



Salvage TIPS for refractory variceal bleeding after failed port-systemic shunt surgery in a patient with non cirrhotic portal hypertension

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Abstract :

Abstract In patients with refractory variceal bleed and well preserved liver function (Childs class A and B) surgical shunt and transjugular intrahepatic porto-systemic shunt (TIPS) are the only few options available. The long-term survival depends on the severity of underlying liver disease, rather than on the variceal bleeding per se(1). Efficacy of TIPS in preventing variceal bleed is almost similar in comparison to splenorenal shunt (SRS) which may be a more cost effective option(2). Both have been used as salvage therapy for refractory variceal bleeding. We herein report a case of refractory variceal bleed after failed distal spleno-renal shunt managed with emergency TIPS in a patient with non cirrhotic portal hypertension.

Keyword :Refractory variceal hemorrhage, TIPS, splenorenal shunt

Case: A 54 years old gentleman was admitted with history of recurrent episodes of large volume haematemesis. He was diagnosed as cryptogenic chronic liver disease

(patent portal and hepatic vein with negative etiology work up) with portal hypertension 6 months prior to the current admission. Despite being on regular endoscopic variceal ligation and optimum pharmacologic therapy he had repeated episodes of UGI bleed. There was no history of jaundice, encephalopathy or ascites. There were no co-morbidities. His Childs score was 7 (class-B) and Model for End-Stage Liver Disease (MELD) score was 8. Upper GI endoscopy showed large oesophageal varices with red colour signs and moderate sized isolated gastric varix. Endoscopic variceal ligation was done for the large oesophageal varices. Colour Doppler abdomen revealed patent portal, splenic and renal veins. Elective porto-systemic shunt was planned in view of repeated episodes of haematemesis with preserved liver functions. Meanwhile he developed massive upper GI bleed. Emergency endoscopy showed bleeding from the post EVL ulcer. He underwent emergency proximal spleno-renal shunt along with splenectomy. On postoperative day 3 he developed

another episode of massive hematemesis. He was intubated and bleeding was controlled with Sengstaken Blakemore tube. CT scan abdomen revealed thrombosis of surgically created shunt (Fig: 1). Hence an emergency transjugular portosystemic shunt (TIPS) was done to reduce the portal pressure. A 10mm X 8/2 cm (10 mm calibre, 8 cm covered and 2 cm uncovered) TIPS stent was placed between right hepatic vein and right portal vein branch (Fig: 2). Portal venous pressure, measured during the procedure, dropped from 29 mm of Hg to 13 mm of Hg after stenting (Table: 1). He did not have any further hematemesis thereafter and his liver functions remained stable during a follow up period of six months. Patient was continued on Propranolol.



Contrast enhanced CT abdomen (venous phase) depicting thrombosed splenorenal shunt in a patient with non-cirrhotic portal hypertension.



Plain skiagram showing TIPS (transjugular intrahepatic portosystemic shunt) stent after deployment. Table 1: Portal and right atrial pressures measured during the TIPS procedure, i.e. just before and just after placement of TIPS stent)

Wedge biopsy did not show evidence of cirrhosis and diagnosis of idiopathic non cirrhotic intrahepatic portal hypertension was considered.

Discussion:
Refractory variceal bleeding is defined as bleeding that continues even after adequate pharmacologic and endoscopic therapy. In these patients, the only option for long-term salvage remains liver

	Portal vein (mm of Hg)	Right atrium (mm of Hg)
Pre TIPS	29	7
Post TIPS	13	11

transplantation. In Child's A patients, other salvage options with good temporary outcomes are -surgical shunt, TIPS, and devascularization procedures (1). Idiopathic non cirrhotic intrahepatic portal hypertension is considered to be one of the common cause of chronic liver disease(3) (4). Surgically created porto-systemic shunts (PSS) are useful in portal hypertension patients with variceal bleeding and well preserved liver functions(5). It has been reported that long term patency of non selective shunt is more than selective shunt (87% Vs 68%)(6). Patency of selective shunt like side to side splenorenal shunt without splenectomy has been reported to be 87% over 54 months follow up (7). Baseline, i.e. pre-operative, portal pressure (Hepatic Venous Pressure Gradient) was not measured in our patient. As depicted in table 1, the portal vein pressure decreased from 29 mm Hg (just prior to TIPS stent placement) to 13 mm Hg (just after the placement of TIPS stent). The patient was thus continued on Propranolol with no further gastrointestinal bleed during six month follow up. According to our knowledge this is the first case report from India of successfully managing patients of refractory variceal bleed with TIPS following thrombosis of splenorenal shunt.

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