Case Report

THAI J GASTROENTEROL 2007
Vol. 8 No. 3
Sept. - Dec. 2007

Duodenal Metastasis from Caecal Adenocarcinoma Presenting as Upper Gastrointestinal Bleeding and Duodenal Obstruction

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INTRODUCTION

Small bowel metastasis accounts as 2% of all metastasis, moreover, metastasis to duodenum is much rarer[1]. The most common primary tumors that metastases to duodenum are lung cancer, renal cell carcinoma, breast cancer, and malignant melanoma[2]. We report a case of duodenal metastasis from adenocarcinoma of the caecum presenting with duodenal obstruction and upper gastrointestinal bleeding.

CASE REPORT

A 76-year-old male patient presented with a history of multiple episodes of vomiting after meals for a month. Until one day prior to admission, he vomitted coffee ground content. He had a previous history of right hemicolectomy four months ago due to adenocarcinoma of the caecum (T3N2M0) with free margin resection. To investigate the cause of upper gastrointestinal bleeding, an esophagogastroduodenoscopy (EGD) was performed and the study revealed 2 cm. and 1.5 cm. erythematous polypoid mass in duodenal bulb as shown in Figure 1A. A second circumferential polypoid mass at duodenal apex was also detected as in Figure 1B and 1C. The endoscope was unable to pass through this point and the ampulla of Vater was not identified. Biopsies were done from these two lesions. Histopathology confirmed the presence of metastatic adenocarcinoma. The tumor cells were located in the lamina propria and vascular spaces above the muscularis mucosae of duodenum. Immunohistochemistry was performed and tumor had a positive cytokeratin 20 (CK20) and negative cytokeratin 7 (CK7). This is suggestive of the metastatic adenocarcinoma of colon. The patient denied any additional treatment and he died within two weeks after diagnosis.

DISCUSSION

Primary carcinoma of the duodenum, excluding carcinoma of the ampulla of Vater, is rare and has been reported to occur in 0.019-0.5% of all autopsy cases[3] and in 33-45% of all cases of small intestinal cancers[4]. However, metastatic duodenal cancer is much rarer than primary tumor of duodenum. Generally, metastatic tumors to the gastrointestinal tract are rare and the overall prevalence is 1-4% from the autopsy series[5]. The first case of duodenal metastasis from adenocarcinoma of the caecum was reported in 1997[6]. After that, there are also few case reports of direct adjacent organ invasion from colonic adenocarcinoma such as duodenum and pancreas as shown in table 1 and duodenal metastasis was detected at the same time of the diagnosis of colon adenocarcinoma except one case. Our case had a short onset (4 months after right hemicolectomy) and short survival. Complex combined resections such as duodenopancreatectomy is the preferred treatment

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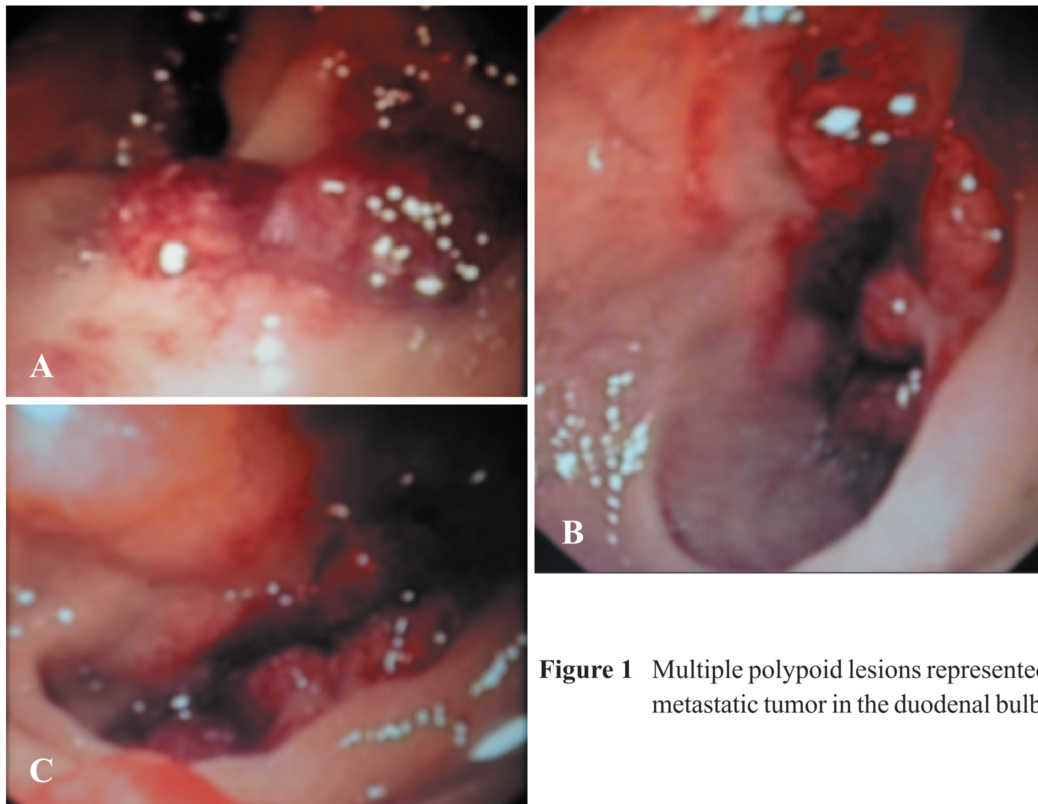

Figure 1 Multiple polypoid lesions represented metastatic tumor in the duodenal bulb.

Table 1 Case reports of direct adjacent organ invasion from colonic adenocarcinoma

Author reference (n)	Location of primary tumor	Location of of metastatic tumor	Time after colonic adenocarcinoma diagnosis	Treatment	Outcome
Xin-ming S, et al[7] 2006 (5)	Hepatic flexure	Duodenum and pancreas	At the same time	RH* and PD*	3 died, 2 alived
Perez RO, *et al*[8] 2005 (1)	Hepatic flexure	Duodenum and pancreas	At the same time	RH* and PD*	Alived
Sefr R, *et al*[9] 2000 (1)	Transverse colon	Duodenum and pancreas	At the same time	RH* and PD*	Alived
Praderi RC, *et al*[10] 1999 (3)	Right-sided colon	Duodenum and pancreas	At the same time	RH*and PD*	2 died, 1alived and well 3 yrs later
Sebastian, *et al*[6] 1997 (1)	Caecum	Duodenum	6 yrs	Endoluminal prosthesis implantation	Died
Veen HF, *et al*[11] 1976 (5)	Hepatic flexure	Duodenum	At the same time	Whipple procedure + chemotherapy	Alived and well 16 months later
Ellis H, *et al*[12] 1972 (6)	Hepatic flexure, transverse and ascending colon	Duodenum and abdominal wall	At the same time	Radical monobloc resection	3 died, 3 alived and well 2-6 yrs later
Ridtitid W, *et al* 2007 (1)	Caecum	Duodenum	4 months	No any additional treatment	Died

**RH; right hemicolectomy, PD; pancreaticoduodenectomy*

strategy because it seems to be associated with improved overall survival rate in locally advanced colon cancer[8,13,14].

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