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Infective endocarditis complicating permanent pacemaker and implantable cardioverter-defibrillator infection.

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OBJECTIVE: To describe management of patients with permanent pacemaker (PPM)- and implantable cardioverter-defibrillator (ICD)-related endocarditis. PATIENTS AND METHODS: We retrospectively reviewed all cases of infection involving PPMs and ICDs among patients presenting to Mayo Clinic's site in Rochester, MN, between January 1, 1991, and December 31, 2003. Cardiac device-related infective endocarditis (CDIE) was defined as the presence of both vegetation on a device lead or valve and clinical or microbiological evidence of CDIE. Of 189 patients with PPM or ICD infection who were admitted during the study period, 44 met the case definition for CDIE (33 PPM, 11 ICD). RESULTS: The mean +/- SD age of patients was 67 +/- 14 years. Staphylococci (36 [82%]) were the most commonly isolated pathogens. Nearly all patients (43 [98%]) were treated with a combined approach of complete hardware removal and parenteral antibiotics. The median duration of antibiotic treatment after infected device explantation was 28 days (interquartile range, 19-42 days). Device leads were removed percutaneously in 34 cases (77%); only 7 cases (16%) required surgical lead extraction. Percutaneous extraction was uncomplicated in 15 patients with lead vegetation greater than 10 mm in diameter. Six patients (14%) died during hospitalization. Twenty-seven (96%) of 28 patients remained infection free at their last visit (median follow-up, 183 days; intraquartile range, 36-628 days). CONCLUSION: Prompt hardware removal and prolonged parenteral antibiotic administration decrease mortality among patients with CDIE. The presence of a large (> 10 mm in diameter) vegetation on a lead is not a contraindication for percutaneous lead extraction.

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