

New Approaches in Prevention and Management of Pressure Ulcer in Cardiac Patients

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ABSTRACT

Background: Pressure ulcers are a significant problem for patients and health care providers worldwide. cardiac especially post cardiac operative patients, because of having more risk factors than other patients, are at extremely high risk of pressure ulcers. Using a standard risk assessment tool and paying attention to the main risk factors of pressure ulcer and updating knowledge and practice in prevention and management can be a useful method for identifying the high-risk patients in admission in order to prevent them from developing such ulcers. Interdisciplinary Pressure Ulcer Prevention team can identify high risk patients and control or manage them correctly.

Material and Methods: Pressure Ulcer (PU) is defined as an area of localized destruction to the skin and underlying tissue caused by unrelieved pressure for longer periods than soft tissue can tolerate, shear, friction, moisture or a combination of these factors during the patient's hospital stay. Exposure of the tissues to prolonged pressure in excess of capillary pressure inhibits circulation and limits normal exchange of oxygen and other substances, thus resulting in cellular metabolism disruption and ultimately tissue destruction. PUs develop on bony prominences of the body such as the ear, heels, elbows, back of head, sacrum, shoulder, and/or the spine and they can range from mild minor skin reddening to severe deep craters down to muscle and bone. Due to its significant impact on patient outcomes and the cost associated with its treatment, the Agency for Healthcare Research and Quality (AHRQ) has listed stage III and IV HAPU as a 'never event.' Cardiac patients may be at particularly high risk for PU (bed sore and device related pressure ulcer) development. Although the precise mechanisms that led to this increased prevalence are not entirely understood, underlying vessel disease, poor ventricular function, and heart failure are known to diminish the cardiovascular system's ability to react to pressure. In addition, hemodynamic instability and coexisting comorbid conditions, probably contribute to increased risk levels in the cardiac population. Additionally, age, diabetes, and hypertension are contributing factors in these patients. Cardiac surgery patients become extremely susceptible to pressure ulcers, and need to more attentions. Risk Factors in Cardiac OR include length of time on the operating table, Type of Cardiac surgery, Type of operation(On or Off Pump) , Time in anesthesia, Time in surgery, use of Vasopressors,

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Hypothermia (duration). Risk Factors in Cardiac ICU include Low BP in ICU admission, use of Vasopressors, Sedatives and Narcotics , MV, IABP, Restraint, and low score of GCS. Using a standard risk assessment tool and paying attention to the main risk factors of pressure ulcer and updating knowledge and practice in prevention and management can be a useful method for identifying the high-risk patients in admission in order to prevent them from developing such ulcers. Pressure ulcer prevention is a nursing practice priority across all care settings. Although the prevention of pressure ulcers is a multidisciplinary responsibility, nurses play a major role. High PUs prevalence rates have been linked to poor or inappropriate knowledge and education. Researches showed that the incidence of Stage I and Stage II PUs decreased following nurses attending an educational session on skin assessment and the subsequent implementation of prevention protocols.

Risk Assessment, Comprehensive Skin Assessment, Minimize pressure friction and shearing, Manage incontinence / moisture, Skin Care and Microclimate Control, Pressure Redistribution or Mechanical Off-loading, Support Surfaces, Manage of nutrition and hydration needs, Assessment and management of pain, Provide patient and family members education are essentials of prevention and management of Pressure Ulcers, and must be Implemented in Hospitals, especially in CCUs and ICUs. Team (Skin Champions Team) approach to pressure ulcer prevention decreases rates of pressure ulcer. An innovative interdisciplinary Pressure Ulcer Prevention team establishes to identify high risk patients. The role of the skin champion manager is to provide expert knowledge, education, data collection and first-line peer consultation on pressure ulcers. The role of other team members is implementation of interventions on patients. education, competency, skills and validation necessary for skin champion members.

Conclusion: Pressure ulcer training and education is a fundamental component of pressure ulcer programmes which promote awareness of pressure ulcer prevention and best practice Best way to decrease development of pressure ulcer and their management if occurs, is establishment of pressure ulcer prevention and control team.

Keywords: Pressure Ulcer, Cardiac Patients, Risk Factors, Prevention, Team Approach