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Patient reported facial scar assessment: directions for the professional

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ABSTRACT

Background: The face is central to our identity and provides our most expressive means of communication. Currently, the role of facial scarring in relation to self-esteem is unclear and the value of self-reported scar assessment is insufficiently understood. The aim of this study was twofold: (1) to assess the extent of agreement between patients' ratings and observers' ratings of facial scar characteristics; and (2) to examine if patients' and observers' scar characteristics ratings, or the differences, are associated with the patients' self-esteem.
Methods: A prospective study was conducted including patients with facial burns. Patients completed the Patient and Observer Scar Assessment Scale (POSAS) and the Rosenberg Self-Esteem Scale 3 months post-burn.
Results: Ninety-four subjects were included, 76 (81%) men and mean percentage TBSA burned was 12.4 (SD 10.4; range 1–50). Subject's and observer's assessment were significantly positively correlated and were identical in 53% of the cases. Subjects' assessments and discrepancy scores on the scar characteristic surface roughness were associated with self-esteem in multiple regression analysis.
Conclusions: The majority of the patients scored the quality of facial scars in a similar way as the professionals. Furthermore, facial scarring appeared only moderately associated with self-esteem. However, our study suggests that using both patients' and professionals' scar assessments provides more useful information regarding the patients' well-being relative to focussing on the separate assessments only. In particular a discrepancy between the patients' and professionals' view on surface roughness might be an early indication of psychological difficulties and a call for further clinical attention.

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1. Background

The face is a central aspect of identity and one of our most expressive means of communication. These and other functions can be compromised as a result of a facial burn, which subsequently may relate to negative self-perceptions [1]. Burns generally have a high prevalence of head and neck involvement [2], presumably because that area is more exposed compared to body regions usually covered with clothes, such as the trunk or the legs. Prevalence rates of facial involvement vary internationally between 6% and 60% [3–5]. A recent study showed that almost half of the patients admitted to Dutch burn centres had facial burns [6], and thus were at risk for visible scars. Additionally, one in five patients needed facial surgery, indicating a deep burn, and one in twenty patients needed reconstructive facial surgery [6]. Despite sophisticated techniques in surgery and reconstructive surgery, operative treatment has not yet established healing without scars.

In recent years, the focus on patient reported outcomes (PRO) has increased in various health related domains. PROs are self-reports that provide insight in how patients perceive (aspects of) their health. It was recently recommended that self-reports of scar evaluations should be integrated in clinical assessments, based on findings that patient-rated scar severity was directly related to psychological distress whereas observer-rated scar severity was unrelated to psychological distress [7]. However, as to why this is the case is poorly understood, hindering the interpretability and clinical decision-making based on the patient's perspective. A first requisite to better understand why both assessments differ in their relationship to psychological distress is to compare the patients' and observers' assessment. The differences between both perspectives in relation to psychological distress found in a prior study [7] may suggest that in general both do not agree. However, because previous studies used different scar assessment tools for patients and professionals, no comparison could be made between the two perspectives.

Alternatively, it is conceivable that only a subgroup of patients deviates from the professional's view in their scar evaluation. For instance, patients who highly value their personal appearance may have difficulties accepting the scars. A prior study showed that importance of appearance predicted body image dissatisfaction [8]. Additionally, a 'good outcome' to the professional may not be seen as a good outcome by the patient as patients and professionals may use different frameworks in their scar evaluation. Likely, professionals use their clinical experience in previous patients as a reference, whereas patients might be more influenced by personal factors, such as reference to their appearance before the burn event, and their perceptions of social functioning [9]. It is therefore important to recognise the differences and to increase insight into the meaning of these differences; a substantial discrepancy might be an indication of psychological distress.

In this perspective, an outcome measure of particular interest might be self-esteem as it has been related to a variety of psychological problems such as depression [10,11] and anxiety [11]. Self-esteem can be defined as one's overall sense of worthiness as a person [12] or as the attitude a person has to oneself [13] and is regarded as a relatively stable trait over time [14]. This stability was confirmed in several studies [13,15,16], although a study in cosmetic surgery in both visible and non-visible areas found a small but significant increase between pre-surgery and post-surgery self-esteem [17], indicating the potency of change. In the burns literature the relationship between facial scars and the patient's well-being is still subject of debate. Only moderate relationships have been shown between burn severity measures (e.g. percentage TBSA burned, number of burn-related surgeries and scar visibility) and several social and emotional variables [18]. Nevertheless, self-esteem may have value in detecting patients with psychological difficulties in relation to facial scarring and may be relevant when investigating the agreement among self-reports and professionals assessment of facial scarring.

In summary, although PROs are highly valued, including in scar assessments, it is insufficiently understood what information self-assessment produces and to what extent patients and observers agree on scar assessments. Furthermore, clinical practice and decision-making might benefit from a better understanding of underlying causes explaining a discrepancy between patient and observer evaluations. With the introduction of the POSAS [19] (http://www.POSAS.org), a scar assessment instrument is available for both self-assessment and observer assessment, allowing to compare the extent to which patients and observers agree on scar qualities. Additionally, this instrument enables the identification of specific scar characteristics that may be more troublesome than others from the patient's point of view. Therefore, the aim of this study was twofold: (1) to assess the extent of agreement between patients' ratings and observers' ratings of facial scar characteristics; and (2) to examine if patients' and observers' scar characteristics ratings, or the differences, are associated with the patients' self-esteem.

2. Methods

2.1. *Participants*

This study included patients from a larger multicentre study. The clinical outcomes were previously published [20] and follow-up treatment was performed according to standard clinical practice. Patients admitted to one of the three Dutch burn centres were enrolled in the study between March 2006 and January 2009. Patients were eligible if they had facial burns (including neck) and were ≥18 years. Patients were excluded if they were unable to provide informed consent, for instance due to cognitive impairment or because they had poor Dutch proficiency.

2.2. *Procedure*

Patient and burn characteristics were collected from medical files and participants completed follow-up measures at 3 months post-burn. All patients provided informed consent, and the medical ethical board of the Maasstad hospital (Rotterdam, the Netherlands) approved the study (TWOR 2005/25).