Jejunal Varices as a Cause of Massive Gastrointestinal Bleeding — A Case Report —

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Summary: This report describes a 49-year-old woman with recurrent massive gastrointestinal bleeding from jejunal varices without portal hypertension. Preoperative diagnosis was obtained by abdominal computed tomography, superior mesenteric arterial angiography and percutaneous transhepatic portography. Percutaneous transhepatic portographic findings revealed no step-up of oxygen concentration and normal pressure in the portal vein, only dilation of superior mesenteric vein. Jejunal resection and anastomosis resulted in complete resolution of the bleeding, and the patient has experienced no recurrent bleeding over a 4 year follow-up period. A review of the literature shows that this syndrome is nearly always characterized by portal hypertension, generally due to liver cirrhosis. Accurate preoperative diagnosis is often difficult. We report a very rare case of jejunal varices without portal hypertension.

Key words jejunal varices, small bowel varices, massive GI bleeding, portal hypertension

INTRODUCTION

Intestinal varices are a very rare entity, with only about 70 cases reported in the literature [1]. Most of these cases are segmental and secondary to portal hypertension or portal venous obstruction, whereas there were a few reported case without portal hypertension. In this paper, we report a jejunal varices patient without portal hypertension and review the literature.

CASE REPORT

A 49-year-old woman was admitted in May 1993 complaining of hematochezia, weakness and passage of dark red blood through the rectum. On admission, her blood pressure was normal and her nutritional status was good. The abdomen was not tender, and the liver was not palpable. Laboratory findings were as follows: hematocrit 30%, hemoglobin 8.8 g/dl, and serum albumin and other laboratory data were almost normal. Findings of colonoscopy and gas-

trofiberscopy were normal. Abdominal computed tomography (CT) revealed dilation of the superior mesenteric vein and abnormal enhancement in part of the jejunum (Fig. 1-a). The technetium-99m-labeled red blood cell study demonstrated a circumscribed vascular lesion in the left upper abdomen. Enteroclysis showed filling defects involving the jejunum (Fig. 1-b). Selective angiography via the superior mesenteric artery (SMA) showed multiple varices convoluted and diffusely spread along the circumference of the jejunum (Fig. 2-a). Percutaneous transhepatic portography (PTP) findings revealed a dilation of the superior mesenteric vein without a dilation of the portal vein (Fig. 2-b). PTP findings also revealed no step-up of oxygen concentration and normal pressure (12 cmH₂O) in the portal and superior mesenteric vein. Surgical exploration of the abdomen revealed several dilated vessels on the serosal surface of the proximal jejunum. The liver was not enlarged and there were no cirrhotic findings. Intraoperative enteroscopy demonstrated serpiginous varices as raised lesions

Fig. 1. Abdominal CT (1-a) and enteroclysis (1-b): Abdominal CT revealed a dilated SMV and enhanced lesions in the jejunum. Enteroclysis showed filling defects involving the jejunum.

Fig. 2. Selective angiography (2-a) and PTP findings (2-b): Portal phase of selective angiography showed multiple varices convoluted and diffusely spread along the circumference of the jejunum. PTP findings revealed a dilation of SMV.

Fig. 3. Intraoperative enterofiberscope (3-a), resected specimen (3-b) and histological findings (3-c): Intraoperative fiberoscopy showed varices as raised lesions about 60 cm beyond the ligament of Treitz. Resected specimen revealed several dilated vessels on the serosal surface and mesentery. Histological findings showed large and small veins with abundant thin-walled, large caliber vessels in the submucosa.

about 60 cm beyond the ligament of Treitz (Fig. 3-a). A 60 cm long segment of small bowel was resected. The resected specimen revealed several dilated vessels on the serosal surface and mesentery (Fig. 3-b). Microscopic examination of the resected specimen showed changes consistent with varices which demonstrated abundant thin-walled, large-caliber vessels in the submucosa (Fig. 3-c). The post-operative course was unremarkable, and the patient has not bled during 5 years of follow-up.

DISCUSSION

Intestinal varices are a rare entity, with only about 70 cases reported in the literature [1]. The etiology of small bowel varices is not known. Bleeding due to portal hypertension most commonly occurs from gastroesophageal varices. Clinical reports, however, indicate that bleeding varices may occur in any area of the gastrointestinal tract. Portal systemic anastomoses occur virtually throughout the

entire gastrointestinal tract and the most significant sites are the esophagogastric junction, rectum, and periumbilical and abdominal wall collaterals. Less frequent sites are in the small intestine and transverse colon [2]. Several mechanisms have been proposed to explain the formation of submucosal varices in the small intestine and colon. Possible causes for this entity include portal hypertension, congestive heart failure with passive congestion, pancreatitis with splenic vein thrombosis, or mesenteric venous occlusion [3]. Other causes in the absence of portal hypertension were an inherited disorder [4,5] and an idiopathic etiology. In patients without cirrhosis, a congenital anomaly of the venous system has been suggested by Lopata and Berlin [6]. The present case suggested an inherited disorder or idiopathic etiology, because of the lack of portal hypertension or mesenteric thrombosis. The venous phase of superior mesenteric angiography [7], PTP and enteroclysis were useful modalities in identifying the origin and extent of involvement. To our knowledge, PTP study

as the diagnostic modality in these cases was not reported in the literature. Selective angiography and PTP study are also very useful modalities to distinguish a diagnosis of small bowel varices from artery-venous malformation and portal hypertension. Therapy is usually resection of the involved small bowel in cases where an inherited or idiopathic etiology is suggested, and porto-systemic shunts are the most frequent surgical procedure for cases with portal hypertension [8,9]. We have reported a very rare case of jejunal varices without portal hypertension that was recognized by enteroclysis, CT, angiography and PTP in the proximal jejunum.

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