

Clinical Evaluation of a New Self-Drying Silicone Gel in the Treatment of Scars: A Preliminary Report

Massimo Signorini, M.D., and Matteo Tretti Clementoni, M.D.

Istituto Dermatologico Europeo, Milano, Italy

Abstract. Topical silicone gel sheeting and intralesional steroids are the only evidence-based recommendable forms of treatment to control the quality of a scar. The advantages and disadvantages of both are well known. This study was undertaken to verify the efficacy of a new topical silicone treatment: a self-drying spreadable gel that needs no means of fixation and cannot be seen because of complete transparency. Fresh surgical scars treated with the tested product showed significantly better outcomes than those untreated in a prospective trial involving a group of 160 patients. Patient compliance was particularly good, especially for scars on exposed areas such as the face, where the traditional gel sheeting is frequently discontinued at an early stage by patients who object to its visibility. The results of the self-drying silicone gel have indeed been satisfactory. Considering the effective results obtained and the good patient compliance, the authors currently rate this concept of treatment as the first choice for preventing hypertrophy of recent scars.

Key words: Keloids—Scar hypertrophy—Scar treatment—Silicone gel

It has been estimated that in the developed world each year, 100 million patients acquire new scars [2], and that about 11 million new scars are keloids. In particular, 70% of keloids occur in children [20].

Scars vary greatly in quality, depending on individual and racial patient features, the nature of the trauma, and the conditions of wound healing. They frequently determine aesthetic impairment and

may be symptomatic, causing itching, tenderness, pain, sleep disturbance, anxiety, depression, and disruption of daily activities [3]. Other psychological sequelae include posttraumatic stress reactions [21], loss of self-esteem [16], and stigmatization [8], leading to a diminished quality of life. Scar contractures also can determine disabling physical deformities [22]. All these problems are more troublesome to the individual patient when the scar cannot be hidden by clothes. The features of a postsurgical scar, which unfortunately often are independent of the surgeon's skills, can strongly influence the patient's judgment on the quality of the treatment received.

Despite the relevance of this issue and of much research, options for controlling the final quality of a scar are limited. As well described by Mustoe et al. [10] in 2002, many treatments have been suggested in the past 15 to 20 years, but only a "few of them have been supported by prospective studies with adequate control group." In the same paper, these authors also stated that "several new therapies showed good results," but only in "small scale trials." At the end of their in-depth analysis, they concluded that the only two treatments with sufficient evidence for internationally evidence-based recommendations for scar management are the topical application of silicone gel sheeting and the intralesional injection of corticosteroids. The former generally is indicated as both a preventive and therapeutic device, the latter as a therapeutic agent only.

Unfortunately, the precise mechanism of action for these two treatments still is unclear, whereas their advantages and disadvantages are well known. Topical silicone gel sheeting is cumbersome to keep on the scar, and patient compliance often is low for lesions in visible areas. Tapes or bandaging frequently is not accepted. It also may lead to skin