

Self removal of unwanted tattoos

Introduction

Tattooing has been around since early civilisation, with origins that can be traced back to Ötzi the ice man dating from the fourth to fifth millennium BC (Renaut, 2004). Various methods of tattoo removal are described in the literature ranging from salabrasion as described by Aetius, a Greek physician, in 543AD (Scutt, 1972) to laser treatment in the late 20th century (Goldman et al, 1967).

Discussion

Methods of tattoo removal revolve around the principle of destruction or removal of skin layers by mechanical, chemical or thermal means. Perhaps the simplest mechanical method is primary excision and either direct closure or split thickness skin grafting. However, resulting scars may be as bad as, or worse than, the original problem and direct closure will only be suitable for smaller or conveniently located tattoos. Dermabrasion is an alternative mechanical method. Use of caustic chemicals such as tannic acid, silver nitrate, phenol and trichloroacetic acid have all been described (Scutt, 1972). Thermal methods, including cautery, electrocautery and infrared coagulation, have been used but with significant scarring and unpredictable results (Colver et al, 1985). Liquid nitrogen has also been described as a method to remove digital tattoos but, again, imprecise tissue destruction leads to prolonged healing and unpredictable results (Colver and Dawber, 1985).

Lasers are the current gold standard for the removal of unwanted pigmented tattoos. Goldman et al (1972) first proposed the idea and successfully removed tattoos

using ruby and argon lasers. Carbon dioxide lasers function in a similar manner but with higher tissue vaporization which is more efficient. The pigment is removed by direct vaporization, as well as thermal necrosis of adjacent tissue, which leads to further loss of pigment in the exudative healing phase. If the wavelength of the laser is well absorbed by the target area and the pulse width is equal or less than the target's thermal relaxation time, the heat that is being generated should be confined to the target tattoo. Different wavelengths and pulse widths aid the removal of different colour pigments. Overall, tattoos respond according to the total amount of pigments in them, and whether they were amateur (elemental carbon) or professional (organic dyes mixed with metallic elements) tattoos; the latter being more difficult to remove.

Although this is the first time that this sort of self treatment has been described in the literature, this cannot be the first time a desperate patient with an unwanted tattoo has considered such action.

Primary care trusts have protocols to deal with all extracontractual referrals which includes treatments not covered by a service level agreement either within the primary care trust or with another NHS provider. All requests for funding are assessed on clinical grounds or, in exceptional circumstances, on compassionate grounds on an individual patient basis. The primary care trust is responsible for considering and approving these requests, and all funding requests are routed through the patient's GP or consultant. Cosmetic surgery is usually excluded in the absence of previous trauma, disease or congenital deformity. Tattoo removal will be considered by the authors' trust if it was inflicted against the patient's will or the patient was not Gillick

competent at the time of the tattooing. Considerations will also be made if the tattoo was inflicted under duress, where it is considered that psychological rehabilitation, family breakdown or prolonged unemployment can be avoided.

The question then is whether funding should be available for the removal of tattoos that cause substantial cosmetic and psychological distress to the patient, as determined by a comprehensive psychological assessment.

Clearly expecting the NHS to remove all unwanted tattoos is unrealistic, but there should be some provision for exceptional cases and this matter merits further debate. In this situation, the patient felt he was left with no alternative, and by treating himself was left with serious complications that required surgical intervention. **BJHM**

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Figure 1. Full-thickness burns over the dorsum of the proximal phalanges, 2 weeks after application of a lit cigarette to remove unwanted tattoos.



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Case Report

A 42-year-old man presented to the burns unit with full-thickness burns over the dorsal aspect of each of the proximal phalanges. These corresponded to the sites of a series of tattoos that had spelt out the name of his previous partner, and that were now a source of conflict in his current marriage. The quoted cost of private laser removal was prohibitively expensive. Eventually in desperation the patient resorted to using a lit cigarette to destroy the tattoos. When these wounds failed to heal by 2 weeks, he attended the authors' burns unit (Figure 1). The affected areas were tangentially excised to healthy subcutaneous fat or paratenon and the defects resurfaced with split-thickness skin grafts. All grafts went on to heal without incident and he retained a full range of motion in the hand and fingers.