Co[illegible]n between Cytologic, Colposcopic & Histopathologic diagnosis of viral infections of the cervix".

Thesis

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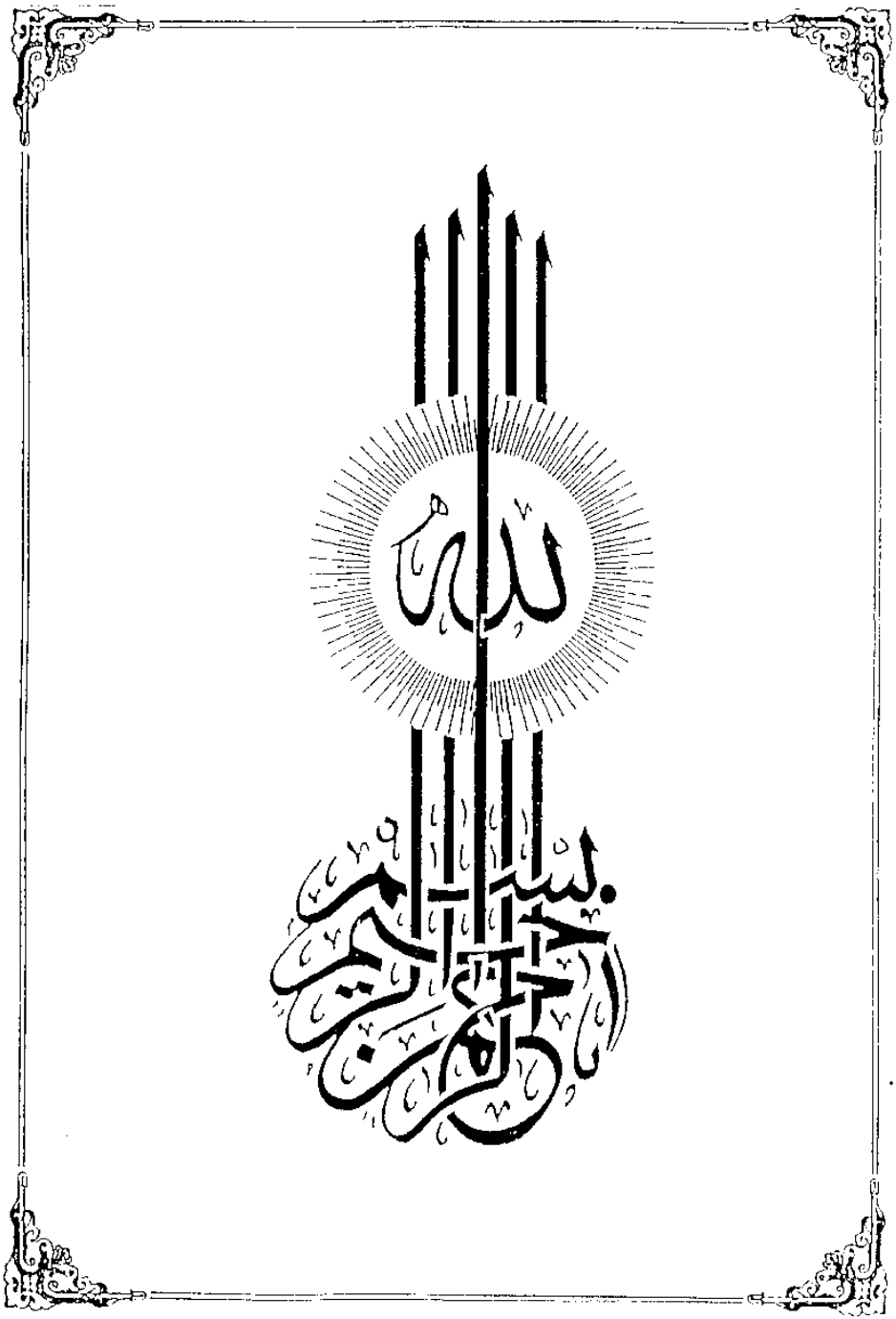

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CONTENTS

INTRODUCTION

&

AIM OF THE WORK

INTRODUCTION

"Prevention is better than cure", this certainly is a request of all those working with cancer. In this particular field, the identification of risk factors and the ability of early detection of malignancy could be considered as a major step towards prophylaxis. The cervix uteri, through its accessability has stimulated research perhaps more than any other organ in the human body. This leads to the discovery of a group of lesions that are now considered to be precursors of the malignant process.

Rotkin (1973) reported that cervical carcinoma and its premalignant phase, cervical intraepithelial neoplasia (CIN) develop in response to some aspects of sexual activity. The implication that cervical cancer has many of the attributes of a venereal disease presupposes the existence of a sexually transmitted agent or agents with oncogenic potential. Viruses, (Meiseles et al. 1981) and in particular human papilloma viruses, (Syrjanen et al. 1985) are receiving most of the attention.

The cytopathic pictures of viral infections of the cervix have been described fully by different investigators in the last few years.

Definite diagnosis of viral infections of the cervix is an essential step towards treatment of this potentialy carcinogenic condition.

Different techniques are available for evaluating the condition of the cervix. The cytologic, colposcopic and histopathologic pictures of viral infections of the cervix have been described. However, the accuracy of evaluating these techniques is still under investigations.

AIM OF THE WORK

As we are still looking for the simplest and most accurate technique for diagnosing viral infections of the cervix, the aim of this study is to find out how many cases of viral infections diagnosed by cytology are confirmed by colposcopy and histopathology and vice versa.

REVIEW

OF

LITERATURE

HISTORICAL

History of Cytopathology of the Cervix Uteri:

The science of cytology actually started with the discovery of the biological unit of the cell. The use of cytopathological study to diagnose malignancy dates back to the nineteenth century. Pouchet (1847), examined vaginal secretion while studying the problem of whether spontaneous ovulation occurs in animals and woman. The major interest in gynaecologic cellular examination continued to be the study of hormonal changes (Papanicolaou, 1946). He discussed the potential value of vaginal smears as an aid to the diagnosis of uterine cancer. Babes (1928) published an article entited "Diagnosis of cancer of the uterine cervix by smears". He collected his materials by platinum loop, fixed it in methyl alcohol and stained it with the Giemsa stain. Almost simultaneously Papanicolaou (1928) reported the occurrence of malignant cells as seen by cytology and indicated cytological characteristics of malignant cells. Later, Papanicolaeou and Traut (1941) described not only the diagnosis of

cervical and endometrial carcinoma, but also the earlier stages of these diseases.

"Acta cytologica" a journal devoted to cytology published its first issue in 1956. Cytology became part of the American Board of Pathology Examination in 1962. The smear examination is felt to be an integral part of an adequate physical examination. Cytologic examination is the cheapest insurance available. (Christopherson, 1966).

Cytology in Ain Shams University:

At March1980, the Gynaecology Cyto-Diagnostic Unit of Ain Shams University Hospital began its work under supervision of Dr. M.B. Sammour Professor of Obstetrics and Gynaecology and his guidance and constant support have been the indespensible cornerstone for the proper achievement of this unit.

History of Colposcope:

In 1925, Han Hinselmann, the director of the gynaecologic clinic in the University of Hamburg invented an optical instrument that permitted examination of the cervix under great magnification, aiming

at finding a method for early detection of cervical cancer. With the aid of the new exploratory method named the colposocope. Hinselmann described and systematized a number of cervical lesions that had been previously unknown, the great merit of this achievement was not simply the diagnostic instrument itself, but the clearer understanding of cervical pathology that resulted from its use. Colposcopy was soon widely practiced in Germany where extensive series of examination were reported and tabulated by Mesterwerdt (1939) followed by numerous other publications. This occurred in spite of the fact that schiller introduced his iodine staining test, which at first competed with colposcopy and retarded its adoption. (Schiller, 1927).

The use of colposcopy then spread over most of Europe and other countries. The picture of colposcope as a competitive to cytology has changed in the recent years and it now being accepted as a complementary diagnostic tool to cytology and that neither can actually be effective without the other. This fact had led Prof. H. Hinselmann to state that "cytology

is not a competitor to colposcopy and any one trying to prove one to be better than the other was a fool who understood nothing of either." (Jordan, 1978). This increased the acceptability of the colposcope and its use is now gradually spreading all over the world.

HISTOLOGY OF THE CERVIX UTERI

On discussing the histological structure of the cervix, two basic entities were considered, namely, the epithelial covering and its underlying stroma. The stroma of the main bulk of the cervix is formed mainly of fibrous tissue with few intermingling smooth muscle fibres, unlike that of the corpus uteri , which is predominantly composed of muscle fibres (Danforth, 1947).

As regards cervical covering epithelia, Singer and Jordan, (1976) classified such epithelia as follows:

1- The original epithelia: or those that were laid down at birth and persist to adult life. They include the original squamous and original columnar epithelia.

2- Metaplastic squamous epithelia: formed post nataly and occupying the transformation zone.

3. Atypical epithelia: comprising pathological epithelia including some with a neoplastic potential. This type would include the various dysplasia and carcinoma in situ (CIS), (Kolstad and Stafle 1977).