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Cosmetic Camouflage Therapy: A Vital Missing Piece in the Holistic Management of Visibly Disfiguring Dermatologic Issues in Family Medicine Clinics

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Abstract

Overtly visible skin issues are associated with significant psycho-social impact and impaired quality of life, posing significant aesthetic concerns that require effective treatment and concealment. Cosmetic camouflage therapy (CCT) temporarily normalizes the appearance of disfigured skin or hides transient skin blemishes resulting from dermatological procedures. However, it remains uncertain if family physicians typically address the aesthetic aspect of skin issues when caring for affected persons. This narrative review explored the role of CCT in the management of visibly disfiguring skin issues and ascertains the status of its practice by family medicine physicians. Comprehensive literature search was conducted to retrieve relevant evidence from scientific databases, with focus on information pertaining to camouflage cosmetic products and CCT within the primary care setting. Emotional/psychological impact,

self-consciousness, and embarrassment were the most bothersome impacts of visible skin flaws/disfigurements, while the site and severity of the skin lesion played important roles in the significance of the impact. CCT resulted in improvements in aesthetics, psychological well-being, and self-esteem. Combining CCT with conventional treatments resulted in higher and clinically significant improvement in quality of life compared with conventional treatments alone. CCT was also recommended as an adjunct treatment serving as “bridge therapy,” and as a potential drug delivery system. The authors recommend measures to increase awareness of CCT and camouflage cosmetic products among family medicine physicians, and the integration of CCT into family medicine encounters for the management of visibly disfiguring skin issues, to ensure truly comprehensive care.

Keywords: Cosmetic Camouflage Therapy, Colour Cosmetics, Treatment Bridge, Psychosocial, Primary Care, Family Medicine

Introduction

Overtly visible skin issues, such as acne vulgaris, vitiligo, scars, port-wine stains, and dyspigmentation, are prevalent globally and are associated with significant psychosocial impact and impaired quality of life ^[1, 2]. These conditions often pose considerable aesthetic concerns that necessitate effective treatment and concealment strategies. For instance, vitiligo affects approximately 0.5% to 2% of the global population, with a greater impact on individuals with darker Fitzpatrick skin phototypes (IV-VI) due to the stark contrast in pigmentation. Melasma affects about 1% worldwide, with higher prevalence among Hispanic women in the United States of America (8-10%) and adult women in Latin America, Southeast Asia, and South Asia (30-40%). Post-inflammatory hyperpigmentation (PIH), a common sequela of acne, particularly affects individuals with darker skin tones (Fitzpatrick types III-VI), with about 65% of dark-skinned acne patients experiencing it. Scars and keloids also show a known predilection for dark-skinned persons ^[3].

The psychological and emotional effects of these visibly disfiguring dermatologic issues are profound, especially when lesions are located on the face, neck, and hands ^[4, 5]. Participants in a study reported emotional distress, self-consciousness, and embarrassment as the most bothersome impacts of their skin conditions. The same study participants also reported that the location and severity of the skin lesion significantly influenced the perceived impact of the skin lesions ^[6].

Cosmetic camouflage therapy (CCT), also known as skin camouflage therapy, involves the use of cosmetic products to

conceal, color, or contour cutaneous irregularities or abnormalities of the face or body [7]. CCT offers a non-invasive solution to temporarily normalize the appearance of disfigured skin or to hide transient blemishes resulting from dermatological procedures [8, 9]. While CCT has been recognized for its potential to provide immediate aesthetic improvement and psychological relief, thereby enhancing patients' self-esteem and social interactions [10, 11], there remains an uncertainty regarding the extent to which family physicians address the aesthetic aspects of skin issues in their practice.

This narrative review aims to explore the role and benefits of CCT in the management of visibly disfiguring cutaneous diseases managed in family medicine clinics, as well as to ascertain current trends in its utilization by family medicine physicians in the context of providing comprehensive patient care.

Methods

This narrative review involved a comprehensive literature search to retrieve relevant evidence from accessible scientific and medical databases. The search focused on information pertaining to cosmetic camouflage products and cosmetic CCT its applications, benefits, and current utilization trend particularly within the primary care setting.

Findings and Discussion

Types and Characteristics of Cosmetic Camouflage Therapy

Cosmetic camouflage can be broadly categorized as temporary and permanent. Permanent (medical) cosmetic camouflage procedures, also known as micropigmentation or dermatography, include tattooing of scars and the fixing of permanent eyeliner or eyebrows [12]. Temporary camouflage, which is non-invasive, is achieved through various products such as liquid dyes (e.g., potassium permanganate, indigo carmine, bismarck brown, and henna pastes), self-tanning products containing dihydroxyacetone, and color cosmetic products like liquid camouflage foundation [13].

Camouflage cosmetic products are specifically formulated with high pigment content to temporarily normalize the appearance of skin areas disfigured by disease or scarring [9], or to conceal transient facial blemishes that may occur after dermatological procedures [8]. The ideal camouflage cosmetic product possesses several desirable features, including an appropriate color shade that matches the treated skin, inertness, high coverage, water-proof and sweat-resistant properties, transfer-proof holding power, and long wear. Furthermore, the inclusion of active ingredients for preventive or therapeutic benefits, such as broad-spectrum photoprotection, depigmentation or skin lightening, sebum control, and anti-irritation, is highly desirable. The formulation should also prioritize cost-effective, non-comedogenic, and non-irritant ingredients [9].

Dermatological Indications and Impact of Skin Lesions

CCT is indicated for a wide range of dermatological conditions, including pigmentation disorders, vascular lesions, scars, and miscellaneous disorders such as acne, rosacea, vitiligo, pityriasis vulgaris, and post-operative bruising [7, 9]. Invasive and non-invasive dermatological/aesthetic procedures often result in transient local skin reactions like erythema, blistering, hypo- or

hyperpigmentation, or hemorrhagic lesions, leading to downtime during which patients often seek to conceal these disfigurements [9].

The location and severity of the skin lesion significantly influence the impact on the affected person. A survey among individuals with vitiligo revealed that the most bothersome aspects were the location (32%) and amount (30%) of depigmentation. The most significant impacts reported were emotional or psychological distress (26%) and self-consciousness and embarrassment (8%) [6]. Notably, 25% of participants in this survey admitted to using temporary cosmetic measures to manage their vitiligo [6].

Psychosocial Benefits and Quality of Life Improvement

Camouflage cosmetics are widely used by individuals with visible skin issues to improve their appearance and, consequently, their psychological well-being. CCT has been consistently reported to provide significant emotional benefits by improving the quality of life for both pediatric and adult patients [10, 14, 15, 16, 17, 18, 19]. It can also ameliorate the emotional and psychological distress caused by skin lesions, particularly those located on the face [11].

Studies have demonstrated that combining CCT with conventional medical treatments yields superior outcomes. For instance, combining CCT with medical treatment and phototherapy resulted in a higher and clinically significant improvement in quality of life compared to medical treatment and phototherapy alone [10]. Similarly, the combination of CCT with psychotherapy also led to clinically significant improvements in quality of life [20]. CCT offers immediate aesthetic improvement and psychological relief from visible cutaneous diseases like acne, rosacea, and vitiligo, all of which are known to significantly impact psychological well-being and quality of life [10, 21].

CCT as Adjunct Therapy and Novel Drug Delivery System

An important emerging concept is the recommendation of make-up products as adjuncts to medical treatment, serving as "bridge therapy" [14, 22]. This approach allows patients to manage visible effects while awaiting significant clinical and cosmetic improvements from traditional treatments. Furthermore, recent research suggests that cosmetic camouflage products could function as a novel drug delivery system. The occlusive properties of camouflage cosmetics may enhance the penetration and efficacy of topical treatments, thereby providing a dual function of aesthetic improvement and therapeutic benefit [23].

Adverse Effects and Considerations

Despite its benefits, it is crucial to acknowledge that cosmetic products, including those used for camouflaging skin problems, have the potential to induce, aggravate, or prolong acne, and can cause a myriad of other cutaneous problems [24, 9]. The presence of comedogenic ingredients is a significant concern, and their avoidance is key in managing acne cosmetica [24, 9]. Some users may also experience skin irritation or allergic reactions, manifesting as redness, itching, or rashes, due to certain ingredients in cosmetic camouflage products [15, 25]. In some cases, CCT can exacerbate existing skin conditions like rosacea or eczema, particularly if the products contain irritants or are unsuitable for sensitive skin [15, 25].

Current Status of CCT Practice by Family Physicians

There is a notable paucity of information regarding the routine practice of CCT by family physicians [6]. While many patients (50-74%) already use makeup to conceal their lesions when presenting to clinics [26], the integration of CCT into routine dermatological practice is not yet universal. Regional variations exist in the awareness, cultural norms, and product availability of CCT [3]. For example, the UK has established formal skin camouflage services, such as those provided by Changing Faces, which also offer training [3]. In Italy, a survey indicated that approximately 31% of dermatologists suggested camouflage products to their melasma patients [3]. However, more than half of dermatologists in another Italian study prohibited their acne patients from using camouflage cosmetics [27]. In Asia, despite an existent cultural practice of skin concealment, formal medical camouflage services are less common. In the Middle East, dermatologists have been reported to recommend CCT. However, weather conditions in this region pose challenges. Training centres are now emerging in the region, though. In Africa, formal CCT training or services are rare, yet 60% of vitiligo patients in Egypt reportedly use some form of CCT [3].

These findings highlight a significant gap in the awareness and integration of CCT within primary care settings, despite its demonstrated benefits in improving patient well-being and quality of life. According to Westmore "All physicians and responsible medical personnel who are concerned with their patients' complete healing and mental well-being should use a properly trained medical make-up specialist as an adjunct to their practice" [21].

However, the current situation suggests that while patients are actively seeking and utilizing camouflage solutions, healthcare providers, particularly family physicians, are apparently not adequately informed or equipped to integrate CCT into their management strategies for visibly disfiguring skin issues.

Summary

Cosmetic camouflage therapy (CCT) serves as a valuable non-invasive intervention that provides immediate aesthetic improvement, improves psychological well-being, enhances self-esteem, and fosters better social functioning and overall quality of life among individuals affected by visibly disfiguring dermatologic conditions. It has also been recommended as an adjunct to serve as "bridge therapy" as well as a drug delivery systems. Despite these significant benefits, there remains a notable gap in the awareness of CCT as well as its routine integration into routine treatment plans among family physicians.

A vital yet often overlooked component of the comprehensive management of visibly disfiguring cutaneous issues, the benefits of CCT extend beyond lesion concealment. It profoundly impacts patients' psychosocial well-being, self-esteem, and quality of life. The authors recommend the development and implementation of measures to increase awareness and education, integration of CCT into standard primary dermatologic care, and the adoption of collaborative care models involving family medicine physicians, dermatologists, and trained medical make-up specialists. This collaborative approach can enhance patient outcomes and satisfaction. The authors also recommend further research to ascertain the current status of CCT practice by family physicians and identify barriers to

its integration into the routine clinical management of persons with visibly disfiguring cutaneous lesions.

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