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Negative Pressure Dressings in Promoting Prompt Wound Healing in Infected Pacemaker-ICD Pockets

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Over a four year period, we have performed laser lead extraction of dysfunctional (21 patients) or infected (22 patients) pacemaker leads in 42 patients. Males predominated with 29 and females 14. Average age was 69 yrs (34-92). Ten infected patients were septic. Seventeen cases required laser lead extraction (Spectranetics, Colorado Springs, Colo). A "wound vac" (KCI, San Antonio, Texas) was placed in 14 infected device pockets. All extractions were done with cardiopulmonary bypass standby by a team of cardiac surgeon and EP specialists.

Results – Complications occurred in 11 pts (50%) of the infected group. These included DVT (upper extremity) in four, persistent sepsis in three, UTI, atrial fibrillation with RVR, pneumonia with ARDS and bleeding requiring transfusion all in one patient each. There were no intraoperative complication. Death within thirty days occurred in three patients (7%) of the total. All of the deaths were in the infected group and were sepsis related. Fourteen patients were pacemaker dependent, but only two of the infected patients. Non infected patients were reimplanted immediately. In the infected group 68 days elapsed between explants and reimplant. The wound vac was placed in fourteen of the infected patients within 24-72 hours and was present for an average of 21 days. Those patients with wound vacs had a device reimplanted within an average of 31 days while the non-wound vac group waited 170 days to re-implant. No infected patient, reimplanted, developed a secondary infection. Most of the patients had multiple co-morbidities. Five of the seven dialysis patients were in the infected group.

Comment – We have safely removed infected pacer-ICD systems with the laser lead extraction system and promoted quicker pocket wound healing by using active negative pressure wound drainage. This has resulted in quicker re-implantation without re-infection.