Use of CobanTM (3M) Self Adherent Dressing Eliminates Pressure Dressing Related Blisters and Skin Denudation in post Cardiovascular Implantable Electronic Device (CIED) implant patients.

Lee Wah Lai
Lydia Binti Zainal Abidin
Swee Chong Seow
Toon Wei Lim
Devinder Singh
Pipin Kojodjojo
Wee Tiong Yeo

Introduction: An adhesive pressure dressing is applied post implantation of CIED to limit bleeding and hematoma formation at the implantation site at our centre. However, skin complications such as blistering and denudation commonly occur due to the adhesive nature of the pressure dressing. This causes pain and discomfort to the patient and it potentially increases the risk of infection. CobanTM (3M) is a self-adherent dressing which does not adhere to the skin. We investigated the use of this dressing to eliminate pressure dressing related blisters and denudation in these patients.

Methods: Routinely, the pressure dressing is applied immediately post CIED implant and the wound is reviewed on the first post procedure day by our arrhythmia management nurses. For this study, patients with latex allergies and those with Reveal LinqTM (Medtronic) loop recorder implants were excluded. From January 2016 to April 2016, the baseline blistering, skin denudation and hematoma rates from the existing adhesive pressure dressing on all our CIED implant patients was obtained. This formed the comparator group. CobanTM(3M) dressing was introduced in place of the adhesive dressing on all our CIED implant patients from May 2016 till December 2016. The primary endpoint was a reduction in the percentage of patients with pressure dressing related skin blister and denudation. The secondary endpoint was efficacy of the dressing which was assessed by comparing the percentage of patients with hematoma in the 2 groups. Continuous variables were expressed as means and student T-test was applied to assess for statistical difference. The Chi-squared test was applied for categorical variables.

Result: There were 79 patients in the adhesive dressing group and 155 patients in the CobanTM(3M) group. The patient profile in these 2 groups were similar in terms of age and gender distribution, type of implant, concurrent antiplatelet and anticoagulation therapy. The baseline blistering and denudation rate with the adhesive pressure dressing was 30.4%. CobanTM(3M) Dressing met the primary endpoint with no pressure dressing related blistering and denudation (p< 0.0001). CobanTM(3M) Dressing was superior in the secondary endpoint with a lower incidence of hematoma compared to the adhesive dressing group (19.0% vs 7.1% p=0.006). We postulate that the superiority of CobanTM(3M) dressing was related to its non-adhesive nature as well as the bandaging technique which distributed the skin tension evenly over a larger surface area.

Conclusion: CobanTM(3M) Dressing was effective in eliminating pressure bandage related skin blisters and denudation. In addition, it was associated with a lower incidence of hematoma compared to
the adhesive pressure dressing.