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SHORT COMMUNICATION

Lack of usefulness of blood cultures to diagnose ventilator-associated pneumonia

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Since ventilator-associated pneumonia is a common complication in ventilated patients and is associated with very high mortality [1, 2], the precise identification of causative organisms and the accurate selection of antimicrobial treatment represent important clinical goals [3]. However, the usefulness of blood cultures in ventilator-associated pneumonia is not yet well known.

During a period of thirty months, we prospectively studied 129 episodes of ventilator-associated pneumonia in our intensive care unit. Ventilator-associated pneumonia was diagnosed when a patient developed new infiltrates on the chest radiograph, excluding those of noninfectious origin, after 48 h on mechanical ventilation, plus two of the following items: fever >38°C, leucocytosis $>10 \times 10^9 \cdot l^{-1}$, purulent secretions from endotracheal tubes. Identification of the causative agent was possible in 92 (71%) episodes by means of highly specific techniques (telescoping plugged catheters (TPC), blood cultures, and/or necropsy). In only 10 (8%) of cases blood cultures were positive and 3 of these only partially coincided with TPC. There was no difference in the mortality directly related to ventilator-associated pneumonia when those cases with positive blood cultures were compared with those negative (20% *versus* 19.3% respectively).

In conclusion, the utility of blood cultures to establish the aetiological agent in ventilator-associated pneumonia is poor. Furthermore, association of positive blood cultures in the course of a ventilator-associated pneumonia was not, in our experience, associated with a poorer prognosis.

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