

# Perinatal Outcome in Term Pregnancies with Isolated Oligohydroamnios

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## ABSTRACT

**Objective:** To evaluate the frequency of adversative perinatal outcome in pregnancies with oligohydramnios isolation at term.

**Study Design:** Case series

**Place and Duration of Study:** Department of Obstetrics & Gynecology, Sadiq Abbasi Hospital Bahawalpur from 1<sup>st</sup> January 2021 to 30<sup>th</sup> June 2021.

**Methodology:** Two hundred women with term pregnancy 37<sup>+0</sup> to 41<sup>+6</sup> weeks, pregnancy with isolated oligohydramnios, active phase of labour were included. CTG and obstetrical ultrasound for biophysical profile were done. Patient's labour was monitored closely and followed till delivery.

**Results:** Majority of the patients 87 (43.5%) were between 20-25 years with mean age was 28.43±4.27 years. Seventy six (38%) were between para 1-2, 83 (41.5%) were para 3-4, while 41 (20.5%) were para >4. Perinatal outcome reveals that APGAR score <6 at 1 minute was calculated in 21 (10.5%) and <7 at 5 minutes in 17 (8.5%) which is not very significant.

**Conclusion:** Oligohydramnios Isolation was not related with adversative perinatal consequences.

**Keywords:** Isolated oligohydramnios, Perinatal outcome, Amniotic fluid index, Term pregnancy, APGAR score

## INTRODUCTION

For the growth and development of the fetus a low resisting environment is required which is provided by the amniotic-fluid (AF).<sup>1</sup> Amniotic fluid index (AFI) is the most appropriate and common process for determining the AF volume.<sup>2</sup> When the AFI is equal or less than 5<sup>th</sup> centile then it is termed as oligohydramnios.

It is accompanied by equal or less than 5 centimeter AFI or an extreme vertical/pocket absent of umbilical cord or a measurement of limb of fetus <30cm: when the membrane is intact.<sup>3</sup> In conditions where there is decreased AF presented on sonographical imaging, the condition is termed as isolated oligohydramnios (IO). It is fetus abnormality with absence of intrauterine restricted growth or is accompanied with major important maternal comorbidities such as pregnancy induced hypertension.<sup>4</sup>

Almost 0.5 to 5 percent of the pregnancies are complicated by oligohydramnios the main factors of oligohydramnios related with oligohydramnios etiology are teared membrane, insufficiency of placenta and congenital anomalies.<sup>5</sup>

Isolated oligohydramnios in case of non-complicated pregnancies with full term has been related with adversative outcomes of neonates which has a decreased APGAR scoring < six per minute 6 and APGAR scoring < 6 per 1 minute.<sup>6</sup>

Oligohydramnios escalates the risk of labour induction, ensured fetal cardiac rate, escalated chances of C-section and fetal distress. Compression due to umbilical cord could be one of the justification for higher risk of perinatal morbidities as well as mortality in addition to insufficiency of utero-placenta and higher frequency of amniotic fluid staining with meconium.<sup>3</sup>

## MATERIALS AND METHODS

This series of case reports was led at Department of Obstetrics & Gynecology, Sadiq Abbasi Hospital Bahawalpur from 1<sup>st</sup> January 2021 to 30<sup>th</sup> June 2021. The women with term pregnancy 37<sup>+0</sup> to 41<sup>+6</sup> weeks by dating scan, pregnancy with isolated oligohydramnios (absence of PIH ruled out by checking blood pressure at admission, diabetes by checking BSL at admission, IUGR on USG) in active phase of labour (cervical dilatation >3cm with regular uterine contraction every 3 to 4minutes) were included. All women who have PROM (ruled out by P/S examination), multiple gestation (by USG) were excluded. Two hundred admitted patients fulfilling the inclusion criteria were enrolled. CTG and obstetrical ultrasound for biophysical profile were done. Patient's labour was monitored closely and followed till delivery. Whatever the mode of delivery, the newborn was assessed in terms of APGAR scores at 1 and 5 minutes. Poor

APGAR scores are less than six at one minute and less than seven at five minutes. All information was recorded. Data was entered and analyzed using SPSS-20.

## RESULTS

There were 87 (43.5%) between 20-25 years, 60 (30%) between 26-30 year and 53 (26.5%) were between 31-35 years of age with mean age was 28.43±4.27years (Table1). Gestational age of the patients was 48(24%) were between 37<sup>+0</sup>-39<sup>+0</sup> and 152 (76%) were between 39<sup>+6</sup>-41<sup>+6</sup> weeks of gestation, gestational age of the patients was 40.32±2.54 weeks (Table 2). Parity of the patients 76 (38%) were between 1-2 para, 83 (41.5%) were para 3-4, while 41 (20.5%) were >4 para (Table 3). The perinatal outcome reveals that APGAR score <6 at 1 minute was 21 (10.5%) while it was <7 at 5 minutes in 17 (8.5%) [Table 4].

Table 1: Distribution of age in participants (n=200)

Age (years)	No.	%
20-25	87	43.5
26-30	60	30.0
31-35	53	26.5
Mean±SD	28.43±4.27	

Table 2: Gestational age of the patients (n=200)

Age (years)	No.	%
37 <sup>+0</sup> -39 <sup>+0</sup>	48	24
39 <sup>+6</sup> -41 <sup>+6</sup>	152	76
Mean±SD	40.32±2.54	

Table 3: Parity of the patients (n=200)

Parity	No.	%
1-2	76	38
3-4	83	41.5
>4	41	20.5

Table 4: Frequency of adverse perinatal outcome (n=200)

Parity	No.	%
1-2	76	38
3-4	83	41.5
>4	41	20.5

Table 4: Frequency of adverse perinatal outcome (n=200)

Perinatal outcome	No.	%
Apgar score <6 at 1 minute	21	10.5
Apgar score <7 at 5 minute	17	8.5
Apgar score >6 at 1 minute and >7 at 5 minutes	162	81.0

## DISCUSSION

It is noteworthy to state that oligohydramnios causes adversative perinatal consequences.<sup>7,8</sup> Alternatively, oligohydramnios is not a good indicator of adversative results.<sup>9,10</sup> These findings suggest that outcomes of all oligohydramnios are not similar and oligohydramnios isolation is not related with adverse consequences. However, we planned the study to determine whether oligohydramnios is linked with poor perinatal consequences in terms of poor APGAR score or not. The results of the study revealed that APGAR score was <6 at 1 minute in 21 (10.5%) neonates while 17 (8.5%) neonates had APGAR score <7 at 5 minutes. The findings of the study are in agreement with a study showing that there higher risk of labour induction (41% Vs 22%), C-section (32% Vs 23%) and APGAR score less than 6 at one minute (8% Vs 1.1%), APGAR score less than 7 at five minutes (6% Vs 0.56%) in oligohydramnios study group.<sup>3</sup>

Chate and colleagues<sup>11</sup> reported in the current year that APGAR score less than seven in study participants reported 30% at one minute and 16% at five minute, that is also similar to with other studies also. In our study, significantly higher number of LBW infants was born but this data did not include because of some study limitations. Result of this study is in accordance with the reported literature.<sup>12,13</sup>

Moreover, labour induction was considerably observed in higher number of study participants with IO, and these findings are similar with result of other studies. In present study, higher C-section rate was detected in oligohydramnios isolation. Higher C-section rate observed not only due to foetal distress but also because of elevated chances of induced labour. It is already documented that, elective labour induction escalates the chances of C-section in females.<sup>13</sup> Result of meta-analysis reported that, reduction in amniotic fluid also increase the risk of Caesarean section.<sup>14</sup> Other researches also reported related findings.<sup>13-15</sup>

However, considering the above findings in support with other studies we are of deduce that isolated oligohydramnios not cause any adversative perinatal consequences.

## CONCLUSION

Adversative outcomes in perinatal with isolated oligohydramnios at full term pregnancy was found in accordance with other local studies but this association is not significantly higher, so decision should be taken on individual basis in isolated oligohydramnios along with other parameters for fetal wellbeing.

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