Articles of Interest
Literature Review

Reviewers

Dr. Shane Inlow reviews an article on the lack of a universal classification system for diabetic foot ulcers.

Dr. David Keast reviews an article on wound measurement.

Validation of Wagner's Classification: A Literature Review

Author: Smith RG

Publication: *Ostomy/Wound Management.* 2003;49(1):54-62

Reviewer: Shane Inlow, MD

One of the biggest problems in wound care is the lack of a universal classification system to share and compare outcomes with others in the area of diabetic foot ulcers. This is becoming more important with the 'globalization' of wound care. Increasingly, wound classification triggers clinical response as more and more standards of care are being employed.

The Wagner system is the widest classification system currently used, but is showing its 23-year-old age. The author discusses the 'clinimetric' properties of the Wagner system, which are readability, accuracy, reliability and validity. Many modified Wagner systems have cropped up in an attempt to correct such features as technical ambiguity and the presence of infective and vascular components at lower stages, but none have been validated or accepted on a large scale. This article goes into great detail on the pros and cons of the Wagner system, analyzing the clinimetrics very thoroughly.

The author discusses and provides tables for two new classification systems; the S(AD) SAD Classification and the University of Texas (UT), San Antonio Classification. In an attempt to predict outcomes, the S(AD) SAD details the ulcer by Size (Area / Depth), Sepsis, Arteriopathy and Denervation. Also motivated by the limitations of the Wagner system, Armstrong and Peters developed the UT system, based on clinical and laboratory data, which is able to help determine the risk of amputation of group vs. individual diabetic patients.

This article reviews the current use of classification systems, points out their features and leaves us hoping that one system will become the global 'language' for healthcare professionals to communicate their outcomes with one another on an international stage.

Wound Measurement: Can It Help Us to Monitor Progression to Healing?

Author: Flanagan M

Publication: *Journal of Wound Care.* 2003;12(5):189-194

Reviewer: David H. Keast, MSc, MD, FCFP

To determine whether ulcers are responding to treatment interventions, clinicians must regularly assess the wound for progress toward healing. Too often chart notes simply state: "wound looks better." The most common parameters evaluated include size (length, width and depth), wound edges, wound bed appearance, presence or absence of undermining, exudate and pain. Several tools to quantify ulcer assessment have been developed. These tools have varying degrees of validity, reliability and responsiveness to change[1]. How should wounds be measured and can these measurements predict clinical outcomes?

Flanagan conducted a systematic review of the literature to answer these questions. Her review reaches four main conclusions.

1. Wound surface areas are often estimated by using diameter product measurements, for example, length x width, assuming the wound to be rectangular. This approach is time-consuming and inaccurate, so does not facilitate clinical decision-making.

2. Planimetry (either mechanical or digital) is more accurate than square counting when determining area from acetate tracings of circumference.

3. Volumetric measurements are not precise and do not inform clinical practice.

4. Percentage reduction in true wound surface area is the best way of predicting healing rates. A 40 per cent reduction in wound surface area over the first two to three weeks of treatment is predictive of healing in 12 to 24 weeks.

Implications for Practice

Per cent reduction in wound surface area is the best predictor of healing. While acetate tracings with planimetry are the most accurate means of determining area, the ruler method of determining length and width, if consistently applied, is better than no measurements at all.

Reference

1. Woodbury MG, Houghton PE, Campbell KE, Keast DH. Pressure ulcer assessment instruments: a critical appraisal. *Ostomy/Wound Management.* 1999;45(5):42-55.