THE PROBLEM OF GRANDMULTIPARA

THESIS

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By

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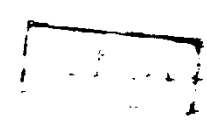

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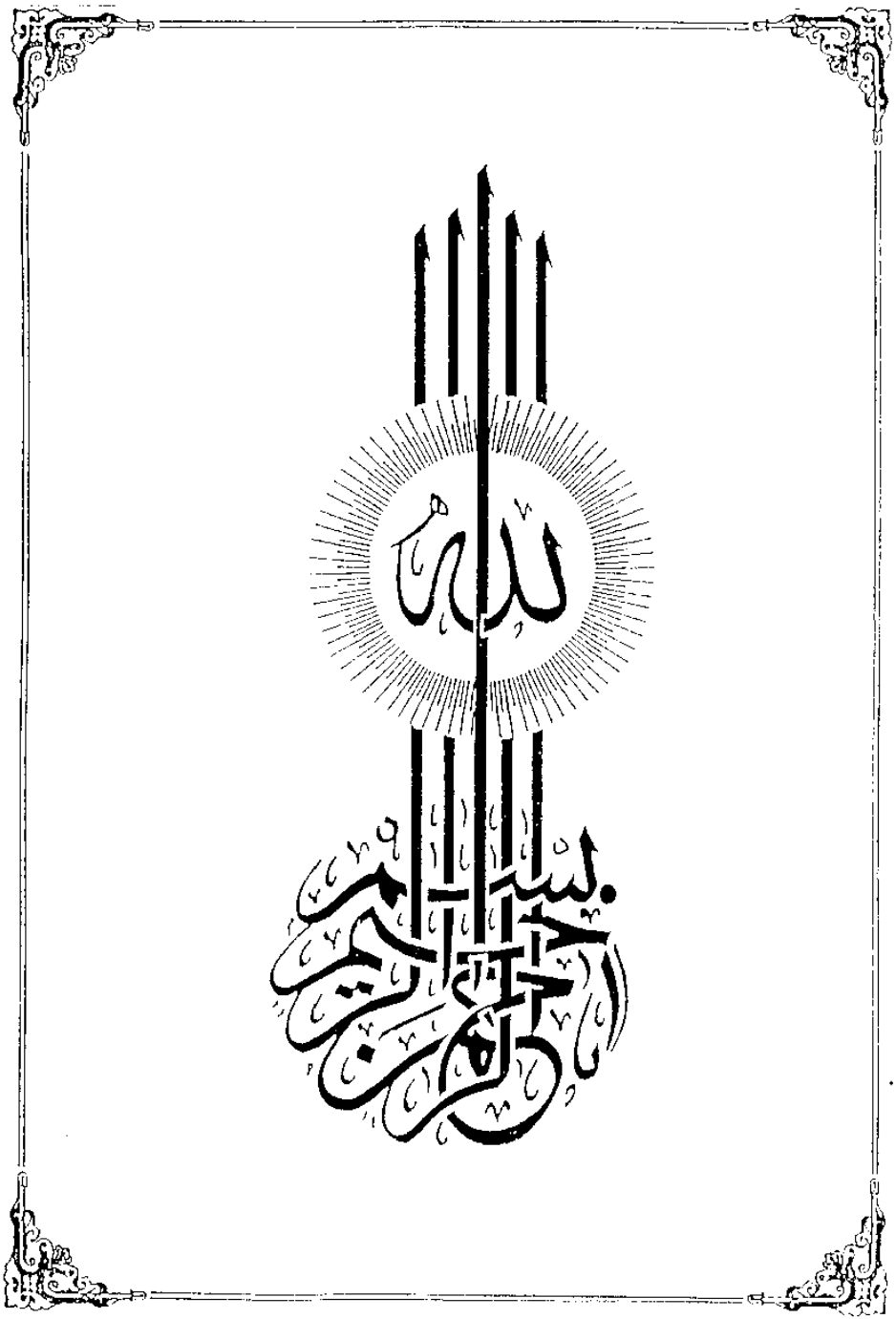

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INTRODUCTION

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There is no universally accepted definition of grand multipara, Barn (1953) and Feeney (1953) restricted it to women having their eighth pregnancy or over. Israel and Blazar regarded the para 7 female as the earliest grand multipara. Eastman (1940) recognised the definition used in french literature that implied parity greater than five. Nowadays grand multipara is usually defined as applying to cases who have had 5 or more previous deliveries (Donald, 1960 and Radonic, 1966). Ever since Solomons 1934 drew attention to what he called, the "dangerous multipara " increasing interest has been taken in the problems associated with grand multipara. Eastman, 1940 observed that the maternal mortality rate of para 10 or more was five times the average rate. These women are liable to a series of dangerous, sometimes unsuspected complications especially as they usually had a long series of an uneventful deliveries. Many factors operate to increase the hazards of high parity. For one thing, the patient is getting older and her cardio-vascular system is consequently less resilient so that hypertensive disease is more manifest. Obesity which is often gross in these cases increases the dangers of child-bearing as is well known and not the least reason for this is the difficulty of making an

accurate examination. Sociological factors play a very important part, for the majority of these patients are poor, overworked and tired. Many of them have never fully regained a good blood picture and anaemia may dag them from one pregnancy to the next without respite. They tend to feed their numerous children at the expense of their own nutrition. They are too busy to attend to their health and in a rapid succession of pregnancies and periods of lactation. They are likely to become seriously depleted of calcium. With increased weight and lumbar lordosis, the abdominal wall gives up the unequal struggle and we have therefore the picture of a harassed woman who stands badly, walks badly, eats indifferently and cannot get enough sleep.

Most recent authors are however less pessmistic regarding the outcome of pregnancy in these woman provided that good obstetric care is done (Schram, 1954, Eastman, 1955, Fuch & Peretz, 1961 Sharfman & Silverstein, 1962, Ziel, 1962 and Quinlivan, 1964). With the exception of somewhat higher incidence of obstetric complications in placenta praevia, post partum haemorrhage and prematurity, the mortality rate for this group is not to be considered frightening.

Nutritional Anaemias :

Nutritional anaemia, an abnormally low haemoglobin content in the blood resulting from a deficiency of iron, vitamia B_{12}, or folic acid, is one of the most common serious diseases which affect women.

Together with protein - Coloric malnutrition (PCM), Xerophthalmia & endemic goitre, anaemia ranks among the four most prevalent serious nutritional diseases in the world.

Anaemia is a particular scourge of women. It occurs two to three times more frequently in nonpregnant women than in man & up to 20 times more frequently in pregnant women.

The disease, which in it's severe form is charcterized by debility & oddema, is so common in some areas of the world that women in those regions accept the symptoms as a normal condition of pregnancy.

Although anaemia in pregnancy occurs to some degree in women in developed countries, it's effects are most severe in developing countries where it is the underlying cguse of 40 - 50 % of maternal deaths as opposed to virtually none in developed countries.

Types of Anaemia :

Three types of nutritional anaemia are recognized, based on whatever nutrient deficiency is causing the diminshed haemoglobin : iorn deficiency, Vit.B_{12} dificiency, & folate deficiency.

Iron deficiency anaemia, the most common anaemia, affect an estimated 80-90 % of pregnant women in developing countries.

Precise data are not available on the incidence of other nutritional anaemias.

Folate deficiency anaemia, thought to be common in pregnant women because of the greatly increased requirements of folate during pregnancy, often occurs together with iron deficiency anaemia & goes undetected.

Causes of Anaemia :

The high incidence of anaemia among women in developing countries results from the combined - and addition - effects of :-

- Inadequate diet.
- Reccurent infections & diseases.
- Great nutritional demands of child bearing.

Multiparity & short birth intervals are associated with severe anaemia in women in developing countries. A study in Malaysia indicated that among anaemic obstetric patients only 10 % were Primigravidas & 55 % were women of parity 5 or more.

The need of iron as well as folic acid is six times greater for a woman in the last trimester of pregnancy than for a non pregnant woman.

This great need for iron ranging from about 1000-1800 mg per pregnancy - Cannot be met by diet alone but is derived partly from maternal reserves. Since maternal reserves of iron are usually increased only during periods of non-pregnancy, women who experience closely spaced births suffer chronic & progressively more severe anaemia.

When a pregnant woman's level of body iron is reduced to the point of morbidity, her body is not able to produce haemoglobin.

The world Health Organization considers a pregnant woman whose haemoglobin is less than 11g/100 ml to be anaemic. Defining the level of haemoglobin which separates normality from anaemia is still somewhat inexact; however, since a slight decrease in haemoglobin level is probably normal in pregnancy.

Poor nutrition resulting from inadequate dietary intake of both proteins & iron, is a cause of anaemia in the developing countries.

Begining with the 2nd trimester, pregnant women have a markedly decreased resistance to malaria, but the cause of this phenomena is unknown. Malaria destroys red bloodcells, increases. The folic acid requirements of the body, may result in severe folate deficiency anaemia.

Worm infestation (round worm, hookworm tape worm), is a common cause of anaemia in developing conntries. Iron therapy or nutritional supplimentation may not be effective unless worm infestation, in the body is eliminated.

Consequences of Anaemia :

Anaemia reduces a woman's resistance to infections, increases the frequency of complications of pregnancy & childbirth from two to three times the normal rate & in addition, increases the risk of maternal mortality.

In a study of maternal mortality in Bombay, anaemia was the single most important factor contributing to death. The death rate from anaemia - related deaths among grand multiparas (women having six or more children) was almost twice that of primiparas.

DIABETES MELLITUS & PARITY

Although high parity has been implicated as a possible factor causing twice as many women as men to develop diabetes after the age of 40, the relationship has not been definitely established.

It is well known that pregnancy does indeed worsen existing diabetes & that it causes biochemical symptoms to appear during gestation in a previously nondiabetic woman, but other etiologic factors such as age., obesity, genetic predisposition & possibly diet, are considered by some investigators as more important than parity.

Middleton & Caird (1968) having noted that the incidence of diabetes in women over 40 increases with increasing parity, Calculated the excess maternal risk caused by childbearing. They compared women who have never borne a viable child with women of varying parity & Concluded that the likelihood of developing diabetes is about 20% greater for a woman with one child, 45% for 2., 100% for 3.,200% for 4, & over 400 % greater for 6 or more.

By contrast, Florey (1972) & Jackson (1961), while confirming the higher female than male rate of

diabetes after age of 40, found no correlation between higher parity & increased incidence of the disease. They concluded that age & abesity were near important as causative factors.

The following table will show comparative risk of "diabetes Mellitus in men & Women & effect of parity on incidence of diabetes in women, in selected studies 1949-1972

Author, Date, & Country	Study Population		Investigator's Conclusions
	Test Group	Control Group	
Fitzgerald et al., 1961, England	3,260women 2,181 men	7,608 married women	incidence of diabetes the same in men and women until age 40, then more frequent in women; in women with 3 children, twice as frequent as nullipara; with 6 children, six times more frequent.
Florey et al., 1972, Jamaica	302 women 236 men	no controls	incidence of disease rose with age for both sexes: to 14.5% in men 45-54 and to 17.0% women; no correlation between parity and incidence of diabetes.
Jackson, 1961, South Africa	508 women 361 men	782 nondiabetic women	women over 35 more than twice as likely to develop diabetes; significant rise in incidence with parities above six but not at lower parities; pregnancy has a temporary diabetogenic effect; prediabetics may be more fertile than non-diabetics.
Middleton & Caird, 1968, England	543 women	general population (oxford and surounding districts)	risk of diabetes greater in women over 40 than in man over 40; increased maternal risk of diabetes over nullipara 20% for one child, 45% for two, 100% for three, 200% for four or five, 400% for six or more.
Munro et al., 1949, Scotland	907 women 402 men	general population (Glasgow, Scotland)	incidence of diabetes the same for men and women until age 40; then more frequent among women, especially multiparas.
Pyke, 1957 England	583 women 370 men	random sample from 1951 Census in England	risk of diabetes in women with 5 or more children is at least twice as great as in nullipara.
Vinke et al., 1959, Netherlands	1,379 women 773 men	census data for Netherlands	slightly more male than female diabetics under age 40; over 40, two to three times more female diabetics; no correlation between parity and incidence of diabetes; obesity in women increased incidence of disease.