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Dr Pascal POTIER, CHR d'Orléans





The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

A Placebo-Controlled Trial of Bezafibrate in Primary Biliary Cholangitis

C. Corpechot, O. Chazouillères, A. Rousseau, A. Le Gruyer, F. Habersetzer, P. Mathurin, O. Goria, P. Potier, A. Minello, C. Silvain, A. Abergel, M. Debette-Gratien, D. Larrey, O. Roux, J.-P. Bronowicki, J. Boursier, V. de Ledinghen, A. Heurgue-Berlot, E. Nguyen-Khac, F. Zoulim, I. Ollivier-Hourmand, J.-P. Zarski, G. Nkontchou, S. Lemoine, L. Humbert, D. Rainteau, G. Lefèvre, L. de Chaisemartin, S. Chollet-Martin, F. Gaouar, F.-H. Admane, T. Simon, and R. Poupon



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WILEY AP&T Alimentary Pharmacology & Therapeutics

Biochemical efficacy of tioguanine in autoimmune hepatitis: a retrospective review of practice in the Netherlands

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Summary

Background: Azathioprine (AZA) and mercaptopurine (MP) are the cornerstone of

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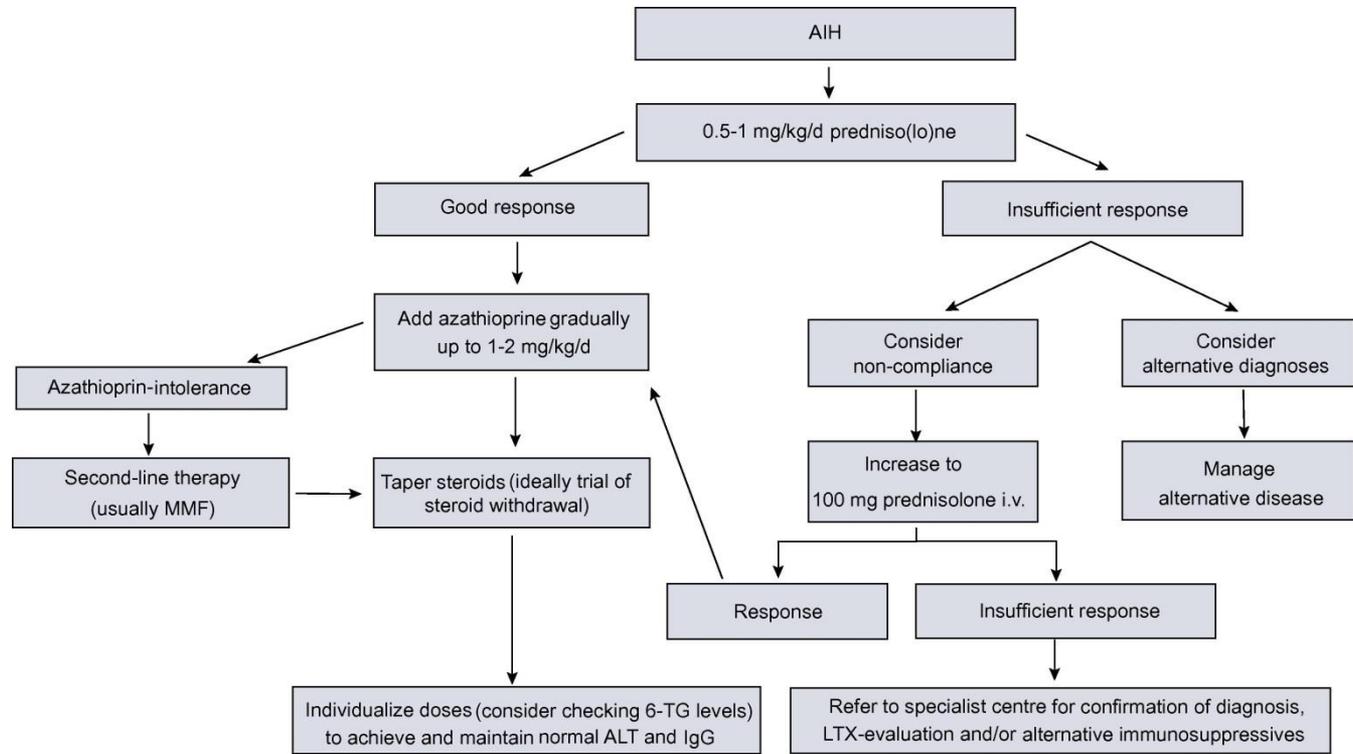
WILEY | *Alimentary Pharmacology & Therapeutics*
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Clinical Practice Guidelines



EASL Clinical Practice Guidelines: Autoimmune hepatitis[☆]

European Association for the Study of the Liver*



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Clinical Practice Guidelines



 EASL | JOURNAL OF HEPATOLOGY

EASL Clinical Practice Guidelines: Autoimmune hepatitis[☆]

European Association for the Study of the Liver*

Echec du traitement standard : 10 à 20 % des patients

- Observance
- Insuffisance de réponse
- Syndrome de chevauchement
- Intolérance
- Comorbidités limitant les choix thérapeutiques

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EASL | JOURNAL OF
HEPATOLOGY

EASL Clinical Practice Guidelines: Autoimmune hepatitis[☆]

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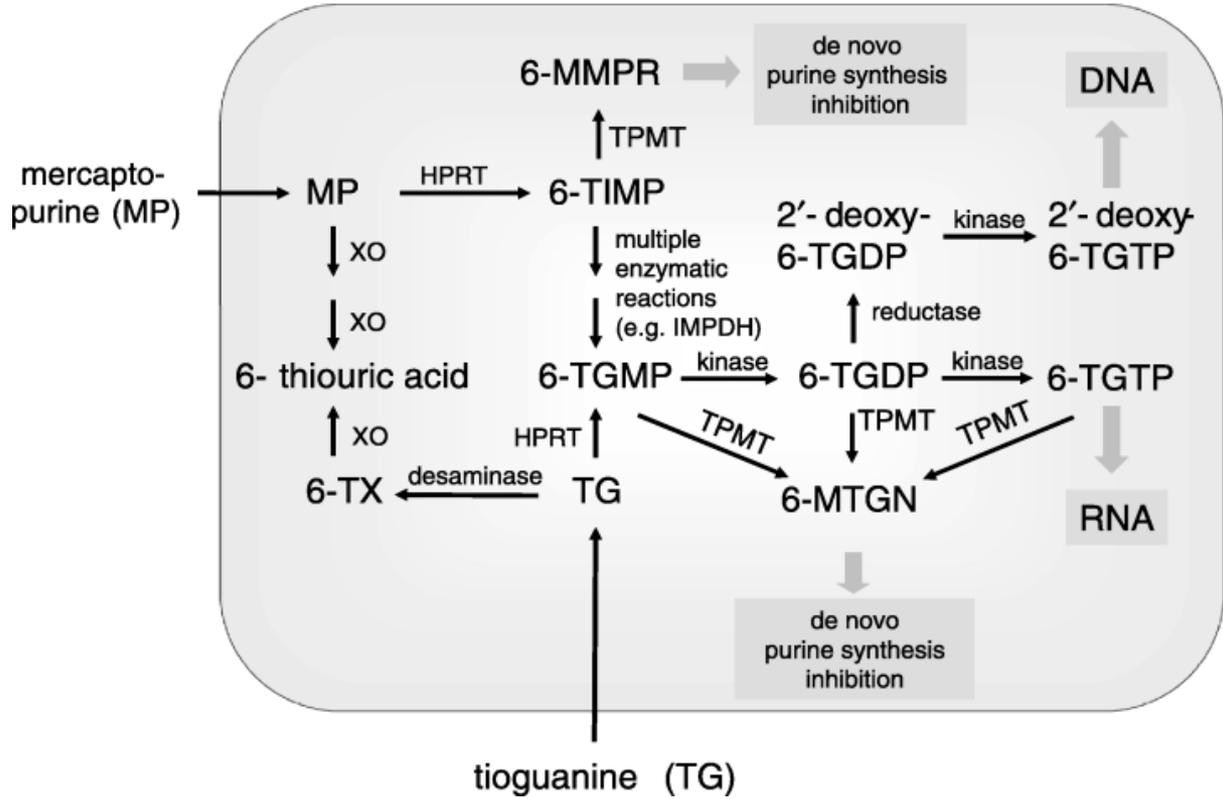
1/ Echec par inefficacité

42. In patients requiring high dose, long-term (>20 mg/day) steroid therapy, conventional treatment should be optimized (high doses of predniso(lo)ne combined with 2 mg/kg/day azathioprine). Alternatively, a trial of CNIs (cyclosporine or tacrolimus), infliximab, methotrexate, or cyclophosphamide can be initiated. The relative effectiveness of second line treatments has not been examined in clinical trials. Therefore, these drugs should be used after consultation with a specialist centre only **(II-3)**

2/ Echec par intolérance

49. In patients intolerant to azathioprine, mycophenolate is the second line drug of choice **(II-2)**
The relative efficacy and tolerability of MMF in other patients compared to azathioprine has not been established **(II-2)**
A trial of 6-MP or 6-TG in patients intolerant to azathioprine is an alternative option **(III)**

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Clinical Gastroenterology
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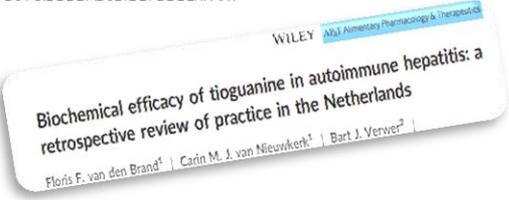
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Safety and Efficacy of 6-thioguanine as a Second-line Treatment for Autoimmune Hepatitis

[Clémence Legué](#), [Ludivine Legros](#), [Solène Kammerer-Jacquet](#), [Caroline Jézequel](#), [Pauline Houssel-Debry](#), [Thomas Uguen](#), [Caroline Le Lan](#), [Anne Guillygomarc'h](#), [Romain Moirand](#), [Bruno Turlin](#), [Dominique Guyader](#), [Edouard Bardou-Jacquet](#)  

- 17 patients traités par 6-TG pour HAI
- 16 intolérants, 1 non répondeur à l'AZA
 - 11 réponses, 4 rechutes, 1 PDV
 - 1 cytopénie gérée par diminution de dose
 - 1 HNR sur 8 patients biopsiés (pré-existante ?)



Enquête : 9 centres hospitaliers d'hépatologie néerlandais sur 37 sollicités

Inclusions de patients ayant une HAI selon le score international et traités par TG entre 2001 et 2017

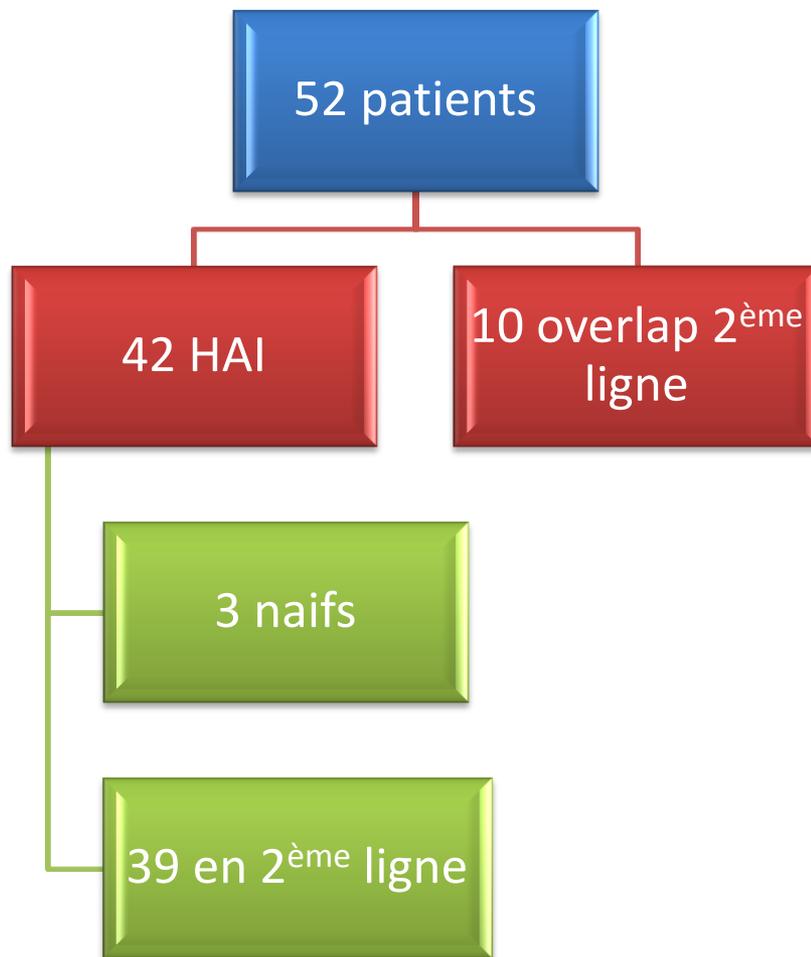
Toxicité hématologique : GB < 4 giga, PS < 150 giga, Hb < 7,5 /femme, 8,5 /homme

Histologie centralisée pour recherche HNR

Epargne cortisonique : baisse de 25% de la dose quotidienne

Réponse complète	ASAT, ALAT, IgG normaux
Réponse incomplète	ALAT < 2N
Non réponse	ALAT > 2N
Rechute	ALAT > 3N ou IgG > 20g/l

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	AIH
N	42
Characteristics at diagnosis	
Female (%)	79
Age (y)	47 (11-71)
ALT (U/L)	558 (57-2214)
IgG (g/L)	20 (8-60)
ANA and or SMA positive, n (%)	27 (69)
LKM-1 positive, n (%)	1 (3)
SLA/LP positive, n (%)	2 (5)
IAIHG score, ^a median (range)	16 (8-21)
Study baseline	
Cirrhosis %, n biopsied	19%, 40
Months diagnosed	18 (0-280)
Tioguanine therapy	
Initial dose	
mg kg ⁻¹ d ⁻¹	0.23 (0.10-0.33)
mg/d	20 (10-24)
Dose at last use (mg/d)	18 (5-30)
Months on tioguanine therapy	12 (2-194)

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Bonne tolérance n=41, 79%

EIG = 0

52 patients

EI « tolérables » n=4 8%

EI « intolérables » n = 7 13%

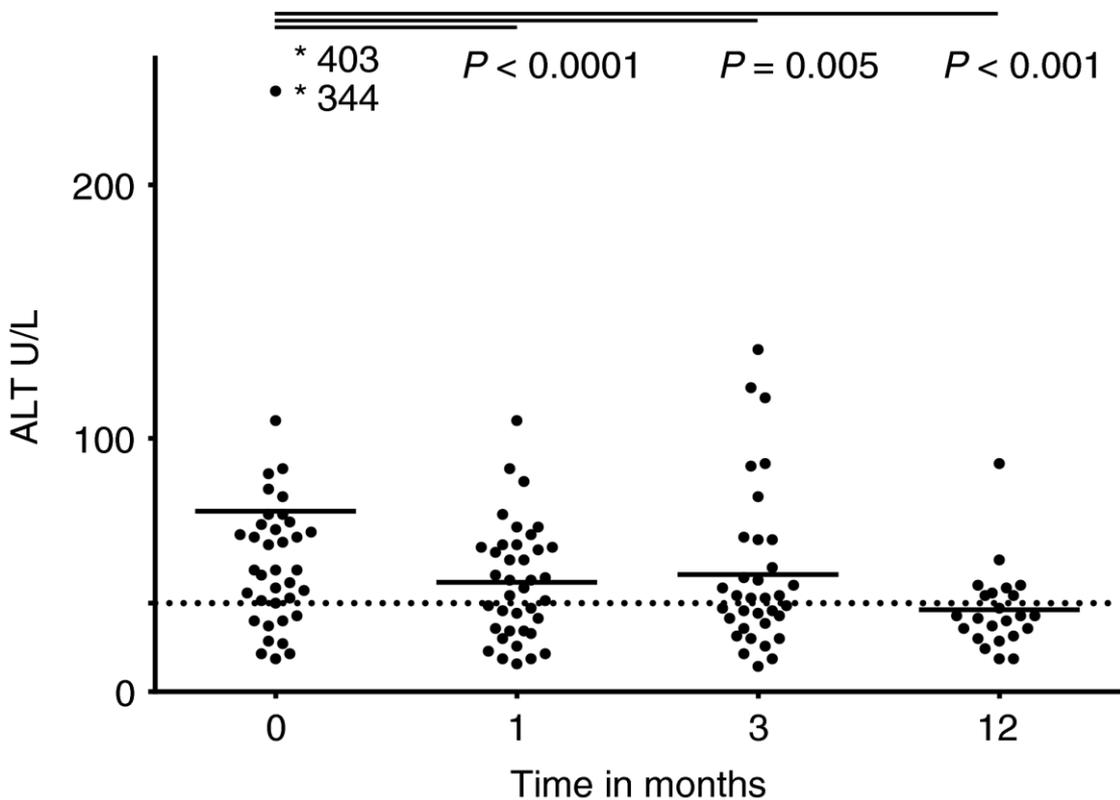
	AZA or MP (N = 49)		TG (N = 52)	
	Tolerable	Intolerable	Tolerable	Intolerable
Patients with an AE	6	38	4	7
Nausea and vomiting	6	20	1	
Headache		2	1	2
Fatigue	2	7	1	
Myalgia/arthralgia	1	6		3
Itch	1		1	
Rash			1	1
Abdominal pain	1	3		1
Fever	1	5		1
Malaise		4		1
Alopecia		2		
Hot flushes		1		
Diarrhoea		1		
Myelotoxicity	2	4	1	

Pas d'apparition d'HTP en cours de traitement

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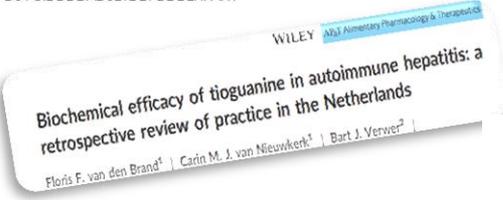
HAI : efficacité de TG en cas d'intolérance à AZA ou MP n=33
 Patients tolérants la TG n=26 79%



26 patients en per protocole

Rémission complète n=22 85%
Rémission incomplète n=3 11%
Pas de réponse n=1 4%

6 patients sous TG pour inefficacité AZA : 4 succès, 2 intolérances



Réponse rapide

Months of treatment	Follow-up n	Tioguanine therapy		Biochemical response		P-value ^a
		Stopped n	Ongoing n	Incomplete n (%)	Complete n (%)	
Baseline	39	0	39	—	9 (23)	
1	38	0	38	19 (50)	19 (50)	0.002
3	36	2	34	15 (44)	19 (56)	<0.001

^aCompared with complete biochemical response at baseline.

Epargne cortisonique : 56 % des patients

Dosage de 6 TGN n=30 patients, médiane 746 pM/8*10⁸ GR, 1 patient non observant

1

- Peu de données disponibles sur l'efficacité et la sécurité de la TG chez les patients atteints d'HAI et en échec par défaut de réponse ou de tolérance à AZA /6MP

2

- Chez les patients intolérants à AZA/6MP, sous réserve de son caractère rétrospectif, l'étude est en faveur d'une **bonne tolérance de la TG** avec disparition des EI de l'AZA dans 80 % des cas
- Pas d'HNR signalée dans cette étude (faible dose de TG ?)
- **La TG induit une fréquemment une réponse** (85 % des cas quand il est toléré), MMF dans cette situation mais dans d'autres populations = réponse 43 à 75%

3

- La TG constitue une **option thérapeutique** chez les patients en échec d'AZA/6MP notamment en cas d'intolérance



OFFICIAL JOURNAL OF
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Gastroenterology

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Original Research

Full Report: Clinical—Biliary

No Superiority of Stents vs Balloon Dilatation for Dominant Strictures in Patients With Primary Sclerosing Cholangitis

Cyriel Y. Ponsioen ¹  , Urban Arnelo ², Annika Bergquist ², Erik A. Rauws ¹, Vemund Paulsen ³, Paolo Cantú ⁴, Ilaria Parzanese ⁴, Elisabeth M. De Vries ¹, Kim N. van Munster ¹, Karouk Said ², Olivier Chazouillères ⁵, Benoit Desaint ⁵, Astrid Kemgang ⁵, Martti Färkkilä ⁶, Schalk Van der Merwe ⁷, Werner Van Steenberghe ⁷, Hanns-Ulrich Marschall ⁸, Per-Ove Stotzer ⁸, Douglas Thorburn ⁹, Stephen P. Pereira ⁹, Lars Aabakken ³

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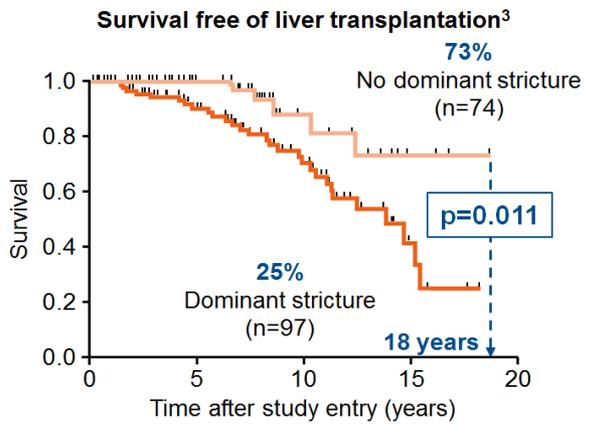
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Clinical Practice Guidelines



Role of endoscopy in primary sclerosing cholangitis: European Society of Gastrointestinal Endoscopy (ESGE) and European Association for the Study of the Liver (EASL) Clinical Guideline[☆]

European Society of Gastrointestinal Endoscopy, European Association for the Study of the Liver*

Sténose serrée ≈ 50 % des patients

Recommendations

A dominant stricture at ERCP should be defined as a stenosis with a diameter of ≤1.5 mm in the common bile duct and/or ≤1.0 mm in a hepatic duct within 2 cm of the main hepatic confluence

Weak

Low

Recommendations

ERCP and ductal sampling should be considered in confirmed PSC in the case of:

- Clinically relevant or worsening symptoms
- Rapid increase of cholestatic enzyme levels
- New dominant stricture or progression of existing dominant strictures identified at MRC in appropriate clinical context

Weak

Low

Recommendations

Endoscopic treatment with concomitant ductal sampling of suspected dominant strictures **is suggested in patients presenting with symptoms likely to improve following endoscopic treatment**

Strong

Low

Recommendation

8. ESGE/EASL suggest that the choice between stenting and balloon dilation should be left to the endoscopist's discretion.

Weak recommendation, low quality evidence.

MENU ▾

AJG The American Journal of
GASTROENTEROLOGY

Original Contribution | Published: 01 September 1999

Four years experience with short term
stenting in primary sclerosing cholangitis

C Y Ponsioen MD, K Lam, A W M van Milligen de Wit MD, PhD, K Huibregtse MD, PhD & G N J Tytgat MD, PhD

American Journal of Gastroenterology **94**, 2403–2407 (1999) | [Download Citation](#) ↓

- 32 patients
- Prothèse transitoire 11 j en moyenne
- Bons résultats cliniques et biologiques

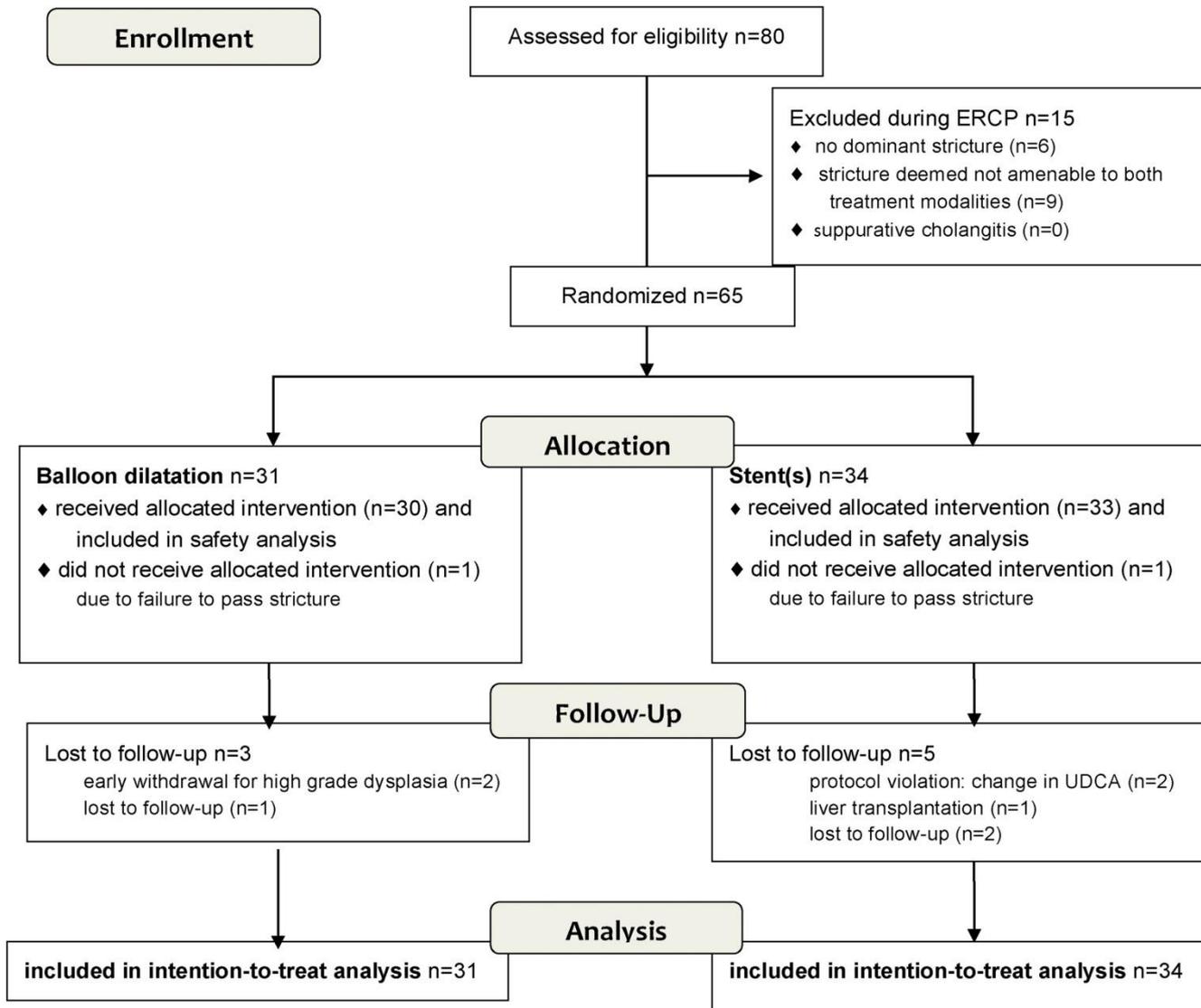




Table 1. Baseline Characteristics

Characteristics	Balloon dilatation (n = 31)	Short-term stenting (n = 34)
Mean age, y ± SD	40 ± 14	40 ± 11
Male, n (%)	22 (71)	23 (68)
Disease duration, y, median (IQR)	7 (3–10)	4 (2–8)
Concurrent IBD, n (%)	25/31 (80)	25/33 (76)*
UC	23 (74)	19 (58)
Crohn	1 (3)	5 (15)
IBD-U	1 (3)	1 (3)
Previous EPT, n (%)	15 (48)	10 (29)
UDCA use, n (%)	21 (68)	26 (76)
Anti-pruritic medication, n (%)	3 (10)	5 (15)
Bilirubin, $\mu\text{mol/L}$, median (IQR)	38 (15–108)*	24 (12–57) ^d
ALP, U/L , median (IQR)	312 (259–470)*	302 (214–475) ^e
AST, U/L , median (IQR)	110 (48–170)**	70 (41–111) ^f

p = 0,12

Pas de différence significative dans la procédure de CPRE entre les 2 groupes



Table 2. Changes in Bilirubin, ALP, and AST Levels and Cholestatic Symptoms at Baseline and 3 Months and Changes Thereof Between Groups

Measure	Balloon Group				Stent Group				P value
	Baseline (t ₀)	3 months (t ₃)	Δ (t ₀ ≥ t ₃)	Relative change	Baseline (t ₀)	3 months (t ₃)	Δ (t ₀ ≥ t ₃)	Relative change	
Bili, μmol/L, median (IQR)	39 (16–108) n = 30	14 (11–58) n = 28	-10 (0 to -45) n = 28	—	24 (12–57) n = 33	14 (9–24) n = 28	-3 (-1 to -33) n = 28	—	.35 ^a
(Bili ₀ - Bili _{3mo}) / Bili ₀ , median (IQR)	—	—	—	0.30 (0–0.67) n = 28	—	—	—	0.22 (0–0.53) n = 27	.54 ^a
ALP, U/L, median (IQR)	312 (259–470) n = 30	306 (153–446) n = 29	-31 (47 to -115) n = 29	—	302 (215–475) n = 33	280 (157–390) n = 27	-35 (21 to -133) n = 26	—	.67 ^a
(ALP ₀ - ALP _{3mo}) / ALP ₀ , median (IQR)	—	—	—	0.09 (-0.17 to 0.41) n = 29	—	—	—	0.10 (-0.12 to 0.36) n = 26	.97 ^a
AST, U/L, median (IQR)	110 (48–171) n = 29	64 (43–175) n = 29	-12 (5 to -55) n = 28	—	70 (41–111) n = 31	44 (32–83) n = 27	-15 (-2 to -39) n = 25	—	.73 ^a
(AST ₀ - AST _{3mo}) / AST ₀ , median (IQR)	—	—	—	0.14 (-0.11 to 0.49) n = 28	—	—	—	0.25 (0.06–0.43) n = 25	.32 ^a
Pruritus, median (IQR)	1.5 (0–2) n = 30	0.0 (0–1) n =	-1.0 (0 to -2) n = 28	—	1.0 (0–3) n = 33	0.5 (0–1) n = 28	0.0 (0 to -2) n = 27	—	.70 ^a
Fatigue, median (IQR)	1.0 (0–2) n = 30	0.5 (0–1) n = 28	-1.0 (0 to -1) n = 28	—	1.0 (0–2) n = 33	0.0 (0–2) n = 27	0.0 (0 to -1) n = 26	—	.60 ^a
Fever, n (%)	1 (3) n = 30	2 (7) n = 28	—	—	4 (12) n = 33	1 (3) n = 28	—	—	1.0 ^b
RUPQ, median (IQR)	1.0 (0–1) n = 30	0.0 (0–1) n = 28	0.0 (0 to -1) n = 28	—	0.0 (0–2) n = 33	0 (0–0) n = 28	0.0 (0 to -1) n = 27	—	.68 ^a
ACCS, median (IQR)	4.0 (2–4) n = 30	1.0 (0–3.5) n = 28	-1.5 (-0.25 to -3) n = 28	—	4.0 (2–5) n = 33	1.0 (0–3) n = 27	-2.0 (-1 to -3) n = 27	—	.61 ^a
SF-36 MCS, mean (SD)	43.2 (10.3) n = 29	49.4 (8.5) n = 20	6.5 (11.4) n = 20	—	41.7 (11.4) n = 28	49.5 (8.3) n = 16	6.5 (8.1) n = 14	—	.99 ^c
SF-36 PCS, mean (SD)	46.4 (8.5) n = 29	51.4 (5.0) n = 16	4.7 (8.3) n = 20	—	47.2 (8.7) n = 28	49.4 (8.9) n = 16	0.9 (9.4) n = 14	—	.23 ^c

NOTE. Analyses were performed in the per protocol population.

AST, aspartate aminotransferase; Bili, bilirubin level; IQR, interquartile range; MCS, mental component score; PCS, physical component score; SD, standard deviation.

^aMann-Whitney U test.

^bFisher's exact test.

^cIndependent samples T-test.



Dilatation
Prothèse

Durée médiane
sans récurrence

26 semaines

34 semaines

Echec initial

52 %

44 %

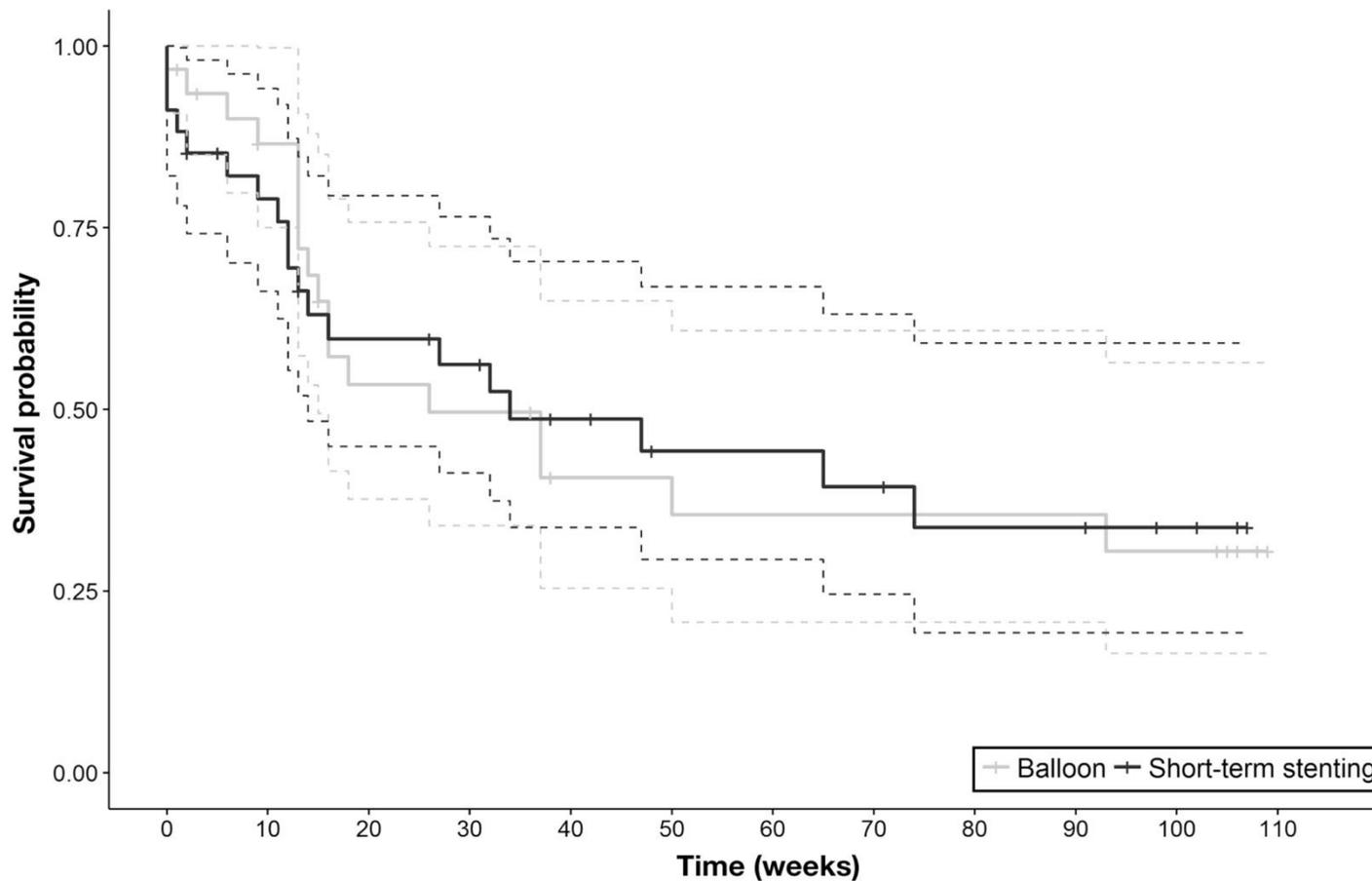




Table 3. Procedure-Related SAEs

Procedure	Balloon dilatation n = 30 ^a		Short-term stenting n = 33 ^a	OR (95% CI)	P value
All cause, n (%)	2 (6.7)	*6,8	15 (45.4)	11.7 (2.4–57.2)	.001
Cholangitis/cholecystitis, n (%)	1 (3.3)		4 (12)	4.0 (0.42–38.0)	.36
Post-ERCP pancreatitis, n (%)	1 (3.3)		8 (24)	9.3 (1.1–79.4)	.03
Postprocedural pain, n (%)	0		2 (4.5)	n.a.	—
Ascites	0		1 (3)	n.a.	—

Table 4. Univariate Analysis for Risk Factors of Procedure-Related Serious Adverse Events

Risk factor	OR	Univariate analysis, 95% CI	P value
Age	1.0	0.9–1.03	.42
Sex	1.2	0.4–4.0	.71
Disease duration	1.0	0.9–1.1	.83
Randomization	11.2	2.4–57.2	.002
Center	0.8	0.6–1.1	.16
Previous sphincterotomy	0.6	0.2–2.0	.39
Baseline serum bilirubin	1.0	0.99–1.01	.43
Procedure time	1.0	0.99–1.02	.79
NSAID prophylaxis	1.0	0.3–3.1	.99
Sphincterotomy	0.7	0.2–2.15	.48

Aucune différence significative entre les groupes pour les critères secondaires :

- Δ bilirubine, PAL
- Δ prurit, symptômes, douleurs biliaires
- Δ critères QDV



Supplementary Table 6. Univariate and Multivariate Analysis of Risk Factors for Post-ERCP Pancreatitis

Risk Factors	OR	Univariate analysis,			Multivariate analysis,		
		95% CI	P value	OR	95% CI	P value	
Age	1.0	0.92–1.04	.45	—	—	—	
Sex	1.1	0.24–4.90	.91	—	—	—	
Disease duration	0.8	0.62–1.02	.07	—	—	—	
Randomization	9.3	1.1–79.4	.04	7.5	0.9–66.1	.07	
Center	0.9	0.6–1.3	.65	—	—	—	
Previous sphincterotomy	0.2	0.02–1.40	.10	0.2	0.03–21.00	.19	
Baseline serum bilirubin	1.0	0.99–1.01	.44	—	—	—	
Procedure time	1.0	0.98–1.02	.80	—	—	—	
NSAID	0.7	0.15–3.00	.60	—	—	—	
Sphincterotomy	0.8	0.2–3.8	.80	—	—	—	

NSAID, nonsteroidal anti-inflammatory drug; OR, odds ratio.

Pancréatites hospitalisées	Bras Dilatation	Bras prothèse	Total
SE antérieure n = 25	0 / 15	1 / 10	1/25 (4 %)
Pas de SE antérieure n = 40	1 / 16	7/24	8/40 (20 %)

OR 0,17
95% IC, 0,02-1,4
p=0,1



1

- La survenue d'une sténose serrée symptomatique est fréquente au cours de la CSP et les modalités endoscopiques de son traitement sont débattues

2

- Le traitement endoscopique améliore les symptômes des patients toutes modalités de traitement endoscopique confondues
- Cette étude randomisée échoue à démontrer une supériorité de la pose de prothèse sur la dilatation au ballonnet pour éviter la récurrence symptomatique de la sténose traitée
- La pose de prothèse est associée à un taux de complication **près de 7 fois supérieur** à la dilatation au ballonnet avec des PA graves notamment en cas de papille intacte

3

- La dilatation au ballonnet des sténoses serrées au cours de la CSP semble constituer le **traitement initial préférable**, notamment chez les patients indemnes de sphinctérotomie