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# POST-WAXING CARE: EVIDENCE ON SOOTHING AND ANTI-INFLAMMATORY PRODUCTS

# CUIDADOS PÓS-DEPILAÇÃO: EVIDÊNCIAS SOBRE PRODUTOS CALMANTES E ANTI-INFLAMATÓRIOS

# CUIDADOS POSTERIORES A LA DEPILACIÓN: EVIDENCIA SOBRE PRODUCTOS CALMANTES Y ANTIINFLAMATORIOS

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## ABSTRACT

Hair removal is a widely used aesthetic procedure that, despite its hygienic and aesthetic purpose, causes microtrauma and inflammation to the skin, requiring specific care in the post-procedure period. This study aimed to analyze scientific evidence on the use of soothing and anti-inflammatory products in restoring the skin barrier after different hair removal methods. Through a qualitative bibliographic review, national publications from 2013 to 2022 were analyzed, addressing the physiological impacts of hair removal and dermocosmetic strategies to minimize irritation and inflammation. It was found that natural agents such as aloe vera, chamomile, marigold, and andiroba oil show significant efficacy in reducing erythema, burning, and edema, in addition to promoting tissue regeneration and deep hydration. It was also observed that the combination of antioxidants, vitamins, and phytotherapeutic compounds enhances soothing and protective effects. The results highlight the importance of well-structured post-depilation protocols that include cleansing, hydration, antisepsis, and photoprotection, promoting the physiological rebalancing of the skin and preventing complications. It is concluded that the use of soothing and anti-inflammatory products based on scientific evidence represents a safe and effective strategy in contemporary cosmetology, contributing to healthier and more sustainable aesthetic practices.

**Keywords:** Hair Removal. Post-procedure Care. Soothing Products. Anti-inflammatory Agents. Cosmetology.

## RESUMO

A depilação é um procedimento estético amplamente utilizado que, apesar de sua finalidade higienizadora e estética, provoca microtraumas e inflamações na pele, exigindo cuidados específicos no período pós-procedimento. O presente estudo teve como objetivo analisar as evidências científicas acerca do uso de produtos calmantes e anti-inflamatórios na recuperação da barreira cutânea após diferentes métodos depilatórios. Por meio de revisão bibliográfica qualitativa, foram analisadas publicações nacionais entre 2013 e 2022, abordando os impactos fisiológicos da depilação e as estratégias dermocosméticas para minimizar irritações e inflamações. Verificou-se que agentes naturais, como aloe vera, camomila, calêndula e óleo de andiroba, apresentam

eficácia significativa na redução de eritema, ardor e edema, além de promoverem regeneração tecidual e hidratação profunda. Também se observou que a associação entre antioxidantes, vitaminas e compostos fitoterápicos potencializa os efeitos calmantes e protetores. Os resultados destacam a importância de protocolos pós-depilatórios bem estruturados, que contemplem higienização, hidratação, antissepsia e fotoproteção, promovendo o reequilíbrio fisiológico da pele e prevenindo complicações. Conclui-se que o uso de produtos calmantes e anti-inflamatórios embasados em evidências científicas representa uma estratégia segura e eficaz na cosmetologia contemporânea, contribuindo para práticas estéticas mais saudáveis e sustentáveis.

**Palavras-chave:** Depilação. Cuidados Pós-procedimento. Produtos Calmantes. Anti-inflamatórios. Cosmetologia.

**RESUMEN**

La depilación con cera es un procedimiento estético muy utilizado que, a pesar de su finalidad higienizante y estética, provoca microtraumatismos e inflamaciones en la piel, requiriendo cuidados específicos en el post-procedimiento. El presente estudio tuvo como objetivo analizar la evidencia científica sobre el uso de productos calmantes y antiinflamatorios en la recuperación de la barrera cutánea después de diferentes métodos depilatorios. A través de una revisión bibliográfica cualitativa, se analizaron publicaciones nacionales entre 2013 y 2022, abordando los impactos fisiológicos de la depilación y las estrategias dermocosméticas para minimizar la irritación e inflamación. Se comprobó que agentes naturales, como el aloe vera, la manzanilla, la caléndula y el aceite de andiroba, son significativamente eficaces para reducir el eritema, el ardor y el edema, además de favorecer la regeneración de los tejidos y la hidratación profunda. También se observó que la asociación entre antioxidantes, vitaminas y compuestos herbales potencia los efectos calmantes y protectores. Los resultados resaltan la importancia de protocolos posdepilatorios bien estructurados, que incluyan higiene, hidratación, antisepsia y fotoprotección, favoreciendo el reequilibrio fisiológico de la piel y previniendo complicaciones. Se concluye que el uso de productos calmantes y antiinflamatorios basados en evidencia científica representa una estrategia segura y eficaz en la cosmetología contemporánea, contribuyendo a prácticas estéticas más saludables y sostenibles.

**Palabras clave:** Depilación. Atención Post-procedimiento. Productos Calmantes. Antiinflamatorios. Cosmetología.

## 1 INTRODUCTION

Hair removal, an aesthetic practice widely spread among different cultures and age groups, causes repetitive microtrauma on the epidermis, capable of momentarily compromising the skin barrier, making the tissue more susceptible to inflammation, irritation and folliculitis, a condition that requires careful post-procedure protocols aimed at the recovery and protection of the skin, in order to reestablish its physiological integrity and prevent infectious complications (Cela *et al*., 2014)

Understanding the inflammatory response generated by the depilatory act is essential for the development of soothing and anti-inflammatory cosmetics, since the removal of hair from the root triggers an acute inflammatory process, characterized by vasodilation, erythema and thermal discomfort, which justifies the application of substances with regenerative and antioxidant properties in the subsequent period (Maciel *et al*, 2022)

The national scientific literature has been consolidating the understanding that post-depilatory requires a dermocosmetic approach based on herbal and biotechnological actives, capable of acting on the modulation of inflammation, re-epithelialization, and hydration of the stratum corneum, since the imbalance of this barrier favors microcracks and penetration of pathogenic agents (Oliveira, *et al*., 2021)

Soothing products with plant extracts rich in flavonoids, tannins and essential fatty acids present promising evidence regarding their anti-inflammatory action, demonstrating efficacy in reducing hyperemia and burning sensation after the use of hot or cold wax, in addition to helping in the healing of epidermal microdamage caused by friction and follicular traction (Lima *et al*., 2021)

In the clinical context, the appropriate choice of post-depilatory agents becomes decisive to minimize complications such as pustules and post-inflammatory hyperpigmentations, observing that formulations that associate vegetable oils, antioxidant principles, and antimicrobial agents have better performance in restoring the skin barrier and maintaining the skin's hydrolipidic balance (Silva, 2021)

In addition to acute inflammatory reactions, another recurrent factor is the appearance of post-depilatory folliculitis, a result of follicular obstruction associated with bacterial proliferation, especially *Staphylococcus aureus*, which reinforces the importance of using cosmetics with antiseptic and regenerating properties to contain inflammation and prevent the recurrence of this condition (Korelo *et al*., 2013)

Aesthetic dermatology recognizes that the proper management of post-depilatory should consider the specificities of each skin type, especially in higher phototypes, in which there is a greater predisposition to post-inflammatory hyperpigmentation, requiring the use of soothing actives that act selectively, reducing inflammation without interfering with melanin production (Pillai, 2019)

Research with natural extracts, such as Passiflora edulis, has highlighted the relevance of phytotherapy in controlling skin inflammation, demonstrating that bioactive compounds present in its plant principles exert a repairing effect on tissues, stimulating collagen production and reducing the action of free radicals in the weakened epidermis after depilation (Santos *et al*., 2022)

The use of agents with antioxidant properties, such as flavonoids and phenolic acids, plays a relevant role in neutralizing oxidative stress induced by heat and hair traction, preventing inflammation from prolonging and the tissue repair process from becoming slow or incomplete, which could result in hypertrophic scars or residual spots (Maciel *et al*, 2022)

Post-depilatory care should not be restricted to the application of an isolated soothing product, but involve an integrative protocol that includes gentle hygiene, repairing hydration, and protection against external agents, especially in regions of friction or sun exposure, contributing to the complete regeneration of the skin barrier and to the patient's sensory comfort (Oliveira, *et al*., 2021)

Evidence indicates that the efficacy of post-depilatory products depends on the chemical composition, pharmaceutical form and frequency of application, with hydroalcoholic lotions and gels being preferred for hairy areas, while lipophilic creams and emulsions perform better in dry regions, ensuring uniformity of action and adequate penetration of the active ingredients (Lima *et al*., 2021)

Finally, the growing demand for safe and sustainable aesthetic practices has driven research into natural and biocompatible ingredients, promoting the development of soothing and anti-inflammatory cosmetics with lower allergenic potential and greater clinical efficacy, representing a promising trend in scientific cosmetology and in valuing skin health (Cela *et al*., 2014)

## 2 THEORETICAL FRAMEWORK

### 2.1 SKIN PHYSIOLOGY AND IMPACT OF HAIR REMOVAL

The skin is the largest organ in the human body, responsible for acting as a protective barrier, thermal regulator and sensory interface between the body and the external environment, being composed of epidermis, dermis and hypodermis, structures that perform distinct and complementary functions in the defense and maintenance of homeostasis, however, during hair removal, a process of mechanical aggression occurs, in which the removal of hair compromises the layer and causes microlesions capable of triggering an immediate inflammatory response (Cela *et al*., 2014).

This trauma, resulting from the traction of the hair follicles and the partial removal of keratinized cells, results in the activation of chemical mediators such as prostaglandins and histamine, responsible for promoting vasodilation and increased capillary permeability, causing clinical signs such as erythema, burning and edema, common in the first hours after depilation, which justifies the need for specific care in the post-procedure period (Maciel *et al*, 2022).

The integrity of the skin barrier, composed of intercellular lipids and structural proteins such as keratin and filaggrin, is essential to prevent excessive water loss and the penetration of irritants, however, hair removal promotes a temporary break in this balance, increasing the skin's susceptibility to microorganisms and secondary infectious processes (Oliveira, *et al*., 2021).

Brazilian research indicates that the physiological impact of hair removal varies according to the method used, with hot wax being the procedure that most harms the superficial tissue, as the high temperature and adhesion of the resin intensify follicular pullout and heat stress, requiring greater attention to epidermal recovery and the application of calming agents (Lima *et al*., 2021).

In addition to thermal and mechanical aggression, there is the risk of excessive removal of the hydrolipidic film, which is responsible for maintaining natural hydration and the integrity of the skin microbiome, which makes it essential to use cosmetics that restore lipid balance and promote the strengthening of the skin's natural barrier after the procedure (Silva, 2021).

The inflammatory reaction triggered by the depilatory act is a physiological defense response, however, when exacerbated or prolonged, it can lead to skin sensitization and the development of post-inflammatory hyperpigmentations, especially in individuals with

higher phototypes, which reinforces the importance of interventions that reduce the release of inflammatory mediators without interfering with melanocytic function (Korelo *et al*., 2013).

In more reactive or sensitized skin, the microlesions caused by hair removal can develop into folliculitis, an inflammation of the hair follicle caused by bacterial penetration, especially *Staphylococcus aureus*, a condition that requires preventive dermocosmetic care and the use of formulations with antiseptic and soothing properties (Pillai, 2019).

The skin physiology after the hair removal process is marked by an imbalance between the defense and repair mechanisms, and it is essential to restore the function of the layer to avoid transepidermal water loss and reduce the risk of secondary inflammation, which can be achieved with the application of substances with anti-inflammatory and regenerating action (Santos *et al*., 2022).

Local inflammatory processes, when not properly treated, can compromise connective tissue and delay re-epithelialization, resulting in dermal thickening or fibrosis, which is why contemporary aesthetic approaches incorporate biofunctional actives that act on cell regeneration and stimulation of collagen and elastin synthesis (Maciel *et al*, 2022).

The physiological impact of hair removal can also be observed in the alteration of the cutaneous pH, which tends to become more alkaline after the procedure, a condition that unbalances the natural microbiota and reduces the skin's resistance to external agents, and the use of products that help acidify and restore the protective mantle is recommended (Oliveira, *et al*., 2021).

Post-depilatory tissue vulnerability is more pronounced in areas of friction and folds, such as the armpits and groin, where heat and humidity favor irritation, making it essential to use non-oily and fast-absorbing cosmetics, capable of creating a protective film and minimizing sensory discomfort (Lima *et al*., 2021).

Thus, understanding the physiological mechanisms that govern the skin's response to hair removal allows aesthetic and health professionals to adopt protocols based on scientific evidence, promoting efficient skin repair and preventing complications that compromise the aesthetic result and the patient's well-being (Cela *et al*., 2014).

## 2.2 SOOTHING AND ANTI-INFLAMMATORY AGENTS APPLIED TO POST-DEPILATORY

Post-depilatory care requires the use of cosmetic formulations that offer soothing, anti-inflammatory and regenerating actions, acting on the biochemical processes triggered by the mechanical, thermal and chemical trauma of hair removal, and it is essential to use active ingredients capable of modulating inflammation, reducing erythema and restoring the skin's hydrolipidic balance, ensuring comfort and skin integrity after the procedure (Cela *et al*., 2014).

Among the most used active ingredients are plant extracts rich in phenolic compounds and flavonoids, such as chamomile (*Matricaria chamomilla*), calendula (*Calendula officinalis*), aloe vera (*Aloe barbadensis*) and andiroba oil (*Carapa guianensis*), recognized for their anti-inflammatory and emollient properties, acting to reduce the release of inflammatory cytokines and accelerate tissue re-epithelialization (Maciel *et al*, 2022).

Chamomile extract, widely used in cosmetology, contains apigenin and bisabolol, substances with proven soothing, antioxidant and antiseptic action, which reduce erythema and irritation caused by hair removal, promoting a feeling of freshness and immediate relief, and is indicated for sensitive skin prone to folliculitis (Oliveira, *et al*., 2021).

Calendula has a high content of triterpenes and flavonoids, compounds that stimulate collagen production and cell regeneration, in addition to exerting antimicrobial action, which helps prevent superficial infections and heal microlesions resulting from follicular pullout, becoming a valuable resource in post-depilatory lotions and creams (Lima *et al*., 2021).

Aloe vera gel, in turn, is composed of polysaccharides and amino acids that act in deep hydration and in the regulation of skin temperature, offering a natural soothing and anti-inflammatory effect, in addition to favoring healing, and is often associated with other herbal agents in synergistic formulations for immediate use after hair removal (Silva, 2021).

Among vegetable oils, andiroba stands out for its content of essential fatty acids, such as oleic, linoleic and myristic, which confer anti-inflammatory and regenerating properties, helping to restore damaged tissue, reduce redness and reconstitute the hydrolipidic film, determining factors for skin comfort and healing (Korelo *et al*., 2013).

In addition to compounds of plant origin, pharmacological agents such as desonide and panthenol are used in post-depilatory formulations for their modulating action on the

inflammatory response and their ability to promote epithelial regeneration, although their use should be restricted and supervised, avoiding adverse effects or follicular occlusion (Pillai, 2019).

Panthenol, a precursor of vitamin B5, has soothing and humectant properties, favoring the increase of skin elasticity and tissue repair, and is widely used in emulsions and post-depilatory gels, as it helps to rebuild the protective barrier and reduce transepidermal water loss, necessary for the physiological balance of the skin (Santos *et al*., 2022).

Another class of substances used are natural antioxidants, such as vitamin E and *Passiflora edulis* extract, which reduce oxidative stress resulting from inflammation and thermal exposure during hair removal, acting to neutralize free radicals and protect against premature skin aging (Maciel *et al*, 2022).

Soothing products can be found in different cosmetic forms, such as gels, creams, lotions and foams, the choice of which must be appropriate to the type of skin and the shaved region, since areas with greater oiliness, such as the face and back, require light and non-comedogenic vehicles, while dry or sensitive regions require moisturizing and protective emulsions (Oliveira, *et al*., 2021).

The association of soothing active ingredients with antiseptic substances, such as witch hazel extract and tea tree essential oil, has been shown to be effective in preventing folliculitis and irritation, creating a balanced skin environment free of infectious agents, in addition to contributing to the maintenance of the skin's beneficial microbiota, vital to its natural immunity (Lima *et al*., 2021).

Thus, the judicious use of soothing and anti-inflammatory agents in the post-depilatory period represents a primary component of evidence-based aesthetic practice, as it combines sensory comfort with biological protection, resulting in a faster, safer and more satisfactory recovery for the patient, consolidating itself as an indispensable step in any professional hair removal protocol (Cela *et al*., 2014).

## 2.3 DERMOCOSMETIC PROTOCOLS AND SAFE AESTHETIC PRACTICES

The implementation of safe dermocosmetic protocols in the post-depilatory period requires a systematized and evidence-based approach, considering the particularities of each skin type, the hair removal method used, and the intensity of the local inflammatory response, factors that determine the choice of the most appropriate active ingredients,

vehicles, and techniques to promote skin recovery and prevent complications (Cela *et al*., 2014).

The first step of an effective protocol consists of gentle cleaning of the depilated area, using physiological pH and alcohol-free products, in order to remove wax, sweat or impurities without aggravating the existing irritation, allowing the skin to optimally receive the soothing and moisturizing active ingredients that will be applied afterwards (Maciel *et al*, 2022).

After cleansing, the application of soothing solutions with plant extracts and antioxidant substances is substantial to reduce redness and restore tissue temperature, and the use of refreshing aloe vera, calendula or chamomile gels is indicated, which promote immediate relief, control sensory discomfort and help modulate local inflammation (Oliveira, *et al*., 2021).

Next, it is recommended to apply cosmetics with moisturizing and regenerating properties, preferably composed of light vegetable oils or hypoallergenic emulsions containing essential fatty acids and antioxidant vitamins, which stimulate collagen synthesis, reinforce the skin barrier, and favor the restructuring of damaged tissue (Lima *et al*., 2021).

In cases where there is a greater predisposition to folliculitis, the protocol should be associated with the use of products with antiseptic and bacteriostatic action, such as tea tree or witch hazel solutions, which help control the local microbiota without drying out the skin, ensuring a clean and balanced recovery, avoiding the appearance of pustules and recurrent inflammation (Silva, 2021).

It is important that the professional avoid the use of products with artificial fragrances, alcohol, parabens or aggressive preservatives, as these compounds can intensify the inflammatory process, cause burning and trigger allergic reactions, compromising the aesthetic result and the patient's comfort, especially in sensitive skin (Korelo *et al*., 2013).

Also important is the temperature of the products applied, since the use of cold lotions favors vasoconstriction and the reduction of edema, providing a feeling of relief and helping to contain the inflammatory process, which is why many protocols include prior cooling of cosmetics before application (Pillai, 2019).

Sun exposure should be avoided in the first 24 to 48 hours after hair removal, as ultraviolet radiation potentiates inflammation and stimulates melanin production,

increasing the risk of hyperpigmentation, and the use of broad-spectrum sunscreen and dry touch is essential, preferably with a physical filter and free of oil (Santos *et al*., 2022).

The frequency of application of soothing and anti-inflammatory products is decisive for the effectiveness of the protocol, and should occur two to three times a day in the first 48 hours, gradually reducing as the skin regains its physiological balance, always respecting individual sensitivity and the reactions presented (Maciel *et al*, 2022).

Complementary procedures, such as the use of high frequency and soothing masks, can be integrated into post-depilatory protocols, since they help with tissue oxygenation, cell regeneration, and infection prevention, as long as they are performed by qualified professionals and with properly sanitized equipment (Oliveira, *et al*., 2021).

To ensure the safety of aesthetic care, it is essential that the environment and materials used in hair removal are properly sterilized, avoiding cross-contamination, in addition to keeping an updated record of the cosmetics applied, their active ingredients and any adverse reactions, ensuring traceability and quality control (Lima *et al*., 2021).

Finally, the success of post-depilatory dermocosmetic protocols depends on the ethical and technical performance of the professional, who must combine scientific knowledge with individualized clinical observation, promoting safe, sustainable and effective practices, capable of ensuring the physiological recovery of the skin, and the appreciation of aesthetic health as an expression of integral well-being (Cela *et al*., 2014).

## 3 METHODOLOGY

The construction of this study was based on a methodological approach of a qualitative nature, based on a systematic literature review, with the purpose of gathering and critically analyzing the evidence available in the national scientific literature on post-depilatory care and the use of soothing and anti-inflammatory products, allowing an in-depth understanding of the physiological mechanisms, cosmetic agents and dermotherapeutic protocols applicable to this aesthetic context (Gil, 2008).

According to Gil, bibliographic research is a central procedure in the scientific field, as it allows the researcher to access knowledge accumulated by different authors and institutions, promoting the confrontation of ideas and the synthesis of relevant information that supports the theoretical basis and the argumentation of new studies, a characteristic that makes it indispensable for investigations that seek to understand phenomena from multiple perspectives (Gil, 2008).

The qualitative methodology was selected because it offers greater interpretative depth and analytical flexibility, allowing the identification of trends, conceptual categories and relationships between variables that could not be observed by purely quantitative methods, enabling the elaboration of consistent inferences about aesthetic and dermocosmetic practices in the post-depilatory period (Lakatos and Marconi, 2010).

According to Lakatos and Marconi, qualitative research is characterized by the search for meanings and understandings, and not by statistical measurement, which makes it appropriate for studies involving social, cultural, and behavioral phenomena, such as those observed in the field of aesthetics and cosmetology, where perceptions of comfort, safety, and efficacy are directly related to the individual's experience and professional performance (Lakatos and Marconi, 2010).

The theoretical survey was carried out through the selection of scientific articles, published between 2013 and 2022, extracted from academic databases such as Scielo, Redalyc, University Repositories, and journals specialized in aesthetics, dermatology, and cosmetology, with priority given to studies that presented experimental evidence, narrative reviews, and clinical analyses on the subject (Gil, 2008).

Studies that directly addressed the effects of hair removal on the skin barrier, the mechanisms of inflammation and tissue regeneration, as well as the pharmacological and phytotherapeutic properties of soothing and anti-inflammatory agents used after the procedure were included in the research corpus, considering their scientific relevance, timeliness and applicability in aesthetic practice (Lakatos and Marconi, 2010).

The analysis of the selected texts was conducted in a descriptive and interpretative manner, aiming to identify points of convergence and divergence among the authors, recognize gaps in the literature and understand the physiological and cosmetic bases that guide contemporary post-depilatory protocols, maintaining the theoretical rigor and scientific neutrality required in academic production (Gil, 2008).

As Lakatos and Marconi advise, the analysis stage in bibliographic studies should be guided by logical coherence and by the direct relationship between the objectives of the work and the results obtained, avoiding subjective interpretations and ensuring that the conclusions derive from verifiable data and evidence, which ensures the scientific validity and credibility of the findings (Lakatos and Marconi, 2010).

The research, due to its theoretical nature, did not involve laboratory experimentation or primary data collection, being restricted to the documentary analysis

of scientific productions already published, which is justified by the intention of consolidating an updated and contextualized conceptual panorama of post-depilatory care, providing subsidies for future applied investigations (Gil, 2008).

Finally, the methodology adopted in this study meets the requirements of scientific research, by uniting systematization, criticality and analytical depth, allowing the construction of a solid framework on the proposed theme, contributing to the expansion of knowledge in the field of aesthetics, while favoring the development of safer and more grounded dermocosmetic practices (Lakatos and Marconi, 2010).

## 4 RESULTS AND DISCUSSION

The analysis of the studies revealed that hair removal, regardless of the method used, causes a series of physiological changes in the skin, such as erythema, edema, increase in local temperature and transepidermal loss of water, phenomena that indicate the temporary impairment of the skin barrier, requiring immediate interventions to restore homeostasis and avoid infectious and inflammatory complications (Cela *et al*., 2014).

It has been observed that methods that use heat, such as hot wax, produce a more intense level of inflammation compared to cold or chemical techniques, due to the dilation of the pores and the simultaneous traction of the follicles, which increases the release of inflammatory mediators and enhances skin sensitivity, justifying the need for products with immediate soothing action and long-lasting anti-inflammatory effect (Maciel *et al*, 2022).

The studies analyzed highlight that plant extracts have been consolidating themselves as effective alternatives to synthetic compounds, due to their biocompatibility, low irritant potential, and antioxidant properties, being widely used in post-depilatory formulations, with positive clinical results in reducing redness, burning, and skin dryness (Oliveira, *et al*., 2021).

Andiroba oil has shown significant results as a natural anti-inflammatory agent, acting on the inhibition of cyclooxygenase and the modulation of prostaglandin production, which results in a significant reduction in edema and discomfort, in addition to contributing to cell regeneration, proving to be a promising option in the context of Brazilian cosmetology (Lima *et al*., 2021).

The presence of active compounds such as flavonoids and triterpenes in chamomile and calendula extracts demonstrated efficacy in restoring skin integrity,

showing that the association between soothing and moisturizing agents enhances the therapeutic effects and improves tissue recovery time, making combined use a recommended practice in post-depilatory protocols (Silva, 2021).

Regarding the control of folliculitis, it was found that the use of formulations containing bacteriostatic and antifungal agents of natural origin, such as tea tree essential oil and witch hazel extract, was effective in preventing microbial proliferation, maintaining the balance of the microbiota and reducing the incidence of inflammation in the hair follicles, without causing additional irritation to the skin (Korelo *et al*., 2013).

The data analyzed also indicated that the temperature and pH of post-depilatory cosmetics are determining factors for their effectiveness, and products with a slightly acidic pH and cold application are preferable, which help with vasoconstriction, reduce hyperemia, and promote an immediate feeling of freshness, contributing to the relief of discomfort and tissue regeneration (Pillai, 2019).

It was found that skin with a higher amount of melanin has a more pronounced tendency to post-inflammatory hyperpigmentation, requiring additional care and the use of mild depigmenting agents combined with soothing substances, preventing the formation of spots and maintaining the uniformity of the skin tone after the depilatory procedure (Santos *et al*., 2022).

The results also showed that the application of cosmetics containing aloe vera and panthenol promoted a faster recovery of the epidermal barrier, thanks to the stimulation of cell proliferation and increased moisture retention, with a significant improvement in the elasticity, texture and natural brightness of the skin being observed in a few days of continuous use (Maciel *et al*, 2022).

It is also interesting to emphasize the importance of the time interval between hair removal sessions, as early repetition of the procedure can aggravate microlesions and hinder complete skin regeneration, reinforcing the need for adequate recovery periods and a complementary home care routine (Oliveira, *et al*., 2021).

Clinical studies have also highlighted that the use of high frequency as a post-depilatory auxiliary resource has positive effects on healing and tissue oxygenation, since the ozone released during the process has bactericidal action and stimulates cell metabolism, favoring recovery and preventing superficial infectious processes (Lima *et al*., 2021).

The findings also demonstrate that the combination of products with antioxidant and moisturizing action enhances the results obtained with the application of soothing agents, creating a synergy between regeneration and protection, which contributes to the maintenance of skin integrity and to the prolongation of the beneficial effects after the procedure (Korelo *et al*., 2013).

Thus, the results obtained and discussed in this review confirm that the success of post-depilatory depends on the adoption of a set of integrated dermocosmetic practices, which involve hygiene, hydration, regeneration and photoprotection, ensuring the health and comfort of the skin as well as the quality and safety of aesthetic services based on scientific evidence (Cela *et al*., 2014).

## 5 FINAL CONSIDERATIONS

The results obtained throughout this study show that post-depilatory care represents a main step for the preservation of skin integrity and for ensuring aesthetic safety, being the moment when the skin most needs professional intervention based on technical and scientific knowledge. The analysis of the sources consulted showed that hair removal, although a widely used procedure, causes relevant physiological imbalances, requiring the immediate application of active ingredients that restore barrier function and restore skin comfort.

It was evident that the use of soothing agents and natural anti-inflammatory agents has significant results in reducing redness, burning and edema, in addition to contributing to tissue regeneration and maintaining skin hydration. These compounds, when used in combination and with appropriate formulations, enhance post-procedure recovery and provide a more pleasant sensory response, becoming indispensable in any professional hair removal protocol.

The choice of products must consider not only the effectiveness of the active ingredients, but also their compatibility with the skin type and the depilatory method used, ensuring that the cosmetics act in a balanced and safe way. Formulations with physiological pH, light texture, and absence of irritating substances proved to be the most appropriate, especially in sensitive skin or with a history of folliculitis and post-inflammatory hyperpigmentation.

In addition, the importance of hygiene and hydration in the immediate period after the procedure was observed, practices that favor the rebalancing of the skin microbiome

and reduce the risk of infections. The use of products with mild antiseptic properties, associated with regenerating and antioxidant actives, proved to be effective in preventing complications, reinforcing the need for integrated and personalized protocols according to the patient's profile.

The implementation of evidence-based post-depilatory dermocosmetic routines strengthens the ethical and responsible exercise of aesthetics, increasing the safety of procedures and raising the standard of quality of care. The professionalization of the practice requires constant scientific updating, since new active ingredients and cosmetic technologies emerge frequently, enabling more effective and lasting results for different skin types and needs.

In addition to the technical aspects, the client's awareness of home care is essential for the effectiveness of the treatment, as the maintenance of the skin outside the professional environment determines the durability of the results and the prevention of complications. The correct guidance on the use of moisturizers, sunscreens and calming agents should be part of the service, promoting autonomy and shared responsibility between professional and client.

The research reinforces that valuing skin health must go beyond visual aesthetics, encompassing preventive and therapeutic aspects that ensure physical and emotional well-being. Post-depilatory care, therefore, should be understood as a continuous process of regeneration and protection, which, when performed correctly and well-founded, transforms the aesthetic experience into an act of health and self-care.

It is concluded that the advancement in the formulation of cosmetic products, combined with technical training and professional ethics, constitutes the path to safer, more sustainable and efficient depilatory practices. The application of appropriate soothing and anti-inflammatory agents represents an aesthetic response and a scientific intervention that reaffirms the importance of cosmetology as a field of knowledge committed to the integrity and functionality of the skin.

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