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MULTIPLE PREGNANCY – RISK FACTORS AND MATERNAL COMPLICATIONS

KEYWORDS: multiple pregnancy

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ABSTRACT Multiple pregnancy is the development of two or more foetuses simultaneously in a uterus. It is associated with an increment of all complications of pregnancy irrespective of the period of gestation. Monochorionic multiples are at more than five times higher risk of complications than dichorionic counterpart. Multiple pregnancy is one of the high risk pregnancies associated with considerable morbidity and mortality to both the mother and fetus. There is increased risk of pregnancy complications than singletons. The aim of the study is to know the maternal complications and risk factors. The study was conducted over a period of one year in Government General hospital, Kurnool.

INTRODUCTION:

Multiple pregnancies may result from two or more fertilization events , from a single fertilization followed by an erroneous splitting of zygote(monozygote) or from a combination of both. Such pregnancies are assosciated with increased risk for both mother and the child and this risk increases with number of offsprings. By infertility therapy both the number and rate of twins and higher order multi fetal births have increased dramatically since 1980. The overall increase in prevalence of multifetal births is of concern because the corresponding increase in the rate of pre term births compromises neonatal survival and increase the risk of life long disability. The mother experiences higher obstetrical morbidity and mortality rates .These above increase with number of foetuses.

RISK FACTORS:

Race: Nigeria the highest 1 in 20 and Japan 1 in 200.These marked differences in twinning frequency may be the consequences of racial variations in levels of FSH.

Maternal age: Dizygote twinning frequency is fourfold between the ages of 15 and 37 years. It is in this age range that maximum FSH stimulation increase the rate of multiple follicles developing. The rate of twinning also increased dramatically with advancing maternal age because the use of ART is more likely in older women. Although maternal age has been linked to frequency of twinning its effect is felt to be small.

Parity: Increased incidence with increased parity. Eight fold increased when parity is 4 or less and 8 fold increase when parity is 5 or more.

Heredity: Family history of twinning in the mother side is more important than the father side.

Nutritional factors: Heavier women have 25- 30 %greater incidence than short and nutritionally deprived women.

Pituitary gonadotrophins: The common factor linking race, age, weight and fertility may be FSH levels. Higher frequency of twins seen in those conceived after stopping OC pills.There is sudden release of FSH during first spontaneous cycle after stopping the hormonal contraception.

Infertility therapy: Ovulation induction withFSH and hCG or clomiphene enhances multiple fetal gestation.With IVF greater the number of embryos that were transferred the greater the risk of multiple pregnancy.

Sex ratio: In humans as the number of foetuses per pregnancy increase the percentage of male conceptuses decreases. Mortality rates are lower in females and female zygotes have a greater tendency to divide.

Pregnancy complications:

1) Miscarriage is more likely with multiple foetuses 7.3% when compared to 1.3% in singleton .Those conceived with ART have increased incidence similar to monochorionic twins.

2) Hypertension : 20% have either gestational hypertension or PET.

3) Gestational diabetes mellitus : Two fold increase in those with GDM.

4) With multiple gestation hypertension not only develops more often but also tends to develop earlier and more severe. They have increased placental mass and increased levels of anti angiogenic soluble fms like tyrosine kinase 1 (sFIT-1) and decreased PIGF levels. (sFIT-1/PIGF) ratio increased.

5) Preterm labour- It is most common complication in multi fetal pregnancies than singleton. As such prematurity is common.

6) Prolonged pregnancy – It is rarest complication. At 39 weeks and greater had still birth rate increased.

Material and Methods: The study conducted over a period of one year (January 2016-December 2016) in pregnant women in the Government General hospital , Kurnool .The study includes all the women with multiple pregnancies admitted in the Labour room in Government general hospital, Kurnool . The pregnant women were studied to know the incidence, in which age group and parity it is common and how the delivery was and maternal complications encountered during and after delivery.

Inclusion criteria: All women with multiple pregnancies with all gestational age.

RESULTS:

The results are analysed as

1) Incidence

	Total	LSCS
Deliveries	8897	2194
Multiple pregnancies	136	52
Twins	132	51
Triplets	4	1

Incidence of twins 1 in 67, Triplets 1 in 2226

2) Gravida

Primi	45
G 2	49
G 3	29
G 4	7
G8 and above	6

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Common in multi gravida especially gravid 2 and gravida3.

3) Recurrence: 3 cases of recurrent twins encountered in study period.

4) Parity:

Primiparae	44
Multiparae	41
Grand multiparae	1
Nulliparae	50

Incidence is almost common in primiparae,multiparae and nulliparae and gravid 4 above had previous 1 or 2 abortions.

5) Age:

<19 yrs	7
20-29 yrs	110
30-34 yrs	12
>35 yrs	7

The common age group with twins and triplets is 20 -29 yrs

Maternal complications:

Abortions	6
Anemia	24
Hypertensive disorders of Pregnancy-PET Eclampsia Gestational HTN	26 3 8
Heart disease	1
PROM	15
Abruption	2
Rh incomplatibility	4
Hypothyroidism	3
Placenta previa	1
Obstructed labour	1
Post partum hemorrhage	5

Mode of delivery:

LSCS	52
Vaginal	75
Abortions	6
VBAC	3

Maternal mortality: only one unbooked, case of G2P1L1 with 36 weeks with pre eclampsia and anemia came with pulmonary oedema succumbed to death.

Discussion:

Incidence of multiple pregnancy is 1.528% with twins 1 in 67 and triplets 1 in 2226. Maximum incidence is found in less than gravid 3 (primi, G 2 and G 3) whereas in grand gravida only 6 cases were found. The incidence in Grand multiparas is less as sterilisations were undertaken in women with 2 -3 living children. commonly seen in the age group of patients between 20 -29 years where the fertility is more. Those with age more than 30 were investigated for infertility and received ovulation induction drugs. 3 had recurrent twin pregnancy. The common maternal complications encountered are anemia, and hypertensive disorders of pregnancy(PET, eclampsia and gestational hypertension). Antepartum hemorrhage in 3 cases (2 abruption , 1 Placenta previa) and PPH in 5 cases were encountered which could be managed with oxytocin ,prostaglandins(PG F2 alpha and misoprostol) . Maternal morbidity is increased due to operative interventions. The indications for LSCS in these women were first twin in non vertex and other obstetric indications. Maternal death has occurred in one case due to preeclampsia with pulmonary oedema.

Conclusion:

multiple pregnancy is a high risk pregnancy if diagnosed early anemia can be prevented by additional folic acid and iron supplementation to the mother. As these patients may set into preterm labour or induced preterm labour for obstetric complications, betamethasone is given to enhance lung maturity. Maternal complications of APH and PPH can be managed by timely interventions.

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