

Management and Outcome of Permanent Pacemaker and Implantable Cardioverter Defibrillator Infections

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Objectives –Our center is a referral center with expertise in extractions and a uniform protocol for infection management. We reviewed our recent experience with device infections.

Methods – Retrospective review of a prospectively collected database of extractions since 2004

Results –Complete data were available for 76/82 pts. 62/76 were referrals from 20 hospitals. Extracted systems included 31 PPM, 31 ICD, 11 CRTP/CRTD and 3 abandoned leads. Manifestations included pocket infection in 49 (74%), 7 (14%) of which with bacteremia, and endocarditis in 27 (36%). Pathogens were Staphylococcus aureus (21%) Coagulase- (16%), Gram - (13%), other gram (+), MOTT and Candida (7%), cultures negative in 43%

72 (95%) underwent complete system removal (57/58 atrial 72/75 ventricular and 11/11 LV leads). 17 (22%) needed postoperative temporary pacing. A new device was implanted in 36 pts (48%). In 33 (43%) of cases no new implantation was performed until discharge (16) or transfer back to the referring hospital (17). There were no procedure-related mortalities. 30d mortality was 5% (4 pts) (2 - intractable sepsis, 1-CVA 1-CHF). 3 pts (4%) died later during follow up from intractable CHF. There were no cases of recurrent infection on newly implanted systems.

Conclusions: Device infection is a severe potentially lethal disease involving a very sick patient population. Despite successful complication-free system removal and systematic approach to infection management some patients succumb later due to intractable infection and comorbidities. It is conceivable that earlier referral could have resulted in better outcome. In many pts device re-implantation can be deferred to enable complete resolution of the infection.