

SUPERFICIAL CHEMICAL PEELING IN THE TREATMENT OF ACNE VULGARIS, FINE WRINKLES AND MELASMA: A COMPARATIVE STUDY BETWEEN NEW AND OLD MODALITIES

Thesis

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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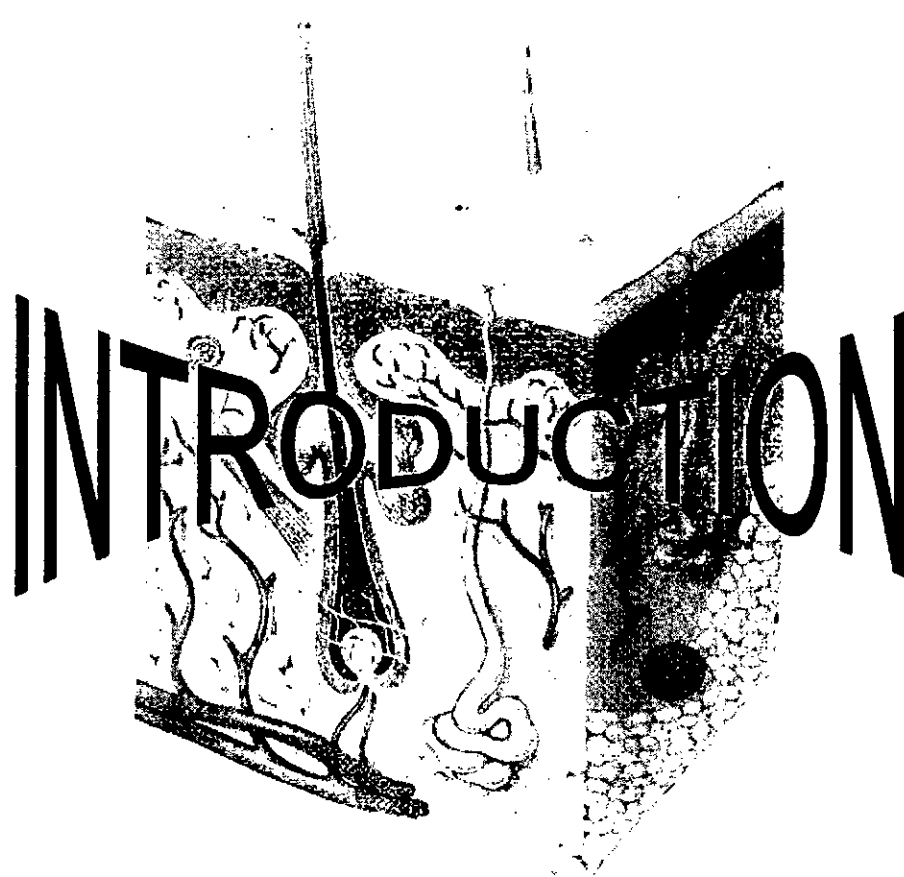
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ABBREVIATIONS

GA	: Glycolic acid
AFAs	: Amino acid filaggrin based antioxidants
F	: Female
M	: Male
Ab	: Antibiotic
Pt	: patient
Wt	: Weight
Vol	: Volume
B	: before
A	: after
Pt.	: Patient
No.	: Number
Ag.	: Age
Exp.	: Exposure
Con.	: Concentration
Exf	: Exfoliation
Imp	: Improvement
Sess.	: Session
M	: Month
Postinf	: Postinflammatory
Hyp	: Hyperpigmentation
Hyperth	: Hyperthyroidism
Top	: topical
Sys	: Systemic
Ab	: Antibiotic
Ret	: Retinoids
Hydroq	: hydroquinone
Cont. pills	: Contraceptive pills
+v	: positive
-ve	: negative
-	: none
+	: mild
++	: moderate
+++	: severe

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INTRODUCTION

Since ancient people, physical attractiveness has been socially advantageous and resulted in perceptions of "goodness" and success as well as a sense of well-being (Engaser and Maibach, 1999).

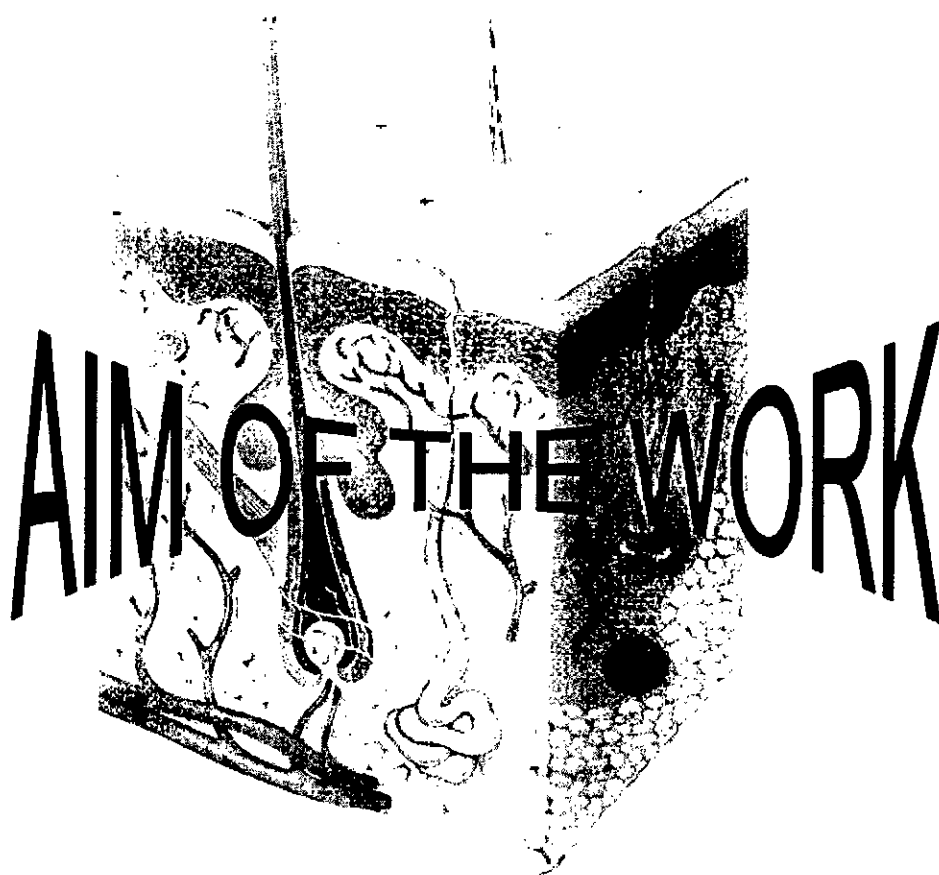
There are many dysmorphic dermatoses such as acne vulgaris, pitted scars, unsightly pigmentations and signs of aging that have a significant impact on a patient's quality of life, namely the relationship to others, self-image, self-esteem and economic opportunities (Boehncke et al., 2002; Rapp et al., 2004 & Balkrishnan et al., 2005). Hence, there is increased demand for aesthetic information and treatments, not only for patients suffering from these dysmorphic disorders but also for those who want their appearance to match their inward perception of youth and vitality (Wilson and Arpey, 2004 & Gordon, 2005).

Corresponding to this trend, there is an ever-increasing number of products and procedures available that claim to aid in this pursuit (Hirsch et al., 2004). These resurfacing techniques include the use of laser resurfacing, dermabrasion, microdermabrasion, jet peel and chemical peels (Golan and Hai, 2005; Karimipour et al., 2005 & Roy, 2005).

Chemical peeling is one of the facial rejuvenation procedures that have many cosmetic clinical applications such as reversal of photoaging, dyschromias, freckles, lentigens, melasma, nevi, seborrheic keratosis, postinflammatory hyperpigmentation and improvement of acne scars. Chemical peels may be superficial, medium depth, or deep. The indication determines to great extent the type and depth of peel necessary (Roberts, 2004).

A variety of peeling agents can be used including trichloroacetic acid (TCA), Jessner's solution, alpha hydroxy acids, alpha keto acids, azelaic acid, retinoic acid, salicylic acid, and phenol. Now, Amino acid filaggrin based antioxidants are used (Klein, 2000; Briden, 2004 & Sharquie et al., 2005).

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AIM OF THE WORK

The aim of this work is to compare the efficacy of trichloroacetic acid (TCA), glycolic acid and amino acid filaggrin based antioxidants (AFA) in the treatment of melasma, acne vulgaris, and fine wrinkles.



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MELASMA

Melasma is defined as a symmetric progressive hyperpigmentation of facial skin that occurs in all races but has a predilection for darker skin phenotypes. It is one of the three common forms of hyperpigmentation (melasma, lentigines, and post-inflammatory hyperpigmentation) with significant negative psychological consequences. Many therapeutic options exist, though, treatment is often difficult requiring lengthy therapy (Cayce et al., 2004 & Perez, 2005).

Etiopathogenesis:

The pathogenesis of melasma is unknown. Many etiologic factors have been implicated, but sunlight is certainly the major factor that selectively increases the functional state of melanocytes (Victor et al., 2004). Melasma can be associated with many other factors like, *a*) Hormonal imbalances (pregnancy, ovarian tumors, long use of contraceptive pills and thyroid abnormality). *b*) Deficiency states (hypoproteinemia, hypovitaminosis and gastrointestinal disturbances as hepatic dysfunction and parasitic infestations). *c*) Drugs (diphenylhydantoin and 5-ethyl-methyl-5-phenylhydantoin). *d*) cosmetics. *e*) Genetic predisposition (Sanchez et al., 1981; Niepomniszcze and Amad, 2001 & Perez, 2005).

Clinical picture:

Clinically, melasma can be divided into three patterns according to the pigment distribution on the skin; *a*) Centrofacial (involved the cheeks, forehead, upper lip, nose and chin). *b*) Malar (involved the