Portal Hypertension in a Patient With Recurrent Pancreatic Cancer After Radiotherapy and Systemic Chemotherapy

To the Editor,

Portal hypertension secondary to pancreatic cancer is rare in everyday clinical practice.¹ The potential mechanism of disease should be portal and splenic vein involvement from pancreatic cancer. This abnormality is also termed as sinistral or left-sided portal hypertension presenting with isolated gastric varices, splenomegaly, and normal liver function. Notably, portal hypertension related complications are often the initial clinical presentations at the diagnosis of pancreatic cancer.² However, to the best of our knowledge, few studies reported the dynamic evolution of portal hypertension after non-surgical treatment of pancreatic cancer. Herein, we reported a case with recurrent pancreatic cancer after successful radiotherapy and systemic chemotherapy for 4 years who developed upper gastrointestinal bleeding from portal hypertension.

A 57-year-old male presented with intermittent hematemesis and melena for 3 days at our department. He had a 4-year history of pancreatic cancer treated with radiotherapy and systemic chemotherapy. He denied any history of viral hepatitis and alcohol and drug abuse. At the admission, laboratory tests demonstrated that hemoglobin concentration was 49 g/L (130–175 g/L), hemocrit was 13.9% (40–50%), platelets was $387 \times 10^9/L$ ($125\text{--}350 \times 10^9/L$), white blood cell was $18.5 \times 10^9/L$ ($3.5\text{--}9.5 \times 10^9/L$), total bilirubin was 9.0 $\mu\text{mol/L}$ ($5.1\text{--}22.2 \mu\text{mol/L}$), alanine aminotransferase was 30.69 U/L (9–50 U/L), aspartate aminotransferase was 38.47 U/L (15–40 U/L), alkaline phosphatase was 119.73 U/L (45–125 U/L), gamma glutamyl transpeptidase was 91.39 U/L (10–60 U/L), albumin was 26.9 g/L (40–55 g/L), prothrombin time was 16.8 s (11.5–14.5 s), and international normalized ratio was 1.34. Blood transfusion was given. After that, an emergent

upper gastrointestinal endoscopy demonstrated esophageal and duodenal varices, portal hypertensive gastropathy, multiple shallow duodenal ulcers, and a duodenal mass. He received intravenous infusion of terlipressin and esomeprazole and underwent endoscopic esophageal variceal ligation. Contrast-enhanced computed tomography scans were performed. Meanwhile, we compared the findings from contrast-enhanced computed tomography and magnetic resonance scans performed earlier at our hospital. Main portal trunk and superior mesenteric vein became thinner, splenic vein disappeared, spleen enlarged, and moderate ascites occurred (Figure 1). Thus, he was diagnosed with portal hypertension secondary to pancreatic cancer. At the discharge, laboratory tests demonstrated that hemoglobin concentration was 90 g/L, hemocrit was 28.8%, platelets was $159 \times 10^9/L$, white blood cell was $5.7 \times 10^9/L$, total bilirubin was 12.6 $\mu\text{mol/L}$, alanine aminotransferase was 13.15 U/L, aspartate aminotransferase was 23.96 U/L, alkaline phosphatase was 108.95 U/L, gamma glutamyl transpeptidase was 68.57 U/L, albumin was 30.8 g/L, prothrombin time was 16.0 s, and international normalized ratio was 1.26. Now, he is receiving oral propranolol without recurrence of gastrointestinal bleeding.

This case report clearly showed a deterioration of portal vein system vessels in recurrent pancreatic cancer after radiotherapy and systemic chemotherapy, such as narrowing of portal and superior mesenteric veins and fibrosing of splenic vein, which eventually led to the occurrence of extrahepatic portal hypertension. Pharmacological and endoscopic treatments are given according to the current practice guideline regarding the management of varices and variceal bleeding in liver cirrhosis.³ Certainly, the outcome of this patient may be mainly dependent upon the management of pancreatic cancer, except for variceal bleeding.

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Figure 1 Contrast-enhanced computed tomography and magnetic resonance scans during a 2-year interval. Panel A. Computed tomography scans performed at July 2015. Panel B. Magnetic resonance scans performed at January 2017. Panel C. Computed tomography scans performed at April 2017. Panel D. Computed tomography scans performed at September 2017. Dotted arrows refer to main portal vein. Thick solid arrows refer to splenic vein. Thin solid arrows refer to superior mesenteric vein.

CONFLICTS OF INTEREST

The authors have none to declare.

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Xingshun Qi*, Ji Feng, Xiaodong Shao
Liver Cirrhosis Study Group, Department of
Gastroenterology, General Hospital of Shenyang Military
Area, Shenyang, Liaoning Province, China

E-mail: xingshunqi@126.com (X. Qi)

Ying Xu

Department of Radiotherapy, General Hospital of
Shenyang Military Area, Shenyang, Liaoning Province,
China

Hongyu Li, Xiaozhong Guo**

Liver Cirrhosis Study Group, Department of
Gastroenterology, General Hospital of Shenyang Military
Area, Shenyang, Liaoning Province, China

**Address for correspondence:* Xingshun Qi, Department of
Gastroenterology, General Hospital of Shenyang Military
Area, No. 83 Wenhua Road, Shenyang 110840, Liaoning
Province, China. Tel.: +86 24 28897603; fax: +86 24
28851113

***Address for correspondence:* Xiaozhong Guo, Department
of Gastroenterology, General Hospital of Shenyang
Military Area, No. 83 Wenhua Road, Shenyang 110840,
Liaoning Province, China. Tel.: +86 24 28897603; fax: +86
24 28851113