# EVALUATION OF PLACENTA PREVIA DURING THE LAST TWO YEARS IN RELATION TO THE TREATMENT AND MATERNAL AND FEATAL OUTCOME



THESIS

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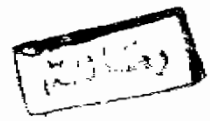
By



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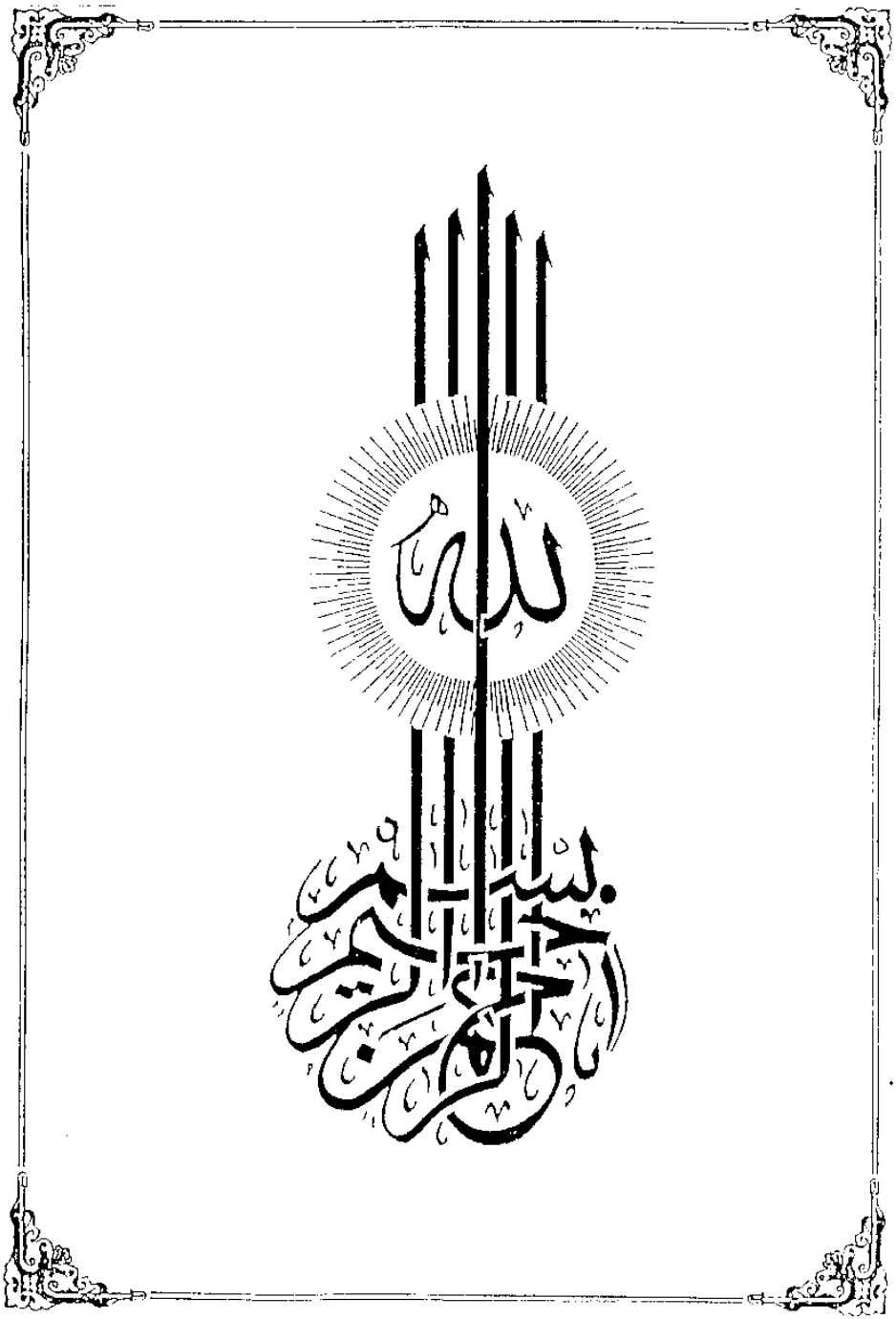

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## Introduction:

Placenta previa is one of the most dangerous causes of bleeding during the later months of pregnancy. It was responsible for a considerable number of maternal death annually , but with the modern methods of treatment the position has become reversed.

Shock and haemorrhage are the main complications resulting from this type of placenta which is implanted in the lower uterine segment, these complications may be so dramatic to necessitate immediate treatment.

Different methods of treatment are available aiming to reduce the maternal and neonatal mortalities and morbidities.

Two factors of crucial importance in the management of placenta previa , which are:

1. Expectative management when circumstances permit a target date for delivery at the end of the Thirty - seventh weeks.
2. The use of cesarean section for delivery.

Eventually we were able to reduce the maternal mortality rates to much less than 1 % during the last decade when 75 % of all patients were delivered by the abdominal route .

Therefore surgical management of placenta previa gained general acceptance in the United Kingdom.

# PLACENTA PRAEVIA

## Definition:

It is the development of the placenta in part or wholly in the lower uterine segment to be located over or very near to the internal cervical os. The placenta may attach itself to any portion of the uterus, the fundal insertion being the rarest, posterior wall being the most common site, next is the anterior wall then sides and finally the last in frequency is the lower uterine segment (DeLee and Greenhill, 1944).

Placenta previa was correctly described by Portal in 1683, although Schacher in 1709 was the first to demonstrate on the dead subject the exact relation of the placenta to the uterus. Prior to these dates, the condition was supposed to be due to separation and prolapse of the placenta which reingrafted itself to the lower pole of the uterus.

## Varieties:

It was customary to classify placenta previa anatomically into lateral, marginal and central placenta previa. The difficulty, as Macafee (1950) said, associated with this classification was that different writers

defined "lateral" and "marginal" in different ways and the so called "central placenta previa" is rarely seen at operation. A more precise grouping, proposed by Norman White in 1929 and Browne in 1946, and has been generally adopted till now and suggests that placenta previa is of four degrees:

First degree: The greater part of the placenta is attached to the active contractile portion of the uterus (i.e. upper segment) and only the lower margin of it dips into the lower segment. This is the low-lying or low-dipping placenta or in the older classification, the lateral type.

Second degree: The margin of the placenta reaches down to the internal cervical os. This is the marginal placenta previa in the older classification.

Third degree: The placenta completely covers the closed internal os but does not entirely do so when the os is well dilated. This is the partial or incomplete type.

Fourth degree: Centre of the placenta corresponds or very nearly corresponds with the internal os. (The total, complete or central type of the older classification).

Regarding the frequency of different degrees, Macafee et al., 1962, had reported that in a total of 425 cases: 81 cases were of first degree, 120 cases of second degree, 112 cases of third degree and 117 cases of fourth degree. (Kelly and Iffy, 1981), classified placenta previa depending on the relation of the placenta to the cervical internal os at about 1 cm dilatation into four categories:1)central placenta praevia with the placenta covering the internal os completely occuring in approximately one third of cases of low implantation,2)partial placenta previa which covers a part of the internal os while the rest is overlapped by the fetal membranes,3)marginal placenta previa with its lower most edge reaching the edge of the internal os and lastly,4)lateral placenta previa (low-lying placenta) with its lowermost part is some distance away from the internal os. Since the digital exploration of the region of the internal os in placenta previa is one of the most dangerous under-takings in obstetrics, it is unwise to attempt to ascertain the changing relation between the edge of the placenta and the internal os as the cervix dilates.

Frequency:

Brenner et al., 1978, identified an incidence of placenta previa during the later half of pregnancy of 0.6% or 1 per 167 pregnancies, 20% were of the central variety. Previously, Moir, 1964, found in a large series of cases that the relative proportion of the four degrees of placenta previa (from the first to the fourth degree)were approximately 2:3:3:3. A roughly comparable impression emerges from German statistics (Von Martius, 1977; and previously from those obtained in Maryland (Gutierrez-ypes and Eastman, 1946) with partial (third degree) previa slightly outnumbering central (fourth degree) implantations.

Aetiology:

The question of why the zygote selects or is deposited at an unsuitable site for implantation has not yet been answered satisfactorily. However, two forms of implantation have been described as reported by Barnes (1853) and later by Luh (1933) and Neumann (1934). The first is a"primary isthmal implantation" and is rare and the second is "secondary isthmal implantation" and is much more common. Such an extension may occur even when the primary implantation of the zygote is far away from the isthmus and a process of placental tissue

extends into that area (Percival, 1980) mentioned that we have to investigate the causes leading to implantation of the zygote in the lower uterine segment and three possible ways in which it may occur, of which the first is the most probable:

(1) The fertilized ovum may become embedded in the lower part of the uterus and the decidua basalis would then form wholly or partially in the lower uterine segment. This may be called the formation of a "basal placenta previa".

(2) After implantation of the ovum in the normal position, the placenta may so develop to become attached in part to the lower uterine segment. The part of the chorion in contact with decidua capsularis has not atrophied as usual (chorion laeve) but has continued to develop into placental tissue on the decidua capsularis on either side of the decidua basalis. At a later stage of pregnancy, the lower placenta-bearing part of the decidua capsularis will come to lie upon the lower uterine segment and will probably fuse firmly with the decidua vera and establish vascular connections with the uterine wall. This may be called the formation of a "capsular placenta previa".

(3) For some reason or another, the decidua is defective and the young villi have to spread over the uterine wall to find more blood spaces. As a result of this, part of the placenta may find its way into the lower segment. In support of this, placenta previa is sometimes large and thin occupying a relatively large area of the uterus. Very rarely, the cervical mucous membrane is capable of forming decidua and in this the development of the placenta goes on and the villi reach even to the external os as in three cases reported by De Lee and Greenhill, 1944. In another, the burrowing villi had split off a layer of mucosa and muscle so that, when the placenta was dug out, a bleeding cavity remained in the cervix. Occasionally, the villi had grown through the cervix into the para metrium resembling the very rare "cervical pregnancy".

Cervical Pregnancy:

The Zygote, in such a case, becomes implanted and developed in the cervical canal. Schneider (1946), has described cervical implantation as a distal ectopic gestation with the same general characteristics as other ectopic pregnancies i.e. destruction of the tissues in which it is embedded and premature termination (Duckmann, 1951), suggested that a diagnosis of cervical pregnancy could be substantiated provided that there

were (1) A dilated, thin walled cervical canal containing histological evidence of products of conception (2) A patulous external os and (3) A small firm uterine body with a normal sized internal os resting on top of the dilated cervix. Of particular interest are cases in which pregnancy has occured after subtotal hysterectomy as in the cervical stump in the Stanley-Browne and Shields case in 1944. But in the case recorded by Connors et al. (1943) in which a premature infant (6 months) was delivered alive by vagina there was little doubt that the pregnancy developed in the cervix because the sac wall was made up of muscle tissue. Studdiford (1945) referred to the condition of cervical pregnancy as being associated with vaginal bleeding and a bulging of the cervix with the os externum partly dilated. The firm corpus could be made out above the cervical mass and on occasions was mistaken for a fibromyoma perched