

Transjugular intrahepatic portosystemic shunt versus open splenectomy and esophagogastric devascularization for portal hypertension with recurrent variceal bleeding

An-Ping Su, Zhao-Da Zhang, Bo-Le Tian and Jing-Qiang Zhu

Chengdu, China

BACKGROUND: Transjugular intrahepatic portosystemic shunt (TIPS) and open splenectomy and esophagogastric devascularization (OSED) are widely used to treat patients with portal hypertension and recurrent variceal bleeding (PHRVB). This study aimed to compare the effectiveness between TIPS and OSED for the treatment of PHRVB.

METHODS: The data were retrospectively retrieved from 479 cirrhotic patients (Child-Pugh A or B class) with PHRVB, who had undergone TIPS (TIPS group) or OSED (OSED group) between January 1, 2010 and October 31, 2014.

RESULTS: A total of 196 patients received TIPS, whereas 283 underwent OSED. Within one month after TIPS and OSED, the rebleeding rates were 6.1% and 3.2%, respectively ($P=0.122$). Significantly lower incidence of pleural effusion, splenic vein thrombosis, and pulmonary infection, as well as higher hepatic encephalopathy rate, shorter postoperative length of hospital stay, and higher hospital costs were observed in the TIPS group than those in the OSED group. During the follow-up periods (29 months), significantly higher incidences of rebleeding (15.3% vs 4.6%, $P=0.001$) and hepatic encephalopathy (17.3% vs 3.9%, $P=0.001$) were observed in the TIPS group than in the OSED group. The incidence of in-stent stenosis was 18.9%. The survival rates were 91.3% in the TIPS group and 95.1% in the OSED group. The long-term liver function did not worsen after either TIPS or OSED.

CONCLUSION: For the patients with liver function in the Child-Pugh A or B class, TIPS is not superior over OSED in terms of PHRVB treatment and rebleeding prevention.

(*Hepatobiliary Pancreat Dis Int* 2017;16:169-175)

KEY WORDS: liver cirrhosis;
portal hypertension;
recurrent variceal bleeding;
transjugular intrahepatic portosystemic shunt;
open splenectomy and esophagogastric
devascularization

Introduction

Portal hypertension secondary to liver cirrhosis results in two severe complications: esophagogastric variceal bleeding and hypersplenism. The former is the most common cause of death (approximately 30%) in this population. Furthermore, recurrent bleeding occurs in over 70% of patients with a history of variceal bleeding.^[1] The general consensus is that these patients should accept further treatment to prevent rebleeding. Surgical interventions play a key role in the treatment process. Liver transplantation has been regarded as the most effective treatment for cirrhotic patients with portal hypertension and recurrent variceal bleeding (PHRVB). However, organ shortage and high medical costs greatly limit its clinical application. Various interventions have been advocated to treat PHRVB, such as open splenectomy with esophagogastric devascularization (OSED), transjugular intrahepatic portosystemic shunt (TIPS), distal splenorenal shunt, and balloon-occluded retrograde transvenous obliteration.^[2-5]

OSED and TIPS are widely used in the treatment of PHRVB. The former is more commonly used in China, whereas the latter is more frequently used in Western

Author Affiliations: Department of Thyroid Surgery (Su AP and Zhu JQ) and Department of Hepatobiliopancreatic Surgery (Zhang ZD and Tian BL), West China Hospital, Sichuan University, Chengdu 610041, China

Corresponding Author: Zhao-Da Zhang, MD, Department of Hepatobiliopancreatic Surgery, West China Hospital, Sichuan University, Chengdu 610041, China (Tel/Fax: +86-28-85423822; Email: zhaodazhang@yeah.net)

© 2017, Hepatobiliary Pancreat Dis Int. All rights reserved.

doi: 10.1016/S1499-3872(16)60129-7

Published online September 13, 2016.

countries.^[6] OSED is an effective treatment for PHRVB because the two severe complications can be solved simultaneously.^[7, 8] Nevertheless, several complications occur after OSED, including portal vein thrombosis, serious gastric mucosal damage, and delayed gastric emptying. TIPS has played an important role in the treatment of PHRVB since its introduction into clinical practice in 1988.^[9] TIPS is commonly recommended for patients with bleeding that is refractory to pharmacological and endoscopic control. With the development of techniques and stents, TIPS has generally been recognized as the first-line therapy for PHRVB, with an estimated technical success rate of 93%-100%.^[10, 11] However, some recent studies showed higher incidences of rebleeding, reintervention for the stenosis of stents, and hepatic encephalopathy for patients with TIPS as compared with other surgical interventions.^[10, 11]

To date, the effectiveness of TIPS and OSED for the treatment of PHRVB has not been compared. Therefore, we conducted a retrospective study to determine whether TIPS is superior to OSED in the treatment of PHRVB and the prevention of rebleeding.

Methods

Patients

The data were retrospectively collected from 479 cirrhotic patients (Child-Pugh A or B class) with PHRVB, who had undergone OSED at the Department of Hepatobiliopancreatic Surgery and TIPS at the Department of Gastroenterology of West China Hospital between January 1, 2010 and October 31, 2014. All patients were diagnosed with liver cirrhosis by biopsy or clinical manifestation, physical examination, laboratory examination, and imaging examination. All participants were diagnosed with portal hypertension and esophagogastric varices by endoscopy, which was confirmed during TIPS or OSED. In our institution, the indications of TIPS were a history of recurrent variceal bleeding and/or refractory ascites. Partial splenic embolization was performed based on hypersplenism and severe thrombocytopenia and/or leukopenia, which was also determined by surgeons. The indications of OSED were as follows: (1) recurrent esophagogastric variceal bleeding history; (2) moderate or severe esophagogastric varices (esophagogastric varices are graded according to the standards of the Chinese Digestive Endoscopy Society in Kunming on March 1, 2000);^[12] (3) hypersplenism and severe thrombocytopenia and/or leukopenia; (4) liver function in the Child-Pugh A or B class, with general conditions and important organ functions satisfying the indications for open surgery. The exclusion criteria included combina-

tion with liver cancer, pre-existing thrombosis in the portal vein system or ascites before operation, patients undergoing TIPS or OSED in the Child-Pugh C class or without variceal bleeding, and acute bleeding with emergency TIPS or OSED (within 72 hours). The indications for blood transfusion were hemoglobin at <70 g/L during acute bleeding and hemoglobin at <60 g/L during chronic blood loss. The study was approved by the local ethics committee. Informed consent was obtained from each patient.

Surgical procedures

The TIPS and OSED procedures performed in our institution were in accordance with the methods described by Zhou et al.^[13] and Zhe et al.^[14] A Palmaz stent (Johnson & Johnson, Warren, NJ, USA), Wallstent (Schneider, Minneapolis, MN, USA) or Wallgraft stent (Boston Scientific, Galway, Ireland) with the diameter of 8-10 mm was used during TIPS. Portal venous pressure was measured through the water column. The portal vein gradient target was about 16.2 mmHg (22 cmH₂O).

Postoperative management

For postoperative management, prophylactic wide-spectrum antibiotics were administered to all patients. Lactulose (10 mL, three times per day) was regularly provided to each patient by oral administration for 3 days after successful TIPS implantation. No further use of lactulose was approved unless the patient was diagnosed with hepatic encephalopathy. Anticoagulant therapy with the injection of low-molecular-weight heparin calcium (1.0 mL, once a day) was initiated if there was no evidence of bleeding at 2 days after TIPS implantation or OSED. Aspirin was orally provided if platelet was >500×10⁹/L after TIPS and OSED. Aspirin was also used post-discharge to prevent in-stent stenosis and thrombosis of the portal vein system. Every patient accepted similar dietary recommendations to prevent hepatic encephalopathy.

Follow-up

All the included patients were followed up either until the last scheduled follow-up examination or death. Follow-up was conducted in the outpatient department in the 1st, 3rd, 6th, and 12th month after discharge and annually thereafter. During the follow-up periods, patients who developed variceal bleeding were immediately subjected to endoscopy and ultrasound or computed tomography scanning. Otherwise, these procedures were performed during each of the follow-up periods. Recurrent esophagogastric variceal bleeding was defined as any episode of endoscopically confirmed esophagogastric variceal bleeding that occurred after the first treatment.

Download English Version:

<https://daneshyari.com/en/article/8735382>

Download Persian Version:

<https://daneshyari.com/article/8735382>

[Daneshyari.com](https://daneshyari.com)