High-risk pregnancy

Prolonged interpregnancy interval as a high risk factor of high-risk pregnancy

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by

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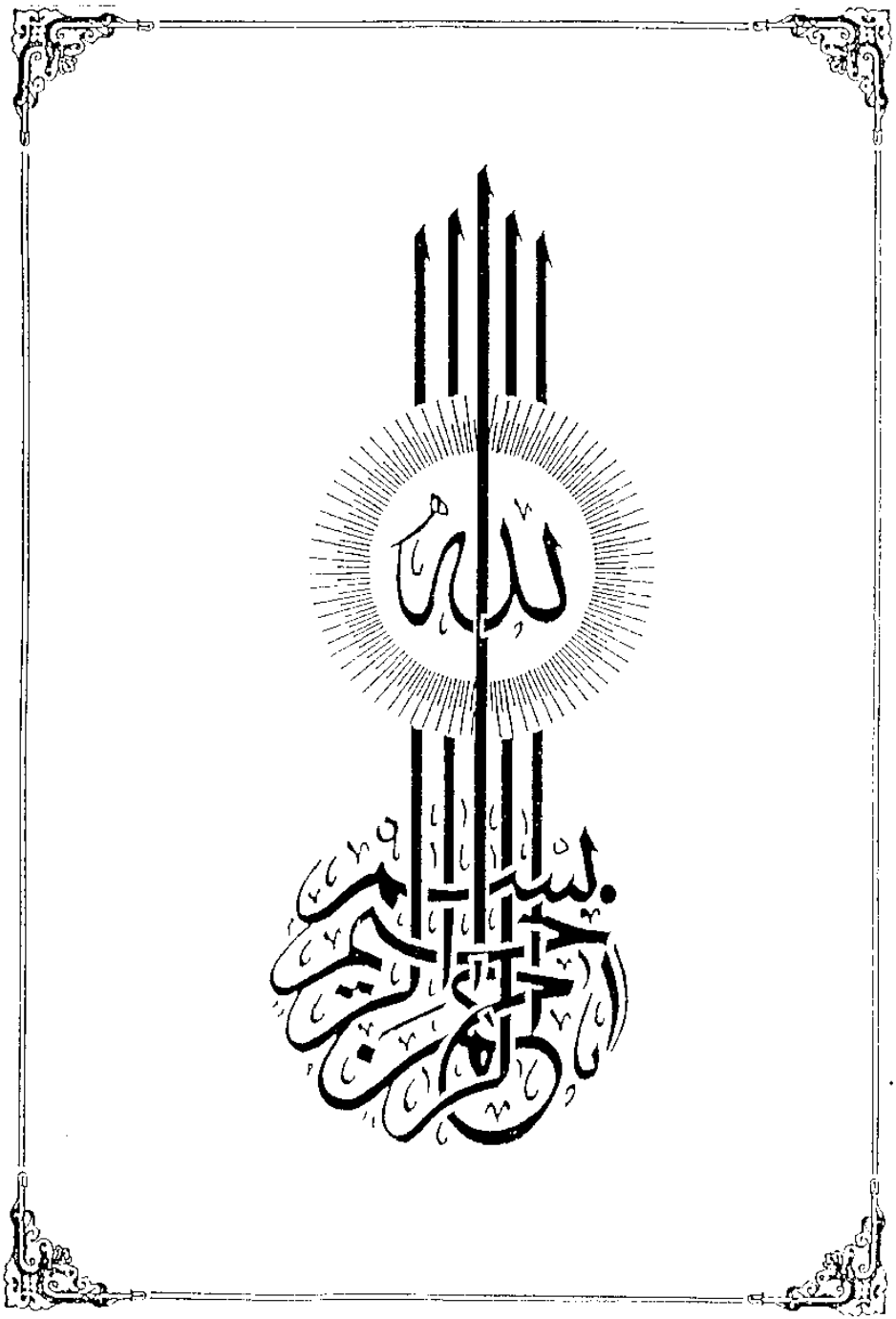

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INTRODUCTION & AIM OF THE WORK

INTRODUCTION

With the development of antenatal care, the past 50 years has seen to be with the most astonishing reduction in M.M.R. (Maternal Mortality Rate) and on this account, attention has turned more and more to discover new causes of high risk pregnancy and its effect on progress of the next pregnancy and labour outcome ***(Aummann et al., 1986)***. So, the obstetricians have to be aware of all complications or risks which become superimposed on pregnancy, how to diagnose them, and how to manage these complications when they arise.

The concept of high - risk pregnancy has been an increasingly important one, there has been recognition that variety of obstetrical, medical and social factors differentially prognosticate and contribute to risk for pregnant woman and their unborn offspring ***(Niswander et al., 1972)*** The major factors which may affect pregnant woman are, age, race, marital status, parity, past - obstetric performance, medical and obstetric illnes, reproductive tract abnormalities, nutrition, psychological state, socioeconomic status, short interpregnancy intervals and recently: prolonged interpregnancy intervals affect the progress of next pregnacy and will be evaluated as a major factor of high risk pregnancy. ***(Erickson et al., 1978)***

The Aim of the work

In a trial to find out a possible effect of prolonged interpregnancy interval on pregnancy outcome, we aim in this study to prove or disprove the recent current suggestion that not only short interpregnancy interval has a very bad effect on pregnancy outcome, but also long interpregnancy interval has the same bad effect too.

REVIEW OF LITERATURE

Review of Literature

1- Definition of high - risk pregnancy

2- Incidence of high - risk pregnancy

3- Criteria for identification of high - risk groups

4- History and Physiology of risk assessment

5- Categorization of High risk pregnancy

A- Socio economic factors

B- Demographic gactors

C- Previous obstetric problems

D- Maternal Medical History / status

6- Influence of pregnancy spacing on outcome of pregnancy

High Risk Pregnancy

Definition : Risk implies the possibility, chance or hazard of injury, damage, or loss - High risk, as it applies to pregnancy, could be defined as any gestation in which the prospect for optimal outcome is reduced for both the mother & the child - By optimal for the mother is meant uneventful conception & course of pregnancy including normal labour, puerperium & lactation, as well as complete restortion of maternal mental & physical functions to prepregnancy levels with prospects for further optimal reproduction. For the baby, optimal outcome would mean intact physiology, both physical & mental, with unlimited chances for normal development & functioning as an individual, including good prospects for successful reproduction . Of course, the worst possible risk to the outcome of pregnancy is death to either the mother, the child or both . ***(Aumann et al., 1986)***

- A "high-risk pregnancy" is defined as a pregnancy in which there is a risk of a serious adverse outcome in the mother and/or the baby that is greater than the incidence of that outcome in the general population. ***(Hobel et al., 1976)***

- The definition in the US public law 88-156 passed as an Amendment to the social security act in 1963, states that high-risk pregnancies are those in which the prospective mothers have, or are likely to have conditions associated with childbearing, which include hazards to the health of the mother or their infants and/or in which the prospective mother come from a low income family - the importance of the definition of high risk is perhaps best visible in studying the magnitude of the problem. ***(Niswander et al., 1972)***

A "high-risk pregnancy" is defined as one in which the mother and/or the fetus has a significantly increased chance of death or disability ***(Gretchen et al., 1986).***

(David James, 1989), defined "high-risk pregnancy" as a pregnancy which there is a risk of a serious adverse outcome in the mother and/or the baby that is greater than the incidence of that outcome in the general population - Fifty years ago, maternal survival was of primary importance and in some instances even linking fetuses were sacrified for the mothers safety ***(Burchell and Gunn, 1980)***. - The focus of obstetric care has changed during the past two decades. Fetal health or fetal medicine has come to appreciate not merely as an exciting area for research but as a clinical discipline with great potential for favourably influencing the quality of human offspring. Indeed, the fetus has achieved the status of the second patient, a patient who usually faces much greater risks of serious morbidity and mortality than does the mother. ***(Dunlop et al., 1992)***

Magnitude of the problem of high-risk pregnancy :-

The incidence of high-risk pregnancy varies from region to region and from country to country. World Health Organization data indicate that there are approximately 20% high risk pregnancies among women in the WHO European region. ***(Hobel, 1976)***

A figure of 29% for high-risk pregnancy was given for syracuse, New York, while studies from Canada reported a high-risk pregnancy rate of 11% - it is highly probable that the proportion of women with high-risk pregnancies in areas of the world like South-East, Asia & some countries in Africa & Latin America may exceed 30%, as judged from data on maternal & perinatal mortality. ***(Hobel, 1976)***

This proportion, however, will vary considerably with the criteria for high risk identification, in which the high-risk population reached 55 %. ***(Hobel, 1976)***

Table(1) Perinatal mortality rate in Cairo Hospitals (Fakhr et al 1980)

Author	Tot. births	PNMR
Younis et al (1977-78)	6990	94.57 per/1000
Serour et al (1977-78)	6190	84.4 per/1000
Serour et al (1979)	3604	84.07 per/1000
Fakhr et al (1979-1980) (Al zahraa Hosp.)	1034	90 per/1000
Fakhr et al (1979-80)	2025	150 per/1000
Manchiet El Bakry (1979-1980)	2025	164 per/1000

Table(2) : Maternal mortality rate in developed & developing countries (incidence per 10,000 live births)
(Fakhr et al., 1980)

Country	Rate/10,000 L.B.	Year	Country	Rate/10,000 L.B.	Year
- Sweeden	0.5	1975-1976	- Ibadan, Nigeria	82	1962-1971
- Norway	1.0	1975-1976	- Pieter maritzburg South Africa	45	1973-1975
- England	1.5	1970-1972	Egypt :		
			1- University Hosp. (cairo)	20.0	1979-1980
- Japan	4.0	1970-1972	2- University Hosp. (Ain shams)	43.5	1979-1980
			3- University Hosp. (Al-Zahraa)	50.8	1975-1976
- USA	1.8	1970-1972	4- MPH I	25.0	1979-1980
			5- MPH II	100.84	1975-1976

Causes of M.M. in third world :-

Haemorhage	49.6%	
Toxaemia	22.9%	
Abortion	15.5%	
Sepsis	11.9%	**(WHO Annual statistics 1973-1976)**

M.M. in Egypt = 20-100/10,000

M.M. in Developed countries = 0.5-4/100,000

it is possible to save the least 6000 mothers from death per year in Egypt. ***(Fakhr et al., 1980)***

Comparison of mortality in developed & developing countries, shows great variations. It is to be remembred that 70% to 90% of all maternal & perinatal complications occur in the high risk group comprising 20%-50% of all pregnancies & labour.

While M.M.R. is in the region of 2-40/1000 in developing countries, it has fallen to less than 10/100,000 in developed countries. ***(Fakhr et al., 1980)*** In Egyptian Hospitals, the M.M.R. ranges from 2/1000 to 10/1000 (average 4.3/1000) which is 20-50 times that of developed countries. P.N.M.R. in developed countries has reached < 10/1000 while it amounts up to 100/1000 in some developing countries. ***(Fakhr et al., 1980)***