Early “pre-emptive” Transjugular Intrahepatic Portosystmic Stent-Shunt (TIPSS)

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Disclosures

• Speaker fees GORE Medical
Interventional Therapies for variceal bleeding

1938 – 1st case report of sclerotherapy (Crafford)

1973 – 1st reported series of sclerotherapy 117 pts (Johnston)

1981 – Using flexible endoscopes (Sivak)
1983 – Use of overtubes (Westaby)
1989 – Reduced mortality with sclerotherapy (Infante)

TIPSS – 1989 Richter & Rossle

1989 – 1st reports of VBL
1992 – Seminal work demonstrating superiority of VBL (Stiegemann)

Covered TIPSS – 1997 Saxon

Early covered TIPSS for AVB – 2010 Garcia Pagan

Covered TIPSS for ascites – 2016 Bureau
Viatorr type of covered stent (Gore Medical)

Diameter: 8, 10, 12 mm
Length: 4-8 cm (covered)
2 cm (uncovered)

Multicentre RCT of Early TIPS (1st 72 hrs; N=32) Vs EBL+NSBB (N=31) in Patients with Acute Variceal Bleed (Child B with active bleeding or Child C < 14)

Audit of pre-emptive TIPSS
Thabut et al, J Hep 2017

931 screened (58 French hospitals; 2012-13), 326 met criteria for early TIPSS

57 underwent TIPSS (17.5%) and only 22 (6.7%) for early TIPSS indication.

Early TIPSS not offered due to lack of local availability of TIPSS (45%), physician did not believe in early TIPSS (34%), and other reason (21%)

Early TIPSS more in academic centres (9.2% vs 2.5%)

Early TIPSS patients had less severe cirrhosis.

Survival benefit not seen in Child’s B with active bleeding.

On multivariate analysis only severity of liver disease associated with survival not early TIPSS.

Fig. 2. Actuarial survival in the 326 patients eligible for early-TIPS according to early-TIPS placement. The actuarial probability of survival at one year was significantly increased in the patients who underwent TIPS (85.7 ± 0.07%, vs. 58.9 ± 0.03%, p = 0.04). TIPS, transjugular intra-hepatic porto-systemic shunt. Statistical tests: Kaplan-Meier method. (This figure appears in colour on the web.)
Preemptive-TIPS Improves Outcome in High-Risk Variceal Bleeding: An Observational Study

- Multicenter observational study; 34 centers; (April 2013- 2015).

- 671 patients with Acute VB and high risk of treatment failure (Child-Pugh C score < 14) or Child-Pugh B plus active bleeding at endoscopy (CP-B+AB)

- E-TIPS = 66, Drugs +EVL = 605

- Follow up= 12 months or until death or LT.

Hernández-Gea et al; Hepatology 2019;69:282-293
Multicenter International Observational Study

P-TIPS markedly improved survival in the whole cohort of high-risk patients admitted with AVB.
Effect of p-TIPS vs standard therapy on the mortality in Child-Pugh B patients with Active variceal bleeding

N = 1425, 12 Chinese hospitals (December 2010 - June 2016)

e-TIPS= 206; SOC=1219

Hernández-Gea et al; Hepatology 2019;69:282-293

Randomised trials of early (pre-emptive) TIPSS

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<thead>
<tr>
<th>ClinicalTrials.gov: NCT01370161</th>
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<tr>
<td>• Early TIPS with covered stent versus standard treatment for acute variceal bleeding among patients with advanced cirrhosis: A randomised controlled trial</td>
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<tr>
<td>• China (Prof Han)</td>
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<td>• Completed</td>
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<td>• ILC2019 abstract PS-024</td>
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<th>ClinicalTrials.gov: NCT02377141</th>
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<tr>
<td>• Early Use of Transjugular Intrahepatic Portosystemic Shunt (TIPSS) in Patients With Cirrhosis and Variceal Bleeding</td>
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<td>• UK (Prof Hayes)</td>
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<td>• Completed</td>
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<td>• Results to be presented at the British Society of Gastroenterology Annual Meeting June 2019</td>
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• Early pre-emptive covered TIPS (placed within 24–72 h) can be suggested in selected high-risk patients, such as those with Child class C with score <14 (I;2).

• However, the criteria for high-risk patients, particularly Child B with active bleeding, remains debatable and needs further study.

EASL Guidelines 2018

• Following satisfactory haemostasis with the methods above, and depending on local resources, early covered TIPSS (<72h following index variceal bleed) can be considered in selected patients with Child’s B cirrhosis and active bleeding or Child’s C cirrhosis with Child’s score less than 14 (Level 1b, Grade B).

BSG Guidelines 2015
Early or “pre-emptive” TIPSS

• Applies to TIPSS during acute bleeding episode in a stable patient with aim of reducing risk of rebleeding
• Some inconsistencies with RCT and real world results, especially with regards to selection criteria
• Most patient suitable for pre-emptive TIPSS not offered it – resources, lack of knowledge or belief
• Publication of 2 RCTs (China and UK) eagerly awaited
• Baveno VII aims to perform a systematic review of individual data
• Until then can we really adopt pre-emptive TIPSS in the UK?