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Original Research Article

A Study of Feto-Maternal Outcome in Twin Pregnancy

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ABSTRACT

Background: The rate of twin's births continues to increase and the number of higher order multiple births has plateaued. Twin pregnancies are associated with a variety of maternal and fetal complications several studies suggest that twin gestation imposes greater demands on the maternal physiological system than do singleton pregnancies. The aim of this study to maternal and perinatal outcome of twin pregnancies at our institution.

Materials & Methods: The study was undertaken in 180 patients with twin pregnancies attending the Jay Kay Loan Hospital attached to Govt. Medical College, Kota during October 2011 to September 2013 time period. Ante partum, intrapartum, postpartum complications were noted. Data was analyzed using Microsoft excel and SPSS v 16 software.

Results: In present study observed that out of 140 cases of 1st twin presenting as vertex there were 27 (19.28%) perinatal deaths whereas out of 116 cases of 2nd twin presenting as vertex there were 26 (22.41%) perinatal deaths. Apart from preterm labor patients needed preterm induction/caesarian section for other obstetric or medical reasons hence the total no. of preterm deliveries was 82.21%.

Conclusion: Antenatal care needs to be further improved so that all pregnant women are covered. However bigger and multi centric trails are needed to compare the outcome after vaginal delivery and caesarian section.

Key Words: Twin Pregnancy, Caesarian Section, Foetal Outcome, Maternal Outcome.

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INTRODUCTION

The incidence of twins is on the rise due to a variety of reasons like increased use of assisted reproductive techniques and increasing no of women having pregnancy at advanced age.[1]

As recently as the early 1980s twin pregnancies and births was a relatively rare event and higher order multiple were of negligible consequence. Over the past two decades the number and rate of twins and other higher order multiple births have increased at an unprecedented pace. This increase has been fuelled largely by infertility therapy. Between 1980 and 2001, the number of twin deliveries rose 77% and number of higher order multiple births soared 459%. The rate of twins births continues to increase and the number of higher order multiple births has plateaued.[2]

The frequency of naturally occurring twins is approximately one in 80 births. Twin births are by far the most common multiple births. There are two types of twin pregnancy: fraternal and identical.[2]

The cause of twining is not known. The frequency of monozygotic twins remains constant throughout the globe and is probably related to maternal environment. It is the wide variation in the prevalence of binovular twins which is responsible for fluctuation in the overall incidence of twins in different population.[2]

Twin pregnancies are associated with a variety of maternal and fetal complications several studies suggest that twin gestation imposes greater demands on the maternal physiological system than do singleton pregnancies.[3-5] An increased incidence of maternal complications in pregnancy is due to the burden on the adaptive capacity of mother. The aim of this study to maternal and perinatal outcome of twin pregnancies at our institution.

MATERIALS & METHODS

The study was undertaken in 180 patients with twin pregnancies attending the Jay Kay Loan Hospital attached to Govt. Medical College, Kota during October 2011 to September 2013 time period.

All cases were managed carefully during labor. Course of labor, mode of delivery and outcome of labor including foetal outcome was noted in detail. Date and time of delivery and duration of labor

and interval between the two babies was also noted. Ante partum, intrapartum, postpartum complications were noted. Data was analyzed using Microsoft excel and SPSS v 16 software.

Inclusion criteria: All women admitted to the labor ward with twin pregnancy after 28 weeks gestation

Exclusion criteria: One fetus delivered outside our hospital.

Table 1: Incidence of Twin Pregnancy

Study period	Total no. of deliveries	Total no of twins delivered	Incidence of twins per1000 deliveries
October 2011 to September 2013	15942	180	11.3

Table 2: Relation of Maternal Age with Twinning

Maternal age (years)	No. of cases	Percentage
<20	35	19.44%
21-25	75	41.66%
26-30	54	30%
31-35	14	7.77%
>35	2	1.11%
Total	180	100%

Table 3: Fetal Outcomes

Fetal outcome	1st twin n=180	2nd twin n=180	p-value	Total n=360
Birth wt> 2500gms	18(10%)	30(16.55%)	0.276	48(13.33%)
LBW1500-2500gms	133(73.88%)	124(68.88%)	0.828	257(71.38%)
VLBW<1500 gms	29(16.11%)	26(14.44%)	0.866	56(15.27%)
NICU admission	31(17.22%)	33(18.33%)	0.782	64(17.77%)
Perinatal death	35(19.44%)	41(22.77%)	0.438	76(21.1%)

Table 4: Presentation of Twins and Perinatal Morality

Presentation of twins	First baby		Second baby		Total	
	No.	PNM (%)	No.	PNM (%)	No.	PNM (%)
Vertex	140	27(19.28%)	116	26(22.41%)	256	53(20.70%)
Non vertex (Breech+ transverse)	40	8(20%)	64	15(23.43%)	104	23(22.11%)
Total	180	35(19.44%)	180	41(22.77%)	360	76 (21.11%)

Table 5: Antepartum Complication in Mother with Twins Pregnancy

Antepartum complication	No.	Percentage
Preterm labor	73	40.55%
PIH	39	21.66%
Anaemia	30	16.66%
PPROM	29	16.11%
Abruptio placentae	3	1.66%
Placenta previa	2	1.11%
Incompetent os(Tightening os done)	2	1.11%
Ante partum eclampsia	2	1.11%

Table 6: Post-Partum Complication in Mother with Twins Pregnancy

Postpartum complication	No.	Percentage
Atonic PPH	12	6.66%
Traumatic PPH	2	1.11%
Mixed PPH	2	1.11%
Post-partum eclampsia	3	1.66%
No complication	161	89.4%

RESULTS

The present study showed the incidence of twins comes out to be 11.3 deliveries (table 1). Maximum numbers of cases129 (71.66%) were in the age group of 21 to 30 years (table 2). This table reveals that 133 (73.88%) 1st twin and 124(68.88%) 2nd twin were low birth weight (1500-2500gms) and 35(19.44%) perinatal deaths amongst 1st twin and 41(22.77%) in 2nd twin group. The difference was not statistically significant (p=0.828, p=0.438 respectively) (table 3).

In present study observed that out of 140 cases of 1st twin presenting as vertex there were 27 (19.28%) perinatal deaths whereas out of 116 cases of 2nd twin presenting as vertex there were 26 (22.41%) perinatal deaths (table 4). Apart from preterm labor patients needed preterm induction/caesarian section for other obstetric or medical reasons hence the total no. of preterm deliveries was 82.21% (table 5). The most common complication was post-partum hemorrhage 16 (8.88%) patients (table 6).

DISCUSSION

The higher rates of preterm delivery of these neonates compromise their survival chances and increase their risk of lifelong disability. Various physiological burdens of pregnancy and the like hood of serious maternal complications are almost invariably greater with multiple fetuses than with a singleton[6].

Incidence of twin pregnancy at our institution over period of 2 years of present study is 11.3/1000 deliveries. Rizwan N et al (2010)[7] from Jamshore Pakistan report the incidence at 14.4/1000 deliveries.

Bangal V. B. et al (2012)[1] from Maharashtra India report an incidence of 14.9/1000 deliveries. Whereas Peter B. L. (2012)[8] from Dar Es Salaam Nigeria and Yakasai I.A et al (2013)[9] from Nigeria quote the incidence of twins as 20 and 22.89 per 1000 deliveries respectively which is much higher than our result.

Age distribution in our study was similar to that quoted by Bangal et al[1], Irene Y.V.[10], Sultana, M.[11] i.e. majority of cases were young i.e. in the 20-30 yrs age group. However Rizwan[7] quoted a greater number of women in age group above 30 years.

Therefore percentage of children with low birth weight i.e. < 2500 Gms as 86.65%. Incidence of LBW was similarly quoted as 82% in the study by Bangal et al[1]; 92% by Sultana M.[11] (32% weighing < 1500 gms and 60% weighing 1500-2500gms). Thus only 8 % babies were reported by Yakasai I.A.et al[9] from Kano, Nigeria; which is quite less compared to other studies Rizwan et al[7] from Jamshoo Pakistan. Fetal outcome at birth in our study closely compared with the study by Bangal et al[1] and Yakasai I.A. et al[9]; Rizwan et al[7] and Sultana M. et al[11] reported slightly higher stillbirth rates. However Irene Y.V. et al[10] reported very low birth still birth rates.

In present study showed maternal complication compared with study with Bangal et al[1] they found PROM in 16 % anemia in 66% APH IN 8% patients.

Another study was done by Rizwan N, et al[7] they found PROM and preterm labor in 84.4%, PIH in31.2% ,anemia in 65.6%,APH in 6.2%, PPH in12.5%. Irene Y, et al[10] found preterm labor in 57.5%, anemia in 28%, PIH in 19%, PROM in 18%, APH IN 1%, PPH in 8% patients.

CONCLUSION

Antenatal care needs to be further improved so that all pregnant women are covered. Factors like poor awareness of hazards of prematurity and delay in reaching the health care facility may be responsible. However bigger and multi centric trails are needed to compare the outcome after vaginal delivery and caesarian section.

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