Summary

Sinistral portal hypertension is a clinical syndrome of gastric variceal hemorrhage in the setting of splenic vein thrombosis due to a primary pancreatic pathology. The distinguishing features from other forms of portal hypertension are preserved liver function and a patent extrahepatic portal vein. The important causes include acute and chronic pancreatitis, pancreatic pseudocysts and pancreatic carcinomas. Benign pancreatic neoplasms only rarely cause sinistral portal hypertension. Splenic vein thrombosis complicates 7-20% of patients having pancreatitis or a pancreatic pseudocyst; however, bleeding occurs in only approximately 5% of patients.

The diagnosis of sinistral portal hypertension is achieved by a combination of gastroscopy, liver function tests, ultrasound examination (with Doppler) and/or contrast-enhanced CT scan of the abdomen.

A mere demonstration of sinistral portal hypertension does not warrant intervention. An expectant management is justifiable in asymptomatic patients with pancreatitis. However, concomitant splenectomy may be considered in patients undergoing operative treatment of symptomatic chronic pancreatitis if sinistral portal hypertension and gastro-esophageal varices are present.

In patients presenting with gastric variceal hemorrhage, splenectomy (with treatment for the primary pancreatic pathology, e.g. distal pancreatectomy) is curative with excellent long term results.
History (1): March 1997

- **Symptoms**
  - Hematemesis (massive)

- **Blood**
  - Hb 7.8 g/dL, albumin 2.8 g/dL, total bilirubin 1 mg/dL,
    AST 32 IU/L, ALT 28 IU/L, ALP 78 IU/L,
    GGT 16 IU/L, INR 0.9

- **Endoscopy**
  - Bleeding from gastric fundal varices [1]

- **US**
  - Liver: spleen normal
  - Patent portal vein (16 mm) and splenic vein (10 mm)
  - Dilated collaterals at splenic hilum
  - No ascites

- **Presumptive diagnosis**
  - Chronic liver disease with portal hypertension

- **Management**
  - N-butyl-2-cyanoacrylate glue intravascular injection (10 units of blood transfusion (each 350 ml) during the admission)

* Reference ranges: Hb: 12.0-16.0 g/dL; albumin: 3.5-5.0 g/dL; total bilirubin: 0.5-1.5 mg/dL; AST: 0-42 IU/L; ALT: 0-42 IU/L; ALP: 40-150 IU/L; GGT: 0.6-4.0 IU/L; INR: 0.8-1.3


History (2): February 2001

- **Symptoms**
  - Melena

- **Blood**
  - Hb 7.4 g/dL, albumin 4 g/dL, total bilirubin 0.4 mg/dL,
    AST 28 IU/L, ALT 33 IU/L,
    ALP 78 IU/L, GGT 14 IU/L, INR 1

- **Endoscopy**
  - Portal hypertensive gastropathy
  - No variceal bleed
  - Bleeding of a duodenal ulcer

- **Management**
  - Endoscopic ulcer therapy was performed with 3% sodium tetradecyl sulfate.

History (3): August 2001

- **Symptoms**
  - Massive hematemesis

- **Blood**
  - Hb 6 g/dL, albumin 3 g/dL, total bilirubin 1 mg/dL,
    AST 40 IU/L, ALT 34 IU/L,
    ALP 72 IU/L, GGT 19 IU/L, INR 1

- **Endoscopy**
  - Bleeding gastric varices

- **Diagnosis**
  - Chronic liver disease with portal hypertension and recurrent gastric variceal bleed

- **Management**
  - N-butyl-2-cyanoacrylate glue injection (4 units of blood transfusion (each 350 ml) during the admission) and balloon tamponade

- **Follow-up**
  - Referred to our centre for a surgical opinion due to persistent bleeding.

Endoscopic Examination: August 2001

- **Fundal varices**

GI Surgery Review

- **Examination**
  - No esophageal pathology
  - Abdomen: liver spleen not palpable
  - No lump palpable, no ascites

- **Investigations**
  - Albumin 3 g/dL, total bilirubin 1 mg/dL,
    AST 41 IU/L, ALT 38 IU/L,
    ALP 68 IU/L, GGT 17 IU/L, INR 1

- **Diagnosis**
  - Portal hypertension with fundal varical bleed
  - Cause?

- **Advised**
  - Contrast-enhanced CT scan of the abdomen

Contrast-Enhanced CT Scan

Surgical Opinion

- **Further investigation**
  - Serum amylase 42 U/L (reference range: 5-100 U/L)
  - CEA: 1.8 ng/mL (reference range: 0.2-5 ng/mL)
  - CA 19-9: 24 U/mL (reference range: 0.33 U/mL)

- **Pre-operative diagnosis**
  - Pancreatic body tumor with a gastric varical bleed due to sinusoidal portal hypertension (SPH) requiring surgical exploration

Operative Findings and Surgical Management

- **Liver normal, no ascites**
  - Dilated collaterals along the greater curvature of the stomach
  - Splenic vein thrombosis
  - 6×6 cm tumor of the body and tail of pancreas adherent to the splenic hilus and gastric fundus
  - Distal pancreatectomy plus splenectomy
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Keywords Cystadenoma, Serous; Esophageal and Gastric Varices; Splenectomy; Splenic Vein; Thrombosis

Abbreviations SPH: sinistral portal hypertension

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References


