Abstract: P1802

**Management and outcomes of infective endocarditis in adults with congenital heart disease**

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**Topic(s):**
Adult Congenital Heart Disease, Clinical

**Citation:**
Background: Causes, epidemiology and microbiology of infective endocarditis (IE) have evolved in recent decades. Although novel tools for the diagnosis and therapeutic strategies have emerged, mortality and morbidity remain high. These trends may particularly concern the growing population of adults with congenital heart disease (CHD) who are at increased risk for IE.

Purpose: We aimed to characterize IE in CHD patients and describe management and outcome in this setting. We also sought to determine the risk factors associated with in-hospital death in CHD patients.

Methods: From January 2000 to June 2018, 666 consecutive episodes of IE in adults were recorded in our center. Among them, 143 concerned CHD, including 5 implantable cardiac electronic devices-lead infections, all managed by an IE team including CHD specialists. Cases were classified according to modified Duke criteria.

Results: CHD patients were significantly younger (37 years IQR [26-52]), with a more common history of cardiac reoperations (numbers of sternotomies=2 in 35.7%) and infective endocarditis (19.7%, p<0.01) compared to non-CHD patients. There were more infections of valve-containing prosthetics (44% vs. 30%, p<0.04), and the right heart side (41.5%, p<0.01) in CHD patients. Forty-nine percent of them had a simple CHD, 12.7% a moderate, and 36.4% a complex. A predisposing event could be identified in only 34% of cases. Oral streptococci/Streptococci bovis and Staphylococcus aureus were the most frequently microorganisms isolated (32.4% and 20.4%, respectively). Surgery was performed in 90 episodes (62%), and was selected in emergency (<24h) in 61% (figure 1). In-hospital mortality was 12.7% and was directly related to IE in 10/18 cases. CHD patients had a significant lower risk of death compared to non-CHD patients (OR=0.47, p=0.026, p<0.01), even after adjustment for age, and the infected heart side. On multivariate analysis the complexity of CHD (if simple CHD: OR=0.07 IQR [0.01 to 0.44], p<0.01) and the white blood cell count (OR=1.18 IQR [1.04 to 1.33], p=0.01) were the strongest predictive factors of in-hospital death in the CHD group.

Conclusions: Mortality associated with IE in CHD patients is lower than in acquired heart disease. The multidisciplinary approach by IE team and CHD specialists may have improved management and outcome in this setting. However, risk for death remains high in complex lesions. Larger prospective studies on IE in adults with CHD are needed to develop guidelines in these complex patients.
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