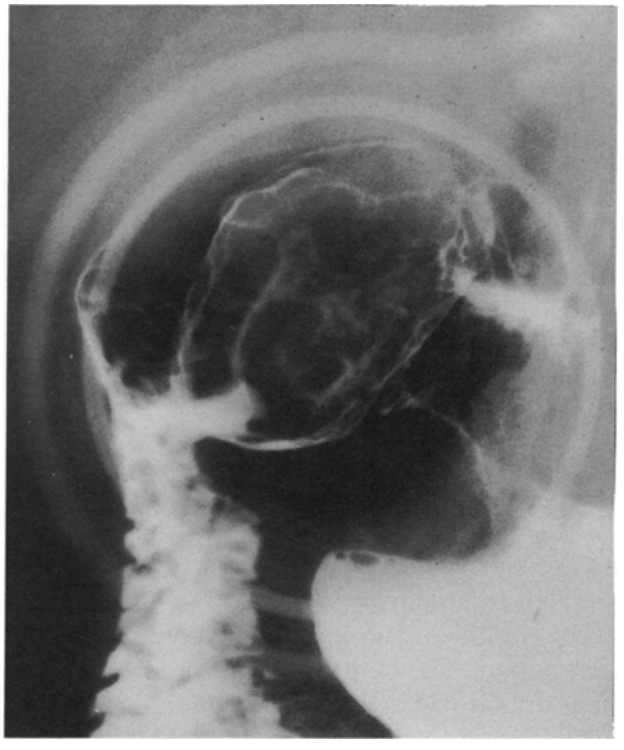

Fig. 1 A localized view from the upper gastrointestinal examination showing a lobulated filling defect in the duodenal bulb. No pedicle was indentified and the distal antrum appeared normal.

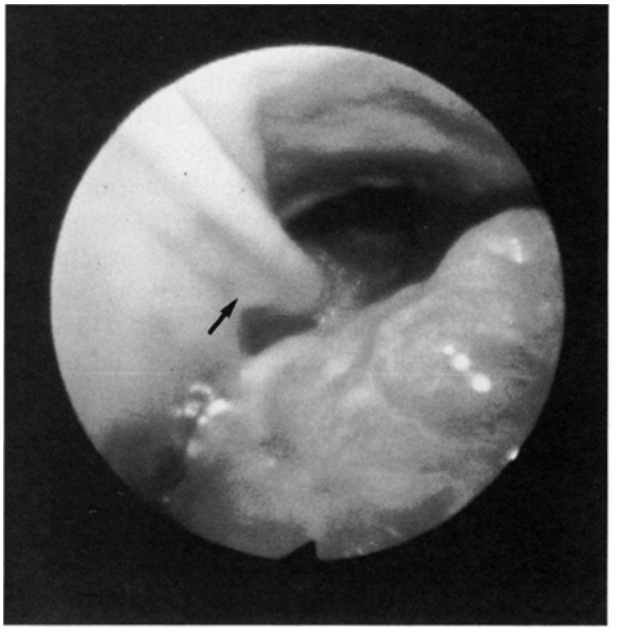

Fig. 2 Gastrocamera picture showing a tumor in the duodenal bulb which has a pedicle from the body of the stomach (black arrow).

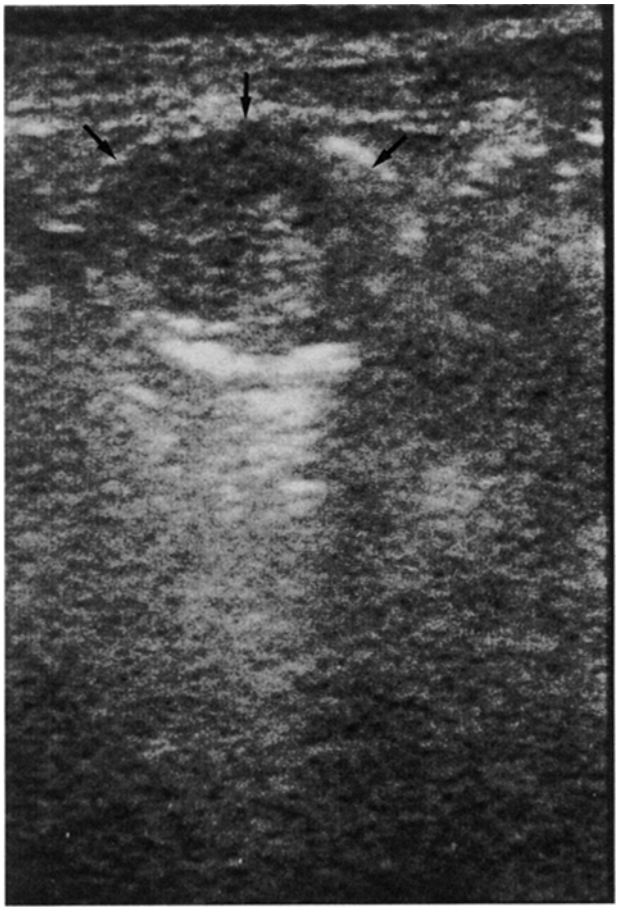

Fig. 3 Abdominal ultrasonography demonstrating a mass in the duodenum.

denal bulb, which could not easily be manipulated into the stomach. Following incision of the anterior wall of the antrum, an incarcerated 4 to 5 cm polypoid tumor, attached by a 4 cm peduncle from the body of the stomach, was found in the duodenal bulb. After manipulating the tumor into the stomach, a distal subtotal gastrectomy was performed.

The macroscopic findings showed a 3.5 × 4.2 × 4.9 cm polypoid tumor with a 4.0 cm peduncle, which originated from the anterior wall of the body of the stomach (**Fig. 4a, b**). Microscopic examination revealed a papillotubular adenocarcinoma on the top, which did not invade the peduncle and the resected lymph nodes were free of tumor (**Fig. 5**).

Fig. 4 Specimen showing 3.5 × 4.2 × 4.9 cm tumor with a 4 cm pedicle (upper). Cut-section of tumor (Yamada 4, lower)

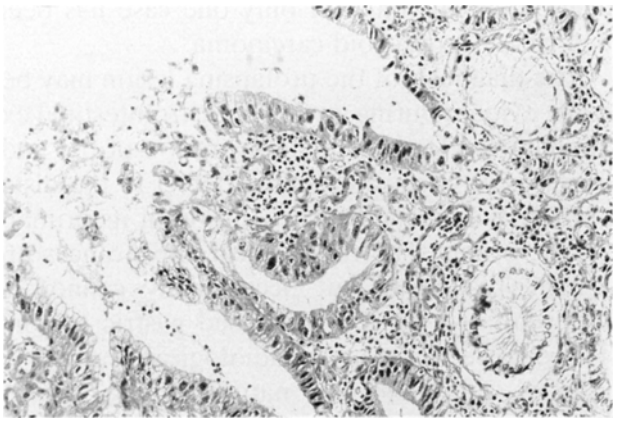

Fig. 5 Microscopic findings showed a papillo-tubular adenocarcinoma. Cancer cells with abundant nucleus mitosis formed tubular structures and papillomatous development. These cells invaded into the mucosa of polypoid region (×130).

Discussion

The vast majority of intraluminal filling defects in the duodenal bulb are not malignant and include abnormalities of primary gastric origin, such as prolapsed antral mucosa and benign gastric polyps[4]. Primary adenocarcinoma of the duodenum in the bulb has not been described and localized intraluminal defects secondary to malignant lymphoma or metastatic malignancy are rare.

In a review of 30 prolapsing gastric tumors reported in the English literature up to 1965, it was found that 20 were of unspecified histology (presumed benign polyps), six were adenomas and three were pedunculated leiomyomas[5]. Submucosal gastric neoplasms, such as leiomyomas or lipomas are occasionally pedunculated and may prolapse into the duodenal bulb. More commonly, these tumors are sessile and tend to be complicated by true gastroduodenal intussusception rather than simple prolapse. Joffe et al[2] reported four patients with transpyloric prolapse of polypoid gastric carcinoma, including two pedunculated and two sessile tumors. There were no other reports of transpyloric prolapse of polypoid gastric carcinoma. In a review of 78 prolapsing gastric tumors reported in the Japanese literature during the past 30 years, 33 cases among then were gastric carcinoma and 23 cases were pedun-

culated carcinoma. But only one case has been described as polypoid carcinoma[3].

The diagnosis of the prolapsing lesion may become evident during an upper gastrointestinal examination. However, demonstration of the peduncle or an associated filling defect in the distal antrum is essential for recognition of its primary gastric origin. The radiological appearances are usually diagnostic but occasionally cannot be differentiated from a prolapsed gastric tumor[3]. There were no specific radiological features to indicate the malignant nature of the lesions. Although large and irregularly-shaped defects are suspicious, similar findings may be produced by benign gastric polyps or the prolapse of multiple polyps. The correct diagnosis was obtained by endoscopy and biopsy in our case. In patients with appropriate clinical or radiological findings, endoscopy and biopsy should always be undertaken because most polypoid gastric carcinomas are at an early stage and the long term prognosis is good.

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