

O500

Abstract (oral session)

Prognosis factors in cardiac device-related infective endocarditis

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Objective: The increasing use of permanent pacemakers (PM), and implantable cardioverter defibrillators (ICD), has been followed by a sharp increase in Cardiac Device-Related Infective Endocarditis (CDIE). We aimed to characterize CDIE profile, temporal trends, and prognosis. **Methods:** CDIE diagnosed at Rennes University Hospital - a 1,435 bed tertiary care center -during years 2000-2008, were identified through computerized database system and validated by two experts. Patients were included if they presented all of the followings: i) clinical signs of infection (local, or sepsis); ii) microbiological documentation through blood and/or lead cultures; iii) lead or valvular vegetation detected by echocardiography. Data were retrospectively extracted from medical charts. Prognostic factors were searched for using multivariate Cox proportional hazard models. To analyse temporal trends, data were compared with data from the previous study performed in our institution (1992-1999), using similar inclusion criteria and methods. **Results:** Sixty-six men and 20 women were included, with a median age of 74.5 years (IQR, 66-80). Cardiac devices were implanted because of atrioventricular block (n=45), and nodal disease (n=27), and included 83 PMs, and 3 ICD. Median delay between last intervention on cardiac device and CDIE diagnosis was 580 days (IQR, 174-1606). Most patients presented with fever (n=68, 79%), positive blood cultures (n=66, 77%), and fulfilled Duke criteria for definite IE (n=85, 99%). Most frequent pathogens were coagulase-negative staphylococci (CNS) (n=39, 46%), *Staphylococcus aureus* (n=22, 26%), other gram-positive cocci (n=11, 13%), and gram-negative rods (n=8, 9%). Percutaneous extraction of devices was attempted in 79 cases (94%) and successful (total extraction) in 58 cases (73%). Fifteen deaths (17%) were attributable to CDIE. Factors independently associated with one year-mortality were chronic obstructive pulmonary disease (aOR 1.23 [1.33-9.85], P=0.01), and non-CNS CDIE (aOR 1.65 [1.50-18.22], P=0.009). As compared to 1992-1999, pathogens and outcome were not different during years 2000-2008, but patients were older (P=0.01), and had more underlying cardiac diseases (P<0.001). **Conclusion:** Microbiology and outcome of CDIE have not significantly changed since the 1990's. For the first time, a significant impact of microbiology patterns is demonstrated, with greater survival for CNS CDIE as compared to other pathogens.