SERUM CANCER ANTIGEN 125 (CA 125) LEVEL IN PATIENTS WITH FLAT CERVICAL CONDYLOMA

THESIS
Submitted for partial fulfilment of
Master Degree in Obstetrics and Gynecology

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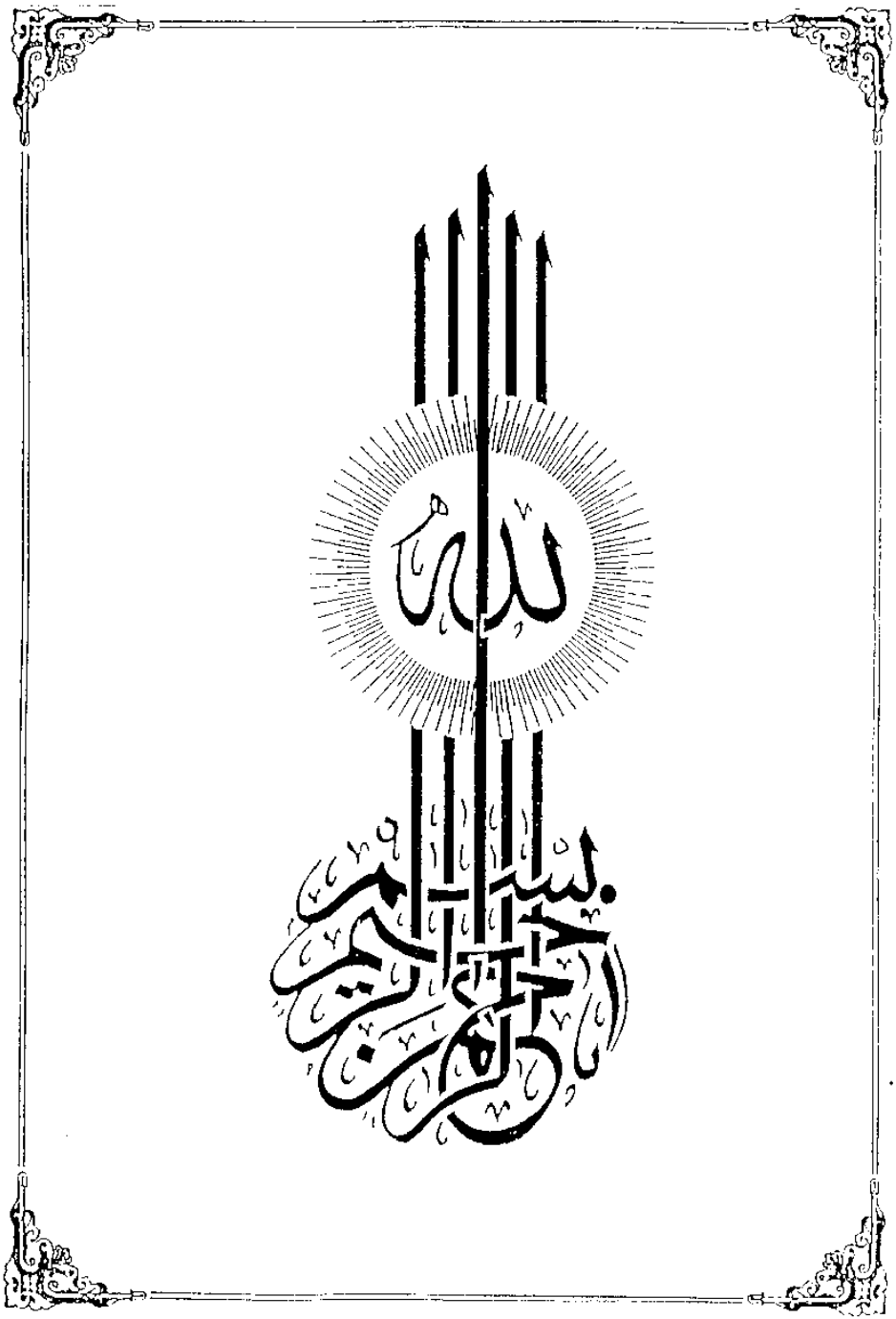

TO MY MOTHER

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CONTENTS

INTRODUCTION

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Unraveling the human papillomavirus (HPV) story has been very much a phenomenon of the 1980s. By 1988, more than 50 distinct HPV types had been characterized (Nuovo et al., 1988).

Human papillomaviral infection of the uterine cervix is one of the commonest sexually transmitted diseases with prevalence rate varying between 2-3% of the smears obtained from the normal population (Meisels et al., 1981).

It is generally accepted that most HPV cervical infection is subclinical becoming visible only during colposcopy after the application of acetic acid (Reid et al., 1980). "Flat cervical condyloma" is considered the subclinical cervical HPV infection (Meisels and Fortin, 1976).

Oncogenic HPV types could be detected in 80-90% of cervical intraepithelial neoplasia grade III lesions (Fuchs et al., 1987). Also, flat cervical condyloma induced by those oncogenic HPV types (HPV -16, -18, -31) generally show a severe degree of cervical intraepithelial neoplasia (Crum et al., 1985).

On the other hand, the consistent association between HPV infection and anogenital cancers in general, emphasizes that the sexually transmitted papillomavirus may have a necessary role in anogenital carcinogenesis.

Cancer antigen 125 (CA 125) is one of the tumor-associated antigens and it is associated with more than 80% of epithelial ovarian neoplasms of serous, endometrioid, clear cell, and undifferentiated types (Kabawat et al., 1983a). High serum levels were also observed in adenocarcinoma of the endometrium and endocervix (Niloff et al., 1984a). Bast et al. (1983) detected elevated CA 125 levels in 29% of patients with non-gynecological cancers including cancer pancreas, stomach, and breast.

So long as CA 125 levels may rise in sera of patients with some non-neoplastic conditions and some benign conditions as peritonitis and liver cirrhosis (Ruibal et al., 1984), endometriosis and fibroids (Simmonds et al., 1986), and even during menstruation (Pittaway and Fayez, 1987), it is resonable to suspect its possible rise in some conditions which might be precancerous such as flat cervical condyloma induced by HPV infection of the uterine cervix.

AIM OF THE WORK

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The aim of this study is the measurement of the serum level of cancer antigen 125 (CA 125) by radioimmunoassay (RIA) among patients with flat cervical condyloma diagnosed by cervicovaginal smear, colposcopy and histopathological examination of cervical punch biopsy which might be a tool for early diagnosis or follow up in such conditions.

HUMAN PAPILLOMAVIRUS

I-Introduction:

The existence of the classical venereal wart (Condyloma acuminatum) in the uterine cervix had been recognized and described in details many years ago (Pitkin and Kent, 1963).

A complete reappraisal of the cervical condyloma had been made by Meisels and Fortin (1976) when the cytological and histological pattern of a new entity quite distinct from the classical condyloma acuminatum was described and known subsequently as "flat cervical condyloma".

Estimates of HPV-DNA in exfoliated cervical cells were as high as 10-20 % of sexually active population in comparison to genital herpes affecting only 1 % of this type of population (Broker, 1987).

II-Oncogenicity of HPV:

The viral DNA has been molecularly cloned from cutaneous and mucosal squamous proliferations of diverse morphology and anatomic locations and a wide range of epithelial diseases have been associated with HPV including: virtually all cases of condyloma, intraepithelial neoplasia and squamous carcinoma of both male and female lower genital tract - laryngeal and oropharyngeal papillomas - and a proportion of adenocarcinomas of the genital and oral mucosa (Zur Hausen et al., 1985 and Syrjänen, 1986).