E012

2-hour Educational Workshop

Management of severe sepsis and septic shock anno 2015

Severe sepsis management issues in special hosts

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Traditionally the definition of special hosts comprises immunocompromised patients. In them management comprises the general principles of management of severe sepsis. The mainstay of treatment is the early start of fluids and antimicrobials i.e. less than one hour from signs of sepsis following sampling for blood cultures. However for immunocompromised patients the choice of empirically started antimicrobials may vary compared to the non-immunocompromised hosts. More precisely, selected antimicrobials should cover both *Pseudomonas aeruginosa* and *Acinetobacter baumannii* and methicillin-resistant *Staphylococcus aureus* as well. The choice of antimicrobials relies on the history of recent exposure to hospital environment and/or antimicrobials and on the resistance surveillance of the hospital in case of hospital-acquired sepsis. The length of treatment should be 14 days. Another major question in these patients is the need for empirical antifungal treatment mainly echinocandins. The question arises particularly for patients who develop hospital-acquired sepsis. In this case, a positive titre for biomarkers like 1,3, β-glucan and mannan or a low concentration of procalcitonin may assist decision making. For the rare occasion of patients with congenital hypoglobulinemias (e.g. common variable immunodeficiency) daily immunoglobulin replacement is required for five consecutive days. However, it should be underscored that the complexity of the sepsis entity allows consider specific patient settings as special hosts. In these patients onset of immunomodulatory therapy within the first six hours from start of sepsis signs may be of major benefit. This applies mainly for the use of macrolides in patients with lower respiratory tract infections. Current guidelines suggest the addition of a macrolide to empiric beta-lactam treatment for patients with community-acquired pneumonia and septic shock. Furthermore, two randomized clinical trials of our group have disclosed considerable decrease of the risk of death in patients with septic shock and multiple organ dysfunction with the intravenous administration of clarithromycin. Clarithromycin shall be administered at a dose of 1g daily one-hour continuous infusion through a central catheter for four consecutive days.