

Self-esteem and Quality of Life in Men Undergoing Chemical Peeling

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ABSTRACT

Introduction: Chemical peeling is considered a safe method for treatment of several skin diseases and is applied to refresh and rejuvenate the skin. The aim of this study was to evaluate the indications for chemical peels in men and examine the effect of this treatment approach on patient quality of life and self-esteem.

Patients and methods: Eighty-five patients were recruited for the study. Fifty-eight individuals had undergone chemical peeling for therapeutic reasons, and twenty-seven individuals had undergone it for cosmetic reasons. The Rosenberg's Self-esteem Scale (RSES) and the Dermatology Life Quality Index (DLQI) were used before and after treatment to assess patient self-esteem and quality of life.

Results: Before the treatment, individuals about to undergo peeling for therapeutic reasons did not statistically significantly differ compared with those who would undergo the procedure for cosmetic reasons in terms of self-esteem (Mean±Standard Error: 20.21±0.36 vs. 19.81±0.53, $P=0.538$) or quality of life (10.12±0.38 vs. 10.37±0.56, $P=0.712$). However, baseline self-esteem in both groups was more strongly impaired in comparison with the controls (24.07±0.29, $P<0.001$)

Conclusion: The results of our study indicate that chemical peelings caused a significant improvement in men's self-esteem and quality of life. Chemical peels are considered a low-commitment option for men that provides impressive results when treating a wide range of skin conditions.

KEY WORDS: quality of life, self-esteem, chemical peeling, men

INTRODUCTION

Although women continue to receive the majority of aesthetic procedures, their popularity among men has significantly increased. The American Society of Plastic Surgeons reported that chemical peels were performed in more than 40 000 male patients,

being one of their most selected procedures after botulinum toxin, fillers, microdermabrasion, and laser treatment. Interestingly, the increase in the demand of chemical peels was striking after the age of 40 (1). There are only few reports in the published literature

regarding chemical peels in men. In our study, we discuss the indications for chemical peels in men and examine the effects of this treatment approach on patient quality of life and self-esteem.

METHODS AND RESULTS

We aimed to study the male population choosing chemical peels as their treatment approach, examining their psychometric status with regard to quality of life and self-esteem. Eighty-five patients who were referred to the "Peeling Unit" at the "Andreas Sygros" Skin Hospital for treatment of their skin condition were recruited for the study. Fifty-eight individuals had undergone chemical peeling for therapeutic reasons (acne scars, rosacea, melasma, and actinic keratoses) (age (Mean±Standard Deviation): 40.74±10.55 years), and twenty-seven individuals had undergone the procedure for cosmetic reasons (rejuvenation, loss of radiance) (age: 46.89±13.87 years). Patients were considered eligible for inclusion in the study if they were older than 18 years and were able to understand the Greek language. Patients with a psychiatric history or a history of psychotropic drug use were excluded from the study.

To assess patient self-esteem and quality of life, the Rosenberg's Self-esteem Scale (RSES) (2) and the Dermatology Life Quality Index (DLQI) (3) were used before and after treatment. The RSES is a short, easy test with 10 questions answered on a four-point scale; its score ranges from 0-30, with scores of 15-25 being within the normal range and scores <15 indicating a feeling of low self-esteem. The DLQI is a 10-question validated questionnaire developed specifically to assess quality of life in patients with dermatological disorders, with a maximum score of 30 and the higher scores indicating lower quality of life. In addition, a control group including eighty-eight healthy, age matched (age: 43.30±10.88 years) volunteers from the general population completed the RSES at base-

line and after the same time interval as the patients. This approach was designed to verify the stability and reliability of the scale over time, ensuring that any changes observed in the patient groups could be more confidently attributed to the effects of the chemical peel treatment rather than to external factors or natural fluctuations in self-esteem.

A two-factor mixed design ANOVA was utilized to assess the presence of statistically significant variations in self-esteem levels before and after undergoing chemical peel treatments. This analysis specifically aimed to compare the changes in self-esteem within individuals over time (pre-treatment vs. post-treatment) and also across different groups: those undergoing treatment for therapeutic purposes, those undergoing treatment for cosmetic reasons, and healthy control participants.

As shown in Table 1, before the treatment, individuals who would later undergo peeling for therapeutic reasons did not statistically significantly differ compared with those who would undergo the procedure for cosmetic reasons in terms of self-esteem ((Mean±Standard Error]: 20.21±0.36 vs. 19.81±0.53, $P=0.538$) or quality of life (10.12±0.38 vs. 10.37±0.56, $P=0.712$). However, baseline self-esteem in both groups was more impaired in comparison with the controls (24.07±0.29, $P<0.001$). After the treatment, significant improvements were observed in self-esteem for both groups ($P<0.001$). Notably, the increase in self-esteem was more pronounced in individuals treated for cosmetic reasons than in those treated for therapeutic reasons, with the former group showing a statistically significantly higher mean score (24.70±0.55 vs. 23.22±0.38, $P=0.028$). When these post-treatment self-esteem levels were compared with those of the control group (24.15±0.31, $P>0.05$), no significant differences were found for either group (Figure 1). Additionally, both groups exhibited substantial enhancements in their quality of life after

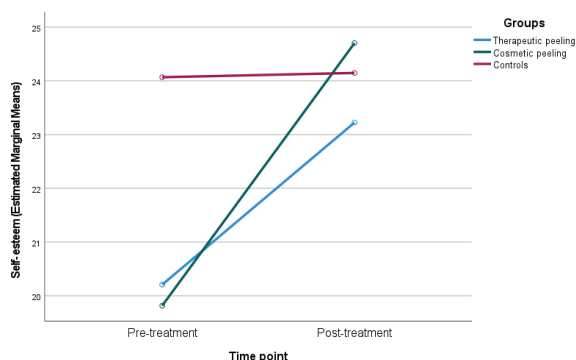


Figure 1. Self-esteem before and after chemical peeling for therapeutic and cosmetic reasons in patients and in healthy controls.

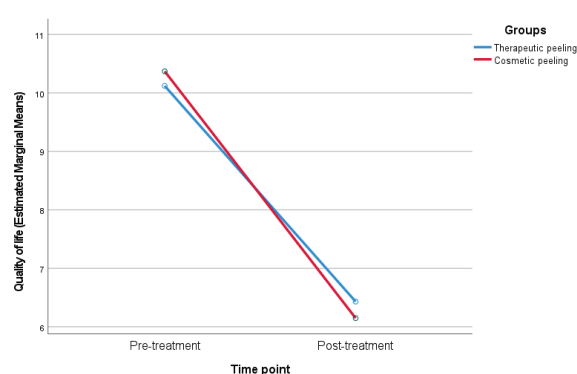


Figure 2. Quality of life before and after chemical peeling for therapeutic and cosmetic reasons.

Table 1. Within-person changes in RSES and DLQI scores over time in individuals undergoing chemical peeling for therapeutic and cosmetic reasons and in healthy controls

	Group			Group effect F / P	Time		Time effect F / P	Time x Group F / P
	Therapeutic peeling	Cosmetic peeling	Controls		Pre-treatment	Post-treatment		
RSES*	21.72±0.35a	22.26±0.51a	24.11±0.28b	15.57 / <0.001	21.36 ± 0.23	24.03 ± 0.24	304.66 / <0.001	94.71 / <0.001
RSES in pre-treatment	20.21±0.36a, †	19.81±0.53a, †	24.07±0.29b, †					
RSES in post-treatment	23.22±0.38a, ‡	24.70±0.55b, ‡	24.15±0.31ab, †					
DLQI	8.28±0.32	8.26±0.47	-	0.001 / 0.977	10.25 ± 0.34	6.29 ± 0.29	249.87 / <0.001	1.13 / 0.290
DLQI in pre-treatment	10.12±0.38†	10.37±0.56†	-					
DLQI in post-treatment	6.43±0.32‡	6.15±0.47‡	-					

Notes: Descriptive statistics presented as mean (Standard Error).
Sidak correction was applied for multiple comparisons where appropriate.
*Due to a significant interaction of Time x Group on RSES, simple main effects were calculated; means (SD) with differing subscripts within columns (a, b, c) and rows (†, ‡) are statistically significantly different

the treatment, with scores showing a significant improvement from pre-treatment levels (10.25±0.34) to post-treatment levels (6.29±0.29, $P<0.001$), while no significant differences were observed among them (Figure 2).

DISCUSSION

Chemical peeling is considered a safe method for the treatment of several skin disorders and is used to refresh and rejuvenate the skin. Chemical peels are used to create a controlled chemical-induced injury to the skin, inducing all 3 stages of tissue replacement: destruction, elimination, and regeneration (4). This may destroy the epidermis (superficial peeling) and part of the dermis (medium or deep peeling), resulting in exfoliation and removal of superficial lesions, promoting skin regeneration and remodeling of tissues (5). The most commonly used peeling agents are: salicylic acid (SA), glycolic acid (GA), pyruvic acid (PA), lactic acid (LA), mandelic acid (MA), Jessner's solution (JS), trichloroacetic acid (TCA), and phenol. Combination peels are often preferred by dermatologists, and since as newer peels and newer combinations have become available, there has been an increase in their popularity in recent times (5). According to the American Society of Plastic Surgeons, chemical peels are among the top five most common

minimally invasive cosmetic procedures in practice. Women continue to receive the majority of aesthetic procedures. Considering the aging population, demand for such treatments is expected to rise in men who can also benefit from an energetic and revitalized appearance. According to the American Society of Dermatologic Surgery and the American Society for Aesthetic Plastic Surgery, between 596 000 and 603 305 chemical peel procedures were performed in 2015, an increase of 25% compared with the previous year (1).

Our study demonstrated that the men who underwent chemical peelings had lower self-esteem and quality of life than healthy volunteers. This can be explained by the fact that men treated with chemical peelings had an existing decrease in self-confidence.

In an increasingly competitive job market, men compete with younger individuals, and want to appear vital, confident, formidable, and worthy of respect in leadership roles. Men's motivating factors and treatment preferences are different when pursuing aesthetic procedures. They tend to be more concerned about discrete troublesome areas than the overall aging appearance. Many seek to refine their features but maintain a masculine appearance in the process. Men tend to find a single day of multiple treatments preferable to treatments spread out over

multiple sessions and gravitate towards minimally invasive procedures. Therefore, men prefer superficial peels due to the limited associated downtime. Nevertheless, men have thicker and deeper wrinkles and a higher density of hair follicles, which may render male skin more resistant to peeling (6). More treatments or higher concentration of peeling agents are often required.

There are physiologic and anatomic differences between the sexes, and outcomes in men can be less predictable compared to those in women. Men demonstrate a gradual loss of cutaneous and subcutaneous tissue over time, whereas women have a more sudden decrease after menopause. Male skin has several distinct (intrinsic/extrinsic) characteristics (7). They also have a larger forehead, lower-set horizontal eyebrows, thinner lips, and a more pronounced chin and jaw line.

Intrinsic gender-specific skin-related variables include increased dermal collagen, higher sebum production, less reflective complexions, higher risk for PIH, predisposition to acne, and slower wound healing (8). Extrinsic gender-specific skin-related variables include higher occupational risk for photodamage, inadequate photoprotective behavior, reduced skin antioxidant capacity, higher prevalence of smoking, aggressive scrubbing habits and avoidance of face products (9).

The results of our study indicate that chemical peelings caused a significant improvement in men's self-esteem and quality of life. When peels are performed in men, special considerations should be taken into account, namely additional counseling on photoprotective behavior, poor wound healing, increased scarring risk, counsel on smoking cessation, risk of scarring and PIH with aggressive post-peel exfoliation, and different vehicle preferences.

Chemical peels are considered a low-commitment option for men that provides impressive results when treating a wide range of skin conditions. The main indications for chemical peeling in men are mild-to-moderate acne/acne scars, skin rejuvenation, photoaging, dyschromia, thin seborrheic and actinic keratoses, periorbital rejuvenation, and xanthelasma (10). The peeling agents suggested are 20-35% GA, 20-30% SA, 20-40 MA%, 40-50% LA, modified Jessner's solution and 20-70%TCA (11). However, the selection of the appropriate agent depends on the patient's Fitzpatrick skin type, their concerns and goals for aesthetic improvement of their skin, and their ability to tolerate the post-procedural recovery period (11). These are always individually selected depending on the skin being treated and the relevant downtime.

There is limited published literature assessing self-esteem in men who undergo chemical peelings. It is important for dermatologists to acknowledge that these patients often suffer from lower self-esteem and that the use of chemical peelings could help them improve their self-confidence.

References:

1. The American Society of Plastic Surgeons. 2022 National Plastic Surgery Statistics: Cosmetic and Reconstructive Procedure Trends. 2022.
2. Rosenberg M. Society and the Adolescent Self-image. Princeton, NJ: Princeton University Press; 1965.
3. Finlay AY, Khan GK. Dermatology Life Quality Index (DLQI)-a simple practical measure for routine clinical use. *Clin Exp Dermatol*. 1994;19:210-6.
4. O'Connor AA, Lowe PM, Shumack S, Lim AC. Chemical peels: A review of current practice. *Australas J Dermatol*. 2018;59:171-81.
5. Soleymani T, Lanoue J, Rahman Z. A Practical Approach to Chemical Peels: A Review of Fundamentals and Step-by-step Algorithmic Protocol for Treatment. *J Clin Aesthet Dermatol*. 2018;11:21-8.
6. Giacomoni PU, Mammone T, Teri M. Gender-linked differences in human skin. *J Dermatol Sci*. 2009;55:144-9.
7. Keaney TC. Aging in the Male Face: Intrinsic and Extrinsic Factors. *Dermatol Surg*. 2016;42:797-803.
8. Falk M, Anderson CD. Influence of age, gender, educational level and self-estimation of skin type on sun exposure habits and readiness to increase sun protection. *Cancer Epidemiol*. 2013;37:127-32.
9. Thieden E, Philipsen PA, Sandby-Møller J, Wulf HC. Sunscreen use related to UV exposure, age, sex, and occupation based on personal dosimeter readings and sun-exposure behavior diaries. *Arch Dermatol*. 2005;141:967-73.
10. Reserva J, Champlain A, Soon SL, Tung R. Chemical Peels: Indications and Special Considerations for the Male Patient. *Dermatol Surg*. 2017 Nov;43 Suppl 2:S163-S173.
11. Truchuelo M, Cerdá P, Fernández LF. Chemical Peeling: A Useful Tool in the Office. *Actas Dermosifiliogr*. 2017;108:315-22.