To Evaluate The Fetal Risk of Twin Pregnancy.

Yasmeen Joyo[1], Rozina Memon[2],Saira Parveen[3], Afra Rehman[4],Mehnaz Akram Shaikh[5]

Abstract

Introduction: - Among Obstetric conditions, the perilous situation that the obstetrician deals with is the complication of twin pregnancy for babies. The most common risk to baby is the prenatal mortality. Many factors are involved in this context. African continent is the common region having the highest rate of prenatal mortality but it is strange to know that the development of advanced techniques have dramatically enhanced the incidence of twin pregnancies in first world countries. Twin pregnancy makes patients vulnerable to complicated pregnancies as compared to singleton pregnancies. **Objective: -** to detect the risk of twin pregnancy to fetuses prenatally and post natally. **Methodology:-**This study was done in Department of Gyn/Obs Unit 2 at PMCH Nawabshah. February 2017 to July 2018.Only pregnant ladies from 21 years to 47 years were selected for the study having the twin pregnancies diagnosed on ultrasound. Patients with single baby were excludd from the criterion. Patients above 47 years were also not the part of our study. **Results: -** Total 120 patients were taken for the study. Out of them,85(70.83%) had single pregnancy and 35 (29.16%) were found to have twin pregnancy. Age difference was also among patients. Only 8 (22.85%) were aged from 21-30 years whereas 24 (68.57%) had age ranged from 31-42 years and only 3 (8.57%) were of age from 43 to 47 years. **Conclusion: -**It is concluded that twin pregnancy is posse's threat to life of baby if not managed in perinatal period. Perinatal mortality and preterm labor are the common complications concluded in our study.

Key words: - Perinatal, Mortality, Singleton, Obstetric, Twin.

1. Assistant professor, gyn unit 2 pumhsw nawabshah.
2. Assistant professor gyn unit-i,pumhsw nawabshah.
3. Assistant professor, gyn unit-ii1 pumhsw nawabshah.
4. Assistant professor gyn unit 2, pumhsw nawabshah
5. Senior registrar pmch nawabshah

Correspondence: Yasmeen Joyo,

Assistant Professor, gyn Unit 2

PUMHSW Nawabshah.

Email: yasmeenjoyo4@gmail.com

INTRODUCTION

According to estimation more than 10 million infants die in peri natal stage of their lives and about 8 million children survive not more than one year of their life. This is common in developing countries.[1]In year 2000, more than 6.3 million peri natal deaths were recorded in the globe. Many plans were formulated and implemented by the world countries in this regard. Fourth Millennium development Goal and the new Sustainable Development Goals were unveiled to lessen the deaths of new born under the age of 5 years.[2] However, it is important to understand the magnitude of peri natal and neonatal morbidity and mortality to deal with their determinants. [3]

Of all the obstetric conditions enhancing the risk of peri natal mortality, the twin pregnancy is a well known risk factor. It is the outcome of a complex interaction of genetic and environmental factors like maternal age, parity, family history of multiple gestations, habits and social

conditions.[4] It occurs in about 2-4% of total live births. Its highest rate is detected in African countries where care is poorest. But the new development has been noted in this connection is the dramatic increase of about 70% in incidence of twin pregnancies for last three decades in rich and middle income countries due to advanced technologies. [5]

Twin pregnancies are usually associated with a number of obstetric complications. Twin pregnancy posses six times more risk of death to baby as compared to singleton pregnancies most commonly due to higher rates of pre term delivery and effect on fetal growth.[6] Preterm birth and decreased birth weight are also causes of morbidity and mortality among infants. Moreover, the risk to mother is also 2.5 times higher as compared to women with single pregnancies which is, later on, followed by potentially life threatening conditions (PLTC) and by maternal near miss (MNM). Research has been done on twin pregnancies, maternal and perinatal mortality.[7]

The complications that baby can develop in twin pregnancies are perinatal mortality, preterm labor, intrauterine growth restriction, twin birth weight discordances, single fetal death, twin-twin syndrome, twin reversed arterial perfusion and congenital anomalies.[8] Congenital anomalies include malformations arising from the process of development and are often midline structural anomalies that are neural tube defects, cardiac and cleft lip anomalies.[9] An extreme example is development of conjoined twins. Other malformations occur through disruption in a previously normally formed fetus.[10] Disruptions are common in monochorionic pregnancy and consist of predominantly vascular type lesions for example hydrancephaly, porencaphaly, small bowel atresia.[11,12]

The rationale of our study is to know the different risks to twin babies in order to pave the way for future planning to save fetuses from risks with effective measures.

Methodology:-

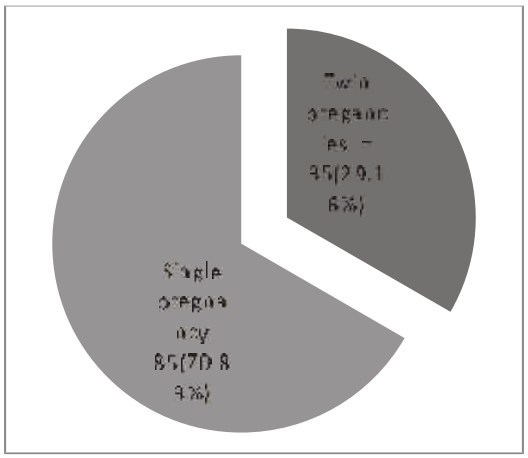
This study was done in Department of Gyn/Obs Unit 2 at PMCH Nawabshah. This is a cross sectional study done from February 2017 to July 2018. All the patients were taken from OPD and Emergency center.

Only pregnant ladies from 21 years to 47 years were selected for the study having the twin pregnancies diagnosed on ultrasound. Patients with single baby were excludd from the criterion. Patients above 47 years were also not the part of our study.

Perinatally, multiple visist were done by the patient and continuos monitoring was done on the movemenet and growth of the baby so that fetal risks of twin pregnancy be dealt timely. On the day of delivery, history and clinical examination was revised and decision of the route of delivery was done accordingly.

RESULTS

Total 120 patients were taken for the study. Out of them,85(70.83%) had single pregnancy and 35 (29.16%) were found to have twin pregnancy as is shown below in Pie Chart



Age difference was also among patients. Only 8 (22.85%) were aged from 21-30 years whereas 24 (68.57%) had age ranged from 31-42 years and only 3 (8.57%) were of age from 43 to 47 years as is shown in table below.

Table 1 AGE DIFFERENCE .

S.no:	Age in years	No of patients	Percentage
1	21-30	08	22.85%
2	31-42	24	68.57%
3	43-47	03	8.57%
Total	21-47	35	100%

Perinatal outcome was also seen. Alive baby boys were 14 (40%) and Alive baby girls recorded were 12 (34.28%). Only 5 (14.28%) were still births. Neonatal deaths noted were 3 (8.57%) whereas the Congenital anomalies was only 1 (2.85%) as is shown in table 2

Table 2 PERINATAL OUTCOM OF TWINS

S.no:	Outcome	No of patients	Percentage
1	Alive baby boys	14	40%
2	Alive baby girls	12	34.28%
3	Stillbirths	5	14.28%
4	Neonatal deaths	3	8.57%
5	Congenital anomalies	1	2.85%
Total		35	100%

Birthweight was also seen of the neonates. The weight ranged from 1 to 3 kilograms.

Table3 BIRTH WEIGHT OF INFANTS

s.no:	birth weight in kg	no of infants	percentage
1	1-2 kilograms	13	37.15%
2	2.1-2.5 kilograms	15	42.85%
3	2.6-3 kilograms	7	20%

Complications of twin pregnancies were also seen and noted with variations. Only 3 (8.57%) patients suffered from perinatal mortality. 5 (14.28%) entered into preterm labor. 4 (11.42%) had single fetal death and 1 (2.85%) had congenital anomaly as is shown in table 4 below.

Table 4 COMPLICATIONS OF TWIN PREGNANCY

S.no:	Outcome of twin pregnancy	No of patients	Percentage
1	Peri natal mortality	3	8.57%
2	Preterm labor	5	14.28%
3	single fetal death	4	11.42%
5	Congenital anomalies	1	2.85%
Total		13	37.12%

DISCUSSION

A single placenta usually gives support to single fetus but the trouble occurs when two fetuses share one placenta. 70% of identical twins may end up sharing single placenta. Only 1% in twin pregnancies

share single placenta and single sac predisposing to risk.[13]

Incidence of twins is different throughout the globe. It is highest in west Africa and lowest in Asian Mongolians. In a study it was 1.3% but in our study it is >20%. Because its incidence varies among different races and ethnic groups.[14]

Preterm birth is the common complication of twin pregnancies. Its aetiology is likely to be multifactorial and is commonly idiopathic. Pathophysiological mechanism involved are intrauterine infection, cervical insufficiency and increased uterine stretch. Increased secretion of mediators like CRH and Surfactant protein A may contribute to preterm parturition. In a study, Overall rate preterm birth was 52.2% but in our study, the rate of preterm birth is 14.28%. [15]

Perinatal mortality is also the risk that can also occur due to twin pregnancies. Its principal causes are prematurity, fetal demise, and congenital abnormalities. The main cause of morbididty was respiratory distress syndrome (RDS). In multiple studies, perinatal mortality, fetal loss, neonatal mortality and perinatal morbidity rates were 7.5, 6.9, 5.8 and 15.4% respectively.[16] Twin pregnancies have higher rates of perinatal mortality and morbidity and potential obstetric complications as compared to single tone pregnancies. To prevent these, it is necessary to introduce intensive monitoring, appropriate complications and deliveries should be performed in referral centers with competent NICUs. In a study, perinatal mortality rate was reported higher but in our study, the rate was 8.57% only. [17,18]

Nearly 28% of neonates get admission in Neonate Intensive care Unit (NICU). %. In a study done by Rizwan Nand et al it was said that every baby should be scored and admitted to NICU. In our study, admission was also done of some babies who were supposed to be needy of NICU but the first visit of Paediatrician was done to every baby. [19,20]

Conclusion

In our study it is concluded that twin pregnancy is more risky and posses threat to life of baby as well as mother. Perinatal mortality, preterm labor and intrauterine growth retardation are the common complications concluded in our study.

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