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Cross Sectional Study of Effect of Oligohydramios on Fetal Outcome

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Abstract: ***Oligohydraminos is a clinical condition characterized by amniotic fluid index less than 5 cm by sonographic assessment. The aim of the study conducted was to evaluate the effects of oligohydraminos on foetal outcome in the form of foetal distress, growth retardation, NICU admission and mode of delivery. Patients with amniotic fluid index less than 5cm fulfilling the inclusion criteria were included in Group A, while the immediate next admission with amniotic fluid index more than 5cm fulfilling the inclusion criteria were included in Group B. Detailed history, clinical examination, need for labour induction was assessed and intrapartum monitoring was done. The study concluded that decrease in the amniotic fluid has been correlated with increased risk of intrauterine growth retardation, meconium aspiration syndrome, birth asphyxia, low APGAR and congenital malformations. Early detection of oligohydraminos and its management may help in reduction of perinatal morbidity and mortality on one side and decrease caesarean rates on other.***

Keywords: Oligohydramios, growth retardation

1. Introduction

The amniotic fluid produced by the amnion is the fluid that surrounds the embryo during its development. In the first half of pregnancy, amniotic fluid is derived from major contribution from fetal and possibly some from maternal compartments. Water and solutes freely traverse fetal skin and may diffuse through the amnion and chorion as well. Thus amniotic fluid in early gestation is a filtrate that is identical to the fetal and maternal plasma, but with a lower protein concentration. By the second trimester, the fetal skin becomes keratinized and thus making it impermeable to further diffusion. At this time, a fetus contributes to amniotic fluid volume and composition almost exclusively through fetal urine.

The light, amorphous nature of amniotic fluid renders it the ideal medium for the fetus to move in. This movement is essential part of the baby's development as it encourages bone growth of the fetal limbs. Likewise, it also maintains the homeostasis around the fetus where the temperature is constant and the fetus loses no warmth in the process. The amniotic fluid acts as a barrier between the fetus and its surroundings and acts as a cushion protecting the baby from external jolts or blows. Besides, the respiratory system also benefits from this property of the amniotic fluid. Fetal respiration bypasses the lungs completely for the entire pregnancy. It will take nine months for the infant to expand it's lungs to take its first breath. But in the meantime, the lungs are allowed to grow and the surrounding amniotic fluid keeps their sensitive linings moist.

Amniotic fluid functions include:

- Fetal cushioning, or protection
- Maintenance of Homeostatic Conditions
- Fosters bone growth of fetal limbs
- Lung development within the fetus (1)

The main source of amniotic fluid is fetalurine, with contribution from fluid diffusing from fetal skin and fetal lung which produce fluid that exits respiratory tract and enters amniotic compartment. The volume of amniotic fluid increases by 10ml per week at 8 weeks and increases up to 60ml per week at 21 weeks, then gradually falls back to a steady state by 33 weeks. Normally, amniotic fluid volume reaches 1 litre by 36 weeks and decreases thereafter to less than 200 mL at 42 weeks. (1) Diminished amniotic fluid is termed as oligohydramnios. Phelan and colleagues described ultrasonographic quantification of the amniotic fluid using the amnionic fluid index - AFI (2) This is calculated by adding the vertical depths of the largest pocket in each of four equal uterine quadrants. Phelan defined oligohydramnios as amniotic fluid index (AFI) ≤5cm and borderline oligohydramnios as AFI between 5 and 8 cm between 36 - 42 weeks of gestation (2). The rate of oligohydraminos in pregnancies after 34 weeks is about 2.3% with AFI less than 5cm. (3) As per study conducted by Chauhan et al, oligohydraminos is associated with increased chances of cord compression, increased risk of operative deliveries, fetal distress and apgar<7 (3). As per study conducted by casey and coworkers, 2000 oligohydraminos has been associated with increased chances of stillbirths, meconium aspiration and non reassuring fetal heart rate patterns (4) As per study conducted by Ghosh et al oligohydraminos is assosiated with 42%caesarean rate. As per study conducted by Soumya et al isolated oligohydraminos without any maternal risk factors is not a risk factor for adversefetal outcome except that the fetal weight may be reduced. (5) Hence this study is undertaken to compare the fetal outcome and operative intervention in pregnancy with AFI<5cm with those of AFI>5cm.

Purpose and Significance of Study:
The purpose of this study is to study the effects of oligohydraminos on foetal outcome in the form of foetal distress, growth retardation, NICU admission and mode of delivery.

The main objectives are: 1) To study the prevalence of congenital anomalies in cases of oligohydraminos 2) To study the mode of delivery in cases of oligohydraminos

2. Methodology

Study Design and Period:
This was an observational cross - sectional comparative study which was done in the Tertiary Care hospital from January 2018 to September 2019.

Study Population:
The patients fulfilling the inclusion criteria and were ready to participate in the study were enrolled for the same.

Sample Size and Sampling Technique:
Patients with amniotic fluid index less than 5cm fulfilling the inclusion criteria were included in Group A, while the immediate next admission with amniotic fluid index more than 5cm fulfilling the inclusion criteria were included in Group B. Complete history of the patient was taken including all complications if any in the past and present pregnancy. Clinical examination was done assessing the general examination and the complete obstetric examination. Per vaginal examination was done to assess the Bishops score.

All routine investigations including complete blood count, HIV, HBSAG, renal function test, blood Grouping, USG obs etc. was done.

All patients with amniotic fluid index less than 5cm were enrolled in Group A. After assessment, patients were stratified as those in labour and not in labour. Those not in labour, were assessed on basis of liquor and bishops score for induction with prostaglandin gel. (PGE2) or for elective caesarean section. Similarly those that were in labour were also assessed on basis of their liquor for spontaneous progress vs. caesarean section.

Similarly, in Group B were classified as those in labour vs. those not in labour. Those not in labour were then assessed on basis of bishop's score for induction and those in labour were left for spontaneous progress of labour.

Intrapartum foetal monitoring was done by intermittent auscultation of foetal heart and continuous electronic monitoring was done as per requirement.

Maternal outcome in the form of mode of delivery, indications for caesarean sections was studied in both the Groups. Foetal outcome in the form of birth weight, NICU admissions, indications for NICU admissions and neonatal deaths were studied in both the Groups.

Data was collected in a clinical profoma and a written informed consent was taken

Inclusion criteria:
Antenatal patients from 34 - 40 weeks gestation with oligohydraminos (AFI <5 cm) with
a) Cephalic presentation
b) Singleton pregnancy
c) Intact membrane
d) Previous unscarred uterus.

Exclusion criteria:
Patients having
a) Premature rupture of membranes,
b) Abnormal lie and presentation,
c) Placental abnormalities,
d) Diabetic mothers,
e) Multifoetal gestation,
f) Previous caesarean sections

Statistical Analysis:
Data was entered into Microsoft excel data sheet and was analysed using SPSS 22 version software. Categorical data was represented in the form of Frequencies and proportions. **Chi - square test** was used as test of significance for qualitative data. Continuous data was represented as mean and standard deviation. **Independent t test** was used as test of significance to identify the mean difference between two quantitative variables.

Graphical Representation of Data: MS Excel and MS word was used to obtain various types of graphs such as bar diagram. **P value** (Probability that the result is true) of <0.05 was considered as statistically significant after assuming all the rules of statistical tests.

Statistical Software: MS Excel**,** SPSS version 22 **(**IBM SPSS Statistics, Somers NY, USA) was used to analyse data.

3. Observations and Results

A total of 656 patients fulfilling the inclusion criteria were enrolled in the study.328 patients were in Group A (patients with afi less than 5 cm) whereas 328 patients were in Group B (patients with afi more than 5cm).

Table 1: Age Distribution between Two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
Age	≤ 25 Years	167	50.90%	148	45.10%
	26 - 30 Years	154	47.00%	163	49.70%
	> 30 Years	7	2.10%	17	5.20%

χ 2 = 5.568, df = 2, p = 0.062

In Group A, majority were in the age Group <25 years (50.9%) and in Group B, majority were in the age Group 26 to 30 years (49.7%). The mean age Group in Group A was 25.66 ± 2.815 years and in Group B was 25.69 ± 3.111 years. There was no significant difference in mean age between two Groups. The findings in our study were comparable with the above studies.

Table 2: Parity Wise Distribution between Two Groups

		Group			
		Group A (328)		Group B (328)	
		Count	%	Count	%
Parity	Primipara	153	46.60%	138	42.10%
	Multipara	175	53.40%	190	57.90%

χ 2 = 1.390, df = 1, p = 0.238

In Group A, 46.6% were Primigravida and 53.4% were Multigravida and in Group B, 42.1% were Primigravida and 57.9% were Multigravida. There was no significant difference in parity distribution between two Groups.

Table 3: Gestational Age Distribution between two Groups

		Group			
		Group A (328)		Group B (328)	
		Count	%	Count	%
Gestational Age	Less than 37 weeks	24	7.3%	13	4.0%
	37 - 40 weeks	304	92.7%	315	96.0%
	Total	328	100.00%	328	100.00%

χ 2 = 3.466, df = 1, p = 0.063

In Group A, 304 cases (92.7%) belonged to gestational age Group of 37 - 40 weeks and 24 cases belonged to less than 37 weeks (7.3%) In Group B, 315 cases (96%) belonged to age Group of 37 - 40 weeks while only 13 cases belonged to less than 37 weeks (4%). Mean Gestational age in Group A was 38.40 ± 1.177 and in Group B was 38.53 ± 1.019 Weeks.

Table 4: AFI Distribution between Two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
AFI	<5	328	100.0%	0	0%
	>5	0	0.0%	328	100.0%
	Total	328	100.0%	328	100.0%

χ 2 =656, df =1, p <0.001*

In Group A, 100% had AFI <5 and in Group B, 100% had AFI >5. There was significant difference in AFI levels between two Groups.

		Group			
		Group A		Group B	
		Count	%	Count	%
AFI	0	13	4.0%	0	0.0%
	1	24	7.3%	0	0.0%
	2	36	11.0%	0	0.0%
	3	57	17.4%	0	0.0%
	4	89	27.1%	0	0.0%
	5	109	33.2%	0	0.0%
	6	0	0.0%	116	35.4%
	7	0	0.0%	38	11.6%
	8	0	0.0%	78	23.8%
	9	0	0.0%	96	29.3%
	Total	328	100.0%	328	100.0%

χ 2 =656.0, df =9, p <0.001*

Out of the 328 cases that were enrolled in Group A, 13 cases had AFI 0 cm, 24 cases had AFI 1 cm, 36 cases had AFI 2cm, 57 cases had AFI 3cm, 89 cases had AFI 4 cm and 109 cases had AFI 5cm. Similarly, in Group B 116 cases had AFI 6 cm, 38 cases had AFI 7cm, 78 cases had AFI 8cm and 96 cases had AFI 9cm.

Table 5: Condition on Admission Distribution between Two Groups

		Group			
		Group A (328)		Group B (328)	
		Count	%	Count	%
Condition on admission	Labour	122	37.2%	289	88.1%
	Not in labour	206	62.8%	39	11.9%
	Total	328	100.0%	328	100.0%

χ 2 = 181.68, df = 1, p = < 0.001*

In Group A, 37.2% were in Labour and 62.8% were not in labour and in Group B, 88.1% were in Labour and 11.9% were not in labour. There was significant difference in condition on admission between two Groups.

Table 6: Management Distribution between Two Groups

		Group			
		Group A (328)		Group B (328)	
		Count	%	Count	%
Management	Induction of labour	135	41.2%	38	11.6%
	Elective LSCS	90	27.4%	1	0.3%
	Spontaneous labour	103	31.4%	289	88.1%
	Total	328	100.0%	328	100.0%

χ 2 = 229.68, df = 2, p = < 0.001*

In Group A, 41.2% were induced, 27.4% underwent elective LSCS and 31.4%were allowed for spontaneous progress of labour. In Group B, 11.6% were induced, 0.3% underwent elective LSCS and 88.1%were allowed for spontaneous progress of labour. There was significant difference in management between two Groups.

Table 7: Mode of Delivery Distribution between two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
Mode of Delivery	FORCEPS	1	0.3%	1	0.3%
	FTND	181	55.2%	276	84.1%
	LSCS	146	44.5%	51	15.5%
	Total	328	100.0%	328	100.0%

χ 2 = 65.56, df = 2, p = < 0.001*

In Group A, 55.2% had FTND and 44.5% had LSCS and 0.3% had Forceps delivery. In Group B, 84.1% had FTND and 15.5% had LSCS and 0.3% had forceps delivery. There was significant difference in the mode of delivery in both the Groups.

Table 8: Birth Weight Distribution between Two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
Birth Weight	< 2.5	180	54.9%	71	21.6%
	> 2.5	148	45.1%	257	78.4%
	Total	328	100.0%	328	100.0%

χ 2 = 76.6, df =1, p = < 0.001*

In Group A, 54.9% had Low birth weight and in Group B, 21.6% had Low birth weight. Mean weight in Group A was 2.52 ± 0.48 Kgs and in Group B was 2.82 ± 0.31 Kgs. There was significant difference in weight between two Groups.

Table 9: Still Birth Distribution between two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
Still Birth	Fresh Still birth	6	1.8%	1	0.3%
	Macerated Still Birth	5	1.5%	1	0.3%
	No	317	96.6%	326	99.4%
	Total	328	100.0%	328	100.0%

χ 2 = 6.364, df =2, p =0.042*

In Group A, 1.8% had Fresh Still birth and 1.5% had Macerated Still Birth and in Group B, 0.3% had Fresh Still birth and 0.3% had Macerated Still Birth. There was significant difference in still birth between two Groups.

Table 10: NICU Admission Distribution between two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
NICU Admission	No	226	68.9%	298	90.9%
	Yes	102	31.1%	30	9.1%
	Total	328	100.0%	328	100.0%

χ 2 = 49.16, df =1, p = < 0.001*

In Group A, 31.1% were admitted to NICU and in Group B, 9.1% were admitted to NICU. There was significant difference in NICU admission between two Groups.

Table 11: Indication for NICU Admission between Two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
Indication	Birth Asphyxia	4	3.9%	4	13.3%
	LBW	30	29.4%	0	0.0%
	MAS	34	33.3%	17	56.7%
	Observation	7	6.9%	2	6.7%
	Resp Distress	17	16.7%	1	3.3%
	Tachypnea	9	8.8%	6	20.0%
	Weak Cry	1	1.0%	0	0.0%
	Total	102	100.0%	30	100.0%

χ 2 = 24.09, df =7, p = 0.001*

In Group A, out of the 102 admissions in NICU majority were admitted to NICU due to LBW and MAS (33.3% respectively) and in Group B out of the 30 NICU admissions, majority were admitted to NICU due to MAS (56.7%).

Table 12: Anomalies Distribution between two Groups

		Group			
		Group A		Group B	
		Count	%	Count	%
Anomalies	No	270	82.30%	325	99.10%
	ASD	3	0.90%	0	0.00%
	B/l contracted kidney	4	1.20%	0	0.00%
	Bladder outlet obstruction	3	0.90%	0	0.00%
	CAAM	3	0.90%	0	0.00%
	Cortical hydronephrosis	1	0.30%	0	0.00%
	Dilated renal pelvis	3	0.90%	0	0.00%
	Ectopic kidney	3	0.90%	0	0.00%
	Gastrochiasis	1	0.30%	0	0.00%
	Left hydronephrosis	1	0.30%	0	0.00%
	Left lung hypoplasia	1	0.30%	0	0.00%
	Left pelvis dilation	1	0.30%	0	0.00%
	Left renal agenesis	4	1.20%	0	0.00%
	Left renal				
	hydronephrosis	1	0.30%	0	0.00%
	Left renal hypoplasia	1	0.30%	0	0.00%
	Left renal pelvis dilated	3	0.90%	0	0.00%
	Multiple cardiac				
	anomalies	3	0.90%	1	0.30%
	Pericardial effusion	1	0.30%	0	0.00%
	Pleural effusion	1	0.30%	0	0.00%
	Renal agenesis	8	2.40%	0	0.00%
	Small b/l kidneys	7	2.10%	0	0.00%
	VSD	5	1.50%	2	0.60%
	Total	328	100.00%	328	100.00%

χ 2 = 57.37, df = 21, p = < 0.001*

In Group A, most common anomaly was renal agenesis (2.4%) and in Group B, 0.6% had VSD. There was significant difference in Anomalies between two Groups.

4. Discussion

Age Wise Distribution: In the present study out of the 328 cases evaluated, 167 belong to age Group less than 25 years, 154 cases between 26 - 30 and 7 cases above 30 years as against the cases which were 148 in age Group below 25 years, 163 between 26 to 30 and 17 in age Group more than 30 years. In Group A majority of cases were below 25 years and in B majority were between 26 - 30. The mean age in Group A was 25.66+/ - 2.8SD and in Group B was 25.69 +/ - 3.11. There was no statistical difference in age distribution between these two Groups. In studies conducted by

Chauhan et al (12) the mean age was 23.6+6.5 years. **Jun Zhang et al** found that the mean maternal age was 28.4 + 3.4 years **Everett et al** found that the mean maternal age was 23.8 + 5.7 years. The findings in our study were comparable with the above studies.

Parity Wise Distribution: Out of the total cases 153 (46%) were primigravida and 175 (53) %were multigravida as compared to 138 (42) %of controls which were primigravida and 190 (57%) %were multigravida. There was no statistical difference of parity between both these Groups. Studies done by **Casey et al** concluded that there was no significant difference between both these Groups. **Chauhan, (12)** and **Maganan et al (8)** there were no significant relations of age and parity with Oligohydramnios. The results in our study were comparable with the above.

Gestational Age Wise Distribution: Out of the total cases, 24 belong to age Group of less than 37 weeks, and 304 belong to more than 37 weeks. Similarly, 13 in Group B belong to less than 37 weeks and 315 belong to more than 37 weeks. The mean gestational age in Group A was 38.40 +/ - 1.77 and in Group B was 38.53 +/ - 1.019. In a similar study conducted by **Jun Zhang et al** the gestational age at termination was 38.1 + 3.3 weeks. In a study conducted by **Casey B et al** (4), it was noted that the gestational age at termination was 37.5 + 2 weeks. **Everett Fat al, (5)** in the study noted that the mean gestational age at termination in their study was 34.3 + 2.1 weeks and **Iffath A et al** stated that the mean age at termination in their study was 36.3 + 2 weeks. Thus the findings in our study were comparable with the above. These findings indicate that the problem of oligohydramnios was more common in later part of pregnancy. It is mainly due to the physiological or pathological causes of reduced placental perfusion near term.

Distribution on Basis of Condition on Admission: Out of the 328 cases 122 were found to be in labour on admission and out of 328 controls, 289 were found to be in labour.206 cases in Group A and 39 cases in Group B were found to be not in labour. Thus there was significant difference in the presentation of these Groups The decision for termination of pregnancy for the rest was taken on basis of liquor and bishops score.

Distribution on Basis of Intervention on Admission: Induction with PGE2 gel was done in 135 cases in Group A and 38 cases in Group B.41.2% were induced with PGE2, 27.4%underwent elective caesarean Ivo severe oligohydraminos and 31.4% were allowed for spontaneous vaginal delivery. Similarly, in Group B, 11.6% were induced with PGE2 gel, 0.3% underwent elective caesarean, and 88.1% has spontaneous vaginal trial of labour. Thus induction rate is higher in cases of oligohydraminos and there was significant difference in the intervention done in both the Groups. Study by **Casey B et al (4)** found that there was increased rate of induction of labour (42%) and caesarean section (32%) in oligohydramnios cases. Thus our results were comparable with the results of the above studies.

Distribution on Basis of Mode of Delievery: Out of the 328 cases in Group A, 182 underwent vaginal delivery and 146 underwent lscs. Similarly, 277 cases in Group B underwent ftnd and 51 cases underwent lscs. Thus, the rate of lscs was 44.5% in Group A and that in Group B was 15.5%. Thus significant difference was noted in the mode of delivery in these two Groups. **Golan A et al** found that the overall caesarean section was performed in 35.2% of pregnancies with amniotic fluid index less than 5 cm. **Kamlesh et al** noted that lscs rate was 41% in cases with oligohydraminos. Oligohydramnios as a predictor for caesarean section due to foetal distress has a sensitivity of 74.6% as per study by **Baron Morgan et al (2000).**

Neonatal Deaths: Out of the 328 cases in Group A, 11 cases of still birth were noted (5 cases of macerated still birth and 6 cases of fresh still birth). Similarly out 328 cases in Group B, 2 cases of still birth were noted. Thus there was significant difference in the neonatal outcome noted in both the Groups. **Chhabra S ET. Al** (9). reported very high (87.7%) perinatal mortality in their study. **Wolff F ET. Al**. (10) found that the perinatal mortality in their study was7.2%. **Apel - Sarid L ET. Al**. (11) found that the perinatal mortality was 9.9%. **Chamberlin PF ET. Al**. (6) calculated the gross and corrected perinatal mortality rate in patients with decreased qualitative amniotic fluid volume and found it to be 188/1000 and 109/1000 respectively. Overall, the perinatal mortality is markedly increased in patients with oligohydramnios. The lack of amniotic fluid allows compression of foetal abdomen, which limits the movement of the diaphragm.

Birth Weight Wise Distribution: The mean foetal weight at birth was 2.52+/ - 0.48 kgs in Group A and 2.82 +/ - 0.31 kgs in Group B. Out of the 328 cases in Group A, 180 had weight less than 2.5kgs and 148 had weight more than 2.5kgs. Out of the 328 controls in Group B, 71 had weight less than 2.5kg and 257 had weight more than 2.5kgs.

Thus there was significant difference in the birth weight in both these Groups.

	Kamlesh R chaudhari et al	Present study
< 2.5kgs	102 (65%)	180 (54%)
>2.5kg	54 (34%)	148 (21%)

A study conducted by **Youseef et al (1993)** also stated that sensitivity of low birth weight with oligohydraminos was 75 %.

NICU Admission: Out of 328 cases in Group A, 102 cases had NICU admission as opposed to 30 cases in Group B. The rate of NICU admission was 31.1% in Group A and 9.1% in Group B. Thus there was significant difference in the rate of NICU admissions in both these Groups. In a similar study conducted by **kamlesh et al,** it was noted that 25.5% babies were admitted in NICU. The incidence of NICU admission was found to be 19% by **Garmel et al.** NICU admission was 64% in study Group compared with 42% in control Group as concluded in **Kwon et al.** The results in our study were comparable with the results of other studies.

Causes of NICU Admissions: Out of the 102 cases in Group A that underwent NICU admissions, 30 cases had MAS and 30 had LBW, while in Group B, 30 cases had NICU admissions, out of which 17 had MAS. **Casey B et. al**. studied 6423 patients, who underwent ultrasonography at more than 35 weeks gestation and found that 147 (2.3%) cases were complicated by oligohydramnios, meconium stained amniotic fluid was identified. Notably the incidence of meconium aspiration syndrome in infants with oligohydramnios was significantly higher despite the diminished identification of meconium stained amniotic fluid. **Bowen Chattoor JS ET. Al** studied perinatal outcome in 55 postdate pregnancies. Oligohydramnios was noted in four patients. All 4 babies were admitted with meconium aspiration. One died due to this complication. According to study conducted by **Kamlesh et al**, 30.7% had developed meconium staining of liquor. **Golan & co - workers (1994)** assessed foetal outcome in 145 babies with oligohydramnios and found increased incidence of foetal distress, MSAF (29%), IUGR (24.5%), breech (17%), birth asphyxia (11.5%)

Association of Anamolies with Oligohydraminos: Out of 328 cases in Group A, 270 had no anomalies and 58 had associated anomalies. Out of the 328 cases in Group B, associated anomalies was found in only 3 cases. Thus the rate of anomalies associated with oligohydraminos is 17.7% most commonly due to renal causes. According to study conducted by **subhash k c, Ramesh Poudel** the prevalence of congenital anomalies with oligoydramions in their study as 18.33%. In patients withsevere oligohydraminos 33 % had congenital anomalies most commonly renal anomalies.

5. Conclusion

Due to availability of non - invasive methods for estimation of amniotic fluid, early diagnosis of oligohydraminos and its management has become of prime importance in obstetric management. Though many methods are available to measure amniotic fluid volume, the measurement of Amniotic fluid index is preferred for its easily reproducible nature and for its standardisation and sensitivity to identify low volumes of amniotic fluid. The time and the mode of delivery of these cases depend on severity of Oligohydramnios and status of foetal wellbeing. Oligohydramnios is associated with high rate of pregnancy complication, increased perinatal morbidity and mortality. Adverse perinatal outcome can be avoided by careful intrapartum foetal heart rate monitoring. Every case of oligohydramnios needs careful antenatal evaluation, parental counselling, individualized decision regarding timing and mode of delivery. Continuous intrapartum foetal monitoring and good neonatal care are necessary for better perinatal outcome. Due to intrapartum complications and high rate of perinatal morbidity and mortality the rate of caesarean sections are rising but decision between vaginal delivery and caesarean section should be balanced so that unnecessary maternal morbidity can be prevented.

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