

## Original article

# Study of incidence of oligohydraminos in third trimester of pregnancy in tertiary care hospital

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### Abstract:

**Introduction:** In Last few decades the obstetric care has focused its attention towards unborn foetus, which is being viewed as a second patient. In modern obstetrics, mother and foetus are considered as a single unit and maximum attention is directed to achieve a revolutionary decrease in perinatal mortality and morbidity.

**Material and methodology:** The prospective Longitudinal study was carried out over the period of two years in the Department of Obstetrics and Gynaecology of Rural Medical College, Loni. 170 pregnant women in 3 trimester of pregnancy, presenting clinically as oligohydramnios with AFI less than 5cm and intact membranes; were included in the study. All cases were evaluated on indoor basis.

**Results:** The mean age at presentation was 22.39 years (SD=2.69). From the above table we see that 49(28.9%) women were 20 years or below, 103(60.59%) were between 21-25 years, 16 (9.4%) were 26-30 years while 2(1.1%) were above 30years of age. The mean Birth Weight was 2.54 (SD= 0.35). Six cases (3.5%) reported birth weight less than 1700 gms. Birth weight of 1.7-2.49 kgs was seen in 59(34.7%) cases, while 105 (61.5%) cases had a birth weight of more than 2.5 kgs.

**Conclusion:** Oligohydramnios associated with obstetrical complications need individualised attention. The time and mode of delivery depends on severity of Oligohyramnios and fetal well being. Casearian section is mostly required for cases of anhydramnios and intrapartum fetal heart rate abnormalities.

**Keywords :** Oligohydramnios , intrapartum fetal heart rate abnormalities.

### Introduction:

In Last few decades the obstetric care has focused its attention towards unborn foetus, which is being viewed as a second patient. In modern obstetrics, mother and foetus are considered as a single unit and maximum attention is directed to achieve a revolutionary decrease in perinatal mortality and morbidity.<sup>1, 2</sup> Oligohydraminos are reduced volume of amniotic fluid poses a challenge in obstetric management, particularly when it is diagnosed before term. Appreciation of the importance of normal amniotic fluid volume, as an indicator of fetal well being is a relatively recent development. Before 1975, discussions of amniotic fluid volume in the obstetric literature were limited to observations of the quantity of fluid released after rupture of membranes.<sup>3</sup>

Oligohydraminos can develop in any trimester, although it is most common in third trimester. About 12% of women, whose pregnancies continue two weeks beyond due date of delivery; develop oligohydraminos due to declining placental function. Oligohydraminos accompanies a broad range of reproductive disorders including anomalies of foetus and functional disorders of mother, foetus and placenta. In non anomalous foetus, oligohydraminos may complicate post term pregnancies and post maturity syndrome in new born infants.<sup>4</sup>

### Material and methodology:

The prospective Longitudinal study was carried out over the period of two years in the Department of Obstetrics and Gynaecology of Rural Medical College, Loni. 170 pregnant women in 3 trimester of pregnancy, presenting clinically as oligohydramnios with AFI less than 5cm and intact membranes; were included in the study. All cases were evaluated on indoor basis.

Depending upon the clinical presentation, necessary investigations were performed. Investigations were done to confirm the diagnosis, to find out the cause of oligohydramnios, to know the severity of oligohydramnios and to assess the maternal and fetal wellbeing. Considering the increased maternal and fetal risk, associated with continuation of pregnancy; induction or augmentation of labour was done at appropriate time in maternal and fetal interest.

Decision regarding mode of delivery (vaginal/abdominal) was individualized, depending on clinical findings, associated high risk factors and severity of oligohydramnios. Cases which were kept for vaginal delivery were closely monitored by using continuous electronic fetal monitor, for evidence of fetal heart rate abnormalities.<sup>7</sup> The epidemiological information will be recorded in a structured proforma. Information regarding Risk factors will be noted in proforma.

### Results:

**TABLE 1:** Agewise Distribution

Age Group (Years)	Frequency(N=170)	Percentage
20 Years Or Below	49	28.9
21-25	103	60.59
26-30	16	9.4
Above 30 Years	2	1.11
Total	170	100

The mean age at presentation was 22.39 years (SD=2.69). From the above table we see that 49(28.9%) women were 20 years or below, 103(60.59%) were between 21-25 years, 16 (9.4%) were 26-30 years while 2(1.1%) were above 30years of age.

**Table 2:** Parity

Parity	Frequency	Percentage
Primipara	99	58.2
Multipara	71	41.8
Total	170	100.0

From the above table 99(58.2%) women were pregnant for the first time while 71(41.8%) had previously delivered.

**Table 3:** ANC Registration

ANC Registration	Frequency	Percentage
Booked	120	70.6
Unbooked	50	29.4
Total	170	100.0

From the above table we find that 120(70.6%) of cases were booked while 50(29.4%) were unbooked cases.

**Table 4:** Gestational Age

Gestational Age (Weeks)	By LMP	
	N	%
37-38	63	37.1
38-42	92	54.1
Not Calculated	15	8.8
Total	170	100

The mean gestational age by LMP was 38.7 weeks (SD=1.28) & mean gestational age as calculated by USG was 37.67 weeks (SD=1.75) in the study sample.

From the above table we can see that most of the pregnancies were in 38- 42 weeks of gestation followed by 37-38 weeks. Gestational age of 15(8.8%) cases could not be calculated as LMP was not available.

**Table 5:** Method Of Delivery

Delivery Method	Frequency	Percentage
LSCS	133	78.2
Vaginal Delivery	37	21.8
Total	170	100.0

From the above table 133(78.2%) deliveries were caesarian sections while 37(21.8%) were normal vaginal deliveries.

**Table 6:** Outcome On Delivery

Delivery Outcome	Frequency	Percentage
Still Birth	2	1.2
Live Birth	168	98.8
Total	170	100.0

Two still births were reported in the study.

**Table 7: Birth Weight**

Birth Weight	Frequency	Percentage
<1.7 kgs	6	3.5
1.7-2.49kgs	59	34.7
2.5 kgs& Above	105	61.8
Total	170	100

The mean Birth Weight was 2.54 (SD= 0.35). Six cases (3.5%) reported birth weight less than 1700 gms. Birth weight of 1.7-2.49 kgs was seen in 59(34.7%) cases, while 105 (61.5%) cases had a birth weight of more than 2.5 kgs.

**Discussion:**

Diagnosis of oligohydramnios raises the need for careful assessment of both mother and fetus, The accurate diagnosis of oligohydramnios has become possible with introduction of ultrasonographic examinations during pregnancy. Outcome of pregnancy complicated by oligohydramnios has been reported by several authors. Oligohydramnios may be associated with, Postdate, Pregnancy induced hypertension, intrauterine growth restriction and elevated perinatal morbidity.<sup>5,6</sup>

Jun Zhang, James Troendle<sup>7</sup> studied 7617 women with oligohydramnios. They found that the incidence of oligohydramnios was 1.5% in their study. Marks and Divon<sup>8</sup> found oligohydramnios in 12 percent of 511 pregnancies of 41 weeks or greater. Brian Casey, Donald McIntire<sup>1</sup> in their analysis of 6423 pregnancies found that 2.3% cases were complicated by oligohydramnios. Elliot H, Robert J. Sokol<sup>9</sup> did a study of 53 viable, singleton pregnancies with intact membranes. They found that incidence of oligohydramnios was 3.9% in their study. Varma TR teman S<sup>10</sup> in their study found that, the incidence was 3.1 % .There were total of 170 cases of oligohydromnios reported in the hospital during the study period out of 15625. Therefore the proportion of Oligohydramnios cases reported in the hospital during the study period was 1.09% in the current study. The maximum percentage of cases in the present study were in the age group 21 to 25 years as compared to other age groups , reflecting the child bearing age of most of the women. In the present study, In present study the mean maternal age was 22.39 years (SD=2.69), From (Table 2) 99(58.2%) women were pregnant for the first time while 71(41.8%) had previously delivered. Ghosh R et al<sup>11</sup> in study of 55 cases of oligohydramnios he found that the mean age was 23.9+3.3 years and 35.5% participants were Primigravida.

In present study (TABLE 3) we find that 120(70.6%) of cases were booked while 50(29.4%) were unbooked cases. Moore and Cayle<sup>11</sup> in 1990 described normality data for amniotic index from 16 to 42 weeks gestation. They noted that the amniotic fluid index changes significantly during each advancing week The mean gestational age in their study was 36.3+4.6 weeks. In the present study, the rate of caesarean section was 78.2% and that of vaginal delivery was 21.8%. Of the 133(78.2%) caesarean sections, we observed that better the AFI chances of vaginal delivery is more. AFI ranges from 0-2cm 3(8.1%) were delivered by vaginally and 65(48.9) were delivered by LSCS, AFI ranges from 2-4cms25(67.6%) were delivered vaginally and 59(44.4) were delivered by LSCS and AFI > 4cms 9(6.8) were delivered by vaginally and 9(24.3) delivered by LSCS. all babies were alive and were discharged with mother Two babies died in antenatal period. Causes of death were IUGR

with anhydramnios and Post date with sever oligohydramnios respectively, Due to very scanty or absent liquor amnii, it is often difficult to diagnose fetal congenital anomalies.<sup>12</sup>

Cases with isolated oligohydramnios do not need any special consideration regarding mode of delivery. All Cases presenting with oligohydramnios need counseling regarding perinatal outcome. Babies are relatively more prone for fetal distress, Low birth weight, meconium aspiration syndrome and birth asphyxia. Perinatal outcome depends upon severity of oligohydramnios and presence or absence of associated complications.

**Conclusion:**

Oligohydramnios associated with obstetrical complications need individualised attention. The time and mode of delivery depends on severity of Oligohyramnios and fetal well being. Caserian section is mostly required for cases of anhydramnios and intrapartum fetal heart rate abnormalities.

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