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**Investigation of the awareness on hand rejuvenation
methods**

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Abstract

Our hands are one of the most aesthetically important organs that we come into contact with people. It is also an organ that we use a lot in our daily work and is frequently exposed to environmental factors. Therefore, it is possible to see the effects of aging rapidly. Our hands also give information about the age of people. Recently, many dermocosmetic methods have emerged about neglected hand care. Therefore, hand rejuvenation will become increasingly popular. In this study, we evaluated the level of knowledge about hand rejuvenation in 28 women who applied to the medical aesthetic clinic and underwent hand rejuvenation. With this study, we aimed to protect the integrity of hand anatomy by emphasizing neglected hand care.

Keywords: Anatomy; Dermocosmetic; Hand; Rejuvenation

1. Introduction

In addition to our anatomical, physiological and aesthetic structure, our hands accompany a large part of our physical work. For this reason, they can be exposed to environmental factors, trauma, chemical agents and signs of aging can occur rapidly. In the aging process, our hands are affected by internal and external factors depending on our genetic and anatomical characteristics. Internal factors include chronic diseases, hormones, water consumption, nutrition, medications, family history of skin cancer, body mass index [1, 2]. External factors include ultraviolet rays, chemicals, occupation and geography. The rate of signs of aging on the hands is personal. These internal and external aging factors cause thinning, wrinkling, staining, decrease in volume, decrease in collagen, prominence of superficial veins, prominence of muscle tendons, deterioration in muscle and bone structure, atrophy and deformations. In addition, the skin layer of the hand is the part that is most affected by internal and external aging factors and where the signs of aging are most visible. There are three separate fatty layers on the dorsal part of the hand and these layers are separated by thin fascia (dorsal superficial fascia, dorsal middle fascia and dorsal deep fascia). Under the dorsal deep fascia are the intrinsic hand muscles. The dorsal middle fatty layer contains large superficial veins and nerves. The dorsal superficial fatty layer has no anatomical formation. Therefore, the safest area in hand rejuvenation applications is the dorsal superficial layer [1, 3, 4].

Like the face area, hands are one of our most visible body parts. However, hand rejuvenation is often neglected. We questioned the 28 women we included in our study about how they were encouraged about hand rejuvenation applications. Thus, we wanted to emphasize that hand rejuvenation is as important as facial rejuvenation.

2. Methods

2.1. Study Population

Our study population included 28 women who had previously undergone hand rejuvenation in a medical aesthetic clinic. The female population participating in our study consists of women between the ages of 32-56. Among 28 women, 10 women had sweating botox, 8 women had hand dorsum filling, 5 women had hand dorsum platelet rich plasma application and 5 women had mesotherapy application (Table 1).

Table 1: Number of people who had hand rejuvenation treatments and satisfaction score

	Botox application	Dermal filler application	Prp application	Mesotherapy application
Number of people	10	8	5	5
Satisfaction score	9.8	8.7	8.6	7.4

2.2. Study Design

Our study design was planned retrospectively. We asked questions to people who had hand rejuvenation applications such as how they accessed information about hand rejuvenation applications, how they decided to have hand rejuvenation application and whether they will continue to have hand rejuvenation application and satisfaction score from hand rejuvenation applications (10 out of 10 being the most satisfied). For this, we obtained a voluntary consent form from each individual and obtained permission from the medical aesthetic clinic. During the study, the relevant guidelines, regulations and experimental procedures were carried out in accordance with the Declaration of Helsinki.

3. Results

Of the 10 people who had hand botox application, 5 of them stated that they decided to have the procedure from those who had botox in their family, 3 from social media, 1 based on his medical knowledge because he was a physician and 1 with the recommendation of a medical aesthetic physician. Of the eight people who had dermal filling of the dorsum of the hand, 5 stated that they decided to have the procedure after seeing it on social media, 2 with the recommendation of a medical aesthetic physician and 1 with the recommendation of a friend. Of the 5 people who applied platelet rich plasma to the dorsum of the hand, 2 stated that they decided to have the application through social media, 2 with the recommendation of their friends and 1 with the recommendation of a medical aesthetic physician. In addition, 2 of the 5 people who had mesotherapy applied to the dorsum of the hand stated that they decided to have the procedure with the influence of social media, 2 with the recommendation of the medical aesthetic physician and 1 with the recommendation of a friend. In addition, 23 out of 28 people stated that they would continue hand rejuvenation procedures. The most satisfied application among the hand rejuvenation procedures was botox applications and the second most satisfied application was filling procedures (Table 1).

4. Discussion

Non-surgical aesthetic applications have become popular today. These applications prevent the aging effects and changes that occur over time in the skin and subcutaneous components. The aging process varies according to the damage caused by internal and external factors at a level that does not lead to cell death. Noninvasive skin rejuvenation methods target the hands as in facial and décolleté rejuvenation. There is no statistical literature on hand rejuvenation applications in our country. However, according to foreign studies, hand rejuvenation methods tend to increase [5–7]. Botox applications for hyperhidrosis are the oldest used applications for hand rejuvenation. Hyperhidrosis affects both the physical function and social life of the person. In the treatment of hyperhidrosis, topical antiperspirant and iontophoresis treatments are applied in the first stage. However, botulinum toxin is the second option in patients resistant to these treatments. There are many studies in the literature examining the efficacy of botox application for the treatment of palmar hyperhidrosis. In our study, the most preferred and well-known application in hand rejuvenation was botox application. Botox application was also the method that the participants were most satisfied with. In addition, this method is widely used among men as well as women [8–10].

Another method used in hand rejuvenation is filling applications. Filling applications to the hand area are applied to both the palmar face and the dorsal face. While medium and dense fillers are applied to the dorsum of the hand, dense fillers are applied to the palmar face. Dermal fillers to be applied to the hand increase volume, reduce the appearance of prominent vessels and tendons, increase collagen and provide moisturization. Looking at the literature, we noticed that there are studies using hyaluronic acid fillers, calcium hydroxyapatite fillers and poly-L lactic acid fillers on the hand. The most commonly used filler type in hand rejuvenation is hyaluronic acid fillers. The least preferred filler type is poly-L lactic acid fillers [11–15]. In our study, hyaluronic acid fillers were applied to all patients who used dermal fillers.

Moreover, mesotherapy applications are also widely used in hand rejuvenation. Mesotherapy cocktails include hyaluronic acid, vitamins (A, B, C, E and K), amino acids, minerals, nucleic acids and polynucleotides. It can be applied alone or as a combination treatment. The number of sessions and application technique specific to the individual are determined by the physician. Platelet rich plasma applications are also important for hands to look younger and more beautiful. Since it is prepared with the person's own blood, there are no side effects [16, 17]. In our study, there are also those who had mesotherapy and platelet rich plasma application as hand rejuvenation application. However, as well as those who are satisfied with these procedures, there are also participants who do not want to have a repeat application because it involves more than one session.

5. Conclusions

The aim of hand rejuvenation is to support all three of the epidermis, dermis and subcutaneous tissue. Today, hand rejuvenation applications are performed for treatment purposes, not for preventive purposes. Hand rejuvenation and hand care are neglected. With this study, we aimed to emphasize that both physicians and patients should give importance to hand rejuvenation as well as facial rejuvenation. We also think that this study will guide both physicians and patients about the channels of access to hand rejuvenation methods and their importance. Furthermore, we recommend developing social media platforms with accurate information about hand rejuvenation methods and conducting similar studies with more participants.

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Consent for publication

All authors read and approved the manuscript.

Ethics approval and consent to participate

The authors declare that this study does not contain any personal information that could lead to the identification of the patients and Informed consent was obtained from all participants. The work described was conducted with the approval of the Dr. Deniz Mahmut Gök Medical Aesthetic Clinic. During the study, the relevant guidelines, regulations and experimental procedures were carried out in accordance with the Declaration of Helsinki.

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Competing interests

The authors declare that they have no conflict of interests.

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