Occasional Survey

Management of Ventilator-associated Pneumonia in Paediatric Setting

WT Ko

Abstract

Ventilator-associated pneumonia (VAP) is the second commonest nosocomial infection in paediatric intensive care units. New definitions about VAP have been proposed recently for better epidemiological study and clinical trials. Management approach is mainly based on adult recommendation because of scanty paediatric studies. Multidrug resistant microorganisms can cause both the early and the late onset VAP. Possible risk factors for VAP include longer duration of ventilation, immunodeficiency, use of immunosuppressive drugs, neuromuscular blockade, genetic syndrome(s), reintubation and transport of critical patients. To have a more reliable diagnosis, quantitative or semi-quantitative bacterial cultures using bronchoscopic or nonbronchoscopic methods should be performed before initiation of the de-escalation therapy, which is the current trend of management. The threshold bacterial count of bronchoalveolar lavage in diagnosing pneumonia is still controversial in Paediatrics. Initial empirical treatment with combination antibiotics therapy providing a broad spectrum cover to decrease the mortality should be considered, which could later be narrowed to single sensitive antibiotic based on bacterial culture. Shorter duration of antibiotic(s) of 8 days is equally effective as the 15-day treatment except in Pseudomonas aeruginosa pneumonia. Good nursing care with utmost infection control practice is the paramount element in the prevention of VAP.

Keyword: Anti-bacterial agents; Child; Cross-infection; Pneumonia, bacterial; Ventilators, mechanical