

Available online at www.sciencedirect.com

SciVerse ScienceDirect

journal homepage: www.elsevier.com/locate/burns

Review

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

Zephanie Tyack^{a,b,*}, Jason Wasiak^c, Anneliese Spinks^{d,e}, Roy Kimble^{f,g}, Megan Simons^{f,h}

^a Central Queensland Hospital and Health Service, Rockhampton, Queensland, Australia

^b School of Health and Rehabilitation Sciences, The University of Queensland, St Lucia, Queensland, Australia

^c Victorian Adult Burns Service and School of Public Health and Preventative Medicine, Monash University, The Alfred Hospital, Commercial Road, Melbourne, Victoria, Australia

^d Commonwealth Scientific and Industrial Research Organisation, Ecosystem Sciences Division, Queensland, Australia

^e School of Medicine, Griffith University, Meadowbrook, Queensland, Australia

^f Centre for Childrens Burns and Trauma Research, Queensland Children's Medical Research Institute, The University of Queensland, Queensland, Australia

^g Department of Paediatrics and Child Health Level 3 Foundation Building, Royal Children's Hospital, Herston, Queensland, Australia

^h Department of Occupational Therapy, Royal Children's Hospital, Brisbane, Queensland, Australia

ARTICLE INFO

Article history:

Accepted 23 April 2013

Keywords:

Burn scar rating measure

Scar assessment

Clinimetric quality

Burn

Outcome measure

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.

Crown Copyright © 2013 Published by Elsevier Ltd and ISBI. All rights reserved.

* Corresponding author at: Central Queensland Hospital and Health Service, Rockhampton, Queensland, Australia. Tel.: +61 749 20 7396; fax: +61 749 20 6539.

E-mail address: Zephanie_Tyack@health.qld.gov.au (Z. Tyack).

0305-4179/\$36.00. Crown Copyright © 2013 Published by Elsevier Ltd and ISBI. All rights reserved.

<http://dx.doi.org/10.1016/j.burns.2013.04.021>

Contents

1. Background	1342
2. Method	1342
2.1. Data sources and search strategy	1342
2.2. Clinimetric criteria for reviewing the purpose of each scale	1343
2.2.1. Burn scar rating scales for discriminative purposes (distinguishing between patient groups)	1343
2.2.2. Burn scar rating scales for longitudinal evaluative purposes (measuring change over time within patient groups)	1343
2.2.3. Burn scar rating scales for predictive purposes	1343
2.3. Characteristics of subjects	1343
3. Results	1343
3.1. What is the preferred content of the scale?	1345
3.1.1. Patient opinion of scarring and patient reported symptoms	1345
3.1.2. Physical properties of scarring	1345
3.2. What is the intended purpose of the measure – measurement at a single time point to discriminate between subjects or groups of subjects, or measurement over time to detect change within subjects?	1345
3.2.1. Single time point	1345
3.2.2. Multiple time points	1345
3.3. What are the characteristics of the sample to be assessed?	1345
3.3.1. Age	1345
3.3.2. Gender	1346
3.3.3. Ethnicity	1346
3.3.4. Burn depth and time after-burn	1346
3.3.5. Location of the scarring	1346
3.4. Is feasibility important (including time to administer and ease of administration)?	1346
3.4.1. Administration time	1346
3.4.2. Scale availability, readability and comprehensiveness, ease of administration and scoring	1346
4. Application to practice scenarios	1346
4.1. Scenario (1)	1346
4.1.1. Recommended approach to selecting an appropriate scale for scenario 1	1346
4.2. Scenario 2	1347
4.2.1. Recommended approach to selecting an appropriate scale for scenario 2	1347
5. Discussion	1347
6. Conclusions	1348
References	1348

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

Download English Version:

<https://daneshyari.com/en/article/6048895>

Download Persian Version:

<https://daneshyari.com/article/6048895>

[Daneshyari.com](https://daneshyari.com)