RETROSPECTIVE STUDY ABOUT THE ROLE OF CERCLAGE IN MANAGEMENT OF HABITUAL ABORTION IN THE YEARS 1985 AND 1986 IN AIN SHAMS UNIVERSITY HOSPITALS

Thesis
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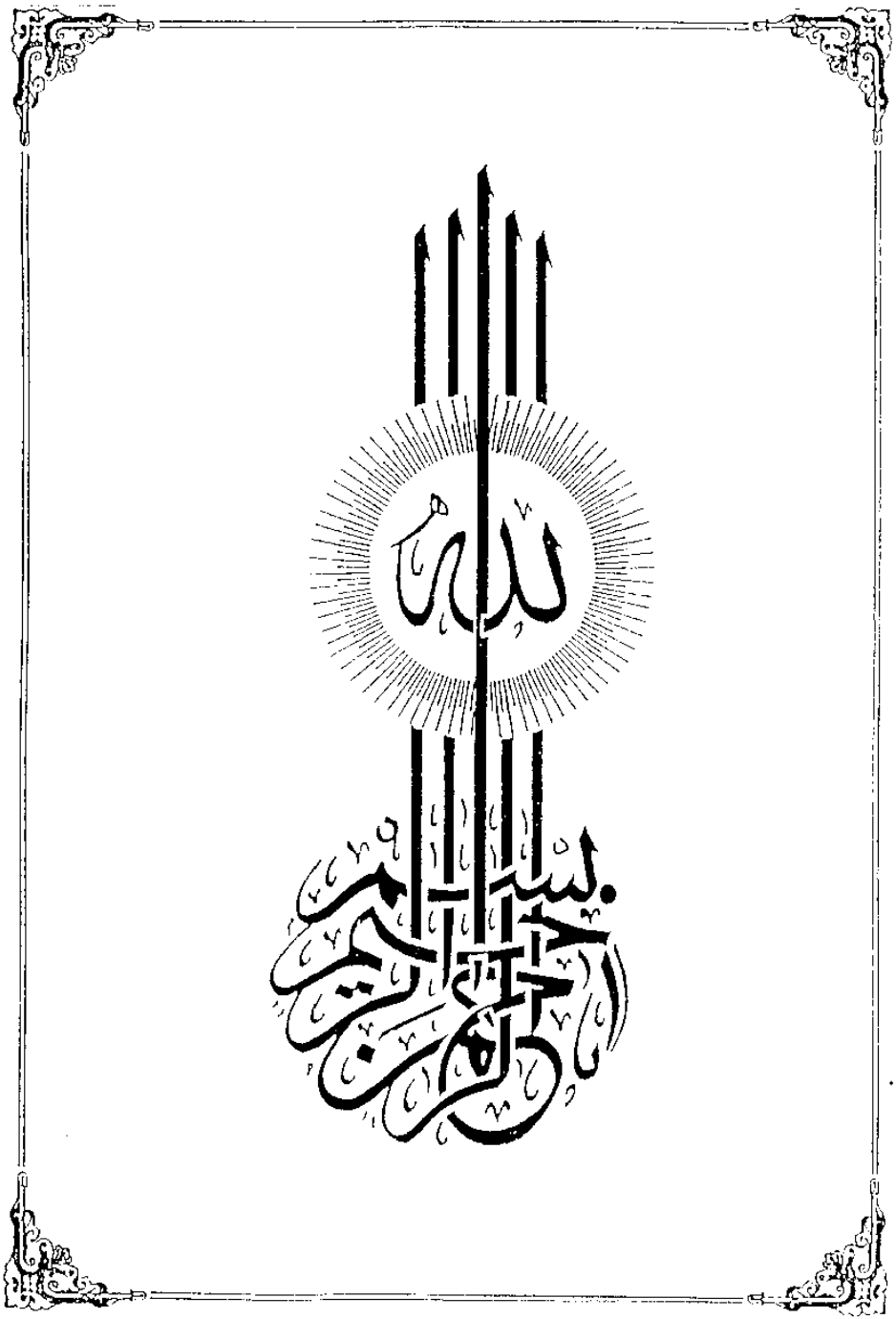
TO THE MEMORY OF MY MOTHER

TO MY FATHER

TO MY FUTURE WIFE



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INTRODUCTION AND AIM OF WORK

INTRODUCTION

The morphological changes, physiological processes and biochemical reactions occuring in the uterus and cervix daily and periodically, constitute a preparation for survival and growth.

The primary function of the cervix is mechanical : it remains closed to maintain the foetus within the uterus until parturation when it dilates to allow delivery.

Over the years the problems of abortion has been of foremost interest in the minds of obstetricians and gynaecologists (Rubovits et al. 1953).

The term habitual abortion is usually reserved for an uninterrupted sequence of at least three abortions. The incidence of habitual abortion was below 0. 2% if related to the number of pregnancies, it might have been twice as high if calculated as a precentage of women (Gerl et al, 1980).

Warburton and Fraser 1969 and Roth 1963 found that approximately 15% of clinically recognised pregnancies abort spontaneously. So that about 2% of women would be expected to have two spontaneous abortion in any two successive pregnancy purely by chance.

Since only a minority of cases can the outcome be improved by treating the cause of abortion, the cost effect ratio of giving all patients a full examination must be considered. The cervical incompetence is one of the commenest aetiological factors in habitual abortion. The first surgical technique for repairing the incompetent cervix was described by Palmer and Lacomme in (1948) and followed shortly afterward by Lash and Lash (1950). The operation was reconstructive in that a defect in the anterior wall was repaired. The procedure can not be carried out during pregnancy.

Another technique has gained more widespread acceptance: Cerclage.

Actually there are two types of cervical cerclage.

1) The transvaginal cerclage: different operative techniques, like Shirodkar operation and MacDonald operation, and numerous modifications, had been proposed.

and

2) The transabdominal cerclage.

Aim of the Work :

The aim of the work is to do a retrospective study to evaluate the role of cerclage in habitual abortion as regards the :

- Antenatal period.
- Delivery
- Complications during the antenatal period and labour.

REVIEW OF LITERATURE

CHAPTER I

ANATOMY OF THE CERVIX

The cervix is a firm structure traditionally described as having the consistancy of the tip of the nose. (Krautz, 1976)

Cervix uteri is about 2. 5 cm in length; it is narrower and hence more cylindrical than the body, and is a little wider in the middle than above or below. Owing to its relationship it is less freely movable than the body, so that its long axis and that of the body are seldom in the same straight line.

The long axis of the uterus as a whole presents the form of a curved line with its concavity forward, and the organ is described as being anteflexed.

In extreme cases there may be an angular bend at the region of the internal os - acute anteflexion.

When the bladder is empty the long axis of the cervix meets the long axis of the vagina at an angle which faces antero-inferiorly, and the whole uterus is therefore turned anteriorly on the vagina or anteverted.

The cervix projects through the anterior wall of the vagina, which divides it into upper, supravaginal and lower, vaginal regions. (Warwick and Williams, 1973).

The supravaginal part of the cervix is separated infront from the bladder by cellular connective tissue, the parametrium, which extends also on the sides of the cervix, and laterally between the layers of the broad ligaments. The uterine arteries reach the lateral aspects of the cervix in the tissue, whilst on each side the ureter runs downwards and forewards in it a distance of about 2 cm lateral to the supravaginal portion of the cervix of the uterus, though the distance may varies from 1 to 4 cm.

The relationship of the arteries and the ureters is not always symmetrical, and in particular one or other of the ureters may be some what anterior to the cervix. Posteriorly the supravaginal cervix is covered with peritoneum, which is prolonged below on to the posterior vaginal wall, whence it is reflected to the rectum, forming rectouterine pouch. It is in relation with the rectum, from which it may be separated by terminal coil of the ileum.

The vaginal part of the cervix projects into the anterior wall of the vagina forming the vaginal fornices (Warwick and Williams, 1973).

For descriptive purposes, the fornix is artificially divided into anterior, posterior, and right and left lateral fornices, the anterior fornix being shallow because the cervix is inserted through the anterior vaginal wall (Romanes, 1986).

On its projecting rounded extremity there is a small depressed, circular aperture, the external os of the uterus, through which the cavity of the cervix communicates with that of the vagina. In women who have borne children the external os is bounded by two lips , anterior and posterior, of which the anterior is the shorter and thicker, although because of the slope of the cervix, it projects lower than the posterior. Normally both lips are in contact with the posterior vaginal wall (Warwick and Williams, 1973).

Hence, the external os (external uterine orifice) is circular in nullipara, but transverse and often fissured in multipara (Chard and Lilford, 1983).

The cervical canal is some what spindle shaped terminating below , at the external os. At its upper end the cervical canal communicates with the uterine cavity through a constricted orifice called the internal os. The mucous membrane covering the vaginal surface is of stratified squamous variety, a continuation of that covering the adjacent vagina.

The cervical canal, on the other hand, is lined by an entirely different type of mucous membrane, the endocervix, which is distinguished by the following features :-

1- A tall "picket" variety of columnar epithelium, with deeply stained nuclei placed close to the membrane and a cytoplasm rich in mucin.

2- Glands of racimose variety, lined by epithelium, like that found on the surface.

3- Stroma of fibrous tissue type, rich in spindle cells elements.

The muscular coat of the cervix is well developped in the region of the internal os, but become increasingly sparse at a lower level ,so that only a thin outer layer is present in the lower portion of the cervix, with a corresponding increase in the proportion of connective tissue. Glands like vestiges of the mesonephric duct are occasionally observed deep in the cervical musculature (Jones and Jones, 1982).

The cervix unlike the body of the uterus, is held in position by a number of structure which are principally condensations of fascia and some smooth muscles in the base of the broad ligament.

The main mass surrounds the uterine artery (transverse ligament of the cervix), and passes from the cervix and lateral fornix on each side to the corresponding lateral wall of the pelvis. A similar condensation of connective tissue in each rectouterine fold forms the uterosacral ligaments.

Thus the cervix tends to remain in position while the body of the uterus expands in pregnancy. (Romanes, 1986).

In the cervical canal , a longitudinal ridge is a feature of both anterior and posterior walls, and from each a number of small oblique

palmate folds ascend laterally, giving the appearance of branches from the stem of a tree (arbor vitae uteri). The folds on the two walls are not opposed, but fit between one another so as to close the cervical canal. (Warwick and Williams, 1973).

Approximately the upper third of the cervix has been termed isthmus, because it presents certain features which differentiate it from the rest. Although it is unaffected in the first month of pregnancy, it is gradually taken up into the body of uterus during the second month and forms the "lower uterine segment". The fetal membrane, though firmely blended with the rest of uterine mucosa, are not attached to the lower uterine segment. In non pregnant uterus the isthmus undergoes changes associated with menstruation similar to, but less pronounced than those which occur in the body of the organ. While the lower $^{2}/_{3}$ of the cervix does not undergo cyclical changes such as occur in the body of the uterus (Warwick and Williams, 1973).

Growth of the uterus and changes in uterus:

The newborn uterus is made up of a relatively large cervix and a very small body with no fundus. Subsequently the body grows faster to form $^{2}/_{3}$ of the mature, organ (Chard and Lilford, 1983).

In foetal life: the uterus projects above the superior aperture of lesser pelvis. The cervix is considerably larger than the body.

In puberty : the uterus is pyriform. The fundus below the

level of superior pelvic aperture. The palmate folds are distinct, and extend to the upper part of the cavity.

In adult : the position of uterus is liable to considerable variation, depending chiefly on the condition of the bladder and rectum. When the bladder is empty, the entire uterus is inclined anteriorly, and is at the same time curved at the junction of body and cervix, so that the body lies upon the bladder. As the latter fills, the uterus gradually becomes more and more erect.

During menstruation: the organ is slightly enlarged and more vascular, and its surfaces are rounded; the external os is rounded, its lips swollen and the lining membrane of the body is darker colour.

During pregnancy:the uterus is enormously enlarged.

After parturation : the uterus regains its usual size, but its cavity is larger than in nulliparous state. External os is more prominent and its edge present one or more fissure.

In old age : The uterus becomes atrophied paler and denser in texture; a more distinct constriction separates the body and the cervix. The internal os is frequently, and the internal os occasionally, oblitarated, whilst the lips of the external os almost entirely disappear (Warwick and Williams, 1973).