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Should NHS patients have access to scar management?

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Immediately after tissue injury and particularly in the post-operative setting, aseptic techniques, tension reduction, and pressure dressing are important short-term approaches to scar management. However, wound healing, and therefore scar formation, continues long after one is discharged from medical care. The mechanism of wound repair is broadly characterized by three processes: inflammation, proliferation, and remodelling. The remodelling stage, which operates between 3 weeks and 6 months post tissue injury, is responsible for the intra- and interpersonal differences in scar morphology.¹ The severity and quality of scarring is unpredictable as a patient may be left with an inconspicuous discoloured mark or an aesthetically displeasing hypertrophic scar or keloid. The physical and psychosocial impairments of such wound healing abnormalities are not insignificant. Reports of physical symptoms most commonly include pain, itching, and contractures leading to restricted limb functionality, whereas psychosocial distress related to anxiety, depression, and fears of stigmatization are of particular concern.² In consideration of these factors, there is a tremendous demand for technologies and methods that improve the appearance of scars. Indeed, 91% of patients who underwent a surgical procedure declared that any improvement in scarring would be worthwhile.^{3,4} Furthermore, 75% of patients agreed that they would “go to any length to minimize scarring, even if they resulted in only small improvements in scar appearance”.⁴ Unfortunately, costs associated with scar prevention or improvement therapies proved to be considerable caveats for many of these respondents.⁴ These data give insight into the extraordinary value placed on scar management and alludes to the challenges involved in financing treatments that are not life-saving, but nevertheless meaningful. The use of public funds to provide a comprehensive range of scar management therapies to patients who find it to be valuable is desirable but not necessarily practical.

As a national healthcare system that provides access to care for people on the basis of need and not ability to pay, noble ideals are at the heart of the NHS. Outlined in the NHS Constitution are notions that health services should be tailored to the needs and preferences of patients and that decisions regarding drugs and treatments are evidence-based.⁵ It emphasizes that any patient of the NHS has the right to treatment that is clinically appropriate and respects the autonomy of the individual. However, this does not equate to the provision of all safe and

efficacious medical treatments to all people while remaining free at the point of use. There are obvious limitations of a single-payer healthcare system that is funded through general taxation. The NHS has the responsibility to meet the clinical needs of individual patients within the confines of a fixed budget. As such, the NHS Commissioning Board is responsible for the arduous process of prioritisation and resource allocation with the aim of “maximising...resources for the benefit of the whole community”.⁵ Strategies for accomplishing this feat are plainly defined in the Commissioning Policy. The protocol clearly states that if treatment to all patients in a cohort cannot be fiscally justified, then treatment cannot be granted to a limited number of individuals unless groups of patients can be differentiated on a clinical basis.⁶ In regards to scar management, qualification for free care under the NHS is judged on a case-by-case basis by physicians and employs this strategy of identifying patients with a supposed greater clinical need. In general, patients are entitled to treatment if scars are painful, impede movement or functionality, are greater than 2cm in length, or situated on the face.⁷ Patients seeking treatment for scars on a purely cosmetic basis are likely to be denied NHS treatment. It is necessary to review the justifications for differentiating groups of patients on these clinical grounds to ensure that they are supported in the context of relevant literature and recent investigations.

According to the guidelines, patients are eligible for scar management on the NHS based generally on three factors: physical limitation, visibility, and severity of the disfigurement.⁷ Scarring in socially visible body areas and unaesthetic scar qualities are frequently attributed sources of psychological distress. It is true that visible scars are a serious concern for many people, with 85% of patients reporting self-consciousness and 67% reporting embarrassment about potential scarring on a conspicuous anatomical area.⁴ Additionally, larger scar size has been shown to be associated with raised levels of self-consciousness and anxiety levels.⁹ These data provide support for the inclusion of patients into NHS treatment with scars that are unsightly or on the face and hands; however, this is not the whole story. Scarring in less visible locations such as the chest, abdomen, thighs, and genitalia is related to body image satisfaction, with 30% of patients agreeing that they would feel embarrassed to have a scar in a so-called non-visible location.⁴ Therefore, while facial scarring is considered to have the most extreme impact on one’s social

adjustment and integration, even socially hidden scars have a meaningful impact on body esteem, particularly in intimate interactions.⁸ Furthermore, it has become clear that scar qualities such as size and pigmentation correlate poorly with psychological distress. It is commonly assumed that there exists a relationship between the severity of disfigurement and the presence of psychological symptoms but even a nondescript scar can act as a powerful trigger for emotional distress.⁹ In fact, the social and emotional variables involved in patients' reactions to living with their scars are more important than the body location and characteristics of the scars.^{8,9} It is less so about a change in physical appearance as it is about a patient's innate perspective on such change. In light of these investigations, it is highly probably that patients who may benefit greatly from scar management therapies are rejected because their scars are judged to be physically or socially inconsequential, despite causing psychological hardship. This calls for a re-evaluation of the NHS Commissioning Policy on scar management.

In addition to determining the optimal inclusion criteria for patients receiving treatment on the NHS, the treatments themselves need to be proven to be safe and efficacious. The lack of a singular robust and reliable long-term regimen for scar prevention and improvement is a notable challenge for policy makers. The fact that there are numerous treatment options which vary widely in results, cost, and adverse effect profile makes recommendation difficult. An abbreviated review of currently available treatments illustrates the complexity of healthcare policy design. The main scar management strategies can be differentiated by modality (i.e. non-invasive versus invasive procedures) and empirical support (Table 1). Pressure therapy has demonstrated some capacity to prevent scar elevation but relies on impeccable patient compliance.¹⁰ Given that pressure garments must be worn daily for up to 12 months, are physically uncomfortable, and significantly restricts daily activity, compliance is unsurprisingly low.¹ Silicone gel sheets are effective at limiting the size of hypertrophic scars when applied daily from 2 weeks to 6 months post tissue injury.¹ They have also been found to improve the pigmentation, vascularity, and pruritus of mature hypertrophic scars.¹⁰ Intralesional injection of corticosteroids is thought to reduce scar elevation and stiffness by stimulating collagen degradation.¹⁰ However, the most commonly used agents – antimetabolite 5-FU and antitumor agent bleomycin – are generally not well tolerated at high

doses and have serious adverse effect profiles.¹⁰ The most invasive treatment is scar revision surgery whereby wound edge eversion and meticulous attention to tension upon closure improves scar appearance.¹⁰ There is an array of other interventions whose clinical efficacy remains inconclusive. In general, the immense amount of data collected on the four conventional treatments certainly demonstrate a benefit for patients with painful, itchy, and unsightly scars. Unfortunately, there is great variability in the effectiveness of each treatment depending on the type of scar and whether scar formation is in early or mature stages. More work needs to be done to ascertain an optimal evidence-based therapy that can be incorporated into standard practice. Most likely, a multimodal approach will be warranted.

The major components in the discussion about NHS-commissioned scar management are eligibility requirements and clinical efficacy of the proposed interventions. Although patients with scars causing chronic pain, itching, and stiffness should certainly be considered for treatment, the significant psychological sequelae (anxiety, depression, and loss of self-esteem) should not be so hastily disregarded. In addition, the practical limitations of treatment must be viewed realistically. In order for the NHS Commissioning Policy to become more inclusive on an unchanging budget, the therapies for scar improvement must prove to be beneficial both clinically and fiscally.

Figures

Table 1. Overview of treatment options for scar management.

	<i>Non-invasive Treatment</i>	<i>Invasive Treatment</i>
<i>Well-accepted & evidence-based treatments</i>	Pressure therapy Silicone gel sheets	Corticosteroid injection Surgical scar correction
<i>Experimental treatments with less supporting evidence</i>	Lotions and creams Massage therapy	Laser therapy Radiotherapy Cryosurgery

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