



Investigate the Efficacy of Wound Dressing Management Techniques in Preventing Pressure Injury in Pediatric Heart Surgery in the OR

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Background

In the perioperative environment, 12%-66% surgical patients occur with pressure injury. Pediatrics' heart surgery time is long and children's skin is thinner, so it's easy to cause skin scratch and pressure injury by the extrusion and friction. At present, based on the surgical position, nurses use the decompression tools (such as foam and silicon pad, etc.) at the apophysis to prevent pressure injury. However, even after the clinical use of silicon material decompression tools, pressure injuries may still occur. Hence the cotton rolls are applied to cover up the apophysis to increase the surface softness of the decompression tool in order to reduce the pressure on the epidermis.

Methods

This study aimed to explore the effectiveness of wound dressing for the prevention of skin pressure damage during heart surgery in pediatrics in the operating room. A quasi-experimental design was adopted. Participants were randomly assigned to the control group (general nursing care group) and the experimental group (general nursing care combined wound dressing disposal). Data analysis used SAS 9.4 for descriptive statistics and related analysis to compare the difference of category variants and continuous variables between the experimental group and the control group.

Results

Ninety-nine pediatric heart surgery patients participated in this project. Their average age were 8 months. The average BMI was 15.34; hemoglobin and albumin were 14.32gm/dl and 4.28g/L. There was no significant difference in demographic variables and nutritional status results between the two groups ($p > .05$). There were four patients (control group 3, experimental group 1) with pressure injuries, the average surgery time was 9.6 hours, which was higher than the non-stressed injuries. The pressure injury levels mostly were grade I and II. The highest rate of pressure injury occurred on the ankles, then the sacrum, phalanx of foot and scapula. But the results did not show significance between the two groups.

Conclusions

Based on the statistical results, no significant results confirmed that the use of wound dressing, compared with the existing protective care measures, can be more effective in reducing the pressure injury in pediatrics' heart surgery. It is worth recognition that the nurses can apply wound dressings and decompression tools correctly to avoid pressure injury in patients.

