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Management of Ventilator-Associated Pneumonia

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Optimal management of patients who are clinically suspected of having ventilator-associated pneumonia (VAP) remains open to debate. Fagon and coinvestigators from Hôpital Broussais, Paris, France, conducted a study to evaluate the effect on clinical outcome and antibiotic use of two strategies to diagnose VAP and select initial treatment for this condition. The study was a multicenter, randomized, uncontrolled trial in 31 ICUs in France and included 413 patients suspected of having VAP. The invasive management strategy was based on direct examination

of bronchoscopic protected specimen brush samples or bronchoalveolar lavage samples and their quantitative cultures. The noninvasive (clinical) management strategy was based on clinical criteria, isolation of microorganisms by nonquantitative analysis of endotracheal aspirates, and clinical practice guidelines. Measurements were death from any cause, quantification of organ failure, and antibiotic use at 14 and 28 days.

Compared with patients who received clinical management, patients who received invasive management had reduced mortality at day 14, decreased mean Sepsis-Related Organ Failure Assessment scores at day 3 and day 7, and decreased antibiotic use (mean number of

antibiotic-free days). At 28 days, the invasive management group had significantly more antibiotic-free days, and only multivariate analysis showed a significant difference in mortality.

Compared with a noninvasive management strategy, an invasive management strategy was significantly associated with fewer deaths at 14 days, earlier attenuation of organ dysfunction, and less antibiotic use in patients suspected of having VAP.

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