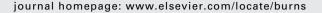


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Review

A guide to choosing a burn scar rating scale for clinical or research use

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ABSTRACT

Introduction: A lack of high quality burn scar rating scales underpins the urgent need to introduce a guide for clinicians and researchers to choose the most appropriate scale for their requirements.

Methods: An updated electronic search of Medline, CINAHL, and EMBASE databases from 2010 to 2011 of a previous published systematic review were used to identify English articles related to burn scar rating scales. The clinimetric properties, content, purpose, characteristics of the subjects tested and feasibility of each scale were critically reviewed.

Results: An additional seven papers were identified by the updated search, bringing the total number of papers reviewed to 36. The majority (88%) covered items pertaining to the physical properties of the skin rated by an observer. All of the scales had been tested for the purpose of discriminating between patient groups; however, only preliminary evidence exists for the ability of the scales to measure change in scar properties over time. The majority of testing of scales occurred using Caucasian subjects, males, upper limb sites and adults.

Conclusions: This paper provides a guide to selecting the most appropriate burn scar rating scale for research and clinical practice by reviewing the content, purpose, test sample characteristics and feasibility of each scale.

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1. Background

Scarring after a burn may lead to reduced body esteem [1], reduced quality of life [2–4], and symptoms such as itch and pain [5,6] which can impact on sleep and return to work for years after the injury has occurred [7]. Thus, the identification of successful interventions to effectively manage scarring after-burn is important for burn patients and the professionals treating them.

Many intervention studies have relied on a burn scar rating scale as the sole method to evaluate scarring [8–17]. However, the ability to evaluate the effectiveness of interventions is hampered by a lack of high quality scar rating scales, as found in a recent systematic review [18] which investigated the clinimetric properties of 18 burn scar rating scales. In that review by Tyack, a high quality rating could be given to only one component of the patient observer scar assessment scale (POSAS).

While systematic reviews of the quality of scales are useful for guiding researchers and clinicians, these reviews should be interpreted in the context of the studies included (i.e., characteristics of the participants, whether there is sufficient support for testing at a single point in time versus testing over

time) [19,20]. Recognition of the importance of these contexts can guide further testing and refinement of existing burn scar rating scales or the development and testing of new burn scar rating scales. To date, systematic reviews of burn scar scales have failed to consider these contexts, despite being highlighted in other systematic reviews [21–23].

Thus, this paper provides a guide to choosing the most appropriate burn scar rating scale based on the required content and purpose; and the characteristics of the burn population with whom the scale will be used. The feasibility of administering the scales is also reviewed as clinicians are likely to rely heavily on this feature in practice. In addition, this paper will update the current evidence for the clinimetric quality of available burn scar rating scales.

2. Method

2.1. Data sources and search strategy

An electronic search of Medline, CINAHL, and EMBASE databases from 1990 to 2011 were used to identify English articles related to burn scar rating scales in the original

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