Healthcare-associated meningitis

Among hospital-associated infections, healthcare-associated central nervous system infections are quite important because of high morbidity and mortality rates. The causative agents of healthcare-associated meningitis differ according to the status of immune systems and underlying diseases. The most frequent agents are Gram-negative bacilli (Pseudomonas spp., Acinetobacter spp., Escherichia coli and Klebsiella pneumoniae) and Gram-positive cocci (Staphylococcus aureus and coagulase-negative staphylococci). There are currently several problems in the treatment strategies of healthcare-associated meningitis due to a globally increasing resistance problem. Strategies targeting multidrug-resistant pathogens are especially limited [1].

Case series

2016

Srihawan et al performed a retrospective study of adults and children with the diagnosis of healthcare associated meningitis or ventriculitis, as defined by the 2015 Centers of Disease Control and Prevention case definition, at 2 large tertiary care hospitals in Houston, Texas from July 2003 to November 2014. Patients were identified by infection control practitioners and by screening cerebrospinal fluid samples sent to the central laboratory. We collected data on demographics, clinical presentations, laboratory results, imaging studies, treatments, and outcomes. Results. A total of 215 patients were included (166 adults and 49 children). A positive cerebrospinal fluid culture was seen in 106 (49%) patients, with the majority of the etiologies being Staphylococcus and Gram-negative rods. An adverse clinical outcome was seen in 167 patients (77.7%) and was defined as death in 20 patients (9.3%), persistent vegetative state in 31 patients (14.4%), severe disability in 77 patients (35.8%), or moderate disability in 39 patients (18.1%). On logistic regression analysis, age >45 years (adjusted odds ratio [OR], 6.47; 95% confidence interval [CI], 2.31-18.11; P ≤ .001), abnormal neurological exam (adjusted OR, 3.04; 95% CI, 1.27-7.29; P = .013), and mechanical ventilation (adjusted OR, 5.34; 95% CI, 1.51-18.92; P = .01) were associated with an adverse outcome. Conclusions. Healthcare-associated meningitis or ventriculitis is associated with significant morbidity and mortality [2].

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2)
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