MODE OF PRESENTATION AND ROUTE OF DELIVERY IN TWIN PREGNANCY

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ABSTRACT

Introduction Two things to know early are very significant in twin pregnancies. One is mode of presentation and other is to decide the mode of delivery as lack of knowledge in this context can jeopardize not only life of mother but also of baby. Before the development of this situation, it is better to know them early. Fetal presentation was considered to be the main modifier of the effect. The mode of delivery usually affects the CNS of neonate but consequences are still not known. Some authors indicate that there occurs effect on the function of Hippocampus. vertex-vertex is the commonest presentation and vaginal delivery is commonest route of delivery. **Purpose of study**: The aim is to know the mode of presentation and route of delivery in twin pregnancies. **Material and methods:-**The study was done in Department of Gyn/Obs Unit 2 at PMCH Nawabshah. This is a cross sectional study. Only pregnant ladies were selected for the study having the twin pregnancies diagnosed on ultrasound. Patients with single baby were excludd from the criterion. **Results:-**Total 120 patients were taken for the study. Out of them, 42 (35%) were found to have twin pregnancy. Mostly the patients were reported in 35-36 weeks. 35.7% patients were found in this scenario. The common mode of presentation was vertex vertex among 12 (28.57%) patients. The common route of delivery in our study in first and secod twin was vaginal having 30% and 28% respectively.

Conclusion:- It is concluded that to find out mode of presentation of baby helped a lot to resolve the problem of route of delivery as it was already decided.

Key Words:-Fetal presentation, Vertex-vertex, Hippocampus, Vaginal delivery.

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Introduction

Twin pregnancies are at increased risk of developing peri natal mortality most commonly due to prematurity. Complications during birth of baby can also cause loss. To avoid the loss, the decision of route of delivery is pivotal either normal vaginal delivery or planned caesarean section is to be decided. Before taking this decision, the risk of both routes for mother must be taken into account.[1]

There is a close relationship between type of delivery and the fetal presentation and also the interaction between type of delivery and fetal presentation. Fetal presentation was considered to be the main modifier of the effect.[2]

The mode of delivery is directly related to biochemical and structural changes in CNS but consequences are still unknown. Recently, studies reveal the existence of in vitro biochemical brain changes related to the active work of a normal child birth. Some deterioration is noted in the functional development of hippocampus leading to the existence of lifelong neuropsychological dysfunctions in cases in which there was no labor due to a scheduled caesarean section. [3]

In accordance with route of delivery depending upon the leading twin and gestational age, vertex-vertex is the common presentation in about 70-80% of twin gestations and the presenting twin is cephalic and vaginal delivery is commonly recommended. First vertex, second non vertex is another option. In this case, some recommend elective caesarean delivery and others vaginal delivery. In case of first twin non vertex, after cephalic, the next common presentation of first twin is breech and the planned caesarean section is performed if first twin is breech.[4,5]

Caesarean section is common in twin pregnancies. More than 60% of twin pregnancies undergo the procedure of caesarean section. Some studies have concluded that the neonatal outcome increases by the policy of caesarean delivery for all twin pregnancies. [6]

The caesarean delivery is indicated in multiple conditions. Conjoined twins are always deliverd through caesarean section. Presence of sufficient growth retardation is also indication as one or both fetuses are not capable of withstanding the stress of delivery. The mal position of dead twin, the presence of acardia fetus, associated placenta previa, prolapsed cord, dysfunctional labor associated with cephalo-pelvic disproportion are also indications of caesarean delivery.[7]

The rationale of our study is to evaluate the mode of presentation in twin pregnancies in order to decide the route of delivery so that safe deliveries be executed with assurance of saving lives of mother and fetus as well.

Material and methods:-

This study was done in Department of Gyn/Obs Unit 2 at PMCH Nawabshah. This is a cross sectional study done from January 2017 to January 2019. Total 42 patients were included in this study. All the patients were taken from OPD and Emergency department of PMCH Nawabshah.

Only pregnant ladies were selected for the study having the twin pregnancies diagnosed on ultrasound. Patients with single baby were excludd from the criterion. A complete detailed history and clinical examinaton was done in addition to routine blood investigations. All these patients were undergone for ultrasound for multiple times. Ultrsound findings were noted from the 1st trimester till the reaching of full term. Per vaginal examination was also in perinatal vists whenever required.

Results:-

Out of total 120 patients, only 42 (35%) patients were diagnosed as having twin pregnancies.

TABLE 1- TOTAL PATIENTS

Total number of deliveries	120
Twin pregnancy	42
Percentage	35%

Gestational weeks were also recorded and findings were noted as is shown in table 2

Table 2 Gestation in weeks at the time of delivery

Gestation in weeks	Number of patients	Percentage
31-32	5	11.90%
33-34	7	16.66%
35-36	15	35.73%
37-38	10	23.80%
39-40	5	11.90%
Total	42 N=42	100%

Patients of twin pregnancy presented with multiple presentations and route of delivery was decided accordingly as is shown in table 3 and 4.

Table 3 Twin presentation on admission in labor Room

Presentation	No of patients	Percentage
Vertex vertex	12	28.57%
Vertex breech	4	9.5%
Vertex transverse	5	11.90%
Breech breech	7	16.66%
Breech vertex	5	11.90%
Breech transverse	5	11.90%
Transverse transverse	4	9.5%
Total	42	100%

Table 4 Route of delivery according to presentations

First twin		Second twin		
Presentation	Vaginal	Caesarean	Vaginal	Caesarean
Vertex vertex	5	2	5	3
Vertex breech	2	-	2	-
Vertex transverse	1	-	-	1
Breech breech	2	2	2	2
Breech vertex	3	2	3	2
Breech transverse	-	1	-	1
Transverse transverse	-	1	-	1
Percentage	30.95 %	19.04%	28.57 %	23.80%

DISCUSSION

Twin pregnancies usually carry higher risks to fetus as compared to single pregnancies. Recently, the rate of elective caesarean deliveries has increased enormously. There are some studies which have concluded that vaginal deliveries carry higher risks than caesarean sections but on strong evidence in data have been given in this connection. In our study, the proportion of vaginal deliveries and caesarean is somewhat equal. Latest trials done on planned vaginal deliveries and planned caesarean section in 2804 twin pregnancies showed that the first twin presentation was commonly cephalic. In our study, vertex vertex is common presentation among 30% of first twins.[8]

In a study, caesarean deliveries were performed in 90.7% of planned C section. In planned vaginal delivery group, 39% had cesarean delivery for both twins and 4.2% had cesarean for the second twin only. In our study, second twin had vaginal deliveries in 28.57% and 23.80% cesarean deliveries.[9]

The incidence of spontaneous twin pregnancies in a study is 1/90 but it is 42/120 in our study. Recently, it is also recorded that there is greater increase in the incidence of twin pregnancies. In a study, the common presentation was cephalic and was 64.5% and non cephalic was 35.5%. in another study, the maternal age recorded was 72.7% under 35 years and in our study mothers age was common from 30 -40 years. With regard to gestational age, a study showed that 72% fetuses has gestational age of over 37 years but in our study the age was 35-36 weeks in 35.73% of twin pregnancies.[10]

A study conducted in Sweden regarding the short and long term outcomes in a twin pregnancies showed that cesarean deliveries for twins increased from 7.7% to 68.9%. in the first study period, vaginal delivery was common but in second period, primary delivery method was caesarean. It was concluded that the weight of twins less than 1500 g is unrelated to perinatal mortality or long term adverse outcomes.[11]

A study was conducted on twin pregnancies who were giver labor trials. 4705 women

were undergone cesarean section whereas 1850 had given trial of labor. 836 (45.2%) of trial delivered vaginally. The rate of uterine rupture was higher in trial group but the rate of complications was lower in trial group. The rate of other complications was somewhat equal between both groups. No such attempt of comparison of such groups was made between both groups.[12,13]

Conclusion

In short it is concluded that during antepartum period the mode of presentation helped a lot to decide the mode of delivery and prevented patients from complications.

References

1. Armson B. A., O'Connell C., Persad V., Joseph K. S., Young D. C., Baskett T. F. Determinants of perinatal mortality and serious neonatal morbidity in the second twin. *Obstet. Gynecol.* 2006.108, 556–564.
2. Asztalos E. V., Hanna M. E., Hutton E. K., Willan A. R., Allen A. C., Armson B. A., Sanchez J. J. Twin birth study: 2-year neurodevelopmental follow-up of the randomized trial of planned cesarean or planned vaginal delivery for twin pregnancy. *Am. J. Obstet. Gynecol.2016.* 214. 371–379.
3. Bentley J., Roberts C. H., Bowen J., Martin A., Morris J. M., Nassar N. (2016). Planned birth before 39 weeks: a population-based study. *Pediatrics* 2016,138. 1–9.
4. Cattani A., Bonifacio S., Ferzt M., Iverson J. M., Zocconi E., Caselli M. C. (2010). Communicative and linguistic development in preterm children: a longitudinal study from 12 to 24 months. *Int. J. Lang. Commun. Dis.2010,* 45, 162–173.
5. David A. S., Dean R. S. Relative risk of perinatal complications in common childhood disorders. *Sch. Psychol. Q.* 2007,22, 13–25.
6. Galland L. The gut microbiome and the brain. *J. Med. Food* 2014,17, 1261–1272.
7. Girsen A. L., El-Saved Y. Y., Blumenfeld Y. J. (2016). Twin gestation and neurodevelopmental outcomes: is there a difference at two years of life between the first and the second twin? *Am. J. Obstet. Gynecol.2016,* 214:216
8. Hyde M. J., Mostyn A., Modi N., Kemp P. R. The health implications of birth by Caesarean section. *Biol. Rev. Camb. Philos Soc.* 2012,87, 229–243.
9. Matthew J. H., Neena M. (2012). The long-term effects of birth by caesarean section: the case for a randomised controlled trial. *Early Hum. Dev.* 2012,88, 943–949.
10. Polidano C., Zhu A., Bornstein J. C. (2017). The relation between cesarean birth and child cognitive development. *Nature* 2017,7 ,1–10.
11. Ravi S. S., McConachie H., Ng J., Rankin J., Korada M., Sturgiss S., & Embleton N. D. (2018). Cognitive outcome in childhood of birth weight discordant monochorionic twins: the long-term effects of fetal growth restriction. *Arch. Dis. Child. Fetal Neonatal Ed.* 2018,103 ,512–516
12. Sacchi C., De Carli P., Mento G., Farroni T., Visentin S., Simonelli A. (2018). Socio-emotional and cognitive development in intrauterine growth restricted (IUGR) and typical development infants: early interactive patterns and underlying neural correlates. Rationale and methods of the study. *Front. Behav. Neurosci.* 2018,12:315.
13. Zwicker J. G., Harris S. R. (2012). Quality of life of formerly preterm and very low birth weight infants from preschool age to adulthood: a Systematic review. *Pediatrics* 2012,121: 366–376.