ROLE OF HYSTEROSCOPY IN EVALUATION OF UTERINE FACTOR IN HABITUAL FIRST TRIMESTER ABORTION

THESIS

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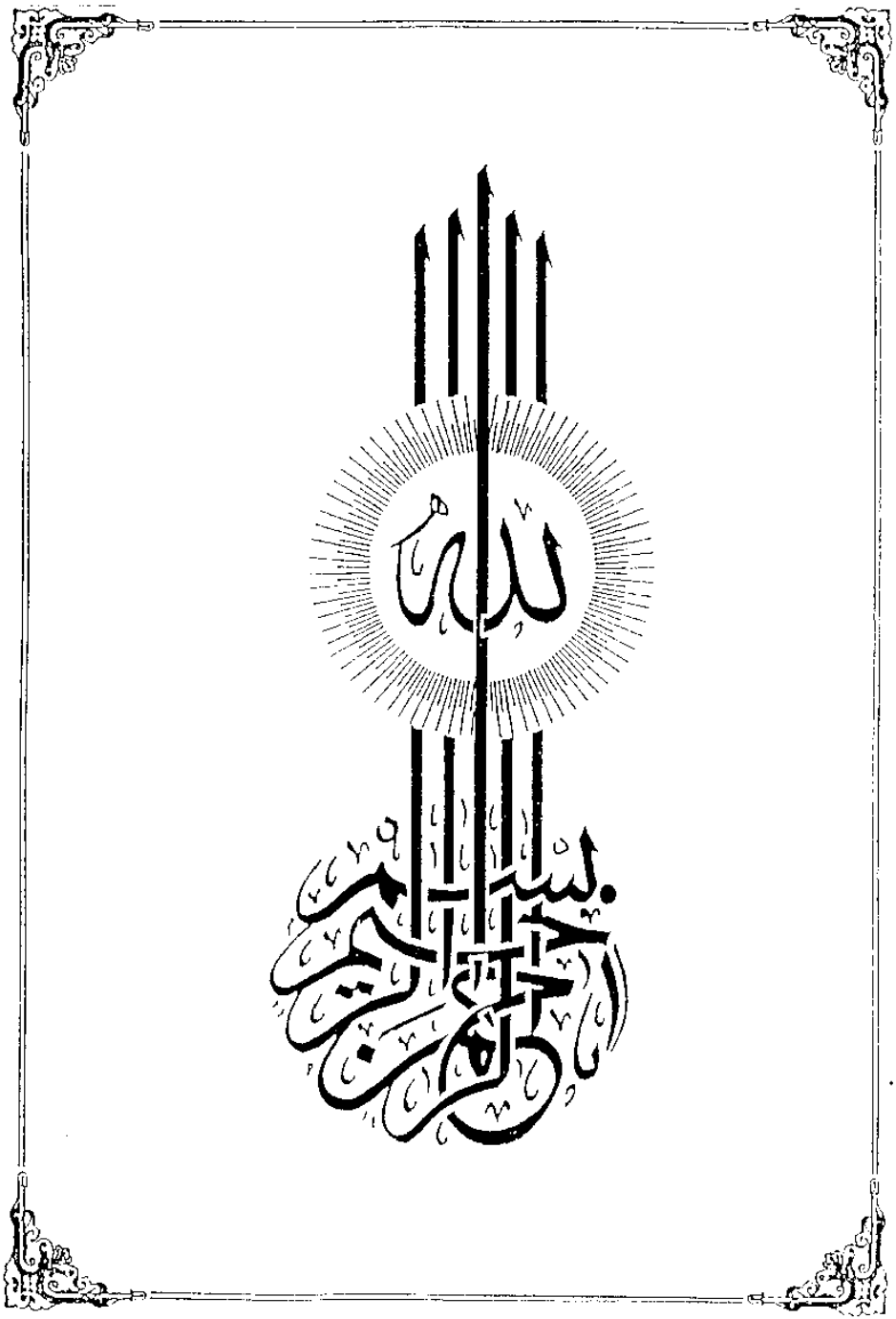

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INTRODUCTION

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Despite a voluminous literature, the subject of habitual abortion is still surrounded by confusion, specially in the first trimester of pregnancy. Following one spontaneous abortion, the risk of a subsequent abortion is almost doubled from 12.3% to 23.7% (**Warburton & Fraser, 1964**). The causes of habitual abortion are generally grouped into 6 major categories i.e.: Hormonal, anatomical, infectious, chromosomal, haematological and **immunological**.

At present, the well established aetiological factors for recurrent pregnancy loss during the first trimester are genetic disorders and morphologic abnormalities of the uterus (**Glass & Globus, 1978**). The configuration of the uterine cavity can be ascertained by direct observation in vivo during hysteroscopy.

Modern hysteroscopy has been established at the beggining of the last decade by refinement of the fiber optic endoscope and the use of high molecular weight dextran as an effective medium for uterine distension (**Van De Pas, 1983**).

AIM OF THE WORK

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The aim of our work is to define the role of hysteroscopy in the evaluation of anomalies of the uterine cavity and the endometrial abnormalities in cases of first trimester habitual abortion.

REVIEW OF LITERATURE

RECURRENT ABORTION

One of the most distressing problems in obstetric practice is recurrent abortion, particularly in those who have no successful pregnancies.

DEFINITIONS

The precise definition of spontaneous abortion was always difficult & variable. Abortion is generally defined as: "The expulsion of the products of conception from the uterus before the attainment of foetal viability. The abortus may be alive or dead. Viability is variously described as 400gm, 500gm or 20 weeks" (Pritchard et al., 1980). While, in the British law, abortion is defined as: "Termination of pregnancy before 28 weeks gestation with no evidence of life" (Howie, 1986).

In 1977 the world health organization (WHO) defined abortion as: "The expulsion or extraction from its mother of a foetus or an embryo weighing 500gm or less". Such a definition which uses an upper limit of foetal weight, overcomes the difficulty of defining an abortion when the gestational age is in doubt and 500gm usually corresponds to a gestational age of 20 to 22 weeks (Howie, 1986). The definition of recurrent abortion, also termed habitual abortion, was known to be: "An interrupted sequence of at

least two or three abortions" (Roth, 1963).

Recently, most studies advise starting investigations with couples with two pregnancy losses (Tho et al., 1979; Glass & Golbus, 1978; Byrd et al., 1977).

The first trimester, by definition, encompasses the first three lunar months of pregnancy from gestational age 1 through 84 days or up to 98 days menstrual age (Dickey, 1984). This can be more explained by the stages of foetal development described by Streeter, 1951, where the gestational age is measured from the beginning of basal body temperature rise about the 14th day in most 28 days cycles, while the menstrual age begins with the first day of normal menstruation, disregarding premenstrual spotting, if any.

INCIDENCE

The incidence of spontaneous abortion is generally considered to be about 15% of all pregnancies (Roth, 1963; Harlap et al., 1980), although some studies have estimated the incidence to be between 20% (French & Bierman, 1962) and 25% (Shapiro et al., 1963).

There are several reasons why it is impossible to define exactly the incidence of spontaneous abortion. In the first place, it is quite possible for women to abort without

showing that they have been pregnant. Using the β subunit of human chorionic gonadotrophin (β-HCG) as a marker of pregnancy, a number of studies have reported "occult pregnancies" in which the woman is aware of no more than a slightly delayed or heavy "menstruation" (**Miller et al., 1980; Whittaker et al, 1983**). The frequency of occult pregnancies has varied widely in the reported studies. Some consider it to be about 20% (**Decherney & Polan, 1984**). Some of which were carried out in apparently infertile women (**Chartier et al., 1979**).

In the second place, some women who present with vaginal bleeding are sure that they are having a miscarriage but show no confirmatory evidence of pregnancy and some of these cases may be explained by the physician as delayed menstruation (**Howie, 1986**). As regards incidence of recurrent abortion, **Malpas 1938**, stated that, after three consecutive abortions, the risk of abortion in the next pregnancy was 73%. In a critical review in **1958, Goldzieher and Beningo** offered evidence of miscalculation in the report of **Malpas** and proposed that the risk of abortion after three successive abortions was only 26%.

Warburton and Fraser (1964), then, **Warburton and Naylor** (1979) reported that the chance of a further abortion in the next pregnancy after one abortion was 23.7% which increased

to 26.0% after two abortions and to 34.1% after three abortions.

Although **Poland et al.,** (1977) found a rather higher figure of a 47% risk of abortion after three abortions, it was still well below the theoretical estimate of Malpas.

FACTORS INFLUENCING SPONTANEOUS ABORTION RATES:

Not all women have the same propensity to abort and about 25% of all women will have one or more abortions **(Warburton & Fraser, 1964).** Some studies have reported that the incidence of spontaneous abortion increases with maternal gravidity and age **(Warburton & Naylor, 1979)** but others do not agree **(Huisjes, 1984).**

In fact, it is likely that gravidity has relatively little effect on the incidence of abortion. On the other hand, maternal age over 35 years appears to be associated with an increased risk of abortion which may be due to increased incidence of chromosomal abnormalities **(Resseguie, 1974).** For women under age 30, the possibility of recurrent abortion was low, averaging < 10% following one, two, three or more consecutive previous abortions comparable to those rates reported previously who were found only when patients were 30 years of age or older **(Wilcox & Treloar, 1980).**