



Placental Localisation At 16-24 Weeks of Gestation And Fetal Outcome

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ABSTRACT

Objective: Our purpose was to determine relation between placental localisation at 16-24 weeks of gestation and fetal outcome. Material and Methods: Total of 250 antenatal cases between 16-24 weeks of gestational age were selected, 50 cases had fundal placenta, 100 cases had anterior placenta and 100 cases had posterior placenta. Results: Anterior placenta is significantly associated with IUGR (p-value-0.029729). Preterm labour was significantly associated with posterior placenta (p-value- 0.0408). Conclusion: Anterior placenta was associated with IUGR & posterior placenta was associated with preterm labour.

KEYWORDS : Placental location, Fetal outcome.

INTRODUCTION

Placenta is an important connecting organ between mother and fetus. Evaluation of the placenta should be a part of every pregnancy sonography; location, shape and size of the placenta should be considered. The blood supply of uterus is not uniformly distributed. Uterus receives most of the blood supply from uterine artery. Intrauterine growth restriction (IUGR), defined most commonly as a sonographic estimation fetus weight, below the 10th percentile for gestational age. Lateral implantation of placenta associated with high risk of intrauterine growth retardation. Low placental location is associated with increased risk of preterm labour, and preterm delivery. Preterm labour is also associated with posterior placenta. Studies which had evaluated the role of ultrasonography of placental locations in predicting neonatal and maternal outcomes mostly had assessed the value of ultrasonography in the second. The aim of this study was to find association between placental location at second trimester and pregnancy outcomes.

AIMS & OBJECTIVE

1. To determine location of placenta in 2nd trimester of pregnancy between 16 to 24th weeks of gestation 2. To study association of placental location and perinatal outcome

MATERIAL AND METHOD

This was a prospective, observational study conducted from January 2014 to July 2015 in M.L.B. Medical College & associated hospital, Jhansi. Cases were selected from the women attending the antenatal clinic, emergency or admitted in the Department of Obstetrics and Gynecology, M.L.B. Medical College, Jhansi. Total 250 antenatal cases between 16-24 weeks of gestational age were selected and followed up to delivery (C.S or vaginal). Before selecting the cases detailed history, general examination, systemic and obstetrical examination and relevant investigation were done. *Inclusion Criteria* : All Singleton pregnancy between 16 to 24th week of gestation attending the ante-

natal OPD, Emergency & ward of MLB, Medical College, Jhansi. *Exclusion criteria*: Multiple pregnancy, chronic hypertension, chronic renal disease, metabolic synd

OBSERVATION

Fetal outcomes was studied with respect to each placenta. Out of 250 cases 50 cases were having fundal placenta (25 central and 25 lateral), 100 cases were having anterior placenta (25 low central, 25 low lateral 25 normal central and 25 normal lateral) and 100 cases were having posterior placenta (25 low central, 25 low lateral 25 normal central and 25 normal lateral). As shown in table 1a&1b at the end of this article 8(8%) cases of anterior placenta, 1 (1%) cases of posterior placenta and 1 (2%) of fundal placenta had IUGR babies. Anterior placenta is significantly associated with IUGR (p-value-0.029729). As shown in table 2a&2b at the end of this article 1 (1%) cases of anterior placenta, 6 (6%) case of posterior placenta and 0 (0%) of fundal placenta had preterm labour. Preterm labour was significantly associated with posterior placenta (p-value- 0.040899)

DISCUSSION

1. Comparison of association of IUGR and placental location with other study

Alexander D. Kofinas et al, 1989, in a study of 153 pregnant women with normal pregnancies and 147 women with complicated pregnancies (diabetes, hypertensive disorders, and intrauterine growth retardation) concluded that in patients with unilateral placentas, the incidence of intrauterine growth retardation was 2.7 folds greater than in patients with central placentas (p<0.03 and p <0.01).

Lucy E.G. Kalanithi et al 2007, in a retrospective study of 67 patients with and 205 patients without IUGR concluded that IUGR pregnancies were nearly 4 fold more likely to have lateral placenta (odds ratio,

3.8, 95% confidence interval, 1.3-11.2) compared with anterior or posterior placentation.

Karthika Devarajan et al, 2012, in a retrospective cohort study of 796 births concluded that placental location was not associated with differences in newborn weight.Miizeyyen duran erdolu et al 2014, in a retrospective study of 500 healthy pregnant women concluded that birth weight was significantly higher in fetuses with anteriorly located placenta (p=0.040).Shumaila Zia et al 2013, in a study 474 cases concluded that there was no significant difference in mean birth weight in different placental location.

Seadati N et al 2013, in a study of 250 pregnant women concluded that incidence of IUGR was 1.6% that 2 cases had high placenta 1.3% and 2 cases has low placenta (2.0%) (p=0.69) and three of them had anterior placenta (1.8%) and one of them had posterior placenta (1.1%).In our study 8 (8%) cases of anterior placentation, 1 (1%) cases of posterior placentation and 1 (2%) of fudal placentation had IUGR babies. i. Anterior placentation is significantly associated with IUGR (p-value-0.029729)

2. Comparison of association of preterm labour and placental location with other E.F. Magann et al 2006, in a study of 3336 concluded that Low implantation sites had a greater risk of preterm labor (odds ratio (OR) 1.70, 95% confidence interval (CI) 1.38 to 2.90, P<0.001), preterm delivery (OR 1.86, 95% CI 1.36 to 2.54, P<0.001).Seadati N et al 2013, in a study of 250 pregnant women concluded that incidence of incidence of preterm delivery was 7.2%, those had shown high placenta in a 6 cases (4.0%) and Low placenta in 12 cases (11.9%) (p=0.01) andamong of them 13 cases had anterior placenta (7.9%) and 5 cases had posterior placenta (5.7%).Shumaila Zia et al 2013, in a study 474 cases concluded that posterior placenta has a significant association with preterm labour.In our study 1 (1%) cases of anterior placentation, 6 (6%) case of posterior placentation and 0 (0%) of fundal placentation had preterm labour. Preterm labour was significantly associated with posterior placentation (p-value- 0.040899).

CONCLUSION

Cases with anterior placentation are more likely to have IUGR babies or small for date babies. The association with anterior placentation is 8% with posterior placentation is 1% and with fundal placentation is 2% (p-value-0.029729).

Cases who have posterior placentation in their second trimester are more likely to develop preterm labour. The association with posterior placentation is 6% with anterior placentation is 1% and with fundal placentation is 0% (p-value- 0.040899).

TABLES & FIGURES

TABLE 1a: IUGR VS PLACENTAL LOCATION

	Fundal	Anterior				Posterior			
		Low		Normal		Low		Normal	
		C	L	C	L	C	L	C	L
IUGR	0	1	1	2	2	3	0	1	0
Percent-age	0	4%	4%	8%	8%	12%	0%	4%	0%

TABLE 1b: IUGR VS PLACENTAL LOCATION

	IUGR	Non IUGR	Row Totals
Ant	8 (4.00) [4.00]	92 (96.00) [0.17]	100
Post	1 (4.00) [2.25]	99 (96.00) [0.09]	100
Fundal	1 (2.00) [0.05]	49 (48.00) [0.02]	50
Column Totals	10	240	250

The Chi-square statistic is 7.0312. The p-value is 0.029729. The result is significant at p<0.05.

TABLE 2a: PRETERM LABOUR VS PLACENTAL LOCATION

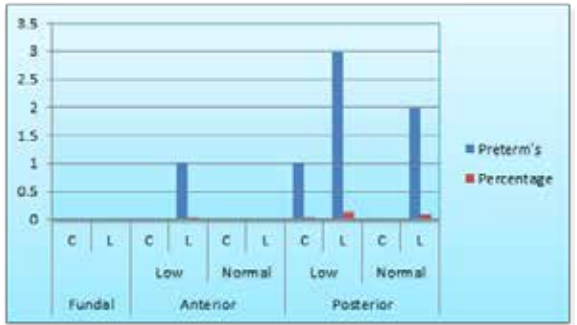
	Fun-dal	Anterior				Posterior			
		Low		Normal		Low		Normal	
		C	L	C	L	C	L	C	L
Preterm's	0	0	0	1	0	0	1	3	0
Percent-age	0%	0%	0%	4%	0%	0%	4%	12%	0%

TABLE 2b: PRETERM LABOUR VS PLACENTAL LOCATION

	Preterm labour	Term	Row Totals
Ant	1 (2.80) [1.16]	99 (97.20) [0.03]	100
Post	6 (2.80) [3.66]	94 (97.20) [0.11]	100
Fundal	0 (1.40) [1.40]	50 (48.60) [0.04]	50
Column Totals	7	243	250

The Chi-square statistic is 6.3933. The p-value is 0.040899. The result is significant at p<0.05

Fig 1



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