Collège des maladies infectieuse, microbiologie et parasitologie-mycologie

Cas clinique 2

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5èmes rencontres en infectiologie, 16-17/2/2018

Enoncé

- Monsieur M.B , 65 ans
- **Antécédents:**
  - BPCO post tabagique (Gold B) suivi à la consultation externe de pneumologie sous Aérol et Cortis
  - HTA
- **Histoire de la maladie:** aggravation de sa dyspnée de base devenant au moindre effort avec augmentation du volume des expectorations et virage de leur couleur depuis 5 jours dans un contexte d'apyrexie.

Enoncé

- **Examen aux urgences:**
  - Température: 37,5°c
  - FR: 40 cycles/mn avec signes de lutte, saturation: 83% à l'air ambiant, râles sibilants à l'auscultation
  - Patient conscient, présence de flapping tremor
  - Etat hémodynamique stable

- **Gazométrie artérielle:** pH= 7,27, PaO2= 46 mmHg, PaCO2= 76 mmHg , HCO3-= 44 mmol/l, SaO2= 82 %.
- **Radiographie du thorax:** distension thoracique
- **Biologie:** GB= 6500 élem/mm^3,CRP= 70 mg/l , fonction rénale et hépatique correctes

- **Diagnostic retenu:** exacerbation de BPCO Antonisen I
- **Prise en charge initiale aux urgences:**
  - VNI
  - Nébulisations de bronchodilatateurs
  - Antibiothérapie par Augmentin
- **Evolution:**
  - Persistance des signes d'insuffisance respiratoire aigue
  - Altération de l'état neurologie
  - GDS sous VNI: pH= 7.15, PaO2= 76mmHg, PaCO2= 94 mmHg , HCO3-= 46 mmol/l, SaO2= 92 %.
- **CAT:** ventilation mécanique invasive et transfert en réanimation

- **En réanimation:**
  - Maintien de la sédation à cause d'un bronchospasme non contrôlé
  - Recours à une corticothérapie systémique et aux β2 mimétiques par voie intraveineuse

- **A J6 d'hospitalisation:**
  - Fièvre à 39°c
  - Aspirations trachéales purulentes
  - Biologie: GB= 17 000 élem/mm^3,
    CRP= 150 mg/l

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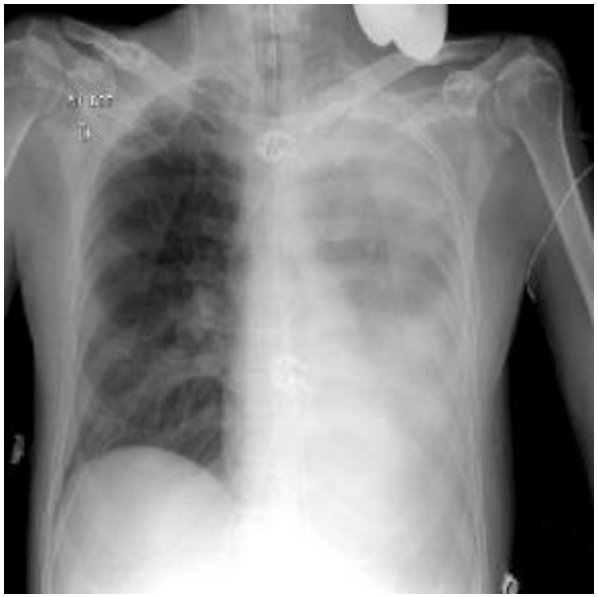
  - Radiographie du thorax:



Questions

1. Quel est votre diagnostic?

Réponse

1. Hospital acquired pneumonia (**HAP**) / ventilator-associated pneumonia (**VAP**)

Commentaires

- Hospital-acquired pneumonia (HAP) is defined as:

  - the presence of a "new" lung infiltrate

    +

  - clinical evidence that the infiltrate is of an infectious origin, which includes the new onset of fever, purulent sputum, leukocytosis, and decline in oxygenation.

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Commentaires

- **HAP** is defined as a pneumonia not incubating at the time of hospital admission and occurring >48 hours after admission in a patient not on a ventilator.

- Ventilator-associated pneumonia (**VAP**) is defined as a pneumonia that arises at least 48 hours after endotracheal intubation.

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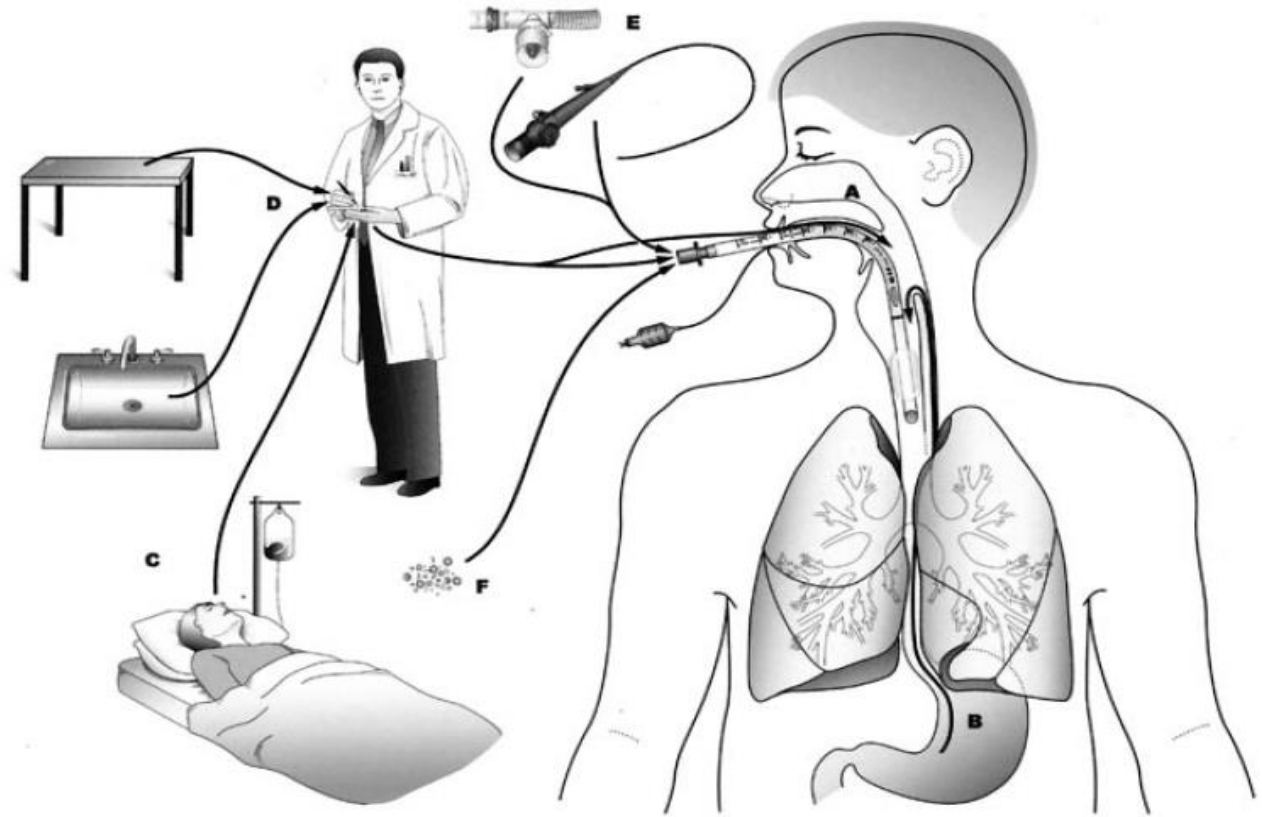
Commentaires

Physiopathologie



The pathogenesis of ventilator-associated pneumonia: its relevance to developing effective strategies for prevention
Respir Care. 2005; 50:725-39.

Questions

Quel examen bactériologique faut-il réaliser en cas de suspicion de PAVM ?

1. Prélèvements invasifs avec culture qualitative
2. Prélèvements invasifs avec culture quantitative
3. Prélèvements non invasifs avec culture qualitative
4. Prélèvements non invasifs avec culture semi quantitative
5. Prélèvements non invasifs avec culture quantitative

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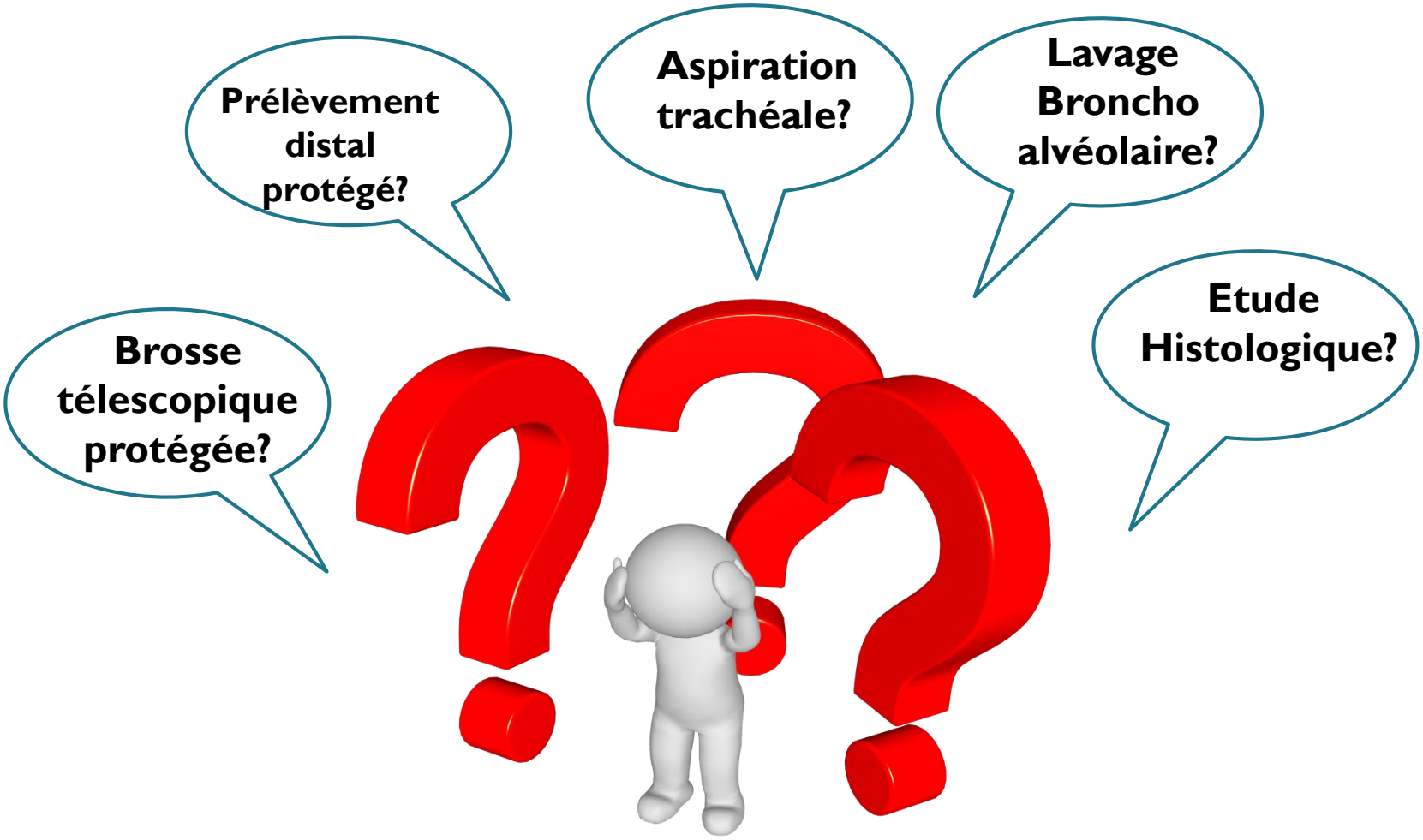

Commentaires

Invasifs

- Etude histologique
- LBA
- Brosse télescopique protégée

Non invasifs

- Aspiration trachéale

Réponse

- To diagnose VAP, we suggest **non invasive sampling** with **semi quantitative cultures**, rather than non invasive sampling with quantitative cultures or invasive sampling with quantitative cultures (weak recommendation, low-quality evidence).

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Commentaires

- Non invasive sampling with semi quantitative cultures :
  - can be done more rapidly
  - has fewer complications
  - and requires fewer resources

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Questions

Quels sont les outils les plus performants pour le diagnostic positif de PAVM?

1. Critères cliniques uniquement
2. Critères cliniques + CRP
3. Critères cliniques + procalcitonine
4. Critères cliniques + sTREM-1
5. Critères cliniques + CPIS

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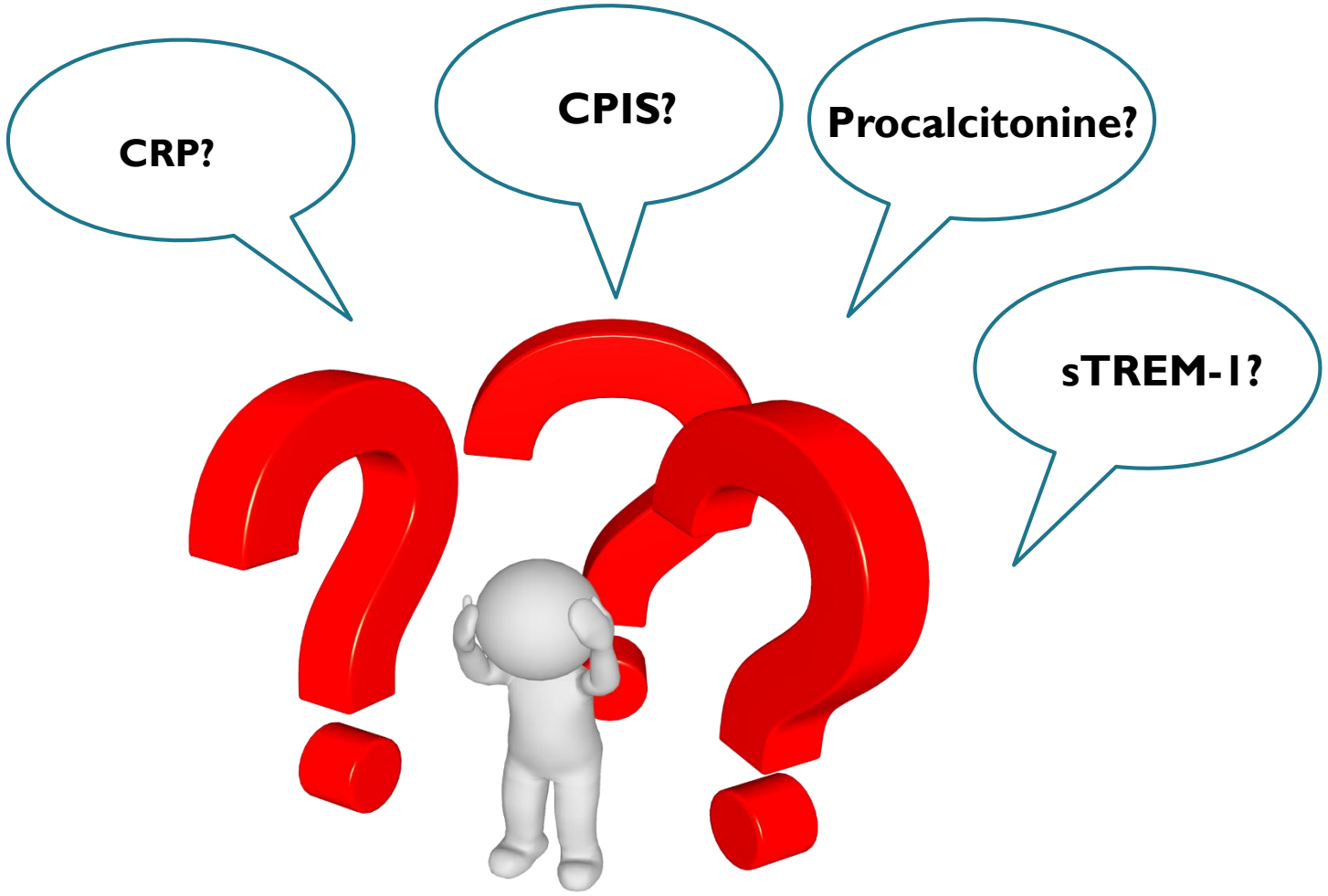

Commentaires

Température (°C)	• ≥ 36,5 et ≤ 38, 4	0 point
	• ≥ 38,5 et ≤ à 38,9	1 point
	• ≥ 39 et ≤ 36,4	2 points
Globules blancs (éléments/mm3)	• ≥ 4000 et ≤ 11 000	0 point
	• < 4000 ou > 11 000	1 point
Sécrétions trachéales	• Absence de sécrétions	0 point
	• Présence de sécrétions non purulentes	1 point
	• Présence de sécrétions purulentes	2 points
Oxygénation PaO2 (mmHg)**/FiO2**	• >250	0 point
	• ≤ 250	2 points
Radiographie pulmonaire	• Pas d'infiltrat	0 point
	• Infiltrat diffus	1 point
	• Infiltrat localisé	2 points

*(**PaO2** : pression artérielle en oxygène ; **FiO2** : fraction inspirée en oxygène)*

Réponse

- For patients with suspected HAP/VAP, we recommend using **clinical criteria alone**, rather than serum procalcitonin plus clinical criteria (strong recommendation, moderate quality evidence), bronchoalveolar fluid soluble triggering receptor expressed on myeloid cells plus clinical criteria (strong recommendation, moderate quality evidence), C-reactive protein plus clinical criteria (weak recommendation, low quality evidence), or the Modified Clinical Pulmonary Infection Score plus clinical criteria (weak recommendation, low quality evidendence).

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Questions

Concernant l'antibiothérapie empirique en cas de suspicion de PAVM, quelles sont les réponses vraies?

1. Doit tenir compte de l'épidémiologie locale
2. Doit tenir compte de la présence de facteurs de risque de bactéries multi résistantes
3. Doit comporter un antibiotique actif sur le SARM
4. Doit toujours comporter 2 antibiotiques anti *Pseudomonas*

Questions

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Commentaires

- Empiric treatment regimens be informed by the **local distribution of pathogens** associated with VAP and their **antimicrobial susceptibilities**.

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Commentaires

Risk factors for MDR VAP
Prior intravenous antibiotic use within 90 d
Septic shock at time of VAP
ARDS preceding VAP
Five or more days of hospitalization prior to the occurrence of VAP
Acute renal replacement therapy prior to VAP onset
Risk factors for MDR HAP
Prior intravenous antibiotic use within 90 d
Risk factors for MRSA VAP/HAP
Prior intravenous antibiotic use within 90 d
Risk factors for MDR *Pseudomonas* VAP/HAP
Prior intravenous antibiotic use within 90 d

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Commentaires

- We suggest including an agent active against **MRSA** for the empiric treatment of suspected VAP only in the following cases:

  - in patients who have a risk factor for antimicrobial resistance
  - in patients being treated in units where 10–20% of S. aureus isolates are methicillin resistant,
  - in patients in units where the prevalence of MRSA is not known

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Commentaires

- If empiric coverage for MRSA is indicated, we recommend either **vancomycin** or **linezolid** (strong recommendation, moderate quality evidence).

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Commentaires

- Pseudomonal antibiotics from different classes for the empiric treatment of suspected VAP only in the following cases:

  - in patients who have a risk factor for resistance
  - in units where 10% of gram-negative isolates are resistant to an agent being considered for monotherapy
  - in units where local susceptibility rates are not available

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Enoncé

- **Culture de l'aspiration trachéale:**
  - *Acinetobacter baumannii* > 10^6 UFC
- **Antibiogramme:** sensibilité uniquement à:
    - Colistine
    - Tigécycline

Questions

1. Quelle antibiothérapie faut-il utiliser après le résultat de l'antibiogramme?

Commentaires

- In patients with HAP/VAP caused by *Acinetobacter* species, we suggest treatment with either a carbapenem or ampicillin/sulbactam if the isolate is susceptible to these agents (weak recommendation, low-quality evidence).

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Commentaires

- In patients with HAP/VAP caused by Acinetobacter species that is sensitive only to polymyxins, we recommend intravenous polymyxin (colistin or polymyxin B) (strong recommendation, low-quality evidence), and we suggest adjunctive inhaled colistin (weak recommendation, low-quality evidence).

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Commentaires

- In patients with HAP/VAP caused by Acinetobacter species that is sensitive only to colistin, we suggest not using adjunctive rifampicin (weak recommendation, moderate-quality evidence).

- In patients with HAP/VAP caused by *Acinetobacter* species, we recommend against the use of tigecycline (strong recommendation, low-quality evidence).

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Questions

Quelle est la durée de l'antibiothérapie?

1. 5 jours
2. 7 jours
3. 10 jours
4. 14 jours

Questions

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1. 5 jours
2. 7 jours
3. 10 jours
4. 14 jours

Commentaires

- For patients with VAP or HAP, we recommend a **7day course**, rather than a longer duration, of antimicrobial therapy (strong recommendation, moderate quality evidence).

- There exist situations in which a shorter or longer duration of antibiotics may be indicated, depending upon the rate of improvement of clinical, radiologic, and laboratory parameters.

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Pour les curieux

Clinical Infectious Diseases

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