Wound Care Management: Infected Implantation Permanent Pacemaker Devices

RUBIYANTO WARJA  
DONI YOGO  
YOGA YUNIADI  
SUNU BUDI RAHARJO  
DICKY ARMEIN HANAFY

Introduction: The benefit of cardiac pacemaker is unquestionable, but it also comes with several complications. One of the most undesirable complications is infection. The incidence of implantable cardiac devices is around 1.7% in 6 months with mortality rate ranging from 5%-15 percent. Wound care after debridement of infected cardiac devices needs special attention. Otherwise infected wound would prolong patient's hospitalization and increase the risk of systemic infection. Maintaining a moist environment is a good method in dealing with wound that has a breakdown in skin integrity.

Methods: Here in, we present a case of 59 year-old male with history of dual chamber pacemaker implantation 5 month prior admission. He came to the emergency department with complain of a tenderness around the implantation site. A hole was noticed on the prior stitched scar on the skin. He undergone debridement soon afterwards. All necrotic tissues and pus was cleaned and a numerous saline flush was applied to the wound. Wound was closed partially and a drain was left. After debridement, wound care was done using acticoat silver dressing. Dressing was changed every 3 to 4 days, and systemic ampicillin/sulbactam was given intravenously in 10 consecutive days. After 25 days, the wound was healed.

Result: The wound care management with moist concept could be done to minimize wound healing process. TIME concept (Tissue management, Infection and inflammation control, Moisture balance, and Epithelial edge) could be used in dealing with infected pacemaker wound. Tissue management with debridement should removes all non-viable tissues and all parts of the device, because the device is considered as the source of infection. Infection and inflammation should be controlled using antimicrobial topical dressing, such as silver acticoat. Transparent film dressing could be applied over the wound to reduce inflammation. A balanced moisture should be kept over the wound using allevyn hydrofoam and calcium alginate dressing to absorb fluids or exudates. Keeping a moist environment also prevent maceration at epithelial edge on the skin barrier. A systemic antibiotic for positive and negative grams should also be used.

Conclusion: Wound Care Management using TIME concepts could be used in managing patients with infected cardiac implantable devices. By promoting faster healing process, complications like systemic infection and wound dehiscence could be avoided.