

Bible class – The transjugular intrahepatic portosystemic stent-shunt procedure for refractory ascites, May 1995, NEJM, by A. Ochs et al.

Wednesday, 2 August 2023, Dres med. Matthias Knecht und Christian Jäggi



Background

TIPSS is an effective treatment of uncomplicated ascites ± variceal bleeding

Refractory ascites¹ affects both quality of life and long-term survival

No improved of survival neither by paracentesis nor peritoneovenous shunting

A. Ochs et al.:

- Is TIPSS effective in patients with liver cirrhosis and refractory ascites too?
- Uncontrolled prospective study.

¹ No decrease in body weight or ascites during 4 weeks of standard treatment (<60mM sodium daily and diuretics).

Methods

Study on 50 of 62 patients with refractory ascites and established TIPSS (1989–1993)

12 patients excluded (hepatic cancer, advanced extrahepatic cancer, heart failure, liver failure)

Procedure:

- ≥ 4 weeks (!) of hospitalisation for a standard treatment to establish diagnosis of “refractory ascites”
- Creatinine clearance, renal-sodium and -protein excretion, ascitic-fluid analysis, assessment of hepatic encephalopathy, US
- Paracentesis of ascites performed before TIPSS
- After TIPSS (all successful) diuretics were tapered
- Follow-up (mean 426 days, SD 333 days) after 4 weeks and then every 3 months
- No patient lost of follow-up.

Population's characteristics

Male, 56 years old, alcoholic cirrhosis, Child-Pugh Class C

CHARACTERISTIC	VALUE*	%
Age (yr)	56±9	
Sex (M/F)	34/16	68/32
Alcoholic cirrhosis	38	76
Budd–Chiari syndrome	5	10
Postnecrotic cirrhosis	4	8
Primary biliary cirrhosis	2	4
Genetic hemochromatosis	1	2
Child–Pugh score†	10.0±1.4	
Child–Pugh class B	18	36
Child–Pugh class C	32	64
Liver-related complication		
Refractory ascites	50	100
Infectious‡	7	14
Chylous	3	6
Variceal bleeding only within the previous 4 wk	16	32
Variceal bleeding no later than 4 wk before	10	20
Uncomplicated hernia	7	14
Complicated hernia or fistula§	10	20
Spontaneous bacterial peritonitis within the previous 4 wk¶	10	20
Occluded peritoneovenous shunt	3	6
Functional renal failure		
Mild: creatinine >1.2 and <2.4 mg/dl	11	22
Severe: creatinine ≥2.4 mg/dl	5	10
Hepatic encephalopathy within the previous 3 mo		
Stage 1–2	15	30
Stage 3–4	5	10
Accompanying disease		
Organic kidney disease (all patients/patients undergoing hemodialysis)	6/4	12/8
Chronic heart disease (New York Heart Association class II–III)	5	10
Hematologic disorders**	5	10
Tumor		
Hepatic	2	4
Extrahepatic	3††	6

Results 1/3

Portal venous pressure gradient reduced by average of 63 %

List of complications (16 patients, 32 %):

- Intraabdominal bleeding
- Stents dislocation
- Placement of TIPSS in right iliac vein
- Septicemia
- Fever
- Cardiac arrhythmia
- Malaise, vomiting
- Contrast-induced nephropathy.

Results 2/3

Ascites

- 46 (92 %) patients responded, two out of three had “complete response”¹
- Response to treatment not predictable by creatinine, albumin, pressure (portal, caval) nor pressure gradient after TIPSS.

Renal function

- Improve in renal function in patients with organic kidney disease.

¹ No ascites detectable by ultrasound within three months.

Results 3/3

Liver function

- Bilirubin improved during follow-up (initial worsening within first month)
- Albumin increased by 20 % (Cave: During follow-up no ascites nor paracentesis).

Hepatic encephalopathy

- Number of patients with hepatic encephalopathy increased.

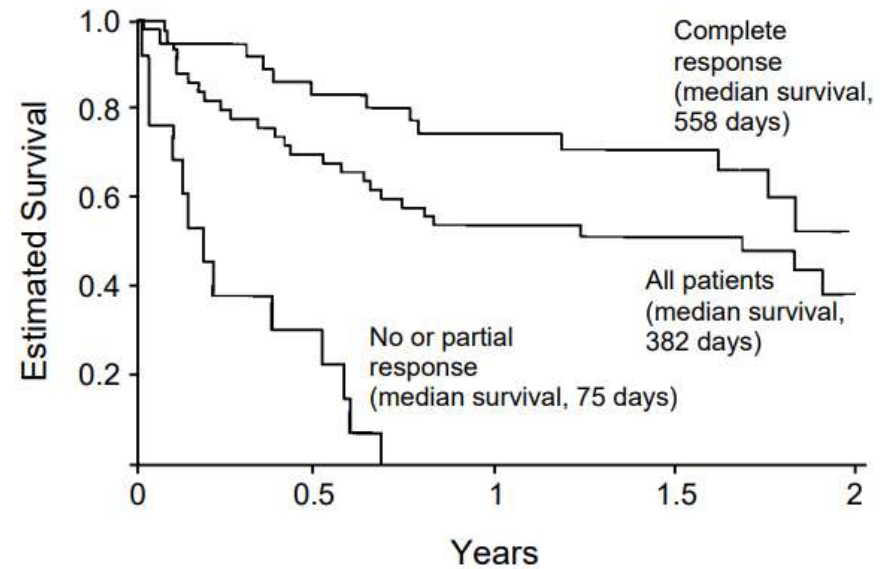
Mortality

- Two in-hospital deaths, 29 died during follow-up
- No correlation between survival and the Child-Pugh class, cause of liver disease, hepatic encephalopathy before / after TIPSS

Conclusion

TIPSS treats refractory ascites (portal decompression, improved renal function)

TIPSS increases incidence of hepatic encephalopathy.



Survival rate	0.68	0.54	0.38
No. dead	15	21	26
No. alive	35	28	8