

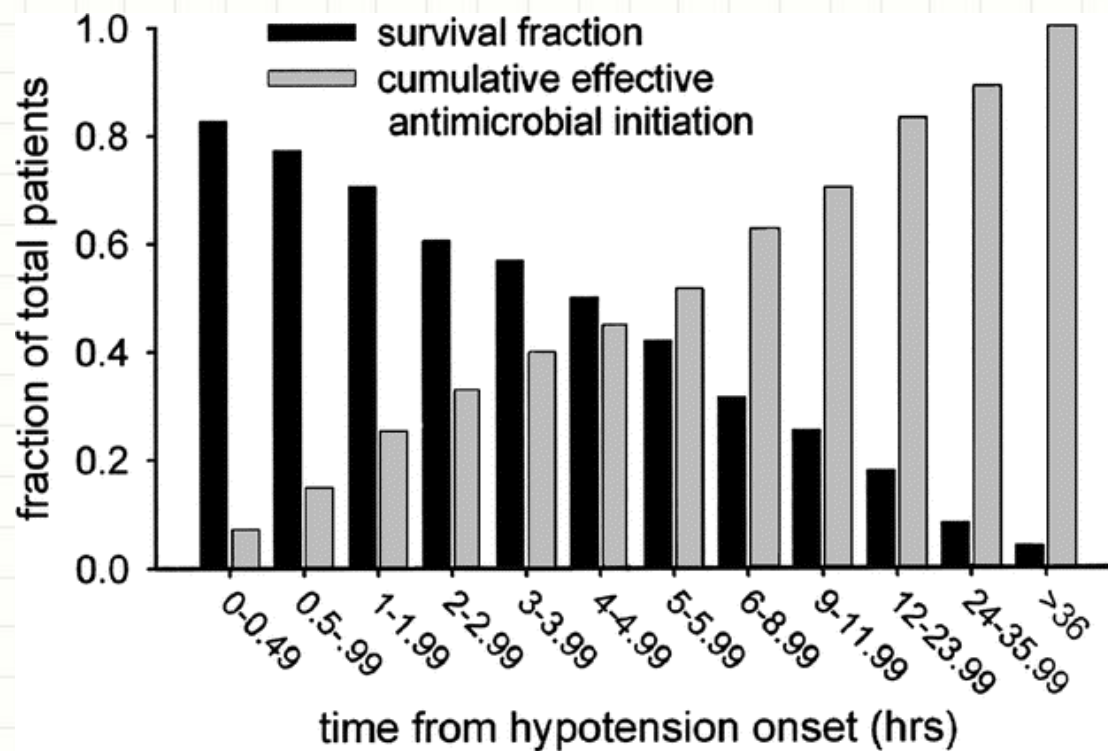
LES 24 PREMIÈRES HEURES DU CHOC SEPTIQUE

Florent THEVENET, DES pneumologie,
DESC réanimation médicale
Le 14 Octobre 2015



Take home message

AGIR VITE



BARRIÈRE DES
6H

Crit Care Med 2006; 34:1589-1596

EARLY GOAL DIRECTED THERAPY

Protocole de remplissage avec surveillance objectif :

Reduction mortalité de 15%

TABLE 3. KAPLAN-MEIER ESTIMATES OF MORTALITY

Rivers E et al *N Engl J Med* 2001

VARIABLE	STANDARD THERAPY (N= 133) no. (%)	THERAPY (N= 130) no. (%)	RELATIVE RISK (95% CI)	P VALUE
In-hospital mortality†				
All patients	59 (46.5)	38 (30.5)	0.58 (0.38–0.87)	0.009
Patients with severe sepsis	19 (30.0)	9 (14.9)	0.46 (0.21–1.03)	0.06
Patients with septic shock	40 (56.8)	29 (42.3)	0.60 (0.36–0.98)	0.04
Patients with sepsis syndrome	44 (45.4)	35 (35.1)	0.66 (0.42–1.04)	0.07
28-Day mortality†	61 (49.2)	40 (33.3)	0.58 (0.39–0.87)	0.01
60-Day mortality†	70 (56.9)	50 (44.3)	0.67 (0.46–0.96)	0.03
Causes of in-hospital death‡				
Sudden cardiovascular collapse	25/119 (21.0)	12/117 (10.3)	—	0.02
Multiorgan failure	26/119 (21.8)	19/117 (16.2)		0.27

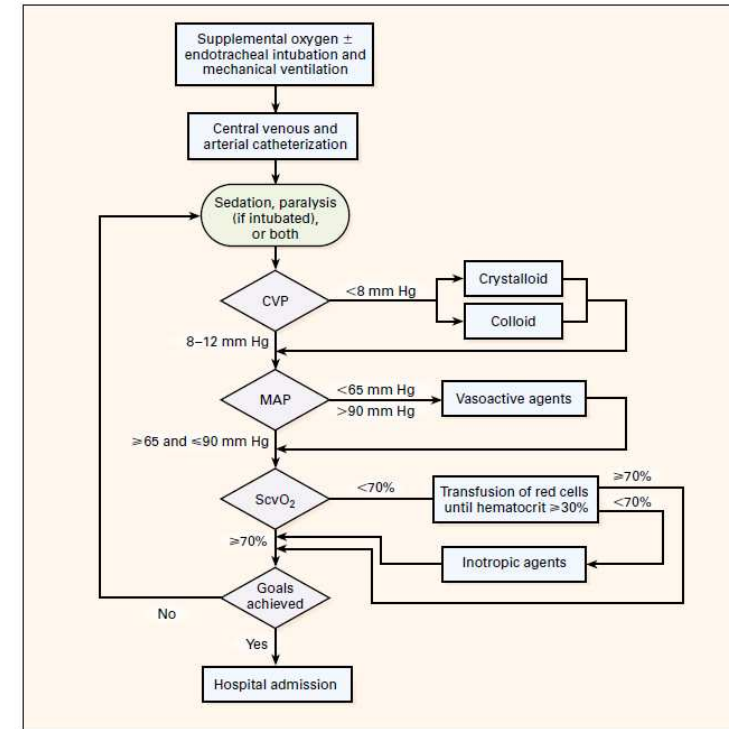


Figure 2. Protocol for Early Goal-Directed Therapy.
CVP denotes central venous pressure, MAP mean arterial pressure, and ScvO₂ central venous oxygen saturation.

Quel soluté de remplissage?

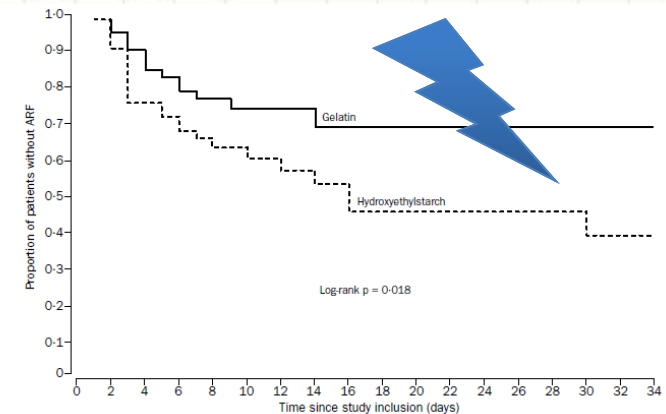
- CRISTALLOIDES en première intention
- The CRYSTMAS study : pas de différence de mortalité entre HES vs. NaCl 0.9% (31% vs. 25.3%, $p = 0.37$)

- Plutôt pas HES : Plus d'IRA significatifs...

126. Schortgen F, Lacherade JC, Bruneel F, et al: Effects of hydroxyethylstarch and gelatin on renal function in severe sepsis: A multicentre randomised study. *Lancet* 2001; 357:911–916

- Minimum de 30mL/kg à la phase initiale
- Adaptation en fonction du **monitorage hémodynamique** (nombreux outils validés)

Guidet B, Martinet O, Boulain T, et al: Assessment of hemodynamic efficacy and safety of 6% hydroxyethylstarch 130/0.4 vs. 0.9% NaCl fluid replacement in patients with severe sepsis: The CRYSTMAS study. *Crit Care* 2012; 16:R94



Number at risk
Gelatin
Hydroxyethylstarch

Figure 2: Proportion of patients without ARF as assessed by Kaplan-Meier curves

Marik PE, Monnet X, Teboul JL: Hemodynamic parameters to guide fluid therapy. *Ann Intensive Care* 2011; 1:1

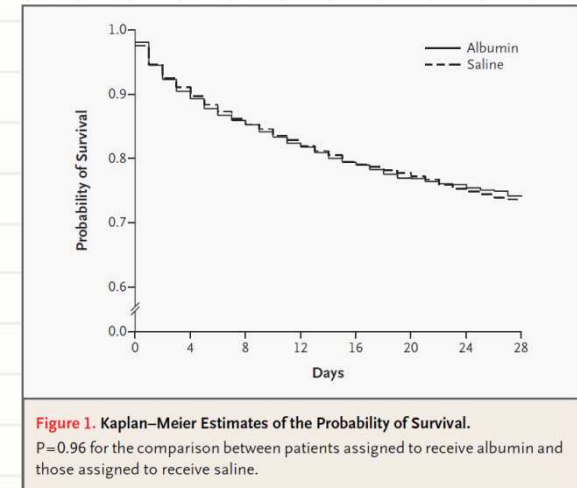
Albumine

- Aussi efficace que NaCl 0,9%
- SAFE study

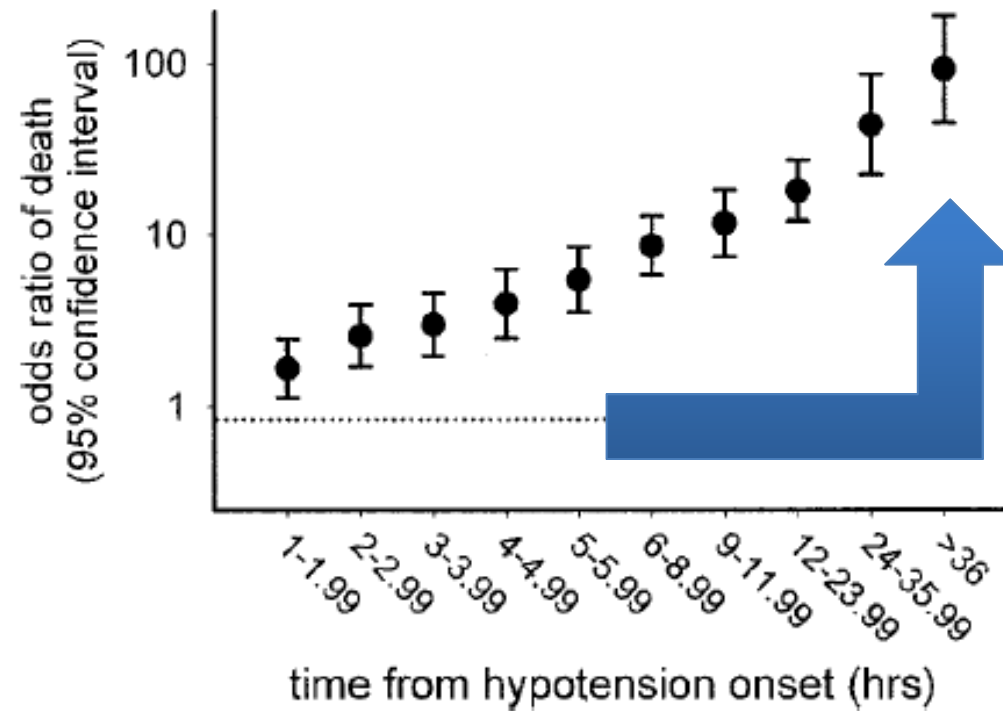
Finfer S, Bellomo R, Boyce N, et al; SAFE Study Investigators: A comparison of albumin and saline for fluid resuscitation in the intensive care unit. *N Engl J Med* 2004; 350:2247–2256

- Pas de différence significative en terme de réduction mortalité, **prix Effets 2nd++**

Delaney AP, Dan A, McCaffrey J, et al: The role of albumin as a resuscitation fluid for patients with sepsis: A systematic review and meta-analysis. *Crit Care Med* 2011; 39:386–391



Antimicrobial therapy



- ANTIMICROBIEN IV le plus précoce possible (1^{ère} heure++)
- corrélé à la mortalité++
- Contrôle de la source infectieuse obligatoire

Kumar A, Roberts D, Wood KE, et al: Duration of hypotension before initiation of effective antimicrobial therapy is the critical determinant of survival in human septic shock. *Crit Care Med* 2006; 34:1589-1596

Points clés Antibiothérapie

- Adaptée aux germes probables ++ (bactéries, virus ou fongiques):
inadaptée corrélée à la mortalité

Ibrahim EH, Sherman G, Ward S, et al: The influence of inadequate antimicrobial treatment of bloodstream infections on patient outcomes in the ICU setting. *Chest* 2000; 118:146–155

- **Attention pharmacocinétique:**
concentration, diffusion
- **Large spectre initial** Désescalade dès identification
- **Association initiale d' ATB:**
(sup monothérapie choc S.)

Kumar A, Zarychanski R, Light B, et al; Cooperative Antimicrobial Therapy of Septic Shock (CATSS) Database Research Group: Early combination antibiotic therapy yields improved survival compared with monotherapy in septic shock: A propensity-matched analysis. *Crit Care Med* 2010; 38:1773–1785

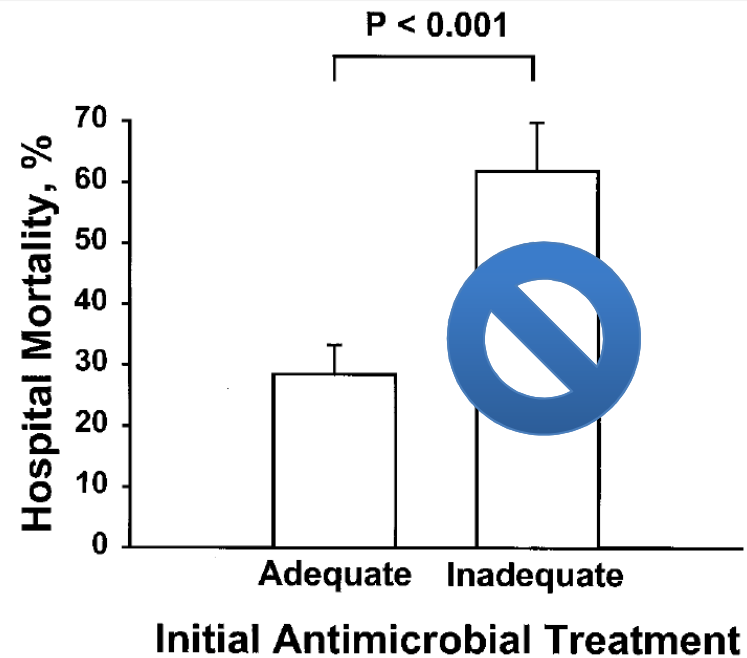


FIGURE 1. Hospital mortality according to the adequacy of the initial antimicrobial treatment prescribed for bloodstream infections. Upper 95% CIs are shown.

Place des amines

- Objectif de PAM à 65mmHg, après remplissage vasculaire adapté

134. LeDoux D, Astiz ME, Carpati CM, et al: Effects of perfusion pressure on tissue perfusion in septic shock. *Crit Care Med* 2000; 28:2729–2732

- Norépinephrine en première ligne comme agent vasopresseur
- Inotropes: préférer dobutamine première int
- Uniquement en cas de dysfonction myocardique: bas débit cardiaque et élévations pressions remplissages

- Ne pas faire pour augmenter débit cardiaque sans dysfonction:

Hayes MA, Timmins AC, Yau EH, et al: Elevation of systemic oxygen delivery in the treatment of critically ill patients. *N Engl J Med* 1994; 330:1717–1722

Place des prélèvements infectieux

- Si possible avant tout anti infectieux
- Hémocultures ++ (préférer périph et au moins 2 séries)
- Autres selon orientation: ECBU, PL, ATP...

- Ne doit pas retarder ATB précoce++
- *Surviving sepsis campaign guidelines 2012*

Au total

SURVIVING SEPSIS CAMPAIGN BUNDLES

TO BE COMPLETED WITHIN 3 HOURS:

- 1) Measure lactate level
- 2) Obtain blood cultures prior to administration of antibiotics
- 3) Administer broad spectrum antibiotics
- 4) Administer 30 mL/kg crystalloid for hypotension or lactate ≥ 4 mmol/L

TO BE COMPLETED WITHIN 6 HOURS:

- 5) Apply vasopressors (for hypotension that does not respond to initial fluid resuscitation) to maintain a mean arterial pressure (MAP) ≥ 65 mm Hg
- 6) In the event of persistent arterial hypotension despite volume resuscitation (septic shock) or initial lactate ≥ 4 mmol/L (36 mg/dL):
 - Measure central venous pressure (CVP)*
 - Measure central venous oxygen saturation (Scvo₂)*
- 7) Remeasure lactate if initial lactate was elevated*

*Targets for quantitative resuscitation included in the guidelines are CVP of ≥ 8 mm Hg, Scvo₂ of $\geq 70\%$, and normalization of lactate.

Merci de votre
attention

