Introduction

The European Pressure Ulcer Advisory Panel (EPUAP) defines a pressure ulcer as a localised injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure, or pressure in combination with shear. This leads to tissue hypoxia and tissue death if the pressure is not relieved. The extent of the injury does not necessarily relate to the time pertaining to the unrelieved pressure, as tissue on the nose, knees and elbows is very thin and can result in the development of a stage 3 pressure ulcer in a short time. Instead, the degree of the injury relates to the cellular metabolic consequences of hypoxic tissue, reactive oxygen metabolites and ischaemia reperfusion changes that occur when pooled blood, relating to the pressure, flushes the area with toxic metabolites.

Why the increased focus on pressure ulcers?

The incidence or prevalence of pressure ulcers in many developed countries are used as indicators of the quality of care rendered by healthcare institutions. Hospital-acquired pressure ulcers (HAPUs) are no longer paid for by the Medicare government health subsidies scheme in the USA. This precedent is likely to be followed by other medical funders across the globe, especially as the development of HAPUs is considered to reflect neglect. Statistics on the prevalence of HAPUs in South Africa are unavailable, but internationally, the 2013 figure was 10-22% of all inpatients.

Risk factors

As with all aspects relating to patient care, many risk factors are present, and these can be classified as extrinsic or intrinsic to the patient. Extrinsic risks relate to the environment outside of the patient. These include the actual care rendered by the team of healthcare professionals, such as mobilising the patient or not relieving the pressure adequately. Shearing of the skin with patient movement or lack of movement while in bed also increases the risk profile of the patient. Intrinsic factors are internal factors that relate to the patient and which influence the patient’s tissue and his or her recovery directly, such as malnutrition, impaired circulation or perfusion, impaired sensation, and incontinence and age. In the new clinical guidelines, the EPUAP indicates that increased skin moisture and body temperature, as well as general health status, should also be considered as factors that could potentially increase a patient's risk profile. As already discussed, the risk of damage increases with the duration and degree of pressure that is applied to the tissue, but factors such as reperfusion injury, and cell and tissue deformation, have been added to the pressure injury pathophysiology more recently.

The way forward

Risk assessment

A variety of assessment tools are available in both original and adapted formats. The Norton, Braden and Waterlow scales are commonly used examples of such tools. There are advantages and disadvantages with respect to all risk assessment programmes, tools or scales, and caution must be applied in not relying solely on such aids. The assessment tools selected for use need to be appropriate to the population and understood by the user to increase their validity. Additional risks should always be considered and the use of clinical judgement is essential during the patient assessment process. Thus, risk assessment and the correct use and interpretation of the selected tool should be taught to the healthcare professionals who will be expected to use it. The clinical practice guideline on the prevention and treatment of pressure ulcers, as recently updated by EPUAP, the National Pressure Ulcer Advisory Panel and the Pan Pacific Pressure Injury Alliance, promulgates the use of a skin

Abstract

Pressure ulcers or bedsores, as referred to previously, have been a burden of care for many years. Healthcare practitioners, care providers, and many other role players in the care circle of the patient have voiced concerns about the prevalence of pressure ulcers, and the assumed lack of guidelines on how to manage them, as well as how to identify patients at risk, in order to prevent their development. This brief highlights some aspects relating to good clinical practice, proactive pressure prevention and the management or care of patients and pressure ulcers.
assessment policy that clearly stipulates that a comprehensive skin assessment needs to be conducted within eight hours of admission.\textsuperscript{3} It is also strongly advised that patient assessment is regularly revised, and that the assessment results should accordingly lead to an adjustment in the planned care and/or the prevention of pressure ulcers in the patient. Proof of clinical judgement and care adjustment aligned to the patient’s condition will help to further validate that the pressure ulcer risk assessment tool is being used and interpreted correctly, and is not yet another healthcare document completed by the person least qualified to do so.

**Prevention and management strategies**

Once a comprehensive assessment has been performed, the findings need to be translated into an individualised plan of care for the specific patient. Some of the present intrinsic risk factors, such as impaired perfusion or circulation, might need medical intervention. The management of the patient’s nutritional status or increased patient mobility or activity could involve multiprofessional team members, such as a dietitian and physiotherapist. Nursing activities include preventative measures, such as regular position changes, monitoring of the patient’s general health status, daily skin assessments being conducted, and ensuring that adequate hygiene practices are being followed. The protection of skin integrity is considered to be a high priority, and healthcare professionals should take cognisance of their handling techniques, so as not to increase the patient’s risk of injury.\textsuperscript{1,5,6} It is strongly recommended that the area that has already been compromised is not massaged as massage exacerbates the fragility of the underlying tissue.\textsuperscript{1} Other recommendations include avoiding the use of non-prescribed creams as they can cause further damage to the skin.\textsuperscript{1} The use of support surfaces and pressure redistribution devices can aid in decreasing the pressure risks, but should be based on the individual’s needs, as well as compatible with the care setting. The manufacturer’s recommendations should always be followed with respect to mattress surfaces and the use of other devices.\textsuperscript{1,7,8} Healthcare professionals need to further ensure that devices in use do not escalate the patient’s risk profile by creating chaffing or decreased circulation.

The use of prophylactic dressings is another strategy that can be used to prevent pressure ulcer development. The clinical practice guideline stress the importance of selecting a dressing that is appropriate to the individual and clinical usage. The dressing needs to have ease of application and removal, aid in regular assessment of the skin, manage the microclimate and should fit well anatomically.\textsuperscript{5,7} Hydrocolloids help to prevent shearing and friction although they do not relieve pressure, but the use of a polyurethane hydrocellular dressing (foam) on areas of bony prominence is advised as such a dressing is designed to aid in redistributing pressure on that area.\textsuperscript{5}

Unit-based quality assurance projects that identify the efficacy of preventative measures have been found to be particularly helpful, not only in increasing general awareness of pressure ulcers, but also in reinforcing individual accountability with regard to preventing pressure ulcers.\textsuperscript{5} The implementation of educational programmes that are structured, organised, comprehensive and directed at all healthcare provider levels is considered to be a vital aspect in combating a high prevalence of pressure ulcers.\textsuperscript{8}

**Pressure ulcer classification and wound management**

A pressure ulcer classification system should be used to describe the extent of the skin and tissue damage. It is important to differentiate between pressure ulcers and other wounds, as effective treatment of any wound starts with understanding its aetiology. Many classification systems or grading scales are available, but it is strongly advised that the international EPUAP pressure ulcer classification system is used as it is user friendly, clearly describes the tissue loss and depth of injury, and can be used by healthcare professionals across various disciplines around the globe.\textsuperscript{1} Once a pressure ulcer is present, the appropriate use of wound care principles and assessment techniques need to be applied. Uniform, consistent measuring methods are strongly advised in helping to assess the efficacy of planned wound care. The use of baseline and serial photographs to monitor healing over a prolonged period is another aspect that can be included in wound care management.\textsuperscript{8} Re-evaluation of the planned interventions, the use of clinical judgement, and monitoring the patient’s response to the treatment regimen, are also deemed to be important aspects in the comprehensive care of the patient and the pressure ulcer.

**Conclusion**

Pressure ulcers are well known to healthcare professionals. They are not exclusive to a particular country, continent, population or income group. Pressure ulcers are pressure related, and are considered to be preventable in most, if not all, cases. In order to reduce the high prevalence of pressure ulcers, increased communication and educational strategies need to be implemented worldwide. This will lessen the burden of healthcare costs with respect to the patient, as well as improve patient care outcome; the ethical responsibility of all healthcare professionals. Joining in the annual international “Stop pressure ulcers” campaign would be a positive step towards eradicating pressure ulcers.

**References**