

The treatment of MDR *Acinetobacter baumannii* pneumonia in the intensive care units

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Introduction: The nosocomial pneumonia due to *Acinetobacter baumannii* is increased. However, it is difficult to treat due to limited treatment regimens. **Objective:** To compare several antimicrobials with Colistin for suspected pneumonia in the ICU. **Methods:** The study included 179 mechanically ventilated patients more than 48 hours who developed suspected ventilator associated pneumonia (VAP) in 52 beds ICU of teaching hospital in South Korea. We retrospectively analyzed 61 patients with *A.baumannii* pneumonia. **Results:** 50 patients had multidrug-resistant *A. baumannii* (MDR-AB) pneumonia and 11 patients had carbapenem-susceptible *A. baumannii* (CSAB) pneumonia. The age, APACHE-2 score and SOFA score at VAP episode and CPIS were 65.8±15.9, 19.2±7.4, 8.0±2.4 and 5.6±1.6. There were no differences in the patient's characteristics between the two groups. Clinical responses were observed in 52% in MDR-AB pneumonia and 63.6% in CSAB pneumonia ($p=0.076$). The adequacy of antimicrobials in CSAB pneumonia was higher than MDR-AB pneumonia (90.9% vs 40%, $p=0.003$). There was not significant difference of 28-day mortality in CSAB and MDR-AB pneumonia (27.3% vs 44%, $p=0.5$). The 28-day mortality of 24 MDR-AB pneumonia who had clinical failure (75%) was significantly higher than 26 patients who had clinical response (15.4%, $p=0.00$). The monotherapy and combination regimen including Colistin were more effective in the treatment of MDR-AB pneumonia. Clinical response with Colistin and without Colistin were 53.8% and 29.2% ($p=0.077$) respectively. 35 patients who received either Colistin or Carbapenem had 73.2% clinical response. The regimens including rifampicin or ampicillin/sulbactam were not effective in MDR-AB pneumonia. **Conclusions:** CSAB pneumonia could easily be treatment compared to MDR-AB, but there was no significant difference of 28-day mortality in two groups. The mortality of patients who had clinical failure was higher and regimen including Colistin was more effective than other antimicrobials. Empirical need regimen including Colistin in the treatment of MDR-AB pneumonia may be considered in the ICU.

Clinical course and predictive factors for complication of inferior vena cava filters

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Background: There are various complications related to the use of inferior vena cava (IVC) filters. We aimed to elucidate the clinical course and predictive factors for complications of IVC filter, especially penetration around IVC. **Methods:** A retrospective observational study was performed in 45 adult patients with IVC filters and available images of follow-up computed tomography (CT), between January 2003 and December 2012. Primary outcomes were the prevalence of IVC penetration and predictive factors for the complication. Secondary outcome was other complications of IVC filters including aorta penetration, vertebral body erosion, migration, strut fracture, and tilting of filters as well as IVC thrombosis. **Results:** IVC penetration following filter placement occurred in 87.6% of patients, and significant penetration was in 57.8% of them. Embedding of filter tips, suggestive of lateral tilting, was observed in 51.1%. Vertebral body erosions and aorta penetrations were in 4.4%, but symptomatic event due to the complications was not found. The patients with significant IVC penetration showed significantly lower body mass index, longer indwelling time of IVC filter, and shorter IVC diameter. Longer indwelling time was significantly associated with higher grade of IVC penetration, and the risk of significant IVC penetration increased in patients with indwelling time of IVC filter more than 20 days (aOR 60.6, 95% CI 4.4-835.5) and IVC diameter less than 24.2 mm (aOR 6.4, 95% CI 1.3-31.5). **Conclusions:** In patients with IVC filter, IVC penetration on CT was very common, and significant IVC penetration was associated with longer indwelling time of IVC filter and shorter IVC diameter.