Optimisation de la prise en charge de l'ascite chez le cirrhotique

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Lille 2
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- SD âgée de 45 ans consultant pour avis sur prise en charge thérapeutique d'une ascite abondante
- ATCD de décompensation ictéro-ascitique sur HAA 1 an auparavant. Réponse complète avec score de Lille à 0,16
- Abstinente depuis l'épisode d'HAA
- Examen physique : ascite très abondante , Oèdèmes membres inférieurs, pas d'ictère, pas d'encéphalopathie, pas de fièvre, dénutrition marquée
- Poids : 65 Kg; TA 80/60 mn Hg, pouls 80/mn
- Biologie
  - Transaminsases normales, GGT 2N, Ph alcaline 1N
  - Bili: 10 mg/l
  - TP : 70%, INR 1,3; Plaquettes 70.000/mm3
  - Alb 25g/l , Child-Pugh B9, MELD 9
  - Natrémie : 130 meq/L Kaliémie 4,1 meq/l , Créat: 4 mg/l
  - Sérologies virales < , auto-AC <, bilan génétigue
  - Echographie abdominale : Foie dysmorphique sans nodule + ascite abondante
- Fibroscopie : VO grade II

Questions

- A/ La ponction d’ascite est nécessaire
- B/ Une ponction évacuatrice doit être réalisée
- C/ Un traitement diurétiques doit être proposé en 1ère intention
- D/ Un traitement par B bloquants doit être systématiquement proposée

Réponses

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EASL clinical practice guidelines on the management of ascites, spontaneous bacterial peritonitis, and hepatorenal syndrome in cirrhosis

European Association for the Study of the Liver [1]

Recommendations **A diagnostic paracentesis should be performed in all patients with new onset grade 2 or 3 ascites, and in all patients hospitalized for worsening of ascites or any complication of cirrhosis (Level A1).**

Neutrophil count and culture of ascitic fluid (by inoculation into blood culture bottles at the bedside) should be performed to exclude bacterial peritonitis (Level A1).

It is important to measure ascitic total protein concentration, since patients with an ascitic protein concentration of less than 15 g/L have an increased risk of developing spontaneous bacterial peritonitis (Level A1) and may benefit from antibiotic prophylaxis (Level A1).

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Table 2. Grading of ascites and suggested treatment.

Grade of ascites	Definition	Treatment
Grade 1 ascites	Mild ascites only detectable by ultrasound	No treatment
Grade 2 ascites	Moderate ascites evident by moderate symmetrical distension of abdomen	Restriction of sodium intake and diuretics
Grade 3 ascites	Large or gross ascites with marked abdominal distension	Large-volume paracentesis followed by restriction of sodium intake and diuretics (unless patients have refractory ascites)

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Questions

- **A/ Un régime sans sel strict (<2 g de sodium/j) est nécessaire**
- **B/ Une restriction hydrique doit-être proposée**
- **C/ La survie médiane des patients ayant une ascite est approxiùatovement de 50% à 2 ans**
-
- **D/ La non réponse aux doses maximales ou une impossiblité d’augmenter les doses de diuretiques définit l’ascite réfractaire**

Réponses

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Recommendations **Patients with the first episode of grade 2 (moderate) ascites should receive an aldosterone antagonist such as spironolactone alone, starting at 100 mg/day and increasing stepwise every 7 days (in 100 mg steps) to a maximum of 400 mg/day if there is no response (Level A1). In patients who do not respond to aldosterone antagonists, as defined by a reduction of body weight of less than 2 kg/week, or in patients who develop hyperkalemia, furosemide should be added at an increasing stepwise dose from 40 mg/day to a maximum of 160 mg/day (in 40 mg steps) (Level A1). Patients should undergo frequent clinical and biochemical monitoring particularly during the first month of treatment (Level A1).**

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- Evolution sous Aldactone 200 mg/j a été la suivante:
- Diminution du Poids de 2 kg et du Périmètre abdominale
- Disparition oedèmes inférieures
- Persistance d’une ascite abondante justifiant d’une Paracentèse/mois
-
- Augmentation de l’Aldactone jusqu’à 300 mg/J associée à des doses progressives de furosemide jusqu’à une posologie maximale de 160 mg/j

- Lors de la 5ème paracentèse, la patiente signale une chute à son domicile avec une entorse du genou. L’exploration orthopédique a confirmé une entorse du genou avec à l’IRM un épanchement synovial et une rupture complète du ligament croisé antérieur qui apparait ancienne. Une indication chirurgicale est proposée et un traitement par Ibuprofène AINS a été initié

-

Questions

- **A/ Le diagnostic d'ascite réfractaire est retenu**
- **B/ L'utilisation d'AINS est contre-indiquée en cas d'ascite**
- **C/ Le paracétamol peut-être prescrit en cas de cirrhose y compris décompensée sous réserve d'un respect strict de la posologie (<4g/j) avec des prises d'1 gramme Maximum espacée d'au moins 6H**
-
- **D/ La non réponse aux doses maximales ou une impossiblité d'augmenter les doses de diuretiques définit l'ascite réfractaire**
- **E/ Un TIPS peut-être proposé**
- **F/ La réalisation d'un scanner avec injection du génou étai contre-indiquée**
- **G/ L'intervention est contre-indiquée dans l'immédiat**

Réponses

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- **D/ Seule une non réponse aux doses maximales des diurétiques ou une impossiblité d'augmenter les doses de diuretiques définit l'ascite réfractaire**
- **E/ Un TIPS peut-être proposé**
- **F/ La réalisation d'un scanner avec injection du génou étai contre-indiquée**
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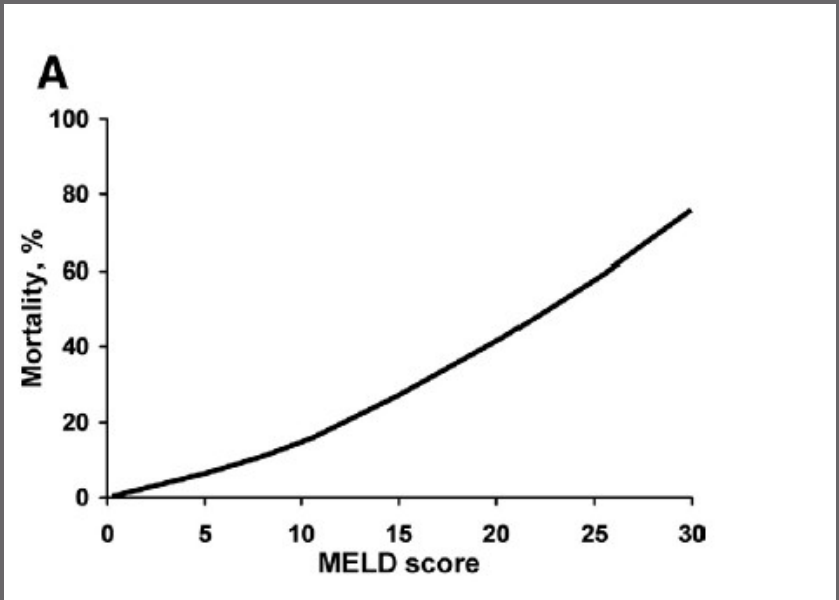
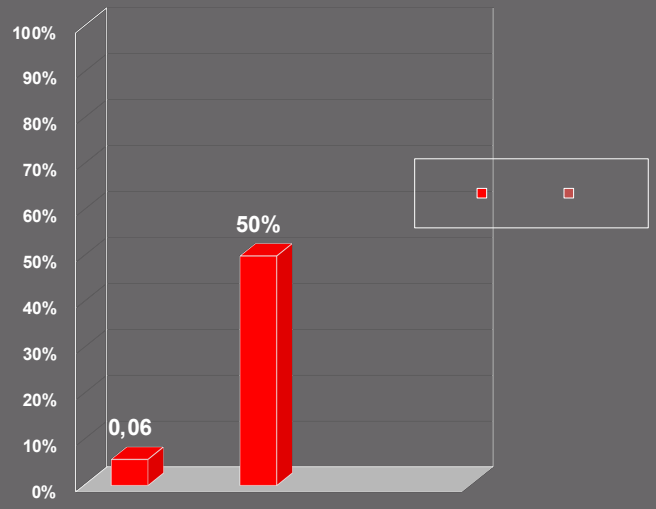
Risque opératoire du cirrhotique



Corrélation entre le score de Meld et la mortalité à 30 jours



Mortalité chez les patients ayant un score de Meld faible ou élevé

Variables	Hazard Ratio	p
Score de MELD > 8	1,12 (1,07–1,17)	p<0,001
Score de CHILD > 7	1,14 (0.62–2,10)	NS
Age	1,26 (1.01–1,56)	p=0,04
Classification ASA IV	2,21 (1,26–3,86)	p=0,005

Analyse multivariée à 30 jours

Teh SH et al, Gastroenterology 2007;132:1261–1269

EASL clinical practice guidelines on the management of ascites, spontaneous bacterial peritonitis, and hepatorenal syndrome in cirrhosis

European Association for the Study of the Liver [1]

The goal of long-term treatment is to maintain patients free of ascites with the minimum dose of diuretics. Thus, once

Recommendations **Large-volume paracentesis (LVP) is the first-line therapy in patients with large ascites (grade 3 ascites) (Level A1). LVP should be completed in a single session (Level A1).**

LVP should be performed together with the administration of albumin (8 g/L of ascitic fluid removed) to prevent circulatory dysfunction after LVP (Level A1).

mia (<3 mmol/L). Aldosterone antagonists should be stopped if patients develop severe hyperkalemia (serum potassium >6 mmol/L) (Level B1).

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Recommendations **Non-steroidal anti-inflammatory drugs (NSAIDs) are contraindicated in patients with ascites because**

In patients with ascites without renal failure, the use of contrast media does not appear to be associated with an increased risk of renal impairment (Level B1). In patients with renal failure there are insufficient data. Nevertheless, contrast media should be used with caution and the use of general preventive measures of renal impairment is recommended (Level C1).

ment (Level A1).

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Table 3. Definition and diagnostic criteria for refractory ascites in cirrhosis.

Diuretic-resistant ascites	Ascites that cannot be mobilized or the early recurrence of which cannot be prevented because of a lack of response to sodium restriction and diuretic treatment
Diuretic-intractable ascites	Ascites that cannot be mobilized or the early recurrence of which cannot be prevented because of the development of diuretic-induced complications that preclude the use of an effective diuretic dosage
Requisites	
1. Treatment duration	Patients must be on intensive diuretic therapy (spironolactone 400 mg/day and furosemide 160 mg/day) for at least 1 week and on a salt-restricted diet of less than 90 mmol/day
2. Lack of response	Mean weight loss of <0.8 kg over 4 days and urinary sodium output less than the sodium intake
3. Early ascites recurrence	Reappearance of grade 2 or 3 ascites within 4 weeks of initial mobilization
4. Diuretic-induced complications	Diuretic-induced hepatic encephalopathy is the development of encephalopathy in the absence of any other precipitating factor Diuretic-induced renal impairment is an increase of serum creatinine by >100% to a value >2 mg/dl (177 µmol/L) in patients with ascites responding to treatment Diuretic-induced hyponatremia is defined as a decrease of serum sodium by >10 mmol/L to a serum sodium of <125 mmol/L Diuretic-induced hypo- or hyperkalemia is defined as a change in serum potassium to <3 mmol/L or >6 mmol/L despite appropriate measures

Questions

- **A/ Le TIPS améliore la survie globale**
- **B/ Le taux de réponse en terme de contrôle de l'ascite est de 50-60%**
- **C/ Le taux de réponse en terme de contrôle de l'ascite est de 70%**
- **D/ Le TIPS améliore l'état nutritionnel des patients au stade TIPS**
-
- **E/ La probabilité d'être un candidat à une greffet est plus faible chez les patients traités par TIPS que chez ceux traités par paracentèse répétées**
- **F/ Le traitement diurétiques peut-être intérrompu après la pose du TIPS**

Réponses

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TIPS et Survie globale

Transjugular intrahepatic portosystemic shunt in refractory ascites: a meta-analysis

Deltenre P, Mathurin P, Dharancy S, Moreau R, Bulois P, Henrion J, Pruvot FR, Ernst O, Paris JC, Lebrec D. Transjugular intrahepatic portosystemic shunt in refractory ascites: a meta-analysis.
Liver International 2005: 25: 349–356 © Blackwell Munksgaard 2005

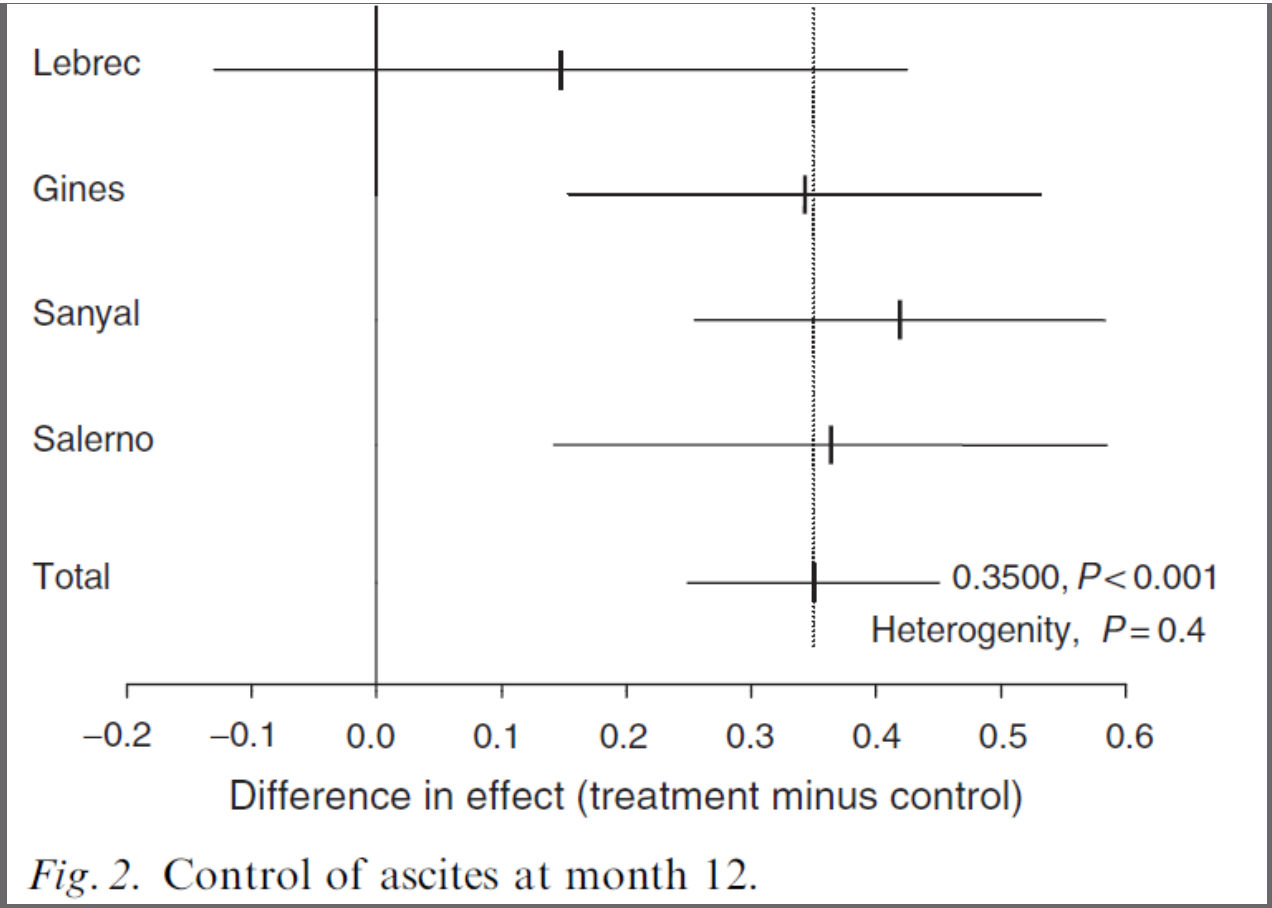

Fig. 2. Control of ascites at month 12.

TIPS et Survie sans transplantation:

GASTROENTEROLOGY 2007;133:825–834

Transjugular Intrahepatic Portosystemic Shunt for Refractory Ascites: A Meta-analysis of Individual Patient Data

FRANCESCO SALERNO,* CALOGERO CAMMÀ,[‡,§] MARCO ENEA,[‡,§] MARTIN RÖSSLE,[‖] and FLORENCE WONG[¶]

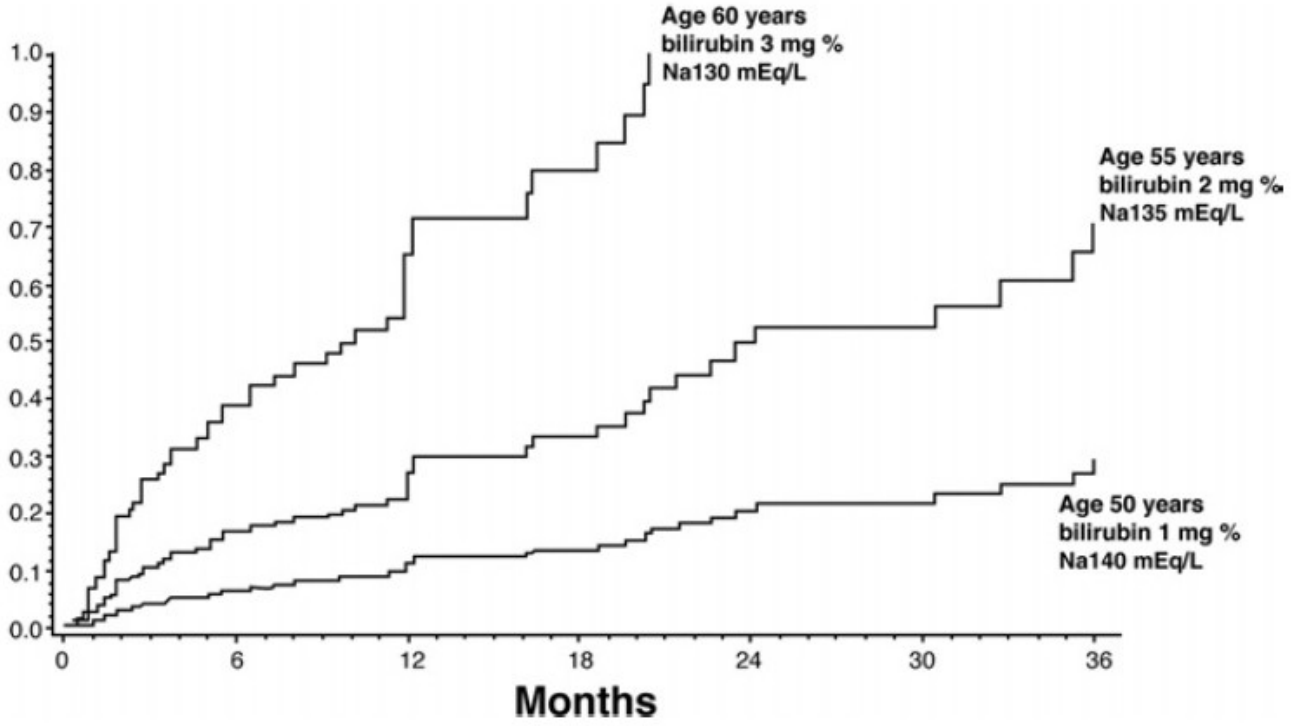

Figure 3. Estimated probability of death for cirrhotic patients with refractory ascites treated with TIPS, according to variability in predicting factors.

TIPS couvert est devenu le gold standard

Covered *vs.* uncovered stents for transjugular intrahepatic portosystemic shunt: A randomized controlled trial

Jean Marc Perarnau[1,*], Amélie Le Gouge[2,3], Charlotte Nicolas[1,4], Louis d'Alteroche[1], Patrick Borentain[5], Faouzi Saliba[6], Anne Minello[7], Rodolphe Anty[8,9,10],

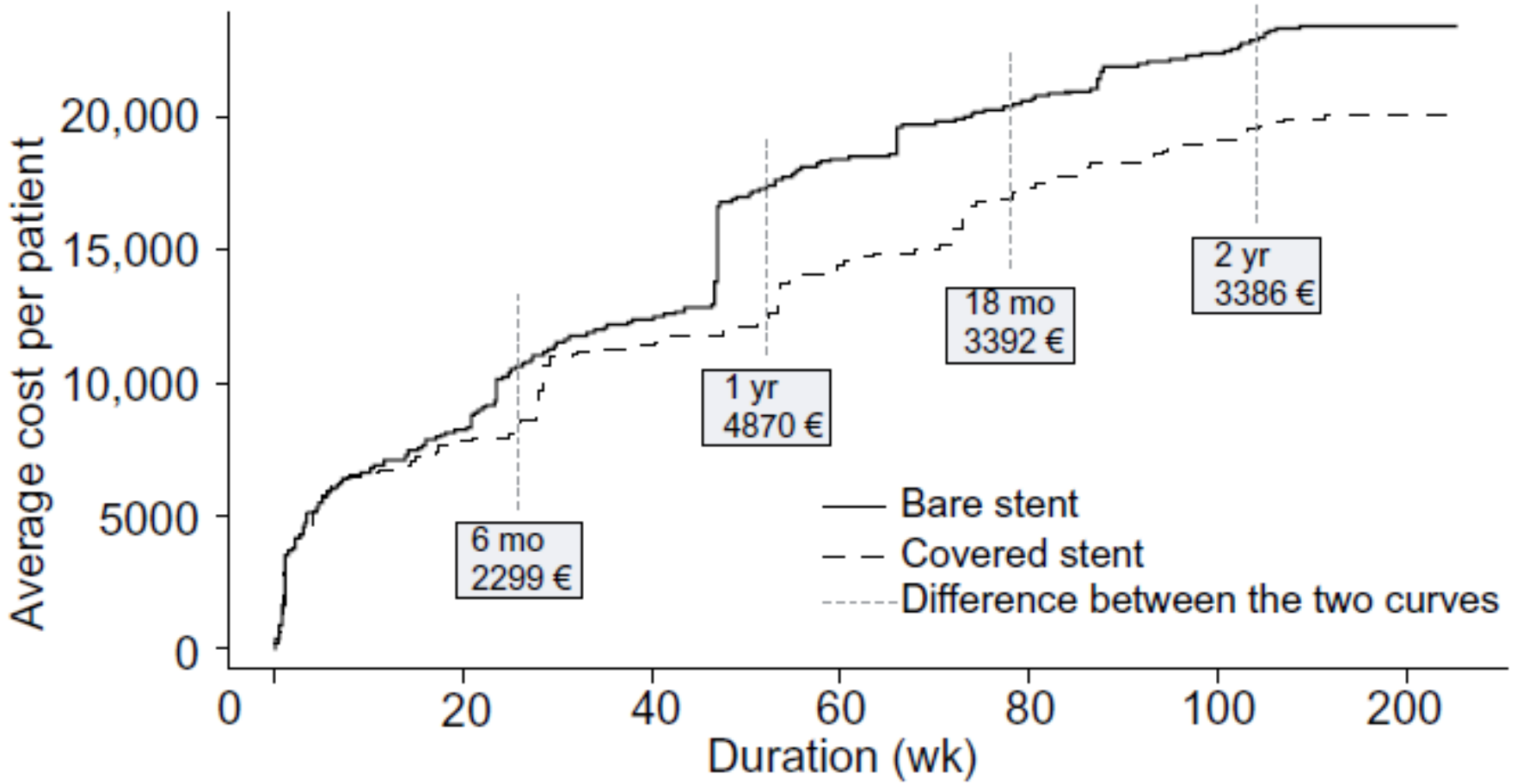

Fig. 5. Economic aspects.

randomization groups.

TIPS couve ntation

Table 4. Evolution of Hepatic and Renal Functions Between Baseline and Month 6 According to the Group

Variable	Baseline	Month 6
Bilirubin, *μmol/L*		
TIPS	20.8 ± 14.4	21.5 ± 19.5
LVP+A	15.8 ± 12.1	17.4 ± 14.8
Albumin, *g/L*		
TIPS	31.2 ± 4.7	34.0 ± 5.6**
LVP+A	33.3 ± 4.8	32.2 ± 6.2
INR		
TIPS	1.38 ± 0.27	1.35 ± 0.22
LVP+A	1.52 ± 0.31	1.48 ± 0.29
Creatinine, *μmol/L*		
TIPS	86.1 ± 31.2	70.3 ± 27.3**
LVP+A	84.6 ± 23.7	81.6 ± 20.1
Serum sodium, *mmol/L*		
TIPS	135 ± 5	139 ± 2**
LVP+A	132 ± 5	133 ± 5
Child-Pugh score		
TIPS	9.0 ± 1.4	7.0 ± 1.7**
LVP+A	9.2 ± 1.8	8.6 ± 2.1
MELD score		
TIPS	12.3 ± 3.4	13.1 ± 5.9
LVP+A	14.2 ± 3.6	13.6 ± 4.3
Plasma renin activity, *μU/mL*		
TIPS	860 ± 1329	59 ± 46*
LVP+A	856 ± 1338	1046 ± 1993
Plasma aldosterone, *ηg/L*		
TIPS	325 ± 554	32 ± 54*
LVP+A	214 ± 201	294 ± 323

Facteurs prédictifs de survie post-TIPS

Serum bilirubin and platelet count: A simple predictive model for survival in patients with refractory ascites treated by TIPS

Christophe ... lippe Otal[4], Juan Carlo ... Procopet[1],

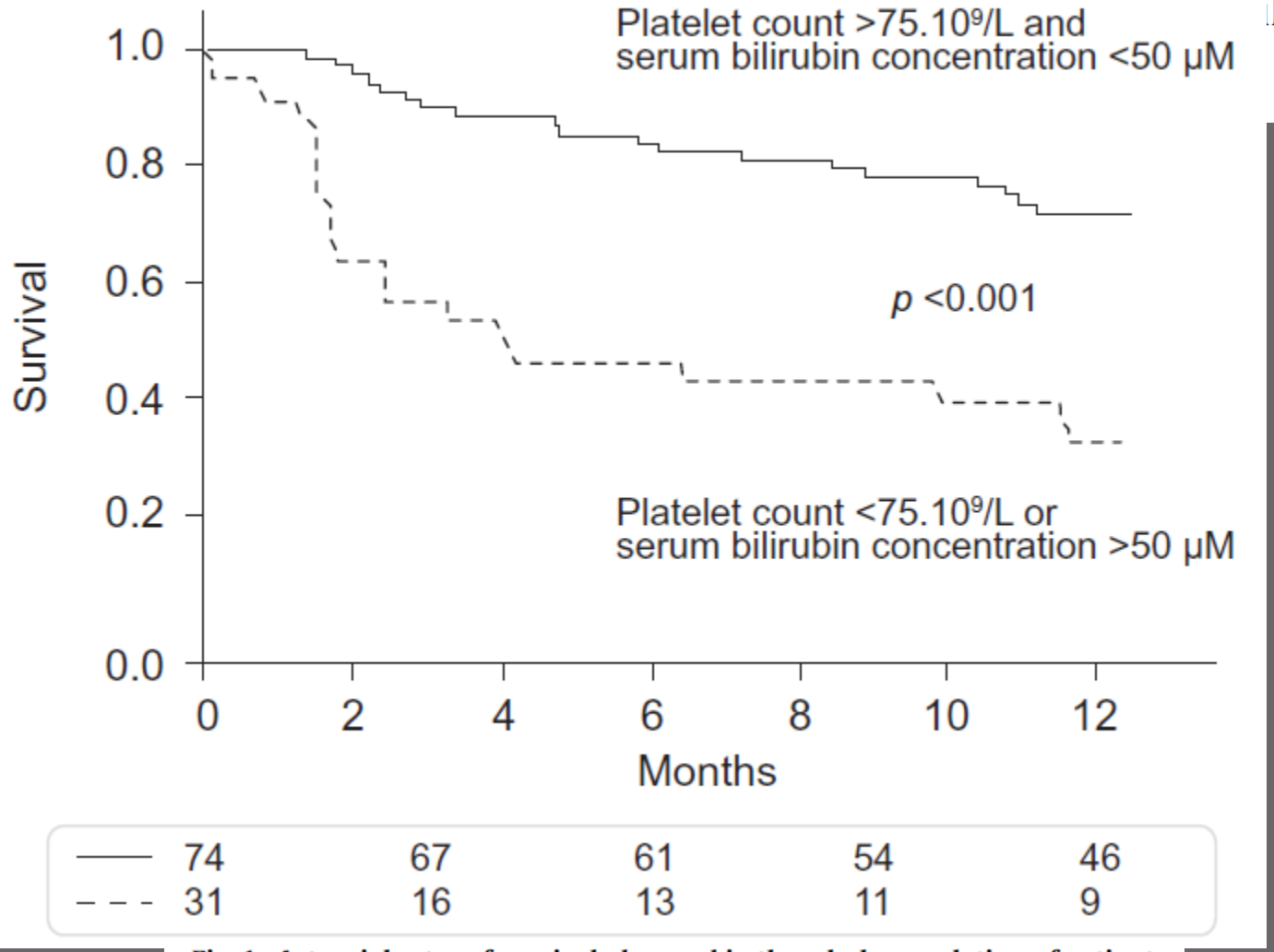

Fig. 1. Actuarial rates of survival observed in the whole population of patients with refractory ascites treated by TIPS (n = 105).

Facteurs prédictifs de complications post-TIPS

Gastroenterology 2017 (in press)

Timing Affects Measurement of Portal Pressure Gradient After Placement

Table 3. Uni- and Multivariate analysis for the determination of portal hypertension related complications (bleeding and ascites) during follow-up.

	Univariate analysis Competing Risk*		Multivariate analysis Competing Risk*	
Variable	sHR [95%CI]	P-value	sHR [95%CI]	P-value
PPG, mmHg	1.20 [1.13 to 1.26]	.000		
PPG≥12mmHg	7.28 [3.11 to 17.0]	.000	8.51 [3.61 to 20.0]	.000
Age, years	1.01 [0.99 to 1.04]	.328		
MELD score	1.04 [0.96 to 1.12]	.306		
Platelets, x10^9/L	1.00 [0.99 to 1.00]	.749		
Albumin, g/L	0.94 [0.87 to 1.00]	.065	0.91 [0.84 to 0.98]	.019
Creatinine, mg/dL	1.03 [0.33 to 3.20]	.955		
INR	1.43 [0.82 to 2.51]	.209		
Bilirubin, mg/dL	0.99 [0.88 to 1.12]	.903		

All variables were evaluated as time-dependent variables recorded at time of each TIPS revision

*Death was the competing event

Abbreviation: PPG, portal pressure gradient; sHR, sub hazard ratio

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TIPS et état nutritionnel

Journal of Hepatology 40 (2004) 228–233

Weight gain after transjugular intrahepatic portosystemic shunt is associated with improvement in body composition in malnourished patients with cirrhosis and hypermetabolism

Mathias Plauth[1,*], Tatjana Schütz[1], Deborah P. Buckendahl[1], Georg Kreymann[2], Matthias Pirlich[1], Sven Grüngreiff[1], Paul Romaniuk[3], Siegfried Ertl[4], Marie-Luise Weiß[4], Herbert Lochs[1]

Total energy intake before TIPS was 1842 (1334–3687) kcal/d and increased by 6 months after TIPS by 26% to 2533 (1014–4062) kcal/d ($P < 0.05$). This was due to an increase in protein (1.2 (0.7–1.7) g kg^{-1} d^{-1} vs. 0.9 (0.5–1.2) g kg^{-1} d^{-1}; $P = 0.05$) and carbohydrate intake (3.7 (2.0–5.4) g kg^{-1} d^{-1} vs. 2.9 (1.7–4.9) g kg^{-1} d^{-1}; $P = 0.05$), while fat intake remained unchanged (1.4 (0.6–2.0) g kg^{-1} d^{-1} vs. 1.2 (0.6–2.0) g kg^{-1} d^{-1}).

Fig. 1. Reduction in body cell mass measured by bioelectrical impedance analysis (BCM_{BIA}) in patients (before TIPS) as compared

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TIPS is effective in the management of refractory ascites but is associated with a high risk of hepatic encephalopathy and studies have not been shown to convincingly improve survival compared to repeated large-volume paracentesis (Level A1). TIPS should be considered in patients with very frequent requirement of large-volume paracentesis, or in those in whom paracentesis is ineffective (e.g. due to the presence of loculated ascites) (Level B1).

Resolution of ascites after TIPS is slow and most patients require continued administration of diuretics and salt restriction (Level B1).

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TIPS cannot be recommended in patients with severe liver failure (serum bilirubin >5 mg/dl, INR >2 or Child-Pugh score >11, current hepatic encephalopathy ⩾grade 2 or chronic hepatic encephalopathy), concomitant active infection, progressive renal failure, or severe cardiopulmonary diseases (Level B1).

In selected patients TIPS may be helpful for recurrent symptomatic hepatic hydrothorax (Level B2).

L'ALFApump: une alternative au TIPS?

Serious adverse events | Number of patients | *p* value

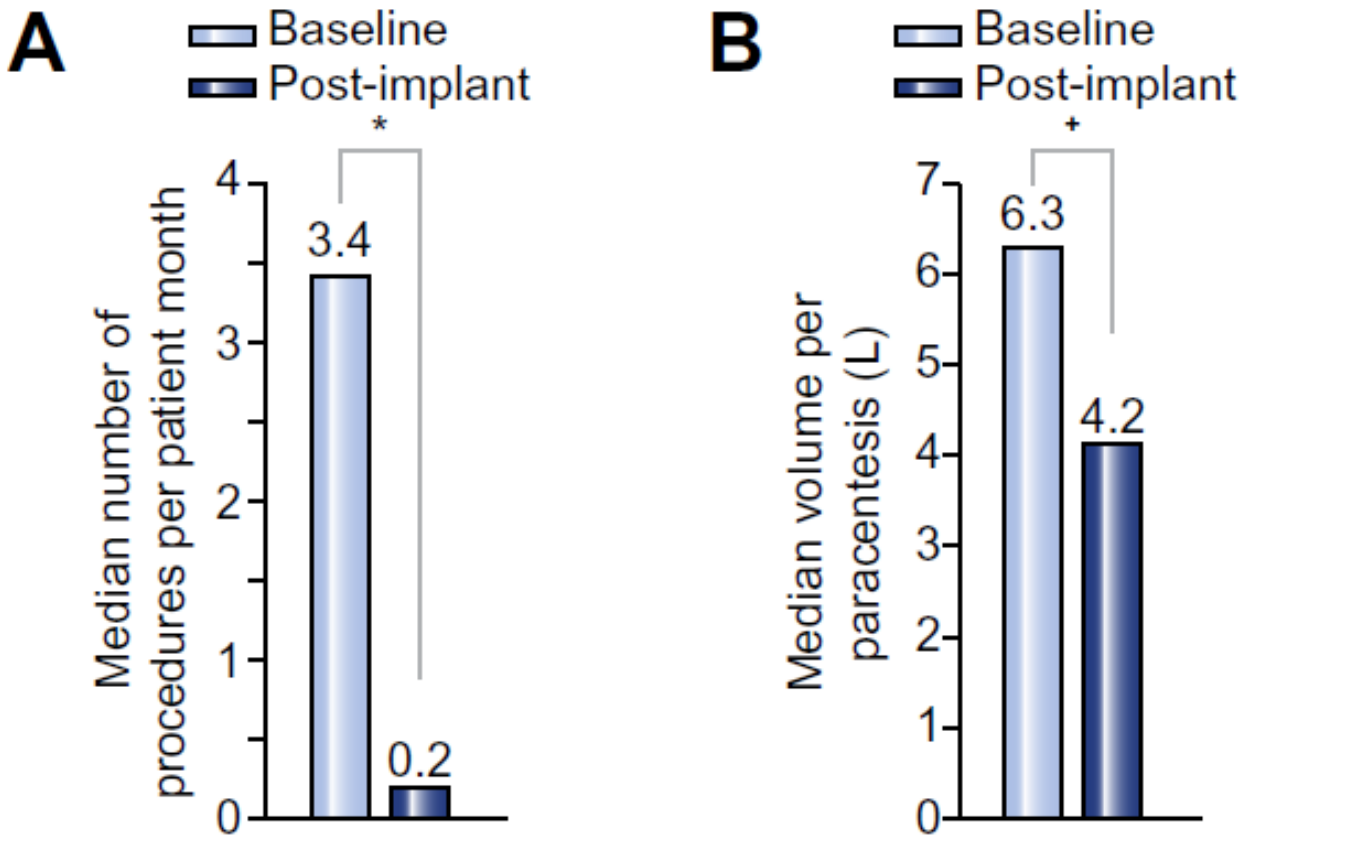

Fig. 2. Need of paracentesis pre and post ALFApump system implant. (A) Median number of paracenteses per month and (B) mean volume of ascitic fluid drained per paracentesis. *p <0.001 *vs.* baseline (Wilcoxon Matched Pairs test); ^{+}p <0.001 *vs.* baseline (Two tailed unmatched t test).