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[Intervention Review]

# TIPS versus paracentesis for cirrhotic patients with refractory ascites

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## ABSTRACT

### Background

Refractory ascites (ie, ascites that cannot be mobilized despite sodium restriction and diuretic treatment) occurs in 10 per cent of patients with cirrhosis. It is associated with substantial morbidity and mortality with a one-year survival rate of less than 50 per cent. Few therapeutic options currently exist for the management of refractory ascites.

### Objectives

To compare transjugular intrahepatic portosystemic stent-shunts (TIPS) versus paracentesis for the treatment of refractory ascites in patients with cirrhosis.

### Search methods

We searched *The Cochrane Hepato-Biliary Group Controlled Trials Register* (January 2006), the *Cochrane Central Register of Controlled Trials* in *The Cochrane Library* (Issue 4, 2005), *MEDLINE* (1950 to January 2006), *EMBASE* (1980 to January 2006), *CINAHL* (1982 to August 2004), and *Science Citation Index Expanded* (1945 to January 2006).

### Selection criteria

We included randomised clinical trials comparing TIPS and paracentesis with or without volume expanders for cirrhotic patients with refractory ascites.

### Data collection and analysis

We evaluated the methodological quality of the randomised clinical trials by the generation of the allocation section, allocation concealment, and follow-up. Two authors independently extracted data from each trial. We contacted trial authors for additional information. Dichotomous outcomes were reported as odds ratio (OR) with 95% confidence interval (CI).

### Main results

Five randomised clinical trials, including 330 patients, met the inclusion criteria. The majority of trials had adequate allocation concealment, but only one employed blinded outcome assessment. Mortality at 30-days (OR 1.00, 95% CI 0.10 to 10.06,  $P = 1.0$ ) and 24-months (OR 1.29, 95% CI 0.65 to 2.56,  $P = 0.5$ ) did not differ significantly between TIPS and paracentesis. Transjugular intrahepatic portosystemic stent-shunts significantly reduced the re-accumulation of ascites at 3-months (OR 0.07, 95% CI 0.03 to 0.18,  $P < 0.01$ ) and 12-months (OR 0.14, 95% CI 0.06 to 0.28,  $P < 0.01$ ). Hepatic encephalopathy occurred significantly more often in the TIPS group (OR 2.24, 95% CI 1.39 to 3.6,  $P < 0.01$ ), but gastrointestinal bleeding, infection, and acute renal failure did not differ significantly between the two groups.

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**Authors' conclusions**

The meta-analysis supports that TIPS was more effective at removing ascites as compared with paracentesis without a significant difference in mortality, gastrointestinal bleeding, infection, and acute renal failure. However, TIPS patients develop hepatic encephalopathy significantly more often.

**PLAIN LANGUAGE SUMMARY****Patients with refractory ascites may temporarily benefit from transjugular intrahepatic portosystemic stent-shunts**

Refractory ascites causes substantial morbidity in patients with cirrhosis. Randomised trials have compared transjugular intrahepatic portosystemic stent-shunts with paracentesis. Mortality, gastrointestinal bleeding, renal failure, or infection did not differ significantly between the two intervention groups. Transjugular intrahepatic portosystemic stent-shunts effectively decreased the risk of ascites fluid re-accumulation, but was associated with an increased risk of hepatic encephalopathy.