

A TIPSS story

TIPSS hikayesi

Dr. Ahmet GÖRGÜL¹, Dr. Burçak KAYHAN², Dr. Zafer AKÇALI², Dr. Bülent MENTEŞ³,
Dr. Selahattin ÜNAL¹, Dr. Uğur KANDILCI¹

Gazi Üniversitesi Tıp Fakültesi Gastroenteroloji¹ bilim dalı, İç Hastalıkları² ve Genel Cerrahi³ Anabilim Dalları, Ankara

ÖZET: Transjuguler intrahepatic portosystemic stent shunt (TIPSS), varsiyel hemoraji tedavisinde ümit vadeden bir tekniktir. Bugüne kadar yapılan çalışmalar, portal basıncın düşürülmesi ve akut kanama kontrolunda etkili bir yöntem olduğunu göstermiştir. Her ne kadar TIPSS'e bağlı komplikasyon oranı düşükse de bu komplikasyonların gerçek sıklığı ve önemi henüz yeterince ortaya konulamamıştır.

Anahtar kelimeler: Karaciğer sirozu, portal hipertansiyon, varis kanaması, transjuguler portosistemik stent şunt, TIPSS

"then, no government should ever imagine that it can always adapt a safe course: rather, it should regard all possible courses of action as risky. This is the way things are: whenever one tries to escape a danger one turns into another. Prudence consists in being able to assess the nature of a particular threat and accepting the lesser evil"

Machiavelli (1469-1527) 'The Prince'

TRANSJUGULER intrahepatic portosysemic stent shunt (TIPSS) is an alternative technique that involves creating a tract between the hepatic and portal veins through the liver parenchyma by means of balloon angioplasty while expandable wire stents, 8 to 10 mm in diameter, are used to keep the intrahepatic tract patent (1). Procedural complication rates are low but the true incidence and significance of these complications need to be further defined.

TIPSS STORY

A 60 year old female presented with massive upper gastrointestinal bleeding, secondary to esophageal and gastric varices. Because the bleeding was not controlled by sclerotherapy or

SUMMARY: Transjuguler intrahepatic portosystemic stent shunt (TIPSS) is a promising investigational technique for the management of variceal haemorrhage. Studies to date have demonstrated that the procedure is an effective means for decompressing the portal venous system and controlling acute bleeding. Although TIPSS complication rates are low, both the true incidence and significance of these complications need to be further defined.

Key words: Liver cirrhosis, portal hypertension, variceal bleeding, transjuguler portosystemic stent shunt, TIPSS

vasopressin and nitroglycerin, the patient was evaluated for a transjuguler intrahepatic portosystemic shunt. We report the case of a patient with decompensated cirrhosis (HBV + Pugh class B) who bled repeatedly from gastric varices.



Figure 1-1

Endoscopy revealed that the 3 variceal cords (Grade 3) appeared at the 30 cm of proximal esophagus and arrived to the cardia. She has also fundal varices.



Figure 1-2

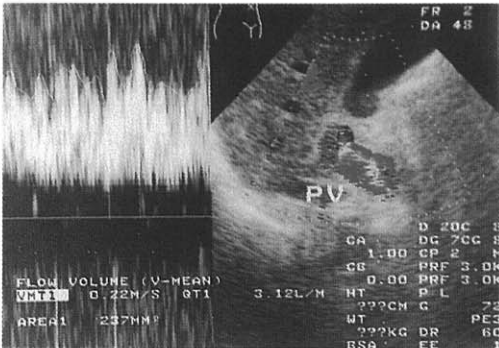


Figure 2-1

Doppler sonography reveal that the diameter of portal vein is measured at 15 mm or the portal vein flow velocity is both 28 cm/sn and turbulent character. She has dilated coroner and gastroesophageal varices too.



Figure 3-1

Both aorta abdominalis and cheliac root or their's main branches are all patent. A. lienalis is dilated. At the late phases of angiography, the spleno-portal axe and portal vein's intrahepatic branches are twisted.



Figure 4-1

The portal vein is catheterized by a transjugular approach. A tract between right hepatic vein and the right portal vein is created after balloon dilatation, and this opening is stented with an expandable stainless steel wall stent. The portal vein pressure is decreased from 42mm Hg to 18mmHg after shunting.

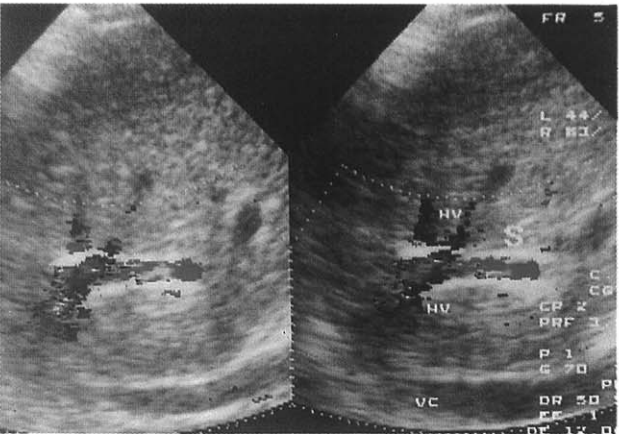


Figure 5-1

After shunting, doppler reveals the patency of the stent.

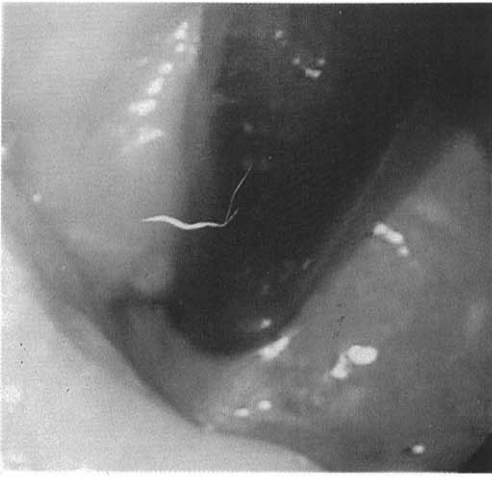


Figure 6-1

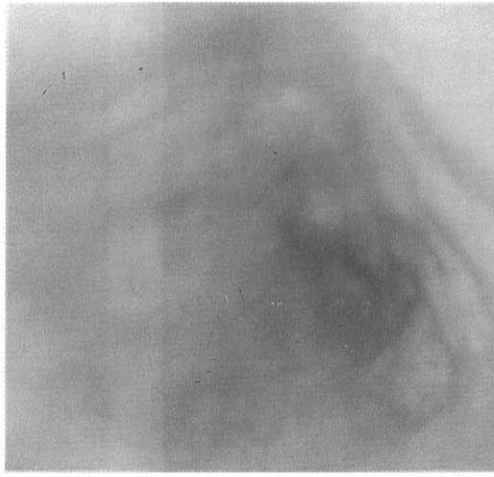


Figure 6-2

After 6 months from TIPSS, the control endoscopy reveals (Grage I) one cordon varice at the distal part of esophagus.

According to our clinical protocol, we repeat a new angiography to our case whose hasn't had any symptoms at this time.

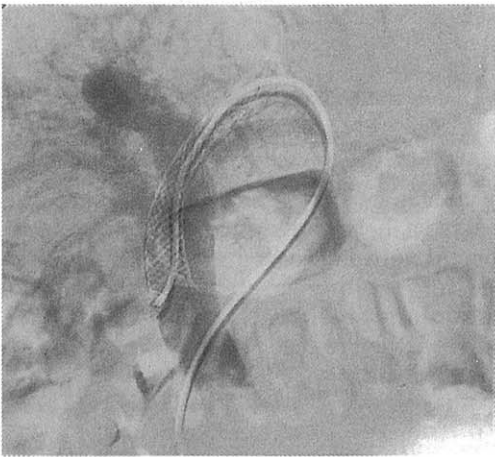


Figure 7-1

Angiography reveals the blood current is decreased in the stent as there is a narrow irregular lumen. So, we decide to make balloon dilatation in this narrow irregular segment of this stent.

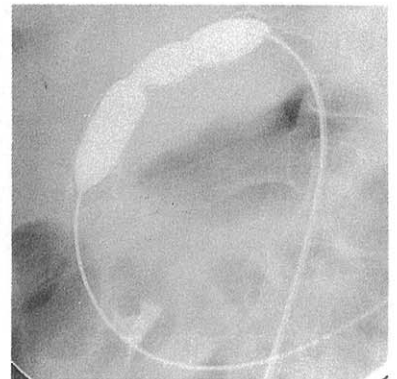
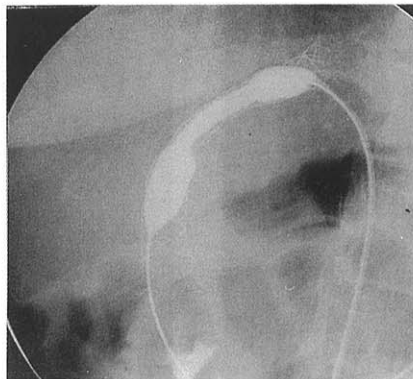
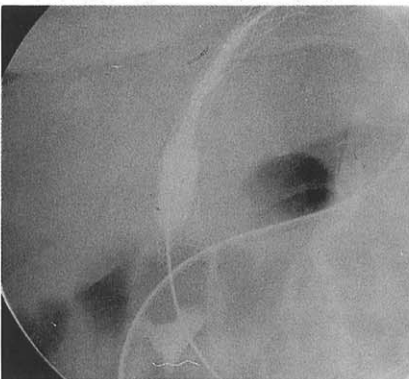


Figure 8-1 Figure 8-2 Figure8-3

First of all, we put a guide chatheter in the stent. The shunt was catheterised by a transfemoral approach revealing a narrow irregular lumen.



Figure 9-1



Figure 9-2

After balloon dilatation, we repeat endoscopy. It reveals that grade 1-2 one cordon varice and significant fundal varices are all continued one week after.

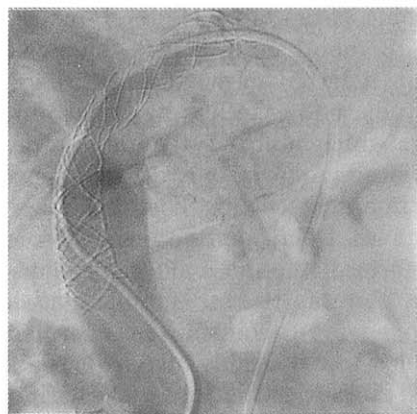


Figure 10-1

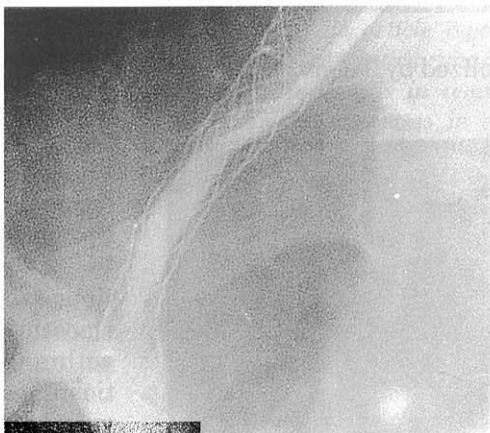


Figure 10-2

A guide catheter is put into the stent. Although balloon dilatation was performed, an optimal luminal opening could not be achieved. Thus, we decided to place a new stent into the old one. In addition, gastric varices were embolized by inserting coils into these veins.

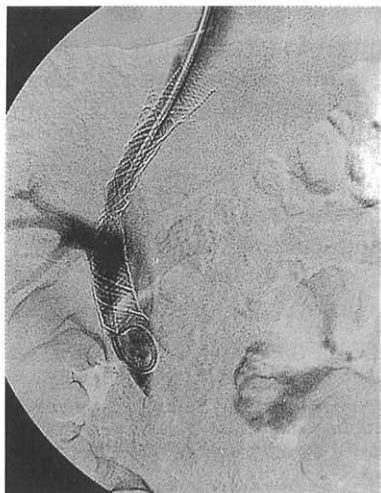


Figure 11-1

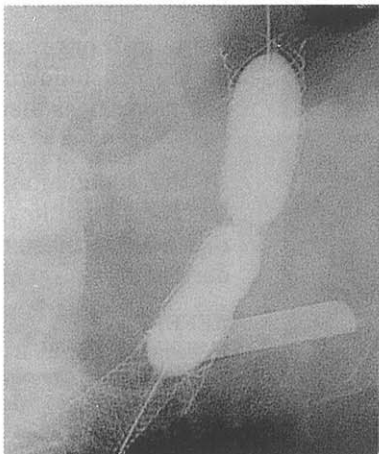


Figure 12-1



Figure 13-1

A second stent is deployed inside the original with reestablishment of shunt potency.

We make a new balloon dilatation.

Last appearance of the second stent and the original.



Figure 14-1

Gastric varices are embolized by 3 coils.

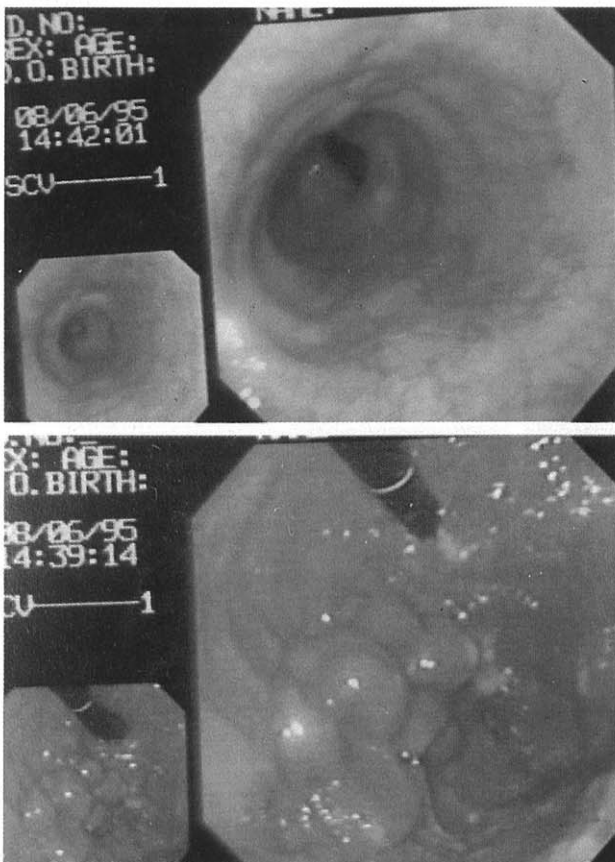


Figure 15-1 Figure15-2

After the second intervention, control endoscopy reveals that (Grade 1) 2 cordon varice appear at the distal part of esophagus and gastric varices are present but it's appearance is smaller before the coil embolisation.

DISCUSSION

TIPSS is promising investigational technique for the management of variceal hemorrhage. Studies to data have demonstrated the procedure is an effective means of decompressing the portal venous system and controlling acute bleeding.

The successful placement of a stent produces a rapid reduction in portal-hepatic venous pressure gradient, and appears to be a much simpler and safer technique than conventional portal decompressive surgery. Preliminary results in patients with failure of sclerotherapy and gastric variceal bleeding have been encouraging. However, the incidence of complications and rates of long term patency could determine the true place of the TIPSS procedure. The long term patency of TIPSS is not yet known. Delayed shunt occlusion has occurred in some patients (2). Late shunt occlusion occurred 18 months after TIPSS in one study resulting in a lethal variceal hemorrhage (3). In another study, one case has had gastrointestinal bleeding, which occurred 102 days after the shunt was placed. Arterial portography performed at that time showed an absence of flow through the shunt (4). Delayed shunt occlusion is likely due to the formation of an exuberant neointima within the shunts. It was found that a smooth nontrombogenic neointima is formed within the shunt by 3 weeks. This histologic reaction appears to be similar to that observed within vascular grafts. The thickness of neointimal hyperplasia developing within the shunt appears to vary with time, however when this pseudointima is excessive, shunt occlusion can occur (5).

Some authors recommend embolisation of residual varices following shunt placement (2). Thus, gastric varices also were embolised by coils in our case.

In the conclusion; procedural complication rates for TIPSS are low but the true incidence and significance of these complications need to be further defined.

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