

中文題目：案例報告:一位男性因罹患因肝門靜脈系統靜脈分流造成的肝性腦病變

英文題目：Portal-systemic Shunt Causing Hepatic Encephalopathy – A Case Report

作者：葉文俊¹, 游博全¹, 張行遠², 宋之維³, 吳茲端¹

服務單位：¹新北市立聯合醫院 內科部；²新北市立聯合醫院 影像醫學部；³國立臺灣大學醫學院附設醫院 急診醫學部

Case report:

A 57-year-old male had history of unknown cause of consciousness disturbance and gastrointestinal bleeding about few years ago. He presented with conscious drowsy and sign of GI bleeding before this admission. At ER, his Glasgow Coma Scale was E3M4V1 with stable vital sign (36.4 °C, HR 72 BPM, RR 19 TPM, SO₂ 95% (ambient), BP 118/82 mmHg). On physical examination, pale conjunctiva and asterixis were noted. There were no signs of liver cirrhosis. The laboratory data showed mild anemia (hb 11.6 mg/dl), leukocytosis (WBC 13360 /ul), no thrombocytopenia, hyperbilirubinemia (total bilirubin 2.09 mg/dl), prerenal azotemia (blood urea nitrogen 51mg/dl, creatinine 0.99 mg/dl) and strong positive for stool OB (4+). The levels of hepatic and biliary enzyme were within normal range. His level of ammonia raised on next day (74.4 mg/dl elevated to 135.7 mg/dl). The culture of blood and urine were sterile. The serologic tests of HBsAg and anti-HCV were non-reactive. The upper gastrointestinal endoscopy revealed an active ulcer (A2) over gastric angularis, endoscopic hemostasis was performed and no evidences of esophageal and gastric varices were found. The abdominal sonography demonstrated torturous tube-like structure near hepatic hilum and pancreas (fig.1). The other findings were unremarkable. The abdominal computed tomography (CT) with contrast enhancement was arranged to study the nature of torturous tube-like structure near hepatic hilum and it revealed the portal-systemic shunt from confluence of superior mesenteric vein and splenic vein to left renal vein (fig.2). Two extrahepatic portal veins were seen, one derived from confluence of superior mesentery vein and splenic vein; another portal vein derived main portal vein near shunt (fig.3). 3D images from reconstructing CT coronal view slices by MIIL 3.0 software [6] demonstrated the tortuous portal-systemic shunt more clearly (fig.4). After administration of rectal lactulose for enema, intravenous high dose proton pump inhibitor, blood transfusion, fluid resuscitation and empiric parenteral antibiotics, the symptoms of this patient subsided gradually. His consciousness became significantly clear. He was then transferred to general ward and oral lactulose was given continuously. He was discharged on the 13th day of admission without complications and then he visited our outpatient clinic once but lost of follow up later.

Discussion:

Clinically, the diagnose of portal-systemic shunt in non-cirrhotic patients is considerably difficult because the symptoms of hepatic encephalopathy are nonspecific. The hepatic injury in these patients is very mild and the portal pressure does not rise even there was a large shunt. As a consequence, these patients might be misdiagnosed as dementia, depression or psychological diseases [7]. The methods to diagnose in the patients with portal-systemic shunt include clinical manifestation,

radiological imaging such as abdominal sonography, computed tomography (CT), magnetic resonance imaging (MRI), and transcolonic portal scintigraphy [4]. Furthermore, 3D reconstruction images using CT or MRI slice images can demonstrate more comprehensive shunt pictures. In our case, the origin of shunt was the confluence of superior mesenteric vein and splenic vein and the end was left renal vein, without liver involvement, his portal-systemic encephalopathy type can be classified as type III according to classification of Watanabe [4]. The current treatments for portal-systemic shunt includes interventions, such as surgically or radiologically, and medical management. Surgical interventions are surgical occlusion of shunts [13] and liver transplantation [14]. The radiologic intervention includes endovascular occlusion [15] or embolization [16]. Medical managements are the avoidances of precipitant factors such as high-protein diet, gastrointestinal bleeding, constipation, hypokalemia, hypnotic medication, diuretics, hypovolemia or metabolic alkalosis. These therapies are similar for cirrhotic patients with hepatic encephalopathy [4].

Figure:

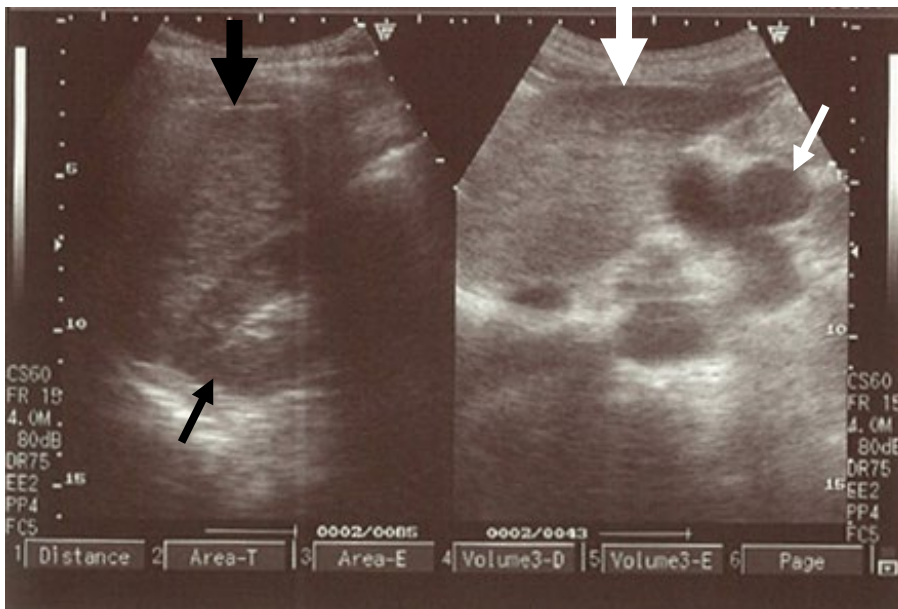


Figure 1: Abdominal sonography, right panel: right axillary line sagittal view shows right lobe of liver (black thick arrow) and right kidney (black thin arrow), left panel: mid-line sagittal view shows left lobe of liver (white thick arrow) and tortuous tube like structures near liver (white thin arrow).

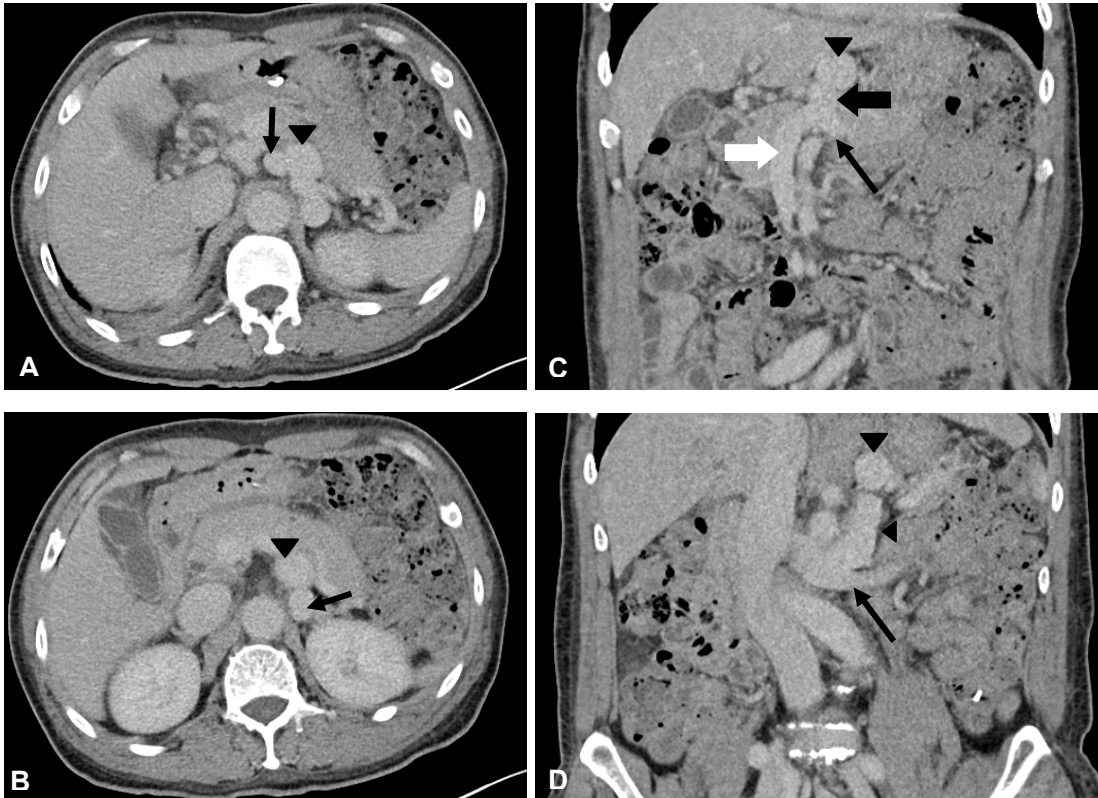


Figure 2: Portal-systemic shunt: A: axial view, shunt (black arrow head) starts from confluence of superior mesentery vein and splenic vein; B: axial view, shunt (black arrow head) ends at left renal vein (black arrow); C: coronal view, shunt (black arrow head) starts from confluence (black thick arrow) of superior mesentery vein (white thick arrow) and splenic vein (black thin arrow); D: coronal view, shunt (black arrow head) ends at left renal vein (black arrow).

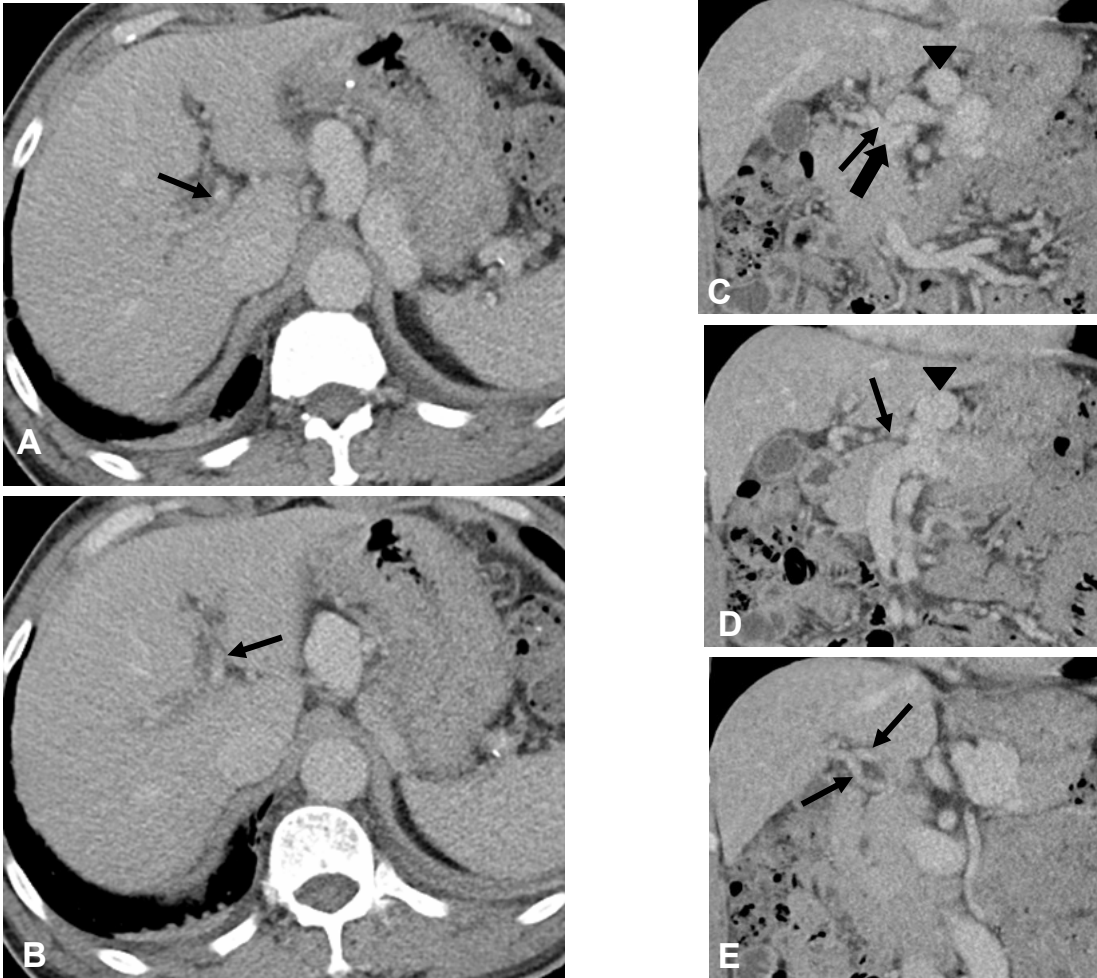


Figure 3: Portal veins: A: axial view, small caliber of right branch of portal vein (black arrow); B: axial view, small caliber of left branch of portal vein (black arrow); C: coronal view, one portal vein (black arrow) starts from confluence (black thick arrow) of superior mesentery vein and splenic vein, shunt (black arrow head); D: coronal view, another portal vein (black arrow) starts from shunt (black arrow head); E: coronal view, two portal veins (black arrows) near hilum of liver.

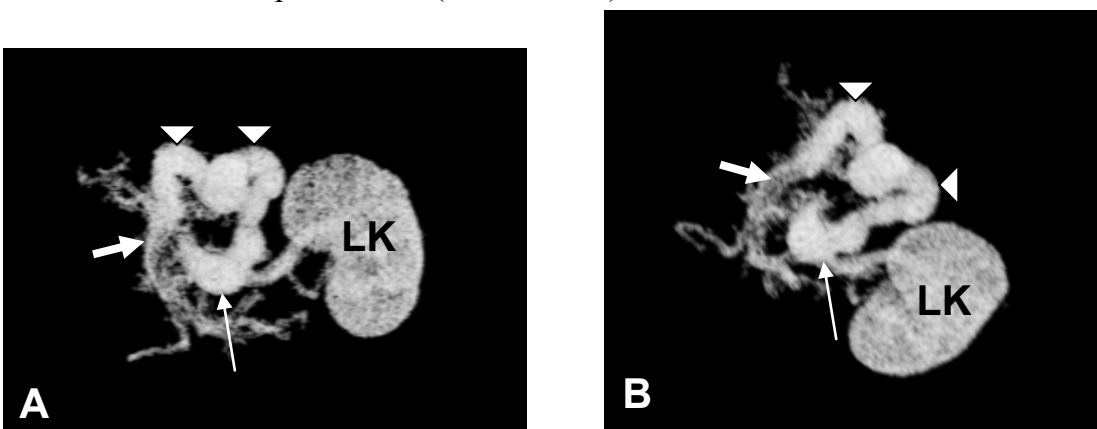


Figure 4A: 'Coronal' view, 3D picture, tortuous portal-systemic shunt (white arrow head) starts from

confluence of superior mesentery vein (white thick arrow) and splenic vein and end at left renal vein (white thin arrow), LK: left kidney; B: 'rotated coronal' view, 3D picture: tortuous portal-systemic shunt (white arrow head) can be more clearly seen. White thick arrow: superior mesentery vein, white thin arrow: left renal vein, LK: left kidney.

Reference:

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