Short Commentary
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Why Assessment and Preventing Pressure Ulcers Related to Medical Devices in the Intensive Care Unit are Important?

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Abstract

Pressure ulcers related to medical devices (MDrPU) are defined as localized injuries caused by tissue compression and long-term pressure from medical devices.

Many studies reported incidence of MDrPU from 33%-44% after 5 days. In addition, medical devices cause pressure ulcers are various. Every patient in Intensive Care Unit (ICU) is at risk of injury due to medical devices. Therefore, assessment and preventing is important toward of incidence of MDrPU. The aim of this article is to clarify and explain incidence and prevalence of MDrPU and why assessment and preventing MDrPU are important.

Keywords: Pressure ulcers • MDrPU • Skin damage

Pressure Ulcers related to Medical Devices

Our study reported prevalence of MDrPU was 21.9% [1]. This study conducted in ICU in a hospital in Indonesia. We did observe a patient starting admission until 5 days by Braden Scale and NPUAP staging. There was no different with previous studies [2,3]. Unfortunately, most of patient pressure ulcers in our study was elderly. The quality of the skin in elderly had decreasing especially elasticity and circulation. Interestingly in our study that average length of use of medical devices until occurrence of a wound in our study was 3 days. Medical devices can prompt injury because the device that is attached to the patient persists for more than one day and is regularly given a support device such as a plaster so it does not easily come off so that the device continues to press on the skin underneath. Skin that is stressed for a long time by a device that is installed during treatment at the hospital will risk causing injury. In addition, increasing in body temperature also influencing the occurrence of pressure ulcers. Increasing of body temperature alone will not cause skin damage, however will also cause damage to blood flow and restriction of lymphatic circulation [4]. In addition, reducing of elasticity cause intolerant of friction and movement force so that will easily experience skin damage.

To predict of pressure ulcer is important. The Braden scale has already known and used various setting to assess and predict pressure ulcers. Interestingly, in our study the prediction value of the Braden Scale for the risk of pressure ulcers due to medical devices is high (74%) with a specificity and sensitivity value respectively (56% and 92%). To the best of our knowledge, this is first study using Braden Scale to predict the risk of pressure ulcers due to medical devices in ICU. However, is needed research in future with large sample.

Conclusion

Prevalence of pressure ulcer due to medical devices in ICU is high. Various medical devices can cause pressure ulcer. Assessment and preventing is important to reduce the risk of pressure ulcers.

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