Infections graves

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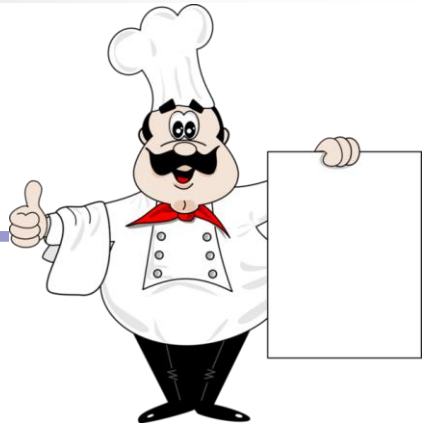
Tri sélectif

1. Première publication en 2024 (ou présentation congrès)
2. ‘Grave’
3. Complémentaire avec le programme du jour

Au menu



- **Endocardites**
- **Encéphalites**
- **Divers**

2023 ESC Guidelines for the management of endocarditis

Developed by the task force on the management of endocarditis of the European Society of Cardiology (ESC)

Delgado V et al. Eur Heart J 2023

Guidelines

Antibiotic therapy and prophylaxis of infective endocarditis – A SPILF-AEPEI position statement on the ESC 2023 guidelines

Strady C et al. Infect Dis Now 2025

Blood Culture-Negative Endocarditis

A Scientific Statement of the American Heart Association

De Simone D et al. Circulation 2025 (in press)

‘hot topics’

1. **Prélèvement 3 paires d’hémocultures en 1 fois**
2. **Amoxicilline-céfazoline en traitement empirique des EI aiguës sévères**

2024 ISCVID

UniEndo

Single-sampling strategy for blood cultures in the diagnosis of infective endocarditis: the prospective multicenter UniEndo study

Single Sampling Strategy (SSS)

Vs.

Multiple Sampling Strategy (MSS)

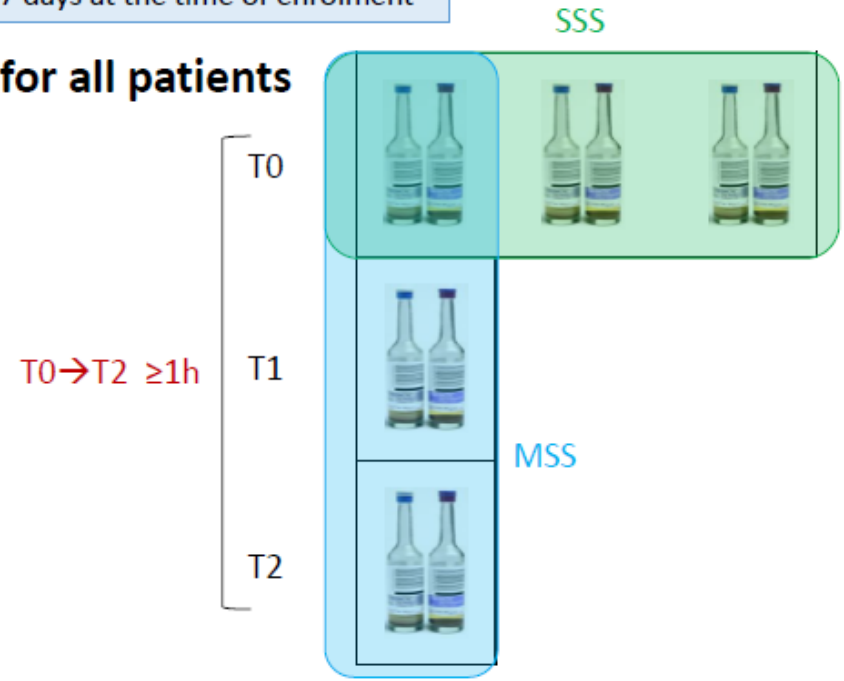
Goehringer F et al. ISCVID 2024

UniEndo NCT03153384

- **Prospective multicenter study** (8 tertiary-care hospitals)
- **Enrolling consecutive patients suspected of IE**

  - At least one major or two minor non-microbiologic criteria (2015 ESC)
  - Absence of microbiological result available at the time of enrolment
  - Antibiotics for IE <24 hours or stopped >7 days at the time of enrolment

- **SSS and MSS were performed for all patients**

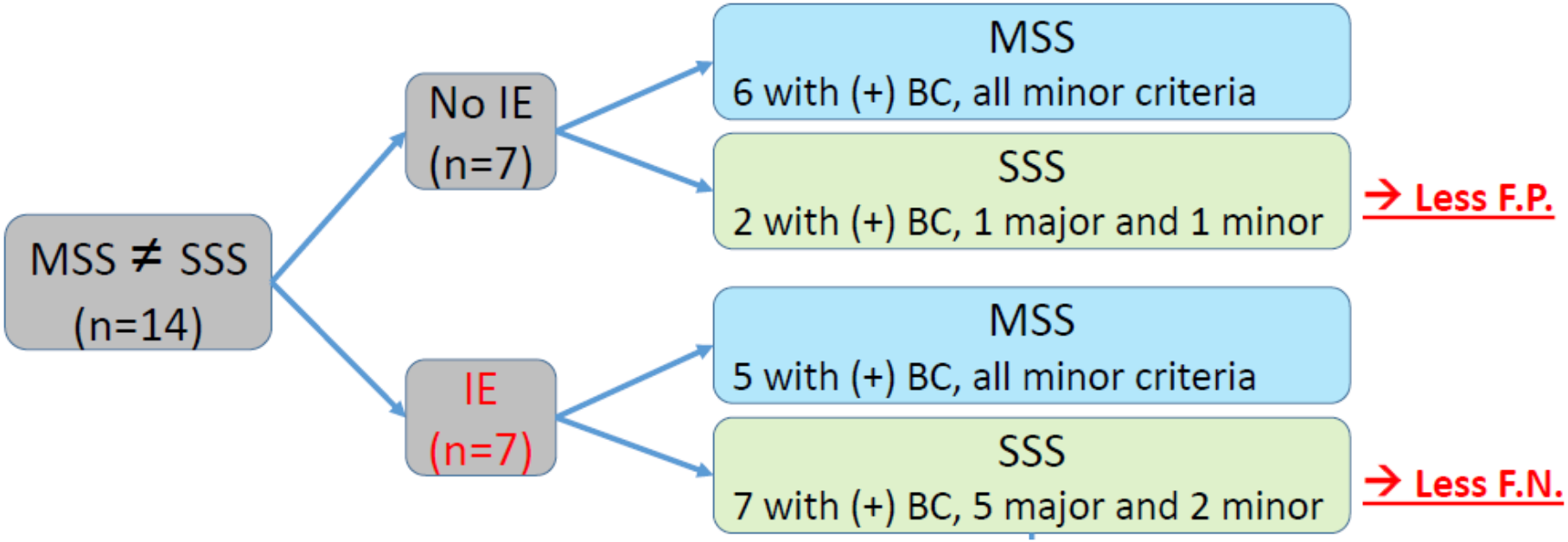


- 256 patients enrolled, median age 70
  - 49% Prosthetic valvular material
  - Fever 60%
  - Heart failure 30%
  - Embolic event 10%

- **IE= 101 (39%)**

Goehringer F et al. ISCVID 2024

Patients with a variation depending on SSS or MSS of the microbiological criterion according to 2015 ESC criteria (n=14)



⇒Prélèvement de 3 paires d'hémocultures en 1 fois

+ performant, permet de débuter les ATB + tôt

- cher, - douloureux pour les patients, - de boulot pour les infirmières…

Strady C et al. Infect Dis Now 2025

How to Optimize the Use of Blood Cultures for the Diagnosis of Bloodstream Infections? A State-of-the Art

Brigitte Lamy[1†], Sylvie Dargère[2†], Maiken C. Arendrup[3], Jean-Jacques Parienti[4] and Pierre Tattevin[5]*

- **Sensibilité**

10 ml : 20 - 25 %

20 mL : 65 -70 %

40 mL : 80 - 90 %

60 mL : 96 - 98 %

Lamy B et al. Front Microbiol 2016

Traitements empiriques: recos Europe 2015

Table 20 Proposed antibiotic regimens for initial empirical treatment of infective endocarditis in acute severely ill patients (before pathogen identification)[a]

Antibiotic	Dosage and route	Class[b]	Level[c]	Comments
Community-acquired native valves or late prosthetic valves (≥12 months post surgery) endocarditis				
Ampicillin with (Flu)cloxacillin *or* oxacillin with Gentamicin[d]	12 g/day i.v. in 4–6 doses 12 g/day i.v. in 4–6 doses 3 mg/kg/day i.v. or i.m. in 1 dose	IIa	C	Patients with BCNIE should be treated in consultation with an ID specialist.
Vancomycin[d] with Gentamicin[d]	30–60 mg/kg/day i.v. in 2–3 doses 3 mg/kg/day i.v. or i.m. in 1 dose	IIb	C	For penicillin-allergic patients
Early PVE (<12 months post surgery) or nosocomial and non-nosocomial healthcare associated endocarditis				
Vancomycin[d] with Gentamicin[d] with Rifampin	30 mg/kg/day i.v. in 2 doses 3 mg/kg/day i.v. or i.m. in 1 dose 900–1200 mg i.v. or orally in 2 or 3 divided doses	IIb	C	Rifampin is only recommended for PVE and it should be started 3–5 days later than vancomycin and gentamicin has been suggested by some experts. In healthcare associated native valve endocarditis, some experts recommend in settings with a prevalence of MRSA infections >5% the combination of cloxacillin plus vancomycin until they have the final S. aureus identification

Habib G et al. Eur Heart J 2015

AEPEI 2025: traitement empirique

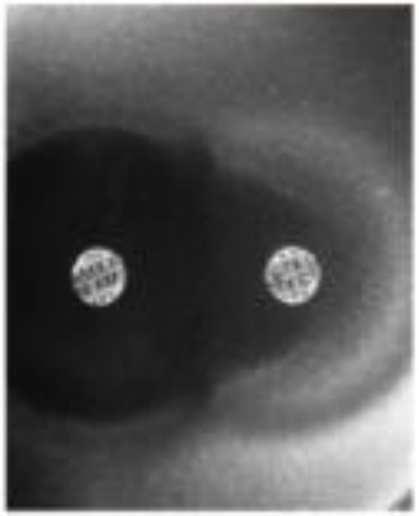
Si évolution rapide, traitement rapide

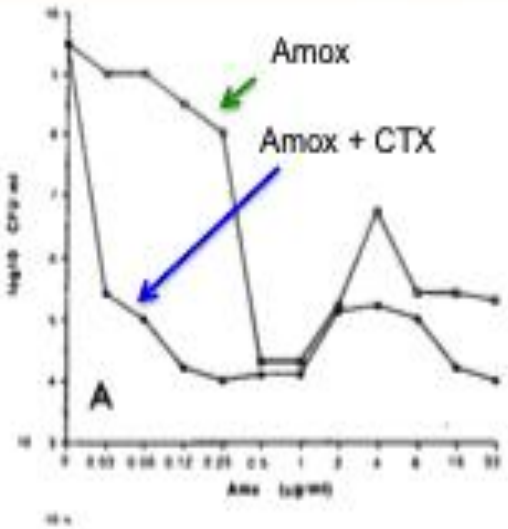
- SAMS = ennemi public n° 1 => céfazoline ou péni M
- Ennemis 2 et 3: streptocoques & entérocoques
- **Combinaison amoxicilline + céfazoline**

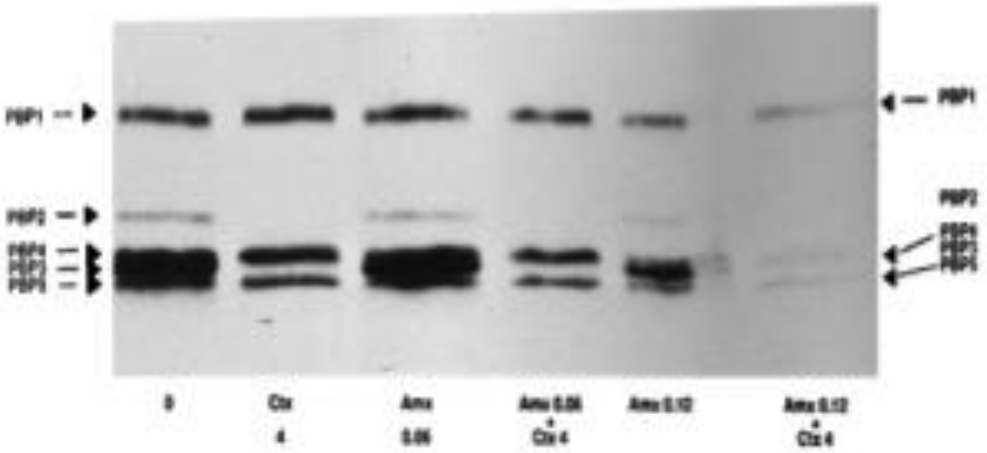
Strady C et al. Infect Dis Now 2025

Synergistic effect of Amoxicillin and cefotaxime against *Enterococcus faecalis*

Mainardi *et al.* Antimicrob. Agents Chemother 1995





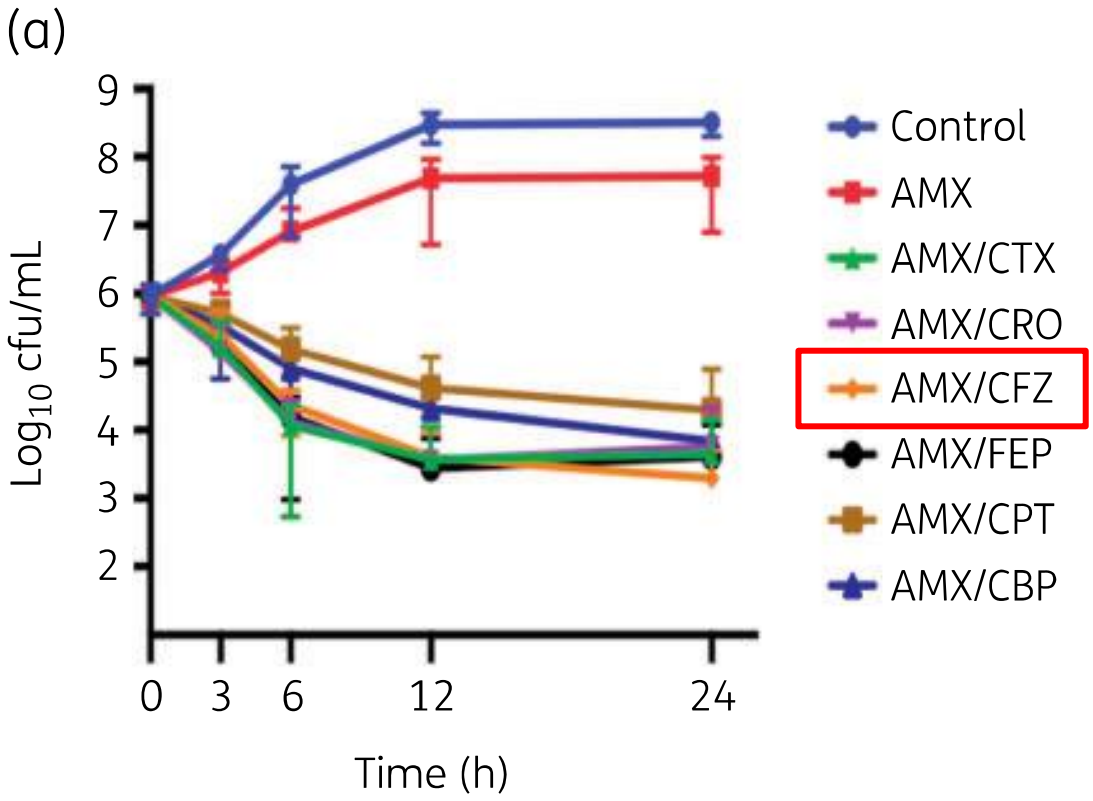


Saturation de PLP différentes par l'amoxicilline et le céfotaxime

Mainardi JL et al. Antimicrob Agents Chemother 1995

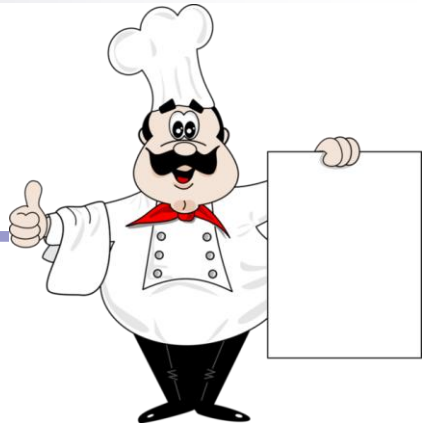
In vitro bactericidal activity of amoxicillin combined with different cephalosporins against endocarditis-associated *Enterococcus faecalis* clinical isolates

Nathan Peiffer-Smadja[1,2]†, Elena Guillotel[3]†, David Luque-Paz[3], Naouale Maataoui[2,4], F.-Xavier Lescure[1,2] and Vincent Cattoir [3,5,6]*



Peiffer-Smadja N et al. J Antimicrob Chemother 2019

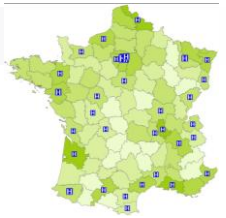
Au menu



- Endocardites
- **Encéphalites**
- Divers

A Prospective Cohort Study to Identify Clinical, Biological and Imaging Features That Predict the Etiology of Acute Encephalitis

Marion Le Maréchal,[1,2] Alexandra Mailles,[2,3] Arnaud Seigneurin,[4,5] Pierre Tattevin,[2,6,©] Jean-Paul Stahl,[1,2] and Olivier Épaulard[1,2,7]; on behalf of the Scientific Committee and Investigators Group

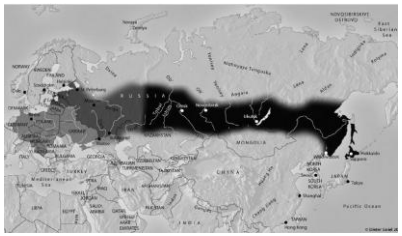


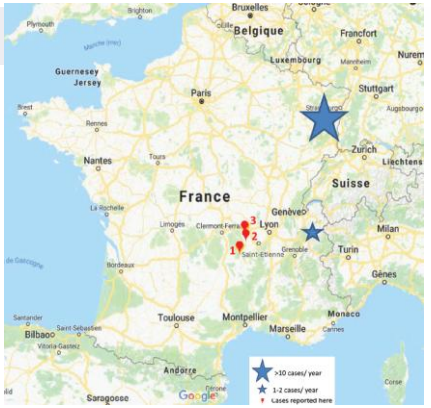
- **Cohorte Française, Encéphalites 'infectieuses', 2016-19 (n=494)**
  - France Métropolitaine, adultes
  - **Moindre proportion de cas sans étiologie (48% en 2007 => 34% en 2016-19)**
  - **Emergence des encéphalites à tiques (#3)**
  - Traitement empirique reste aciclovir + amoxicilline

Pathogen	N = 349	Proportion of the Whole Cohort (%)	Proportion Among Encephalitis With Documented Etiology (%) N = 232
Herpes simplex virus	88[a]	25.2	37.9
Varicella-zoster virus	39	11.2	16.8
Tick-borne encephalitis virus	22	6.3	9.5
Listeria monocytogenes	19	5.4	8.2

Le Maréchal M et al. Clin Infect Dis 2022

Tick-Borne Encephalitis in Auvergne-Rhône-Alpes Region, France, 2017–2018



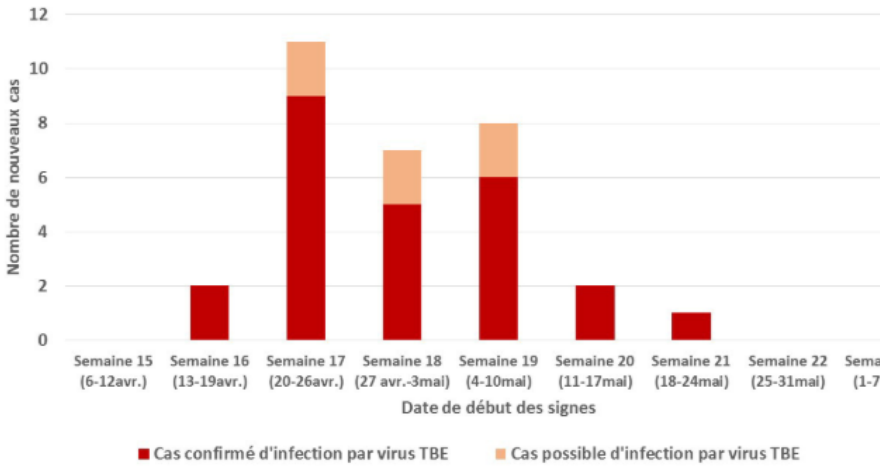


- **Encéphalites à tiques (TBE)**
  - Même saisonalité que Lyme, même vecteur (*Ixodes*)
  - Mais transmission très rapide (minutes)
  - **Biphasique** (prodromes = sd grippal 7 j => accalmie => signes neuros)
  - **Diagnostic = sérologie sang + LCS**
  - **Si neuro: méningite 50%, encéphalite 40% encéphaloradiculomyélite 10%**
  - **Si encéphalite, séquelles 25-50%**
  - Vaccin efficace

Botelho-Nevers E et al. Emerg Infect Dis 2019

Encéphalites à tiques: maladie émergente en France

Courbe épidémique des cas d'encéphalite à tiques liés à la consommation de fromage de chèvre au lait cru, Ain, Avril-Mai 2020. Actualisation au 19/06/2020.



Lieu probable de contamination des cas autochtones d'infection par le virus TBE déclarés en France de mai 2021 à mai 2023 (n= 61)

https://www.santepubliquefrance.fr

Encéphalites HSV & VZV: pas la même chose !

Characteristics, management and outcome of Herpes Simplex and Varicella-Zoster virus encephalitis: a multicentre prospective cohort study

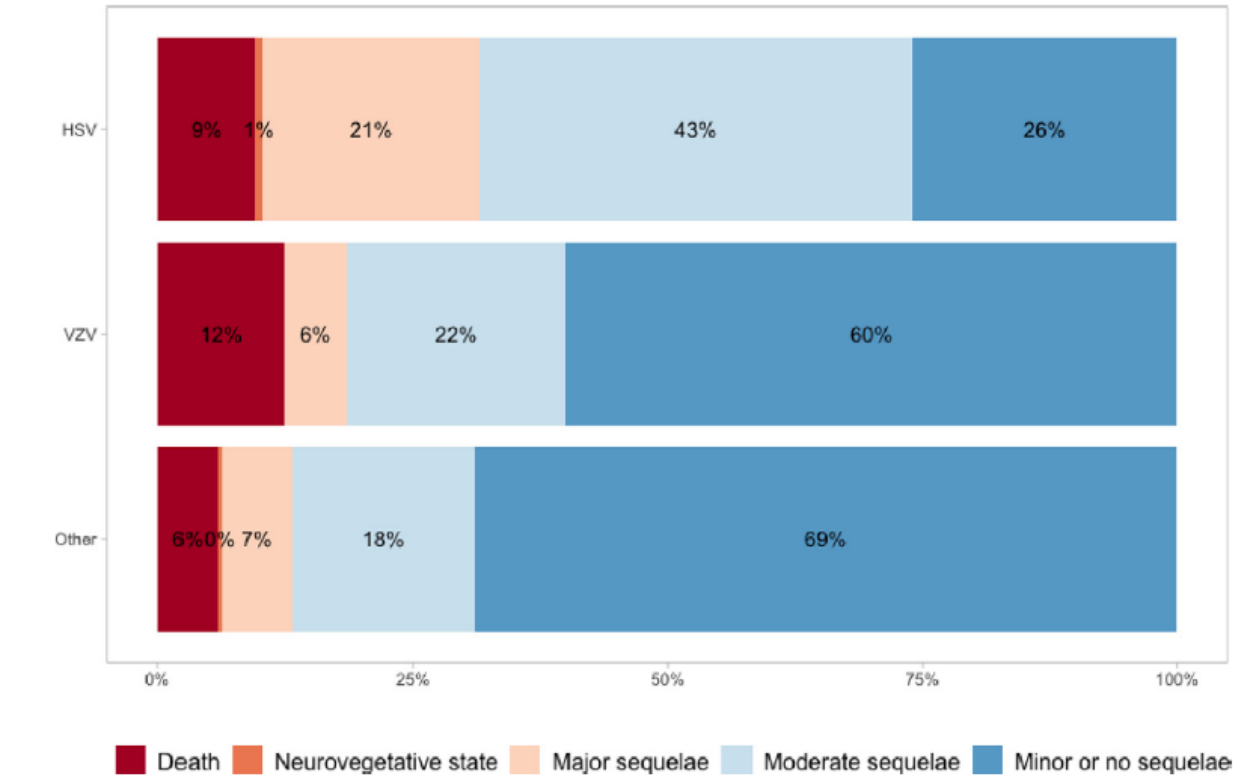
Léa Poussier [1,2], Alexandra Mailles [3], Pierre Tattevin [1,2], Jean-Paul Stahl [4], Pierre Fillâtre [2,5,*], the scientific committee and investigators group[*]

Encéphalites HSV (n=132) vs VZV (n=65) vs autres infections (n=297)

- ✓ encéphalites VZV + agées (75 vs 65 ans) et + IDP (23% vs 10%)
- ✓ mais moins graves que HSV à l'admission, avec un meilleur pronostic
- ✓ impact aciclovir précoce moins net pour VZV

Poussier L et al. Clin Microbiol Infect 2024

Encéphalites HSV & VZV: pas la même chose !



Distribution of Glasgow Outcome Scale at discharge according to infectious encephalitis etiology, ENCEIF cohort, France 2016–2019.

Poussier L et al. Clin Microbiol Infect 2024

Kathryn A. Kvam[a]
Jean-Paul Stahl[b]
Felicia C. Chow[c,d]
Ariane Soldatos[e]
Pierre Tattevin[f]
James Sejvar[g]
Alexandra Mailles[h]

Outcome and Sequelae of Infectious Encephalitis

Un patient qui se promène dans le couloir avec le sourire n'est pas forcément guéri !

1. **Dépistage actif des séquelles** (40% des encéphalites), évolutives
2. Organisation de leur traitement **(consultation neuropsychologue)**
3. **Préparation de l'entourage** (changement de personnalité, handicap…)

Kvam KK et al. J Clin Neurol 2024

Functional outcome after infectious encephalitis: a longitudinal multicentre prospective cohort study

Pierre Fillâtre [1, 2, *], Alexandra Mailles [3], Jean Paul Stahl [4], Ronan Garlantezec [2, 5], Marion Le Maréchal [4], Pierre Tattevin [2, 6], on behalf of the scientific committee and investigators group

3 messages

1. **Processus évolutif, même après 6 mois**
2. **Pas vraiment prévisible**
3. **Tous peuvent bénéficier d'un suivi !**

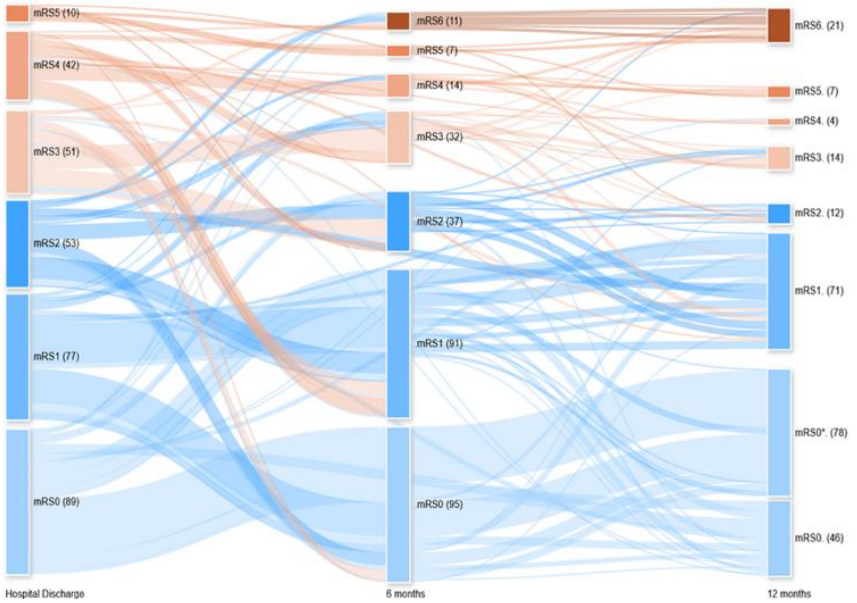
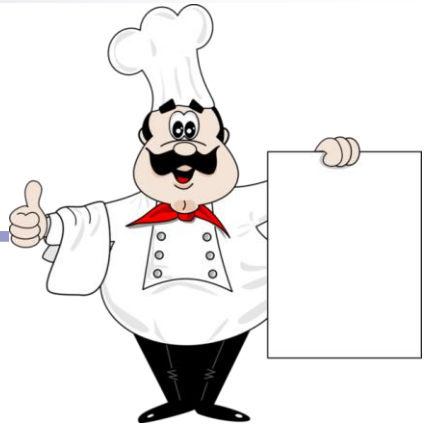


Fig. 1. Sankey diagram, with 862 mRS assessments at hospital discharge, at 6 and 12 months, among 322 patients. mRS, modified Rankin Scale, *As planned, functional outcome was attributed at mRS0 for the 12-month evaluation if patients were considered with full recovery at 6 months and therefore were not followed-up at 1 year.

Fillâtre P et al. Clin Microbiol Infect 2024

Au menu



- Endocardites
- Encéphalites
- **Divers**

Efficacy and safety of rezafungin and caspofungin in candidaemia and invasive candidiasis: pooled data from two prospective randomised controlled trials

George R Thompson III, Alex Soriano, Patrick M Honore, Matteo Bassetti, Oliver A Cornely, Marin Kollef, Bart Jan Kullberg, John Pullman, Maya Hites, Jesús Fortún, Juan P Horcajada, Anastasia Kotanidou, Anita F Das, Taylor Sandison, Jalal A Aram, Jose A Vazquez, Peter G Pappas

Une échinocandine à longue durée d'action (1/semaine)

- **Etude randomisée internationale double aveugle**
  - Rezafungine IV 1/semaine (400 mg J0 puis 200 mg/semaine)
  - Caspofungine IV 1/j (70 mg J0 puis 50 mg/j)

- **Infections invasives à *Candida* sp.**
  - 73% candidémie
  - *C. albicans* (43%), *C. glabrata* (25%), *C. tropicalis* (17%), *C. parapsilosis* (14%)

- **Critère principal = Mortalité à J30**

Thompson GR et al. Lancet Infect Dis 2024

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	Rezafungin (n=139)	Caspofungin (n=155)	Treatment difference (95% CI)
Primary pooled efficacy endpoint: day 30 all-cause mortality			
Deceased or unknown survival status	26 (19%)	30 (19%)	..
Known deceased	21 (15%)	25 (16%)	..
Unknown survival status	5 (4%)	5 (3%)	..
Alive	113 (81%)	125 (81%)	..
Death rate*	..	..	−1·5% (−10·7 to 7·7)
Exploratory efficacy endpoints			
Patients with negative blood culture†‡			
At 24 h	63/105 (60%)	57/116 (49%)	..
At 48 h	80/103 (78%)	73/115 (64%)	..

Thompson GR et al. Lancet Infect Dis 2024

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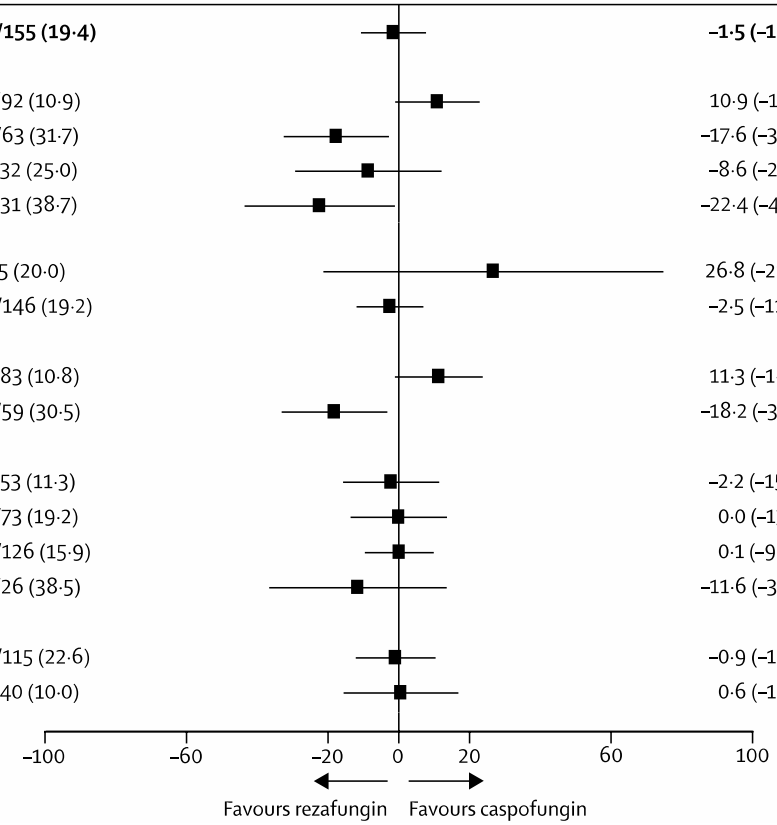
	Participants who died or with unknown survival status		Difference (95% CI)
	Rezafungin, n/N (%)	Caspofungin, n/N (%)	
Overall	**26/139 (18·7)**	**30/155 (19·4)**	**–1·5 (–10·7 to 7·7)**
Age			
18 to <65 years	18/82 (22·0)	10/92 (10·9)	10·9 (–1·0 to 22·8)
≥65 years	8/57 (14·0)	20/63 (31·7)	–17·6 (–32·5 to –2·8)
65 to <75 years	5/32 (15·6)	8/32 (25·0)	–8·6 (–29·3 to 12·0)
≥75 years	3/25 (12·0)	12/31 (38·7)	–22·4 (–43·6 to –1·1)
ANC count			
ANC <500 cells/µL	4/7 (57·1)	1/5 (20·0)	26·8 (–21·3 to 74·8)
ANC ≥500 cells/µL	22/128 (17·2)	28/146 (19·2)	–2·5 (–11·9 to 7·0)
Renal impairment			
≥60 mL/min (normal or mild)	17/75 (22·7)	9/83 (10·8)	11·3 (–1·1 to 23·7)
<60 mL/min (moderate or severe)	7/54 (13·0)	18/59 (30·5)	–18·2 (–33·1 to –3·2)
APACHE II			
APACHE <10	5/51 (9·8)	6/53 (11·3)	–2·2 (–15·8 to 11·5)
APACHE 10–19	14/65 (21·5)	14/73 (19·2)	0·0 (–13·6 to 13·6)
APACHE <20	19/116 (16·4)	20/126 (15·9)	0·1 (–9·6 to 9·9)
APACHE ≥20	5/21 (23·8)	10/26 (38·5)	–11·6 (–36·6 to 13·5)
Final diagnosis*			
Candidaemia only	22/100 (22·0)	26/115 (22·6)	–0·9 (–12·2 to 10·4)
Invasive candidiasis	4/39 (10·3)	4/40 (10·0)	0·6 (–15·6 to 16·8)



Thompson GR et al. Lancet Infect Dis 2024

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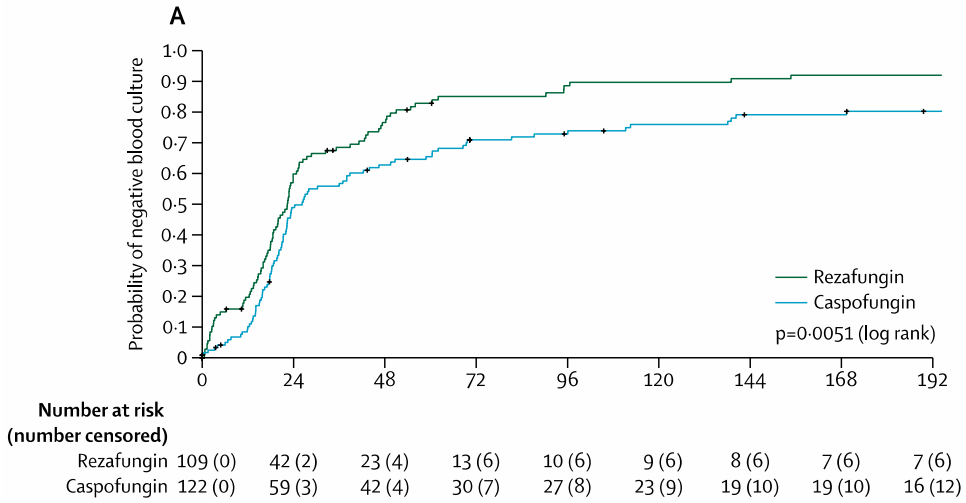
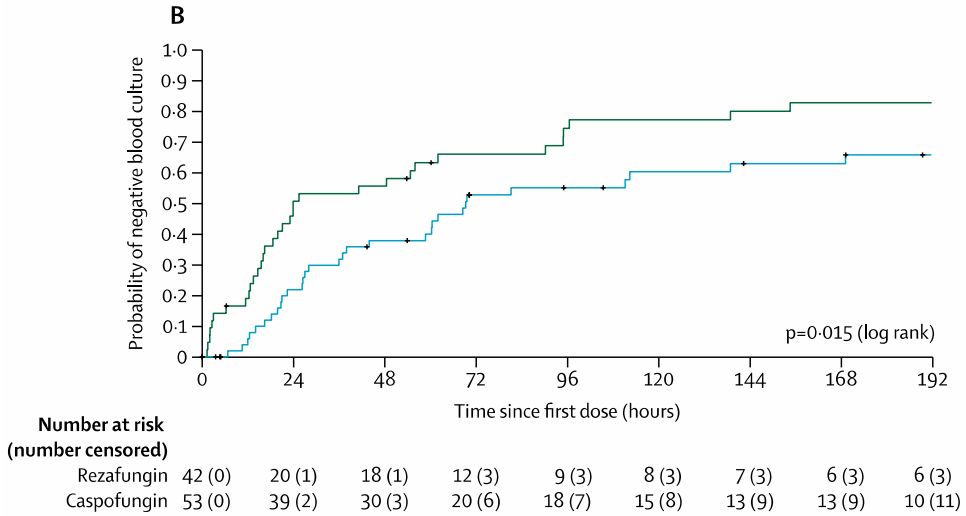


Number at risk (number censored)								
Rezafungin	109 (0)	42 (2)	23 (4)	13 (6)	10 (6)	9 (6)	8 (6)	7 (6)	7 (6)
Caspofungin	122 (0)	59 (3)	42 (4)	30 (7)	27 (8)	23 (9)	19 (10)	19 (10)	16 (12)



Number at risk (number censored)								
Rezafungin	42 (0)	20 (1)	18 (1)	12 (3)	9 (3)	8 (3)	7 (3)	6 (3)	6 (3)
Caspofungin	53 (0)	39 (2)	30 (3)	20 (6)	18 (7)	15 (8)	13 (9)	13 (9)	10 (11)

Rezafungine

1ère échinocandine LP (1/semaine)

Délai d'action + rapide ?

Thompson GR et al. Lancet Infect Dis 2024

Treatment of infections caused by multidrug-resistant Gram-negative bacilli: A practical approach by the Italian (SIMIT) and French (SPILF) Societies of Infectious Diseases

Marianna Meschiari[a], Antoine Asquier-Khati[b], Giusy Tiseo[c], David Luque-Paz[d], Rita Murri[e], David Boutoille[b], Marco Falcone[c], Cristina Mussini[a], Pierre Tattevin[d,*], on behalf of the Italian Society of Infectious and Tropical Diseases (SIMIT), and the French Society of Infectious Diseases (SPILF)

Background

- ✓ Emergence of MDR-GNB worldwide
- ✓ Advent of new antibiotics
- ✓ RCTs often focused on basic situations

International guidelines

ESCMID MANAGING INFECTIONS PROMOTING SCIENCE

IDSA Infectious Diseases Society of America

- ✓ Robust analysis of literature data
- ✓ Prioritized high-level evidence (RCTs)
- ✓ Could not address complex situations

Our practical approach

- ✓ Italian & French Societies of Infectious Diseases
- ✓ Aimed to fill some gaps of ESCMID/IDSA guidelines
- ✓ Combined experience, expertise, and updated literature data

SPILF Société de Pathologie Infectieuse de Langue Française

SIMIT Società Italiana di Malattie Infettive e Tropicali

Meschiari M et al. Intern J Antimicrob Agents 2024

Contents lists available at ScienceDirect

Clinical Microbiology and Infection

journal homepage: www.clinicalmicrobiologyandinfection.com

Editorial Note

From medical editors: a call to the global infectious diseases and clinical microbiology community

Huttner A et al. Clin Microbiol Infect 2025

Congrès Mondial Infections cardio-vasculaires 2026 en France (Rennes)

18th International Symposium
on Modern Concepts in Endocarditis
and Cardiovascular Infections

RENNES, FRANCE

JUNE 28-30, 2026

Tous les 2 ans, 100% anglophone, alternance Europe / reste du Monde

- Endocardites & autres infections cardio-vasculaires
- Infectiologues/Cardiologues/microbios/chir cardiaque/imagerie
- Objectifs 2026: 250/300 participants
- Sessions plénières + posters

Contact: pierre.tattevin@chu-rennes.fr

https://www.iscvid.org/

Les 10 messages à ramener à la maison:

1. **Vigilance sur les grippes graves sans comorbidité (AH5N1 aviaire)**
2. **Trois paires d'hémoc, prélèvement unique si suspicion endocardite**
3. **Amoxicilline + cefazoline en traitement empirique endocardite grave**
4. **Emergence des encéphalites à tiques (#3 en France)**
5. **Encéphalites HSV # VZV (plus graves, urgence aciclovir)**
6. **Suivi systématique et structuré des encéphalites**
7. **Rezafungine: 1ère échinocandine LP, d'action rapide**
8. **Des recommandations pratiques pour les BGN XDR**
9. **Menace Mondiale sur la recherche médicale**
10. **Congrès Mondial infections cardio-vasculaires, Rennes, 28-30 Juin 2026**