

HORMONAL PROFILE OF WOMEN HAVING ESTROGEN AND PROGESTIN THERAPY FOR MENOPAUSAL SYNDROME

Thesis

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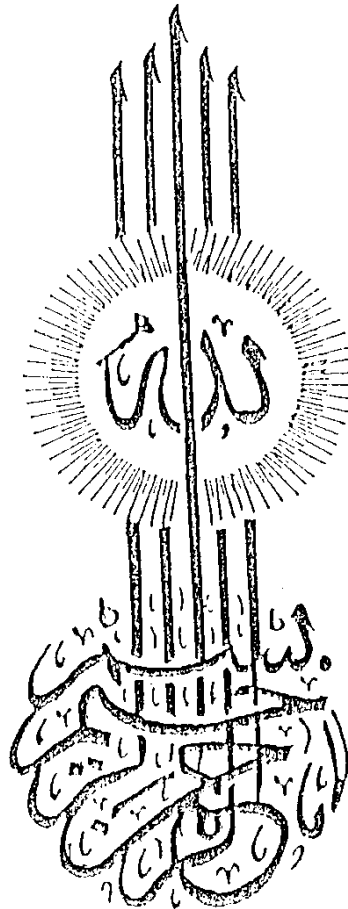
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" يرفع الله الذين آمنوا منكم والذين أوتوا العلم درجات
والله بما تعملون خبير "

تعالى الله عما يشركون

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LIST OF ABBREVIATIONS

ACTH	: Adrenocortical hormone
B-EN	: B-endorphins
B-LPH	: B-Lipoprotein Hormone
CBG	: Corticoid Binding Globulin
E	: Estradiol
² FSH	: Follicle Stimulating Hormone
GnRH	: Gonadotropin releasing hormone
HRT	: Hormone Replacement Therapy
LH	: Luteinizing Hormone
LH-RH	: Luteinizing Hormone - Releasing Hormone
POMC	: Pro opiomelanocortin
PRL	: Prolactin
SHBG	: Sex Hormone Binding Globulin
TBG	: Thyroid - Binding Globulin
TRH	: Thyroid Releasing Hormone
TTS	: Transdermal Therapeutic System

INTRODUCTION

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Postmenopausal women comprise an ever-increasing percentage of the population. This is due to the increase of life span expected for population with advancement in medicine, and improvement of the socioeconomic state.

There are marked endocrinal changes in the menopause. The circulating levels of estradiol falls. At the same time, the concentrations of FSH and LH rise. There is also significant fall in circulating levels of testosterone and androstendione. Calcitonin, prolactin and B-endorphins may be affected in the menopause.

The menopause and its problems are mainly due to estrogen deficiency. Diminishing ovarian secretion of estrogen not only produces symptoms such as hot flushes and psychosomatic changes, but it also produces the more serious problems of elderly women such as urogenital atrophy, osteoporosis and atherosclerotic heart disease. Because the menopause is endocrinopathy, estrogen replacement therapy is needed. Estrogens have been used in many forms and have many routes of administration, for example, oral, injection, implants, or transdermal. Transdermal estrogens has several unique features. First, it delivers the primary ovarian estrogen, estradiol, into the systemic circulation. Second, this delivery is constant and controlled, both throughout the wearing of a single system. Third, it

delivers sufficient estradiol into the circulation to raise estradiol levels to concentrations similar to those in women in the early to mid follicular phases of their menstrual cycles. Fourth, the system can be applied or removed with ease (Laufer et al., 1983).

Estrogen replacement therapy has many risks. The major risk is endometrial cancer, but it can be avoided by combining estrogen replacement therapy with progestins.

AIM OF THE WORK

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This study is designed to evaluate the effectiveness, tolerability and patient compliance of the transdermal estrogen therapy in the women with menopausal syndrome. Besides the clinical studies, hormonal changes with this form of therapy will be estimated. These will include FSH, LH, estradiol, calcitonin and B-endorphins.

REVIEW OF THE LITERATURE

CHAPTER ONE

MENOPAUSE

Menopause describes the permanent cessation of menses, which usually happens in women at a mean age of 50 years. The condition constitutes one part of the climacteric, during which the women undergo endocrine, somatic and psychological changes. The changes are related both to aging and to estrogen depletion, but it is nearly impossible to quantify the respective effects of each.

Definitions

Menopause is derived from the Greek men "month" and Pauo "to stop" and means the cessation of menstruation. The climacteric is derived from the Greek Klimakter, "rung of the ladder" meaning critical period of life. The climacteric is the equivalent of the perimenopause which may extend to 5-10 years. Pre-, Peri- and postmenopausal apply respectively to the periods immediately before, around and after the cessation of menstruation.

Menopause as defined by the International Menopause Society in 1976 is the beginning with the final menstrual period, which typically occurs around the age of 51 years.

The climacteric as defined by the International Menopause Society is the transitional period from reproductive to non reproductive status.

HISTORICAL REVIEW

Until recent times, menopause was only sparsely mentioned in the medical and non medical literature, although it was recognized as a stage in human life at least for back as the Biblical era. Abraham, in Genesis, acknowledged the fact of reproductive failure when he pondered the prospect that a couple who were 100 and 90 years old would be granted offspring. The historical record traces attempts to define the characteristics of menopause and speculations about its cause. In the Sixth Century, Aetius of Amida reported that the menstruation did not cease before the age of thirty-fifth and that it usually didn't continue after the fifty. He noted that overweight women lost their periods very early. He attributed the changes in the menstrual period, remained normal or abnormal or increased or decreased in amount, to the women's age, the season of the year, the habits and peculiar traits of the woman, the nature of foods eaten, and the presence of complicating diseases.

Physical and psychologic changes that are observed during the menopausal period have for centuries been blamed on the loss of menstrual flow. Since menstruation was classically believed to represent a means of exciting the "percant matter in morbid humour, sometimes acrimonious and malignant..... whose retention never fails to be extremely injurious to the constitution", medical literature is