

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

Thesis

*Submitted in Partial Fulfillment of the Requirements of
the Master Degree of*

"Dermatology & Andrology"

By

HEND MAHMOUD SAMY

(M.B.B.Ch)

Supervisors

Prof. Dr

EMAN MOUSTAFA SANAD

Assistant Professor of Dermatology &
Andrology
Faculty of Medicine
Benha University

Prof. Dr

BASMA MOURAD ALY

Professor of Dermatology & Andrology
Faculty of Medicine
Tanta University

Dr

HANAN HASSAN SABRY

Lecturer of Dermatology & Andrology
Faculty of Medicine
Benha University

**FACULTY OF MEDICINE
BENHA UNIVERSITY**

2005



بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

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صَلَّى عَلَى النَّبِيِّ الْعَظِيمِ

«سورة طه: ١٤»

Acknowledgment

First, and for most thanks to **ALLAH**, the most merciful, gracious and compassionate, whose magnificent help is the main factor in every thing we can do in life.

I would like to express my sincere gratitude and deep appreciation to Prof. **Dr. EMAN MOUSTAFA SANAD** *Assistant Professor of Dermatology & Andrology , Faculty of Medicine, Benha University*, who learned me a lot and who suggested the subject of this study, for her continuous scientific guidance, enriching me with her vast experience, unlimited help, full provision of all facilities, the precious time and effort. She devoted in the supervision of the present work, despite other busy tasks. I feel to her much respect and great honored to work under her supervision.

I am delighted to express my deep gratitude and sincere thanks to, Prof. **Dr.BASMA MOURAD ALY** *Professor of Dermatology & Andrology, Faculty of Medicine, Tanta University*, who offered me a lot of her valuable time and contributed greatly of this work through her suggestion, generous supervision and valuable remarks. I wish to express my deepest thanks for her continuous cooperation and experienced guidance in this work. I'm greatly indepted to **Dr.HANAN HASSAN SABRY** *Lecturer of Dermatology & Andrology, Faculty of Medicine, Benha University*, for her scientific guidance, helpful cooperation, effective advice and in exhaustible patience throughout the entire work.

My appreciation and deep thanks are extended to **Dr. AHMAD ABD EL-WAHAB SALEH** *Assistant Professor of Dermatology & Andrology, Faculty of Medicine, Benha University*, for his keen encouragement and experienced guidance.

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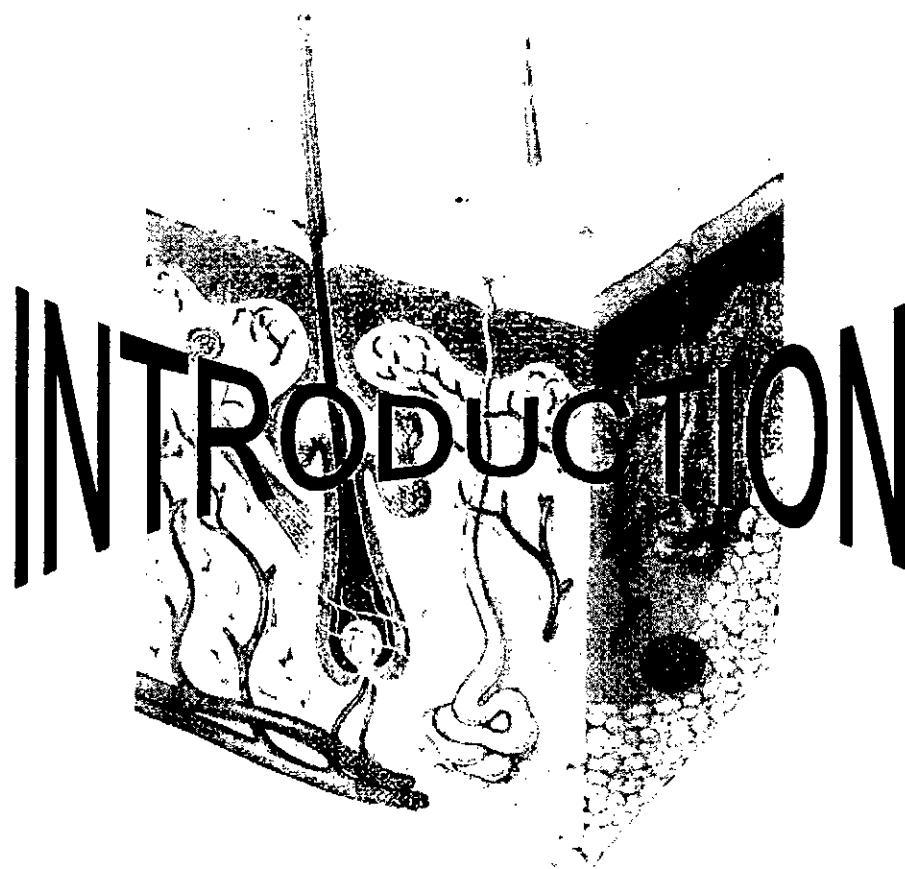
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ABBREVIATIONS

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).

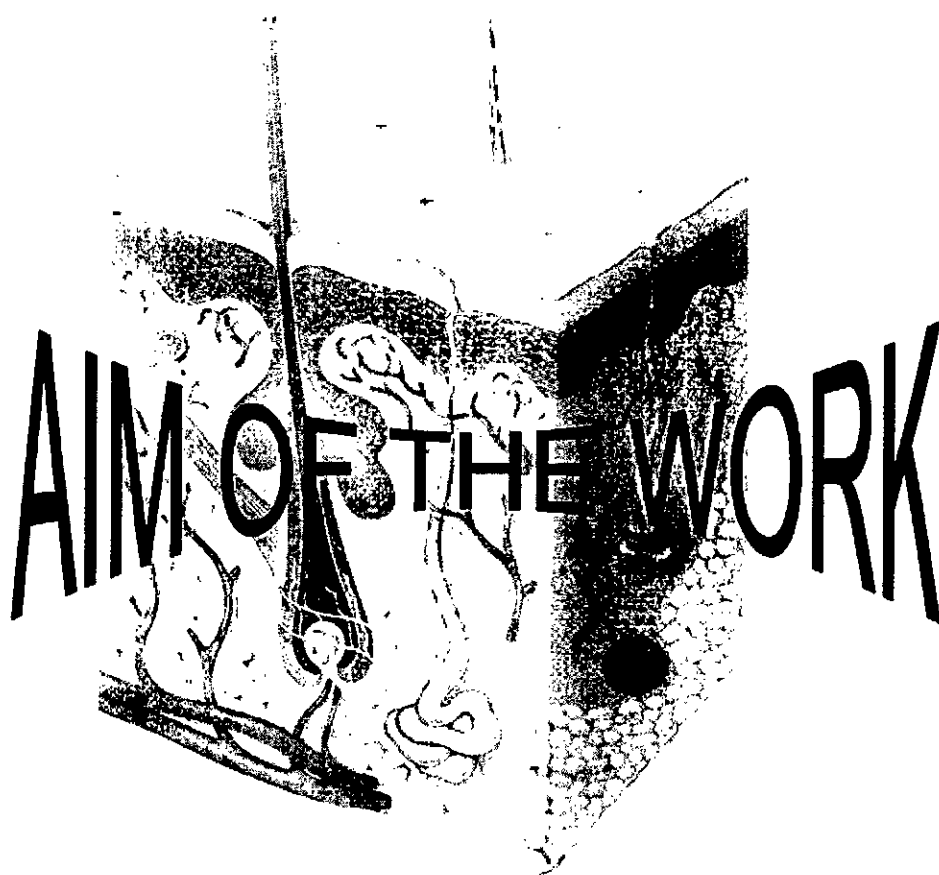
There are many dysmorphic dermatoses such as acne vulgaris, pitted scars, unsightly pigmentations and signs of aging that have a significant impact on a patient's quality of life, namely the relationship to others, self-image, self-esteem and economic opportunities (Boehncke et al., 2002; Rapp et al., 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.



REVIEW OF LITERATURE

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