

O202

Oral Session

Bacterial pediatric infections

POSTOPERATIVE MEDIASTITIS: EXPERIENCE OF A SINGLE PEDIATRIC CENTER OF CARDIAC SURGERY

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Objective: Mediastinitis is a rare but significant source of poststernotomy morbidity and mortality both in adult and pediatric patients. Here we describe the clinical and microbiological features and the therapeutic strategies in a cohort of patients admitted to a single pediatric center of cardiac surgery, with a diagnosis of postsurgical mediastinitis

Methods: we conducted a retrospective study of patients referred to our cardiac surgery centre with postoperative mediastinitis diagnosis, between May 2012 and May 2013. For each patient we collect data about: demographics, cardiologic diagnosis, surgical procedures, time between surgery and symptoms onset, medical and surgical treatment of mediastinitis

Results. We identified 19 patients. The median age was 1 year (range: 14 days - 25 years), 16 males and 3 females. All patients had congenital heart disease. The main risk factors for mediastinitis development in our cohort were: male gender (84.2%), age under one year old (52.6 %), underlying syndromic disease (21%), extracorporeal circulation time > 105 minutes (52.6 %). The median latency between surgery and clinical symptoms onset (fever and / or wound dehiscence) was 7 days (range: 2 days -73 days). Systemic antibiotic therapy was initiated in all patients, excepted two, within 48 hours from the symptoms onset. Surgical mediastinal revision was performed in all patients. It consisted in sternum reopening, removing of metallic stitch, collection evacuation (sending samples for microbiologic analysis) and placement of drainages . The mean latency from symptoms onset and surgical revision was 5 days (range: 0-14 days). Gram-positive bacteria were involved in 57.9% of patients, Gram-negative bacteria in 15.8%, Candida in 10.5%. Polymicrobial infections were documented in 15.8% cases. In the context of Gram-positive pathogens, we isolated: Staphylococcus Aureus in 46.6% of cases (50% oxacillin – resistant); Coagulase-negative Staphylococci in 46.6% of cases (86% oxacillin - resistant); anaerobes in 6.6% of cases. Within the Gram-negative bacterias we did not isolated ESBL strains. The 52.6% of patients had at least one positive blood culture. All patients were treated with combined antibiotic therapy, for a median of 28 days (range 20-63 days). There were no recurrences or deaths attributable to the infectious disease.

Conclusions: mediastinitis is an important complication in pediatric patients undergoing cardiac surgery. In these patients, early diagnosis and timely approach with medical and surgical combined treatment can minimize morbidity and mortality.