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Review Article

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Reconstruction of the Nipple-Areola Complex in Chemotherapy Treated Skin: The Clinical Role of Medical Dermopigmentation

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ABSTRACT
Medical dermopigmentation of the nipple-areola complex has become established as a minimally invasive reconstructive alternative in patients undergoing mastectomy for breast cancer, including those treated with chemotherapy and radiotherapy. Oncological therapies can cause persistent skin alterations, such as dermal thinning, fibrosis, tissue retraction, and changes in vascularization - factors that influence the choice and execution of reconstructive techniques. The present study describes a clinical series of ten cases of nipple-areola complex reconstruction using medical dermopigmentation, applied in different post-mastectomy scenarios and types of breast reconstruction. The procedure was performed following a standardized technical protocol, taking into account skin condition, prior oncological treatments, and the need to optimize pigment retention and procedural safety. Clinical results demonstrate adequate pigment integration, absence of major complications, and a high degree of patient-reported satisfaction. Medical dermopigmentation is presented as a safe and effective reconstructive option for skin treated with chemotherapy, providing immediate and reproducible results within the context of breast reconstruction.

Keywords: Breast Cancer, Mastectomy, Nipple-Areola Complex, Chemotherapy, Medical Dermopigmentation

Introduction

"Chemotherapy is considered a systemic treatment because the drugs travel throughout the body and can eliminate cancer cells that have spread (metastasized) to parts of the body far from the primary tumor" [1]. However, these agents are designed to target rapidly dividing cells; while this is a hallmark of cancer, it is also a characteristic shared by various healthy tissues with accelerated cellular turnover.

In this context, one of the organs most affected by chemotherapy is the skin, particularly the epidermis and dermis, given its high rate of renewal. The consequences on the skin are significant, and particularly include skin thinning, epidermal atrophy, dysfunction of the skin barrier, and decreased keratinocyte proliferation.

As a result, the skin becomes more fragile, dry, and reactive, leading to increased susceptibility to injury and reduced tolerance to invasive procedures. Furthermore, chemotherapy contains anti-EGFR agents that are toxic, making dermatological toxicity highly likely, which "usually manifests itself in skin eruptions in more than 60% of patients" [2].

Therefore, after breast cancer, followed by a mastectomy, the reconstruction of the nipple-areola complex (NAC), becomes a very difficult process. While various reconstructive alternatives are available, the condition of the tissue after a cancer treatment significantly impacts the results of these interventions. This case review will compare surgical reconstruction of the nipple-areola complex with medical dermopigmentation.

Reconstruction of the nipple-areola complex is a fundamental part of the breast cancer treatment process, as it not only serves an aesthetic function but is also an integral part of the physical and psychological recovery of mastectomy patients. This procedure directly influences how they perceive their body image, femininity, well-being, and future quality of life. The breast holds profound significance due to its nature as a symbol of womanhood, the first bond between a mother and child, sexuality, and more.

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In this context, the objective of the present study is to comparatively understand the risks, limitations and results of surgical reconstruction of the nipple-areola complex and medical dermopigmentation in mastectomized patients who have received chemotherapy, considering the biological singularities of the skin after oncological treatment.

Literature Review

Effects of Chemotherapy on the Skin

The skin is the organ most vulnerable to the effects of chemotherapy because, as mentioned previously, it has rapidly dividing cells, resulting in constant renewal of its cell layers. As mentioned by San Martín et al., there are lesions that predominantly affect the epidermis. The pathogenic mechanism responsible for this includes cytotoxicity against epidermal keratinocytes and, to a lesser extent, against eccrine ductal cells in the epidermis [3].

As a consequence of this cellular damage, keratinocytes die or significantly reduce their proliferative capacity, leading to thinning of the epidermis and a decrease in the skin's regenerative capacity.

Likewise, damage to eccrine duct cells alters sweat production and excretion, modifying the skin's microenvironment, pH, and natural hydration mechanisms.

These pathophysiological alterations favor the development of intense dryness, irritation, and persistent inflammation, making the skin a more fragile tissue, susceptible to infections, and less tolerant to invasive procedures.

As the literature describes, these alterations are not always transient and can persist beyond the active period of chemotherapy treatment, significantly impacting the skin's response to subsequent reconstructive procedures [3].

Tissue Changes Following Mastectomy and Involvement of the Nipple-Areola Complex

Mastectomy is an aggressive surgical procedure that involves the resection of the mammary gland and, in many cases, the skin, subcutaneous tissue, and associated structures, including the nipple-areola complex. Clinical guidelines in breast oncology describe the skin and nipple-areola complex as part of the surgical and oncological field, and are systematically evaluated due to the frequent presence of retractions, ulcerations, trophic changes, and structural alterations associated with both the tumor process and the surgical intervention [4].

As a direct consequence of surgery, the remaining thoracic tissue initiates a complex healing process, characterized by tissue remodeling, fibrosis formation, and the development of soft tissue adhesions. These structural alterations affect local biomechanics, modify skin elasticity, and compromise the functional integrity of the intervened tissue. In this sense, mastectomy patients may present persistent sequelae related to surgical scarring and fibrosis, which significantly impact long-term tissue functionality and quality [5].

Several studies have shown that these alterations are not always transient. In fact, the presence of chronic pain, functional limitations, and tissue changes have been reported even several years after surgery, demonstrating prolonged involvement of the intervened tissue and incomplete adaptation of the musculoskeletal and cutaneous systems [5]. This persistence of tissue damage reinforces the notion that post-mastectomy tissue does not fully recover its original biomechanical and biological characteristics.

In the specific case of the nipple-areola complex, these modifications are especially relevant. The Roffo Institute guidelines emphasize that the nipple-areola complex has significant clinical value within the breast examination and surgical approach, as it can be compromised by the tumor, by surgical resection, or by subsequent scarring [4]. Therefore, any attempt at nipple-areola complex reconstruction is performed on previously operated tissue with altered vascularization, reduced elasticity, increased rigidity, and limited adaptive capacity.

In this context, nipple-areola complex reconstruction faces an unfavorable tissue scenario, in which structural changes, fibrosis, and altered local biomechanics influence both the choice of reconstructive technique and the predictability of the results. These factors must be given priority when evaluating the various reconstructive alternatives available, especially in patients who, in addition to mastectomy, have undergone systemic cancer treatments that exacerbate cutaneous and tissue involvement.

Surgical Reconstruction of the Nipple-Areola Complex

Surgical reconstruction of the nipple-areola complex (NAC) is usually the final stage of breast reconstruction following a mastectomy. Its main objective is to restore the projection and the three-dimensional appearance of the nipple, as well as to define the areola, contributing to a sense of closure of the oncological process from a physical perspective. Various surgical techniques have been developed for this purpose, including local flaps, skin grafts, and, in selected cases, the use of contralateral tissue.

However, surgical reconstruction of the nipple-areola complex (NAC) is performed on previously intervened tissue that has undergone surgical resection, scarring, and, in many cases, adjuvant cancer treatments such as chemotherapy and radiotherapy. These conditions alter the quality of the available tissue, affecting its elasticity, vascularization, and adaptive capacity. Consequently, one of the main challenges of NAC surgical reconstruction is the progressive loss of neo-nipple projection, a phenomenon widely described and associated with tissue retraction and scar remodeling.

From a clinical standpoint, CAP surgery presents a relatively low risk of major complications; however, it is not without adverse events such as partial necrosis, suture dehiscence, local infections, or unsatisfactory aesthetic results. These complications are more relevant in patients with a history of chemotherapy, in whom skin fragility and vascular compromise can limit flap viability and affect the predictability of the final outcome.

In this context, the indication for surgical reconstruction of the nipple-areola complex should be based on a careful evaluation of the local tissue condition, considering both the anatomical aspects and the patient's oncological history.

Recent studies have indicated that, "while surgical reconstruction is generally well-received, there are persistent limitations in terms of the stability of the result and long-term satisfaction, which has prompted the search for complementary or less invasive alternatives" [6].

Medical Dermopigmentation of the Nipple-Areola Complex

Medical dermopigmentation of the nipple-areola complex has become established as a non-surgical reconstructive alternative or as a complement to surgery, especially in patients with compromised skin tissue or contraindications for invasive procedures. This technique is based on the controlled implantation of pigments into the superficial dermis to recreate the color and appearance of the nipple-areola complex, often creating an optical illusion of volume and symmetry.

From clinical experience, many patients who have undergone prolonged diagnostic processes, successive surgeries, and systemic treatments tend to reject further surgical interventions due to the accumulated physical and emotional burden. In this context, medical dermopigmentation presents itself as a final reconstructive option that allows the therapeutic process to be completed without subjecting the patient to another surgical procedure, fostering a sense of control, well-being, and reconciliation with their body image.

Unlike surgical reconstruction, medical dermopigmentation does not depend on flap creation or graft viability, significantly reducing the impact on local vascularization and the risk of tissue necrosis. This characteristic is particularly relevant in mastectomy patients who have received chemotherapy, in whom the skin presents structural and functional alterations that limit its tolerance to further surgical procedures.

From a safety standpoint, medical dermopigmentation is generally associated with mild and transient complications, such as local pain, inflammation, or self-limiting skin reactions. However, one of the main challenges of this technique is the durability of the result, as pigment stability can be affected by factors such as skin quality, patient age, and a history of systemic cancer treatments. In particular, chemotherapy has been observed to influence pigment retention due to impaired epidermal regeneration and the local inflammatory response [6].

It is important to emphasize that the safety of the procedure depends not only on the technique applied, but also on the quality and regulation of the materials used. Since the pigments are introduced into the body, it is essential that they are certified and comply with current regulations established by international regulatory bodies, such as the European Chemicals Agency (ECHA) and the REACH regulation, whose objective is to guarantee the safety of chemical substances and protect human health. The use of certified pigments, free of heavy metals and potentially toxic substances, is an indispensable requirement to minimize systemic and local risks, especially in cancer patients with previously compromised tissues.

In this sense, the standardization of materials and technique plays a central role. The Gateño® method is based on the exclusive use of regulated pigments and an optimized technical approach that prioritizes tissue safety and the stability of the result. One of its distinctive features is the controlled reduction of intervention time, allowing the procedure to be performed in a limited time, generally less than 30 minutes. This aspect is not only based on operational criteria but also aims to limit the inflammatory response and lymphatic exudation during the procedure, factors that can interfere with pigment fixation and compromise its durability. Thus, the correct selection of materials and technical precision not only improve the safety of the procedure but also directly influence the effectiveness and stability of the results of medical dermopigmentation.

In reconstructive terms, the main difference between surgery and medical dermopigmentation lies in the type of result each technique can offer. Surgical reconstruction allows for the creation of a nipple with real projection, that is, a physical three-dimensional structure. In contrast, medical dermopigmentation does not generate anatomical volume, but rather recreates the appearance of the nipple-areola complex through an optical three-dimensional (3D) effect, using color, shadows, and gradients to simulate projection. This distinction is especially relevant in contexts of tissue retraction and positional changes following mastectomy and adjuvant treatments, where surgical projection can be lost over time or be affected by underlying asymmetries. In these cases, medical dermopigmentation offers a functional-aesthetic advantage: it allows for optimizing the perception of symmetry, visually adjusting the apparent position of the nipple-areola complex (NAC),and harmonizing shape and color with the contralateral breast, even when the actual anatomy has been modified by fibrosis, retraction, or tissue displacement.

Despite this limitation, medical dermopigmentation enjoys high levels of patient acceptance and satisfaction, offering an immediate and predictable aesthetic result with less physical and emotional burden than surgery. In this sense, it has become a relevant therapeutic tool within the comprehensive approach to nipple-areola complex (NAC) reconstruction, either as a standalone procedure or as a complement to surgical reconstruction, especially in contexts of high tissue risk.

Psychosocial Importance of NAP Reconstruction

Nipple-areola complex (NAC) reconstruction represents a particularly important stage in the comprehensive recovery process for mastectomy patients, as its impact transcends the anatomical and aesthetic realms to directly affect psychological, emotional, and social dimensions. Several studies have indicated that the loss of the breast and the NAP significantly affects body image perception, female identity, and self-esteem, constituting one of the most difficult aspects to process after breast cancer treatment.

From a psychosocial perspective, the nipple-areola complex (NAC) plays a central symbolic role in the construction of the female body image. Its absence can reinforce the experience of mutilation, illness, or loss of bodily integrity, even in patients who have achieved adequate breast volume reconstruction. In this sense, NAC reconstruction is often perceived by patients as a "closure" of the cancer process, marking the transition from a body associated with the disease to a recovery of their previous identity or a more integrated reconfiguration of their own body [7].

The literature has shown that nipple-areola complex (NAC) reconstruction is associated with significant improvements in body satisfaction, emotional well-being, and quality of life, positively influencing self-perception, body image, and sexuality. Furthermore, it has been observed that patients who undergo NAC reconstruction tend to experience a greater sense of normalcy and control over their bodies, fundamental elements in the process of coping with cancer and its after effects.

However, the psychosocial impact of cervical spine reconstruction depends not only on the aesthetic outcome but also on the subjective experience of the procedure. Factors such as the invasiveness of the technique, the number of interventions required, the occurrence of complications, and the predictability of the outcome directly influence the emotional experience of patients. In this context, less invasive procedures with more predictable results can offer significant advantages, especially in patients with high physical and emotional strain following prolonged cancer treatments.

From this perspective, both surgical reconstruction and medical dermopigmentation of the nipple-areola complex (NAC) should be understood not only as technical interventions, but also as therapeutic tools with a significant psychological impact. The choice of reconstructive technique should consider the expectations, emotional needs, and clinical conditions of each patient, promoting an individualized approach that integrates the biological, aesthetic, and psychosocial dimensions of breast reconstruction.

Materials and Methods

A series of 10 clinical cases is presented, corresponding to mastectomy patients who underwent medical dermopigmentation of the nipple-areola complex as part of their reconstructive process following cancer treatment.

P1: Woman, 47 years old, Chile, private practice. Diagnosis 03/2023. Invasive ductal carcinoma, stage II. Chemotherapy. Right total mastectomy. Tamoxifen/pregabalin. Prosthetic reconstruction. Symmetry: yes.

P2: Woman, 42 years old, Chile. Diagnosis 2020. Luminal carcinoma. Chemotherapy. Right total mastectomy.
Reconstruction: right prosthesis + left reduction. Symmetry: no.

P3: Woman, 54 years old, Chile, private practice. Diagnosis 2020. Stage "2 positive". Radiotherapy. Left mastectomy. Tamoxifen.
Reconstruction: latissimus dorsi. Symmetry: yes.

P4: Woman, 44 years old, Colombia. Diagnosed 2020. Triple-negative. Chemotherapy + radiation. Bilateral radical mastectomy.
Reconstruction: latissimus dorsi. Symmetry: yes.

P5: Woman, 51 years old, Mexico, private. Diagnosed 2020. Ductal + infiltrating lobular stage II. Chemotherapy + radiation. Left mastectomy. Tamoxifen. Prosthetic reconstruction. Symmetry: yes.

P6: Woman, 44 years old, Chile, public. Diagnosed 06/2022. Ductal carcinoma. Chemotherapy (16) + radiation (15). Right partial mastectomy.
No reconstruction. Symmetry: yes.

P7: Woman, 55 years old, Chile, public hospital. Diagnosed 2021. Hormonal breast cancer. Chemotherapy (8 cycles) + radiation (15 cycles).
Nipple mastectomy (glandular preservation). Letrozole + T4 (injections). No reconstruction. Symmetry: no.

P8: Woman, 67 years old, Chile, private hospital. Diagnosed 12/2022. Ductal breast cancer. Radiation therapy (5 cycles) and chemotherapy. Right partial mastectomy. Letrozole + denosumab. Left reduction for symmetry.
Symmetry: yes.

P9: Woman, 53 years old, Chile, private hospital. Diagnosed 2020.
Triple-negative breast cancer. Chemotherapy (16 cycles) + radiation (16 cycles). Right radical mastectomy. Reconstruction: implant + expander. Symmetry: no.

P10: Woman, 51 years old, Chile, private hospital. Diagnosed 2021. Hormonal breast cancer. Chemotherapy. Right radical mastectomy (2 surgeries).
Tamoxifen. Prosthetic reconstruction. Symmetry: yes.

Dermopigmentation was performed following a standardized protocol, using certified and regulated pigments that comply with current international regulations, including ECHA guidelines and the REACH regulation, guaranteeing the absence of heavy metals and potentially toxic substances.

All materials used met medical use and biosafety criteria.

The procedure was carried out using a dermopigmentation technique aimed at the visual recreation of the nipple-areola complex, employing chromatic and shading techniques to generate a three-dimensional (3D) effect, without creating actual anatomical volume. The intervention was performed within a limited time, less than 30 minutes per session, to minimize the local inflammatory response and lymphatic exudation, factors that can affect pigment fixation and durability.

Following the procedure, the patients were clinically evaluated in successive follow-up visits, taking into account the cutaneous evolution, the stability of the aesthetic result, and the degree of subjective satisfaction with the reconstruction achieved. Given the descriptive nature of the study and the small number of cases, satisfaction was approached from a qualitative perspective, prioritizing the patients' subjective accounts as part of the clinical analysis.

The results presented in Table 1 allow us to identify common patterns in the subjective experience of patients after medical dermopigmentation of the nipple-areola complex. A positive assessment of the procedure is observed, with particular emphasis on the perception of a natural aesthetic outcome and an improvement in visual symmetry, regardless of prior clinical

and reconstructive differences. Furthermore, reported satisfaction is not limited solely to the aesthetic aspect, but also incorporates relevant emotional dimensions, such as the experience of closure of the reconstructive process and an improved reconciliation with body image. The good tolerance of the procedure and the absence of significant complications reinforce the safety profile of the technique in skin treated with chemotherapy. Taken together, these qualitative findings suggest that medical dermopigmentation of the nipple-areola complex can provide significant clinical and psychosocial benefits when performed under appropriate technical and regulatory criteria.

Results

Table 1: Qualitative dimensions of satisfaction after medical dermopigmentation of the areola-nipple complex (n=10)

Dimension of Satisfaction	Description of the Dimension	Qualitative Indicators Identified
Psychological relevance of the areola-nipple complex	Subjective importance of the areola-nipple complex as a closing element of the reconstructive process and body temperature	Expressions of emotional relief, closure of the oncological process, symbolic relevance superior to the physical
Perception of aesthetic naturalness	Degree to which the result is perceived as harmonious, coherent with the body, and visually natural	Use of terms such as “natural”, “harmonious”, “real”, adaptation to skin undertone
Search and achievement of symmetry	Evaluation of the procedure as a tool to balance post-surgical asymmetries	Explicit mention of previous asymmetry, visual correction, comparison with contralateral breast
Adaptation to complex tissue conditions	Assessment of the technical approach in the face of irradiated skin, extensive scars or tissue tension	Mention of delicate skin, scars, tension from expander, need for prior preparation
Impact of systemic cancer treatments	Awareness of the effects of chemotherapy, radiotherapy or hormone therapy on the skin and body	References to tamoxifen, letrozole, menopause, joint pain, skin changes
Overall assessment of the procedure	General evaluation of dermopigmentation as part of the reconstructive procedure	Overall satisfaction, explicit recommendation, perception of a non-invasive procedure

Discussion

Given the descriptive nature of this case series and the qualitative assessment employed, no statistical analysis was performed. Nipple-areola complex (NAC) reconstruction in mastectomy patients treated with chemotherapy presents a significant clinical challenge, given the combined impact of systemic oncological treatment and breast surgery on skin tissue quality. As outlined in the theoretical framework, chemotherapy induces persistent alterations in the epidermis and dermis, including skin fragility, decreased regenerative capacity, and increased susceptibility to inflammatory processes—conditions that can limit tolerance to invasive procedures and affect the stability of reconstructive results.

Table 2: Conceptual comparison between surgical reconstruction and medical dermopigmentation of the areola-nipple complex in patients treated with chemotherapy

Dimension	SurgicalReconstruction of the NAC	Medical Dermopigmentation of the NAC
Type of procedure	Invasive	Not invasive
Nipple projection	Real anatomical projection	Optical 3D effect
Dependence on tissue quality	High	Moderate
Impact of previous chemotherapy	May limit viability andstability	Generalmente well tolerated
Complication risks	Moderate depending on the tissue	Low, generally mild
Predictability of the result	Variable in compromised skin	High in visual terms
Recovery time	Prolonged	Immediate
Long-term adjustments	Limited	Posible through repigmentation
Phychosocial impact	Positive, but conditioned to results	Positive, with high acceptance
Rol in the reconstructive process	Structural reconstructive stage	Final stage or alternative
Additional need for surgery	Possible	No

As summarized in Table 2, medical dermopigmentation offers significant advantages in terms of low invasiveness, visual predictability, and tolerance in chemotherapy-treated skin, whereas surgical reconstruction allows the creation of a true anatomical projection, although its outcome can be conditioned by tissue quality and scar evolution. These factors reinforce the need for individualized selection of the reconstructive technique. This comparison highlights the main technical,

clinical, and psychosocial differences between the two reconstructive alternatives, emphasizing the role of medical dermopigmentation as a safe and effective option in skin treated with chemotherapy.

In the cases presented, medical dermopigmentation of the nipple-areola complex (NAC) was used as a final or alternative reconstructive strategy, proving to be a well-tolerated procedure, even in skin treated with chemotherapy and radiotherapy. Unlike surgical reconstruction, which allows for the creation of a nipple with true anatomical projection but can be compromised by tissue retraction, secondary displacement, and loss of projection over time, medical dermopigmentation offers a non-invasive approach aimed at the visual reconstruction of the NAC through a three-dimensional (3D) effect. This feature is particularly advantageous in contexts of tissue alteration, where surgical predictability may be reduced.

The qualitative results observed, summarized in the satisfaction table, demonstrate a positive perception of the procedure by the patients, highlighting the naturalness of the aesthetic result, the improvement in the perception of body symmetry, and the subjective experience of closure of the reconstructive process. These findings reinforce the relevance of the psychosocial impact of nipple-areola complex (NAC) reconstruction, particularly in patients who have undergone prolonged cancer treatments and multiple medical interventions.

Nevertheless, the safety and effectiveness of medical dermopigmentation depend not only on its non-invasive nature, but also on the correct technical execution and the use of appropriately regulated materials. In this regard, the Gateño® method is particularly relevant, as it integrates scientific criteria for selecting pigments certified according to international regulations (ECHA and REACH), along with a standardized technique that prioritizes tissue protection. The controlled reduction of procedure time, avoiding excessive lymphatic drainage, is a key technical aspect for promoting pigment fixation and the stability of the result, especially in biologically compromised skin.

From this perspective, the cases presented support the claim that medical dermopigmentation of the cervical area can be considered a safe and effective reconstructive option in patients treated with chemotherapy, provided it is performed using a structured, scientifically designed, and correctly implemented method. The absence of significant complications and the high degree of reported satisfaction reinforce the importance of approaching this procedure not merely as an aesthetic technique, but as a therapeutic intervention requiring specialized training, clear clinical criteria, and a patient-centered approach.

While this work is limited to a series of cases and a qualitative evaluation of the results, the findings provide clinical evidence supporting the role of medical dermopigmentation as part of a comprehensive approach to post-mastectomy reconstruction in chemotherapy-treated skin. Future studies with larger samples and validated quantitative tools will allow for a more in-depth evaluation of long-term outcomes and a systematic comparison of the various reconstructive alternatives available.

Findings

Analysis of the ten clinical cases showed that medical dermopigmentation of the nipple-areola complex was a feasible and well-tolerated procedure in all patients, including those with a history of chemotherapy and radiotherapy. No significant adverse events associated with the procedure were recorded.

Across the data, a consistent qualitative pattern emerged, characterized by high levels of satisfaction, especially regarding the natural appearance of the reconstructed complex and the improvement in the perception of breast symmetry.

Patient testimonials frequently associated the procedure with a sense of closure in the oncological and reconstructive process.

These findings support medical dermopigmentation as a safe and acceptable reconstructive alternative for the nipple-areola complex in mastectomized patients treated with chemotherapy, provided it is performed under standardized technical conditions and with regulated materials.

Limitations

The present study has some limitations that should be considered when interpreting its results. First, it is a descriptive observational study based on a case series, which implies the absence of a control group and limits the possibility of making statistical comparisons or causal inferences between different reconstructive techniques.

Second, the sample size is small and corresponds to a purposive clinical selection, which restricts the generalizability of the findings to larger populations. Furthermore, the patients included present clinical heterogeneity, both in terms of cancer, oncological treatments received (chemotherapy, radiotherapy, hormone therapy), and previous reconstructive techniques, which may influence cutaneous response and the aesthetic outcomes obtained.

Finally, another relevant limitation is that the satisfaction assessment was based on qualitative testimonies from patients, without the use of standardized psychometric instruments or validated scales, which prevents an objective quantification of the psychosocial impact of the procedure.

Conclusions and Recommendations

Based on the clinical experience analyzed, medical dermopigmentation of the nipple-areola complex is consolidated as a safe, minimally invasive, and clinically viable reconstructive alternative for mastectomy patients, including those with a history of chemotherapy and other cancer treatments. Its application allows for the effective management of the final phase of the reconstructive process, contributing to both aesthetic restoration and the perception of body integrity.

The cases included in this study demonstrate that when dermopigmentation is performed using a standardized method, with proper assessment of skin condition, selection of certified pigments, and technical adaptation to the characteristics of the treated tissue, it is possible to obtain harmonious, reproducible, and clinically satisfactory results, even in contexts of skin compromised by previous treatments.

Furthermore, the experience gathered highlights the psychosocial relevance of the procedure, since the visual reconstruction of the nipple-areola complex constitutes a significant milestone in the symbolic closure of the oncological process, promoting self-image, body acceptance, and emotional well-being in patients.

In this sense, medical dermopigmentation should not be understood as a substitute for surgical reconstruction, but rather as a complementary strategy, whose value lies in its less invasive nature, its capacity for progressive adjustment, and its potential for personalization. Its implementation requires specialized training, clear clinical criteria, and an ethical and regulatory framework that guarantees the safety and quality of the procedure.

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Ethical Considerations
All procedures were conducted in accordance with ethical standards. Informed consent was obtained from all patients included in this study for the use of clinical data and images for academic and scientific purposes. Patient confidentiality was preserved throughout the research process.

Conflicts of Interest
The authors declare no conflicts of interest related to this study.

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