Preface

For decades, ventilator-associated pneumonia (VAP) has been thought to be the most important complication of intensive care medicine. A meta-analysis of studies published in the 1990s calculated the incidence of VAP, which is equivalent to 16.5 cases per 1,000 patient days. Attributable mortality due to VAP was estimated to be 20–40%, although the range in different studies was very broad. Healthcare costs realted to VAP seem to be remarkable, in particular with regard to multidrug-resistant pathogens. A controversial debate about the management of VAP occurred in the literature at the beginning of the century, but latterly the discussion has wound down. The latest VAP guidelines were published in 2005 by the American Thoracic Society/Infectious Diseases Society of America, and a consensus paper was published in *Intensive Care Medicine* in 2009; however, the number of VAP studies has decreased dramatically.

A major problem with VAP is that there is no established gold standard for its diagnosis. The diagnosis of VAP is clinical, taking chest radiographs, clinical signs and symptoms into account. However, the spectrum of differential diagnosis is broad. The improvement of radiological procedures, implementation of new biomarkers into the diagnostic algorithm, and political decisions has reduced the number of patients diagnosed with VAP. 5 years ago the Center of Disease Control (Atlanta, GA, USA) declared a "zero VAP" programme, postulating that VAP is a hygienic problem and could be solved by infection control measurement alone. Health assurance no longer reimbursed for VAP. Since then the diagnosis of VAP has disappeared from the ICD codes and has been substituted by ventilator-associated tracheobronchitis or sepsis; the first is very similar to VAP and hard to distinguish in an individual patient, the latter is a typical complication of VAP with high mortality.

VAP is still a problem and although it may have been overestimated in the past, it is underestimated today, mainly in the USA. Previously, infection control had been able to reduce the incidence, but infectious disease complications are immanent in intensive care medicine depending on the severity of the disease and the risk factors (age and comorbidities) of the patients, therefore zero VAP will never be possible. The absence of clinical studies in this field and the lack of guidelines make it difficult to establish an evidence base for the management of this disease entity, which is still responsible for high mortality and morbidity and a high proportion of costs. Therefore, this Monograph is valuable from different perspectives. It summarises the current knowledge about VAP and is therefore a guide for the management of VAP using the best evidence available. However, it allows for an opening of controversy about VAP, which may lead to new scientific activity in the field. I want to congratulate the Guest Editors for this excellent Monograph, which will be of interest to either basic scientists or clinicians, and may have an impact on healthcare policy.

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