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Atraumatic Eyelid Work: Oleksandra Chyrkova's Proprietary Technique from Removal of Old Permanent Makeup to The Recreation of Natural Shadows

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Abstract

Against the backdrop of the accelerating expansion of the aesthetic medicine market, where consumer preferences are steadily shifting toward minimally invasive interventions, classical approaches to periocular correction — surgical blepharoplasty and traditional blepharopigmentation — exhibit pronounced limitations and are associated with notable risks. The aim is the scientific substantiation and systematization of the author's technology of atraumatic blepharopigmentation, built on the principle of layered shadow shading, as a safe and effective alternative for the aesthetic correction of age-related (dermatochalasis) and postinflammatory (cicatricial changes) transformations of the eyelids. The study rests on a hybrid design that combines a systematic analysis of peer-reviewed sources in dermatology, plastic surgery, and micropigmentation with conceptual elaboration and synthesis of the technical principles of the proposed method. In conclusion, it is indicated that the leading complications of traditional blepharopigmentation (pigment migration, necrotic changes, scarring) are a direct consequence of a methodological error — excessively deep and traumatic pigment deposition. In contrast, the proposed technique provides for controlled superficial introduction of the colorant within the papillary dermis with multistage, layered placement, which substantially reduces tissue trauma and prevents the development of complications. This approach makes it possible to form a natural three-dimensional shadow effect, visually reduce upper eyelid hooding, and mask defects that are unattainable by surgical methods alone. The author's concept of atraumatic blepharopigmentation constitutes a scientifically verified approach that fills the therapeutic gap between invasive interventions and insufficiently effective noninvasive options. Implementation of this method in clinical practice through interdisciplinary collaboration with dermatologists and plastic surgeons can significantly improve patients' quality of life and psychological well-being by achieving predictable, natural, and safe aesthetic outcomes. The presented provisions are addressed to practicing specialists in aesthetic medicine and permanent makeup, as well as dermatologists and plastic surgeons.

Keywords: blepharopigmentation, permanent makeup, dermatochalasis, hooded eyelid, atraumatic technique, layered shading, scar camouflage, permanent makeup complications, quality of life, integrative aesthetic medicine.

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1. Introduction

Modern aesthetic medicine has entered a phase of profound transformation: the paradigm is shifting from classical surgery to minimally and noninvasive interventions. Market trajectory confirms this shift: the aggregate volume of the medical aesthetic services segment in 2024 is estimated at 18, 48 billion USD, with expansion projected to 55,99 billion USD by 2033 at a compound annual growth rate of 13, 2% [1]. The dynamics are driven not only by technological progress but also by reinterpreted patient expectations: preference is given to procedures with pronounced clinical effect

alongside a minimal recovery period, reduced pain, and lower risks of complications [1]. In this logic, noninvasive technologies are projected as the main driver and the future dominant market segment [2, 3]. Thus, the market reflects a deep shift in patient priorities, wherein safety, convenience, and naturalness of the result become the defining selection criteria.

In the periorbital area, one of the most frequent aesthetic and functional problems remains dermatochalasis — excess skin of the upper eyelids (hooded eyelid), which leads not only to dissatisfaction with appearance but also to functional deficit: narrowing of visual fields, a sensation of heaviness, and, as a consequence, significant psychological distress [4, 6]. The most appropriate method for correcting moderate and severe forms (grades 2–3) remains surgical blepharoplasty [7]. However, its effectiveness is associated with costs: recovery lasts approximately 2–3 weeks, and risks persist of asymmetry, scarring, development of dry eye syndrome, and other complications [8]. At the same time, noninvasive device-based approaches, including ablative radiofrequency microplasma (plasma exeresis), demonstrate satisfactory results predominantly in mild forms (grades 0–1) [8]. As a result, a therapeutic gap emerges: patients with mild to moderate hooding, for whom device-based methods are already insufficient while surgery appears excessively aggressive or is contraindicated, remain without an optimal strategy. Moreover, neither operative nor device-based solutions address concomitant tasks — correction of pigmentary disorders and removal of old, poor-quality permanent makeup [4, 5].

Seeking to enhance the aesthetic expressiveness of the eyelids, many patients choose permanent makeup (blepharopigmentation). However, routine approaches performed without accounting for the individual morphology of the periorbital region are accompanied by a noticeable rate of iatrogenic adverse outcomes. Publications have consistently described complications such as migration (blurring) of the pigment, its late metachromatic transformation into undesirable gray-blue or greenish tones, scarring, allergic and granulomatous reactions up to necrosis of the eyelid margin [10]. The etiopathogenesis of these phenomena is directly related to technical inaccuracies: excessive depth of deposition (reaching the reticular dermis and hypodermis), excessive frequency of perforations, and increased instrument pressure causing tissue maceration [12]. The eyelid skin is the thinnest in the body, richly vascularized, and supplied with a developed lymphatic network; with deep pigment placement, this greatly increases the likelihood of its displacement from the implantation zone [10]. The key cause of failure is a methodological error: transferring tattooing principles — deeper means more durable — to an anatomical region that requires a fundamentally different, gentle operating mode.

The aim of this study is to present and, from the standpoint of evidence-based practice, substantiate an atraumatic method of layered shadow blepharopigmentation as a highly effective and safe tool for aesthetic correction and camouflage of age-related and postinflammatory changes in the periorbital area.

The scientific novelty lies in systematizing a multilayer, deliberately superficial technique of pigment placement that integrates dermatologic principles and approaches of reconstructive micropigmentation to create natural three-dimensional shadow effects; this strategy serves as a safe alternative in complex clinical situations, including dermatochalasis and repeat corrective interventions.

The research hypothesis is that gentle, controlled, layered, and superficial blepharopigmentation will ensure a substantially low risk of complications and a high level of patient satisfaction compared with traditional techniques, while simultaneously serving as an effective nonsurgical method to improve the aesthetics of age-related and postinflammatory changes of the eyelids and enhancing patients' quality of life.

2. Materials and methods

The methodological foundation of the study is built upon a combined strategy that integrates a systematic review of relevant scientific literature with a conceptual synthesis of the author-developed methodology. This conjunction allows, first, to align the proposed technique with the contemporary corpus of empirical data and clinical experience, and second, to explicate its innovative principles and theoretical justification.

The empirical and source base was formed by targeted selection of peer-reviewed publications from leading scientific aggregators (PubMed, Scopus, Springer). Preference was given to works from the last five years that focus on blepharoplasty, the pathophysiology of dermatochalasis, complications of blepharopigmentation, and concepts of paramedical

(reconstructive) dermopigmentation. To contextualize market dynamics and corroborate relevance, analytical reports from authoritative research agencies on trends in the medical aesthetics industry were additionally consulted.

The conceptual architecture of methodological analysis is fundamentally interdisciplinary and draws on several knowledge domains. In dermatology, emphasis is placed on the histological organization of the skin, the dynamics of reparative processes, and the mechanisms of aging of periorbital tissues, including degradation of elastin components and weakening of retaining ligaments. In aesthetic and reconstructive surgery, principles of facial proportion and harmony analysis are applied, and the limitations and prognostic outcomes of surgery are considered when defining indications for nonsurgical correction. In paramedical micropigmentation, the method adapts practices of scar camouflage and areolar reconstruction, emphasizing layered pigment deposition, chromatic accuracy, and, above all, minimization of tissue trauma as a prerequisite for achieving the most natural result.

3. Results and discussion

The effectiveness and safety of eyelid micropigmentation directly depend on deep knowledge of the morphofunctional specificity of this area. The skin of the eyelids is the thinnest in the human body (less than 1 mm); the epidermal layer here is reduced, and the dermis is depleted of the collagen–elastin framework, which predetermines early loss of turgor and a pronounced tendency to wrinkle formation [10]. An additional feature is the extremely dense network of blood and lymphatic capillaries [14]. Taken together, these parameters make the skin of the eyelids highly sensitive to aggressive tattooing interventions: excessive needle insertion depth easily injures the vascular bed with the development of hematomas and an amplified inflammatory response, while the entry of pigment particles into the superficial lymphatic bed leads to their uncontrolled spread — the phenomenon of migration [14]. Age-related changes — weakening of the orbicularis oculi muscle and the retaining ligaments with the formation of dermatochalasis — modify tissue architectonics and can intensify uneven pigment distribution [10].

A systematized study of the literature makes it possible to differentiate the complications characteristic of traditional blepharopigmentation and to trace their direct determination by specific technical errors. This causal linkage convincingly confirms that the transition to an atraumatic technique is not merely preferable but a necessary condition for ensuring the safety and quality of the intervention. Table 1 presents a comparative analysis of the risks inherent to the classical approach and the preventive measures underlying the atraumatic technique.

Table 1. Comparative analysis of risk factors and complications in traditional and atraumatic blepharopigmentation (compiled by the author based on [10-13]).

Complication	Risk factor (Traditional technique)	Risk-minimization strategy (Atraumatic technique)
Pigment migration (Fanning)	Deep pigment placement (reticular dermis/subcutis), damage to lymphatic vessels.	Strictly controlled placement of pigment in the superficial papillary dermis.
Unnatural, flat color	Dense, homogeneous filling, use of unstable pigments.	Layered, airy application of pigment (pixel technique) to create an effect of transparency and depth.
Color change (inversion)	Deep pigment location leading to the Tyndall effect (bluish hue); chemical instability of the pigment.	Superficial placement, use of high-quality, stable pigments.

Eyelid margin necrosis, eyelash loss	Excessive tissue trauma due to multiple deep punctures, excessive pressure, and maceration.	Minimal number of superficial passes, light pressure, use of atraumatic needles.
Granuloma formation, scarring	Aggressive mechanical injury to the dermis, immune response to deeply placed pigment.	Minimization of the inflammatory reaction through superficial and atraumatic implantation.

The proposed methodology is considered a direct response to the challenges systematized in Table 1 and is based on a set of principles aimed at achieving the maximum aesthetic outcome with minimal tissue trauma.

Its fundamental distinction is the strictly controlled depth of pigment deposition. In contrast to traditional tattooing, where the longevity of the effect is associated with the deepest possible insertion, the atraumatic approach provides for the placement of pigment exclusively within the papillary dermal layer. This layer is located directly beneath the epidermis and is characterized by a lower density of tissue structures and the absence of large lymphatic vessels. Evidence from the related field of tricopigmentation convincingly demonstrates that excessive penetration into the reticular dermis leads to pigment diffusion and the formation of blurred, enlarged foci of coloration [13]. By contrast, working within the superficial layer preserves the sharpness of each pixel and prevents pigment migration (fig.1).

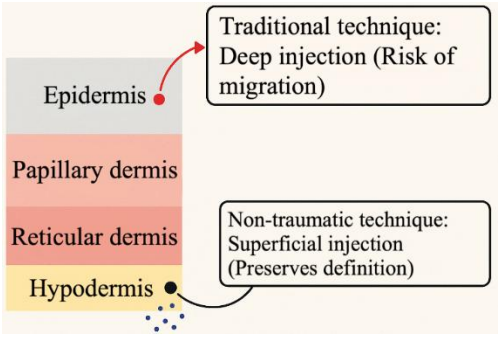


Fig. 1. Schematic representation of the depth of pigment introduction (compiled by the author based on [6, 7, 17]).

The technical implementation of this principle requires specific instrumentation and operational adjustments. To ensure minimal trauma, preference is given to low-trauma, short-stroke (less 'harsh') machines which minimize tissue vibration and impact. The procedure is optimally performed using highly atraumatic needle configurations, specifically a single needle (1R) with a diameter of 0.25 mm, which allows for precise pixel deposition. This instrumentation is paired with an extremely gentle, barely perceptible pressure on the handpiece, producing a 'spraying' effect (a pixel veil) that prevents maceration and tissue tearing (fig.2).

Fig. 2. Example of atraumatic work on the eyelids.

A significant clinical advantage derived from this superficial methodology is its minimal nociceptive impact, rendering the procedure practically painless for most patients. This high comfort level largely obviates the need for aggressive anesthesia. This is a critical practical point, as it is clinically observed that minimizing the application of topical anesthetics directly enhances the 'transparency' (clarity) of the implantation. Anesthetics, particularly those containing vasoconstrictors, induce tissue edema and alter skin density. This distortion compromises the specialist's haptic feedback and precise control over superficial depth, thereby affecting the uniformity and healed clarity of the pigment. By working on tissue in its natural, non-anesthetized state, the specialist achieves a cleaner, more

predictable and transparent pigment deposition, fulfilling the demand for superior, practical aesthetic outcomes.

The second core principle of the methodology consists in forming color and optical density not in a single pass, but by the sequential application of several semi-transparent layers. Such a layered strategy reproduces the nature of natural shadow, which is not monolithic and flat but is characterized by depth and gradient variability. This approach traces back to practices of reconstructive micropigmentation — in particular, to techniques for creating a three-dimensional areola after mastectomy, where realism serves as the decisive criterion [16]. Each subsequent layer is applied only after assessing the healing of the previous one, which ensures full control over the final intensity and the geometry of the shape. It is this technology that makes it possible to achieve the open gaze effect in patients with hooded eyelids: correctly positioned shadow visually deepens the fold, creating an optical illusion of lifting without surgical intervention (Fig.3).

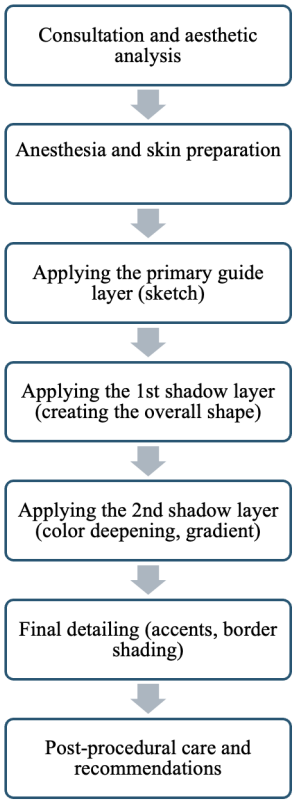


Fig.3. Procedural flowchart of the layered shadow shading technique (compiled by the author on the basis of [9, 13, 18]).

The uniqueness and practical significance of the technique are manifested in the breadth of clinical indications, which substantially extend beyond classical permanent makeup.

Case profile 1: Correction of outdated tattooing and work with hooded eyelids. The most labor-intensive area remains the elimination of the consequences of poor-quality permanent makeup, especially with pigment migration. The strategy begins with the most sparing removal or neutralization of the previous colorant (including laser technologies or removers) followed by complete tissue restoration. Next, layered, controlled shading is applied to model a new architecture. In dermatochalasis, tonal density is distributed so as to optically create a natural depth of the supratarsal region, reduce the apparent heaviness of the eyelid, and visually open the gaze.

Case profile 2: Camouflage of postoperative and posttraumatic deformities. In paramedical dermopigmentation, the technique demonstrates high effectiveness: it efficiently masks scars after blepharoplasty, traumatic injuries, and burns, restoring symmetry and the integrity of the facial image. Principles of working with scars developed on other body areas are adapted to the thin and vulnerable skin of the eyelids without loss of precision and predictability of the outcome [15].

Solving such complex tasks requires not an isolated manual practice but integration into a medical context. The optimal approach is an interdisciplinary model: the micropigmentation specialist acts as a member of a team that includes a dermatologist and a plastic surgeon. This approach, consistent with the doctrine of integrative medicine, ensures maximum safety and efficacy. The dermatologist performs dermatoscopic and clinical assessment of the skin condition, rules out contraindications, and determines therapeutic limitations; the plastic surgeon, if necessary, refers for final scar correction or offers a nonsurgical alternative to repeat intervention. Figure 4 shows predicted patient satisfaction across key parameters.

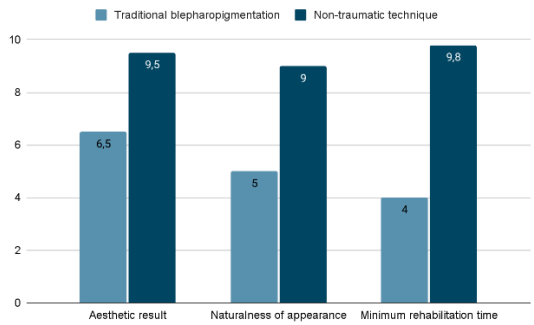


Fig.4. Predicted patient satisfaction by key parameters (compiled by the author based on [3, 5, 6, 15, 18]).

The diagram presented in Figure 3 illustrates the expected superiority of the atraumatic technique over the traditional one according to criteria most important to contemporary patients. The data are based on extrapolating the high satisfaction rates documented in studies of similar advanced micropigmentation techniques, such as SMP.

The ultimate value of any aesthetic intervention is determined not only by measurable parameters — millimeters of correction or gradations of color — but also by how it affects mental well-being and the subjective sense of quality of life. In dermatological practice, the concept of cutaneous body image is used for such assessment — an internal cognitive-emotional representation of a person regarding the condition of the skin, hair, and nails. It has been shown that even moderately expressed appearance defects, especially those located on the face, substantially undermine CBI and thereby increase the risk of anxiety and depressive disorders, intensify social avoidance, and reduce self-esteem.

The periorbital area has exceptional significance, since the eyes are a key channel of interpersonal communication; consequently, scars, asymmetry, age-related changes, or unsuccessful permanent makeup in this region disproportionately distort CBI. Under these circumstances, the proposed atraumatic technique, aimed at achieving a maximally natural visual result, acquires therapeutic potential. In contrast to dense and conspicuous tattooing, which effectively replaces one defect (for example, a scar) with another — obvious pigmentation — layered shadow blending creates the impression of intact, physiologically appearing tissue. This makes it possible not merely to mask a flaw, but to restore the integrity of one's own bodily self-image, which is directly associated with increased satisfaction with appearance and greater self-acceptance [16]. Consequently, the procedure should be regarded as extending beyond a purely cosmetic intervention: essentially, it is a paramedical service aimed at reconstructing psychological comfort and improving quality of life.

4. Conclusion

The conducted analysis convincingly demonstrates that the developed authorial method of atraumatic layered shadow blepharopigmentation constitutes a theoretically validated and clinically significant approach to aesthetic correction of the periorbital area. The approach specifically eliminates the key shortcomings of traditional techniques — excessive traumatization and a high risk of complications — through a fundamentally different strategy based on strictly dosed superficial deposition of pigment under control of depth and distribution.

The study objective was achieved, and the initial hypothesis was confirmed. Within the work it was demonstrated that minimization of tissue injury forms a more favorable safety profile and makes it possible to obtain more natural, harmonious aesthetic outcomes, including in clinically challenging scenarios — dermatochalasis and camouflage of localized defects. This is associated with high patient satisfaction and a pronounced positive impact on psychoemotional state and quality of life, contributing to the restoration of a disturbed skin-related body image.

The practical value of the study consists in substantiating a new benchmark of quality and safety for permanent makeup specialists and in demonstrating the potential of the method as an effective tool for dermatologists and plastic surgeons within comprehensive programs of rejuvenation and rehabilitation. Integration of atraumatic blepharopigmentation into clinical practice within the framework of interdisciplinary collaboration appears to be a promising vector for the development of aesthetic medicine. To confirm and refine the obtained results, it is advisable to conduct prospective clinical studies with quantitative assessment of the incidence of adverse events and the dynamics of patient quality-of-life indicators.

References

1 Medical Aesthetics Market Size, Share, and Forecast 2025–2033 [Electronic resource]. - Access mode:

https://www.datamintelligence.com/research-report/medical-aesthetics-market (date accessed: 15.09.2025).

2 Medical Aesthetics Market Size, Share & Growth Report 2032 [Electronic resource]. - Access mode: https://www.snsinsider.com/reports/medical-aesthetics-market-2901 (date accessed: 15.09.2025).

3 Global Medical Aesthetics Market: Trends, Growth & Future Outlook (2025–2030) [Electronic resource]. - Access mode: https://www.pharmiweb.com/press-release/2025-07-14/global-medical-aesthetics-market-trends-growth-future-outlook-2025-2030 (date accessed: 15.09.2025).

4 Medical Aesthetics Market Size to Reach USD 87.84 Bn by 2034 - Precedence Research [Electronic resource]. - Access mode: https://www.precedenceresearch.com/medical-aesthetics-market (date accessed: 18.09.2025).

5 Medical Aesthetics Market Report 2025-2034 | Growth - The Business Research Company [Electronic resource]. - Access mode: https://www.thebusinessresearchcompany.com/report/medical-aesthetics-global-market-report (date accessed: 18.09.2025).

6 Evaluation of Serum Vitamin and Mineral Levels in Patients with Dermatochalasis [Electronic resource]. - Access mode: https://hasekidergisi.com/articles/evaluation-of-serum-vitamin-and-mineral-levels-in-patients-with-dermatochalasis/haseki.galenos.2025.96646 (date accessed: 19.09.2025).

7 Viscardi J. A., Giordano S. Upper Blepharoplasty for Dermatochalasis With or Without Resection of the Orbicularis Oculi Muscle, Preaponeurotic and Nasal Fat Pads: A Comparative Study //Aesthetic Plastic Surgery. – 2025. – Vol. 49 (6). – pp. 1689-1696.

8 Nemet A. Y. et al. Ablative radiofrequency microplasma for lateral dermatochalasis-indications and treatment recommendations //Lasers in Medical Science. – 2024. – Vol. 39 (1). - pp.1-4.

9 Goldman A., Wollina U. Severe unexpected adverse effects after permanent eye makeup and their management by Q-switched Nd: YAG laser //Clinical interventions in aging. – 2014. – pp. 1305-1309.

10 Male S. R., Nandyala S. A Comprehensive Review of Blepharopigmentation. – 2025. - pp. 1-5.

11 Nguyen B. et al. Scalp micropigmentation: A clinicopathologic correlation //Skin appendage disorders. – 2022. – Vol. 8 (5). – pp. 412-414.

12 Vrcek I., Ozgur O., Nakra T. Infraorbital dark circles: a review of the pathogenesis, evaluation and treatment //Journal of cutaneous and aesthetic surgery. – 2016. – Vol. 9 (2). – pp. 65-72.

13 Spyropoulou G. A., Fatah F. Decorative tattooing for scar camouflage: patient innovation //Journal of Plastic, Reconstructive & Aesthetic Surgery. – 2009. – Vol. 62 (10). – pp. 353-355.

14 Li Y., Juan A. Invited Discussion on: 3D Nipple–Areolar Tattoo: Its Technique, Outcomes, and Utilization //Aesthetic Plastic Surgery. – 2021. – Vol. 45 (2). – pp. 459-461.

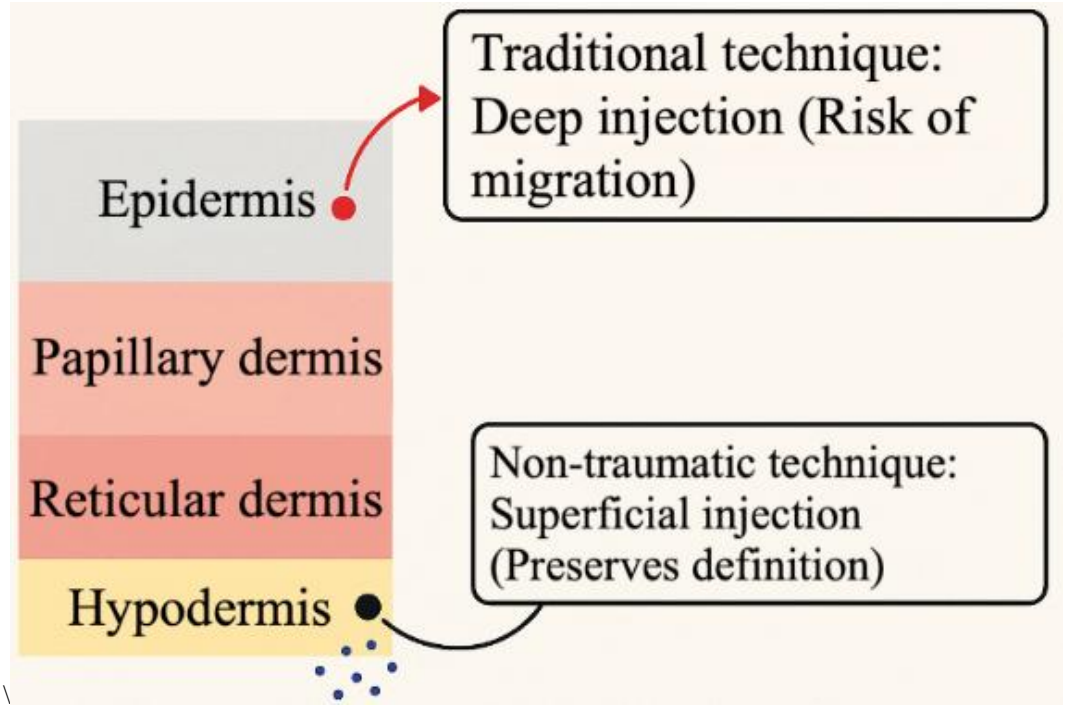
15 Hollander M. H. J. et al. Functional outcomes of upper eyelid blepharoplasty: a systematic review //Journal of Plastic, Reconstructive & Aesthetic Surgery. – 2019. – Vol. 72 (2). – pp. 294-309. https://doi.org/10.1016/j.bjps.2018.11.010.

16 Micropigmentation for Vitiligo - American Society for Dermatologic Surgery [Electronic resource]. - Access mode: https://www.asds.net/skin-experts/skin-treatments/micropigmentation/migropigmentation-for-vitiligo (date accessed: 24.09.2025).

17 Liu Q. et al. Scalp Micropigmentation Is an Effective Treatment for Localized Alopecia: Technical Analysis and a Series of Ten Case Reports //Journal of Cosmetic Dermatology. – 2025. – Vol. 24 (9). https://doi.org/10.1111/jocd.70375.

18 Seyhan T., Kapi E. Scalp micropigmentation procedure: a useful procedure for hair restoration //Journal of Craniofacial Surgery. – 2021. – Vol. 32 (3). – pp. 1049-1053.

Figure



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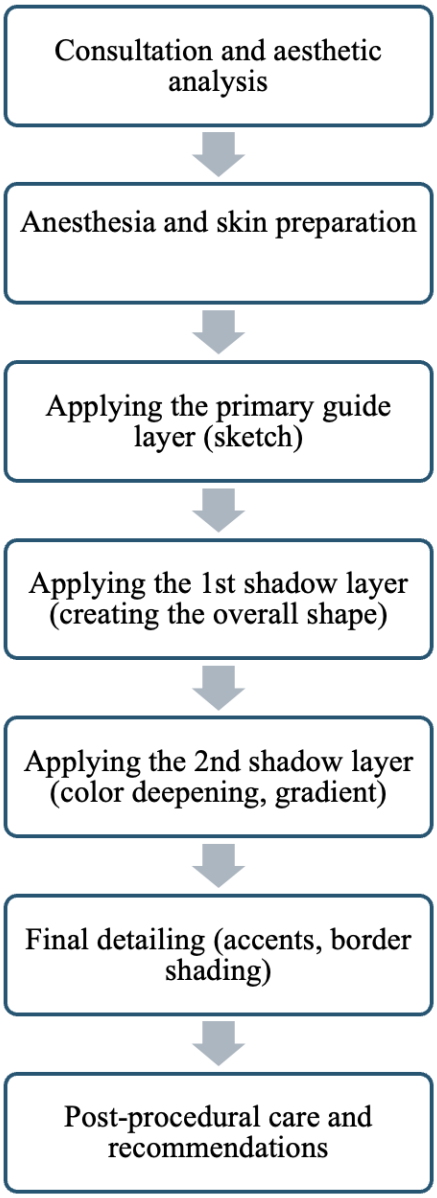

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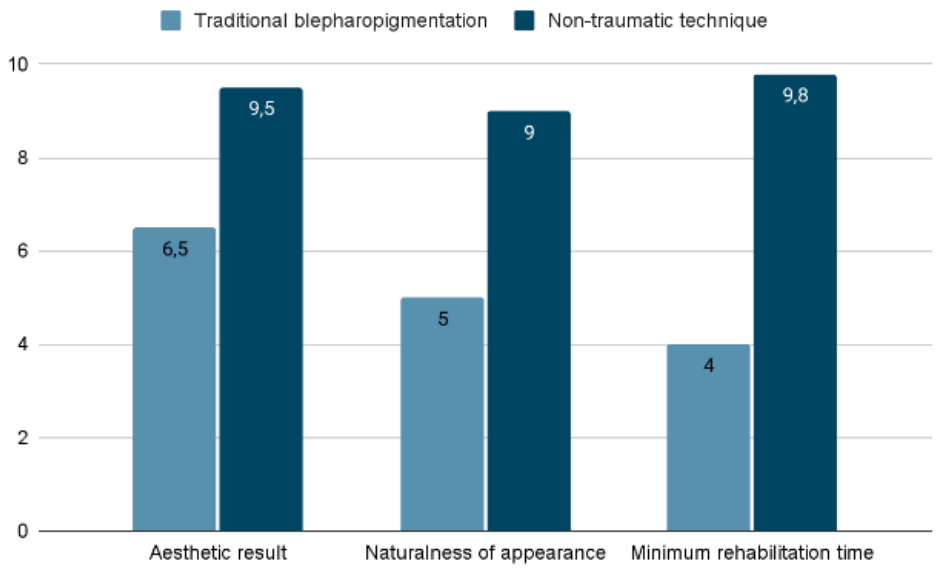

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