TO ASSESS THE MATERNAL AND NEONATAL OUTCOME OF OLIGOHYDRAMNIOIS AMONG THE ANC MOTHERS

Akash R. Chaudhari, Prachi S. Chaware, Pallavi V. Chonde, Debarati P. Bera, Pradhnya Sakle

Basic B.SC. Nursing students, Smt. Radhikabai Meghe Memorial college Of Nursing, Datta Meghe Institute of Medical Sciences (Deemed to be University) , Sawangi (Meghe) Wardha (Maharashtra)

DOI: 10.47750/pnr.2022.13.S0.7

Abstract

Background: Oligohydramnios is a condition in which the amniotic fluid volume (AFV) is lower than usual for the gestational age. The volume of the amniotic fluid changes throughout pregnancy and increases linearly up to 34–36 weeks, which results in a reduced post-term gestation. This pattern facilitates fundal height measurements and pregnancy ultrasound analysis for the clinical evaluation of AFV. After the sonography has thoroughly scanned the belly, the largest vertical pockets of amniotic fluid can be seen that are free of the unborn child's body components or umbilical cord. Both single-fetal and multifetal gestations are considered to have oligohydramnios if the pocket is smaller than 2 cm. Objective: To assess the maternal and neonatal outcome of oligohydramnios among the ANC mothers. To associate the maternal and neonatal outcome of oligohydramnios among the ANC mothers with selected demographic variables. Research Design: Research Approach descriptive Research Approach. Setting of the study: the study was conducted at AVBR Hospital sawangi Meghe Wardha Population: ANC mothers. Sampling technique: simple random sampling. Sample size: 25. CONCLUSION: In order to analyse the maternal and newborn outcome of oligohydramnios among ANC moms, the researcher used a descriptive research design, which is examined in the section that follows the thorough analysis in this thesis. Under the headings of sepsis, perineal laceration, postpartum haemorrhage, premature membrane rupture, placental insufficiency, twin to twin transfusion syndrome, and cardiomyopathy, the mother outcome is broken down. Additionally, the neonatal outcome is broken down into the categories of low birth weight, APGAR scores at 1 and 5 minutes, reflexes, congenital anomalies, admission to the NICU, intrauterine growth restriction, birth asphyxia, foetal distress, delayed lung maturation, preterm birth, and stillbirth.

The demographic characteristics did not significantly affect the maternal or neonatal outcome of oligohydramnios. As a result of the assessment and low levels of amniotic fluid found in this study, it is advised that all women increase their ANC visits in order to lower the risk of oligohydramnios in ANC mothers.

Keywords: Assess, oligohydramnios, maternal and neonatal outcome, ANC mothers.

INTRODUCTION

A condition called oligohydramnios, which affects the fluid, causes a reduction in amniotic fluid volume in relation to gestational age. Low levels of amniotic fluid, which can result from a number of maternal, foetal, or placental issues, can be harmful to the development of the foetus. This exercise will highlight the pathophysiology, aetiology, evaluation, and management of oligohydramnios in addition to exploring the role that healthcare teams have in the diagnosis and treatment of this illness.

Oligohydramnios is the medical term for having insufficient amniotic fluid (AFV) for the gestational age. The volume of amniotic fluid fluctuates over the course of pregnancy, rising linearly until 34–36 weeks, when it levels out. (at roughly 400 mL) and maintains its stability throughout the duration. AFV typically decreases after 40 weeks of pregnancy. Smaller post-term gestations are the result of this. This pattern makes it easier to diagnose AFV using fundal height measures and prenatal ultrasound imaging.

When the measurements for the gestational age and fundal height differ, the differential diagnosis is considered. Amniotic fluid anomalies should be taken into consideration. If there are any variations, an ultrasound of the amniotic fluid should be requested. During the transabdominal ultrasound evaluation of the AFV, the maximum vertical pocket (MVP) or the amniotic fluid index...
(AFI) may be used, depending on the institution. The image created after the sonographer thoroughly scans the belly shows the largest vertical pocket of amniotic fluid that is free of the unborn child's bodily parts or umbilical cord.

Oligohydramnios, which can occur in both single- and multifetal gestations, is defined as any pocket less than 2 cm; the usual range for MVP is 2 to 8 cm. Polyhydramnios is considered when the MVP is greater than 8. Another method for measuring AFV is the amniotic fluid index. At 20 weeks of pregnancy, the umbilicus can be used to partition the uterus into four quadrants, with the MVP in each quadrant being used to calculate the AFI. The AFI is the product of the potential four vertical pockets. Oligohydramnios and a 5 cm AFI are connected.

Statement problem:
To assess the maternal and neonatal outcome of oligohydramnios among the ANC mothers.

Objectives:
1. To assess the maternal and neonatal outcome of oligohydramnios among the ANC mothers.
2. To associate the maternal and neonatal outcome of oligohydramnios among the ANC mothers with selected demographic variables.

Assumption:
1. The population from which the sample were obtained must be normally or approximately normally distributed.
2. The samples must be independent.
3. The variances of the populations must be equal.

Hypothesis:
1. Null Hypothesis H0: There is no significant difference between maternal and neonatal outcome of oligohydramnios among the ANC mothers and their demographic variables.
2. Alternative Hypothesis H1: There is no significant difference between maternal and neonatal outcome of oligohydramnios among the ANC mothers and their demographic variables.

Operational definitions:
Assess: the action or an instance of making a judgment about something.

In this study assess refers to the extent of maternal & neonatal outcome of Oligohydramnios among the ANC mothers.

Maternal outcome:
Maternal outcomes include maternal death, postpartum haemorrhage, infection, and third- or fourth-degree tears.

Maternal outcome in this study refers to the percentage of ANC moms who had died from oligohydramnios.

Neonatal outcome:
Newborn outcomes include things like low birth weight, premature delivery, poor Apgar scores at one and five minutes after birth, and serious neonatal diseases.
Newborn outcome in this study refers to the percentage of ANC moms who experienced neonatal deaths or serious neonatal complications as a result of oligohydramnios.

Oligohydramnios:

Oligohydramnios is the medical term for amniotic fluid volume below the minimal amount anticipated for gestational age.

The term "limitation of maternal and neonatal outcome" in this study refers to the lower-than-expected amniotic fluid volume for the gestational age.

ANC mother:

The care given to pregnant women by qualified medical personnel is known as antenatal care (ANC).

The number of pregnant women in this study who have adverse maternal and newborn outcomes as a result of oligohydramnios.

**MATERIALS AND METHOD:**

**SOURCE OF DATA:**

Research design: Descriptive research design

Setting of the study: Postnatal ward of AVBRH

Research approach: Evaluating research approach used in this study

Method of data collection:

Sample: ANC Mothers with third trimester

Sampling technique: simple random sampling technique

Sample size: 25

Criteria of the study:

Inclusion criteria:

1. ANC mothers who are willing at the time of data collection.

2. ANC mothers who is having the low amniotic fluid.

Exclusion criteria:

1. ANC mothers who is not having low level of amniotic fluid.

2. ANC mothers who are not willing at the time of data collection.

Tools for study:

Section A: Demographic variables
RESULT:

The following are the major findings of the study.

Section A: Percentage wise distribution of ANC mothers according to their demographic characteristics.

Participants included 12 (48%) ANC mothers who were in their 20s or early 30s, 9 (36%) ANC women who were in their 26s or early 30s, and 4 (16%) ANC mothers who were in their 31s or early 35s. 0 (zero) percent of the ANC mothers who participated in the study were in the 36–40 year age range.

The participation rate of illiterate mothers is 0 (0%), while 8 (32%) of them attended primary high school. The participation rate of qualified mothers is 11 (44%) and 6 (24%) of them had a degree.

Participant frequency is 7 (28%) and their yearly income is between 30,000 and 50,000 rupees, while the annual income of ANC moms is 12 (48%) and ranges between 70,000 and 90,000. We are in the annul income 6 (24%) bracket, earning between 90,000 and 200,000 per year, with no percentage over 0%.

18 primigravida moms (72%) and 7 multigravida mothers (28%) participated frequently.

The percentage of ANC mothers who participate is 9(36%) for gestational ages 28 to 30 weeks, 11(44%) for gestational ages 31 to 33 weeks, and 5(20%) for ages 34 to 36 weeks and 37 to 40 weeks. For gestational ages 37 to 40 weeks and thereafter, ANC mother participation is 0%.

Section B: ASSESSMENT OF NEONATAL AND MATERNAL OUTCOME

Maternal outcome of ANC mothers with sepsis is present in 9(36%) and absent in 16(64%), perineal lacerations present in 0(0%) and absent in 25(100%), premature rupture of membrane present in 3(12%) and absent in 22(88%), placental insufficiency is present in 25(100%) and absent in 0(0%), twin to twin transfusion syndrome present in 0(0%) and absent in 0(0%), cardiomyopathy present in 0(0%) and absent in 0(0%).

Neonatal outcome of low birth weight baby is 15(60%) present and 10(40%) is absent, APGAR scoring for 1min and 5min is in normal range, reflexes is 25(100%) present and 0(0%) absent , congenital anomalies is absent, admitted in NICU is 18(72%) present and 7(28%) is absent, intrauterine growth restriction is 9(36%) present and 16(64%) absent, birth asphyxia 11(44%) present and 14(56%) absent, fetal distress 1(4%) present and 24(96%) absent, delayed lung maturation is not present in any neonates, preterm birth and still birth also absent in the neonates.

Section C : ASSOCIATION OF MATERNAL AND NEONATAL OF OLIGOHYDRAMNIOUS IN ANC MOTHERS,

According to the data, sepsis affected 36% of ANC mothers, premature membrane rupturing affected 12% of ANC mothers, low birth weight babies affected 60% of ANC mothers, NICU admission affected 72% of ANC mothers, intrauterine growth restriction affected 36% of ANC mothers, birth asphyxia affected 44% of ANC mothers, and foetal distress affected 4% of ANC mothers.

the relationship between the age in years of ANC women from a chosen hospital and the oligohydramnios score's effects on both the mother and the baby. The tabulated "F" values were 3.44(df=2,22), which is significantly less than the calculated "F," which was 34.74 at the 5% level of significance. Additionally, the calculated "p" was calculated at 0.0001, which was far lower than the allowed level of significance, which is "p"=0.05. As a result, it can be concluded that ANC mothers' age in years is statistically related to the oligohydramnios score of both their neonatal and maternal outcomes.

This graph shows the relationship between the maternal and neonatal outcomes of oligohydramnios and the educational status of ANC women from a certain hospital. The estimated "F," which is 17.89 at the 5% level of significance, was substantially
lower than the tabulated "F" values of 3.44(df=2,22). Furthermore, the calculated "p" was 0.0001, which was far lower than the permitted level of significance, which is "p"=0.05. As a result, there is a statistical correlation between the oligohydramnios score for maternal and baby outcomes in ANC women and educational status.

the association between the outcomes for mothers and newborns and the oligohydramnios score, annual income, and ANC mothers from a certain institution. The estimated "F," at the 5% level of significance, was 1.39, which was significantly less than the tabulated "F" values, which were 3.44 (df=2, 22). In addition, the calculated "p" value of 0.26 was significantly greater than the permitted level of significance, which is "p" = 0.05. As a result, there is a statistical correlation between the oligohydramnios score for ANC mothers’ maternal and newborn outcomes is statistically connected to their yearly income as a result.

Maternal and newborn outcomes based on oligohydramnios score and parity of ANC moms from a chosen hospital. The estimated 't' value was 0.73 at the 5% level of significance, however the tabulated 't' values were 2.07(df=23), which is significantly higher. The determined 'p'=0.47 was also significantly greater than the permissible level of significance, which is 'p'=0.05. The parity of ANC women is therefore inferred to be statistically related with both their maternal and neonatal outcome of oligohydramnios score. the relationship between gestational age of ANC moms from a particular hospital and the outcome of maternal and neonatal oligohydramnios score. The estimated "F" value was 0.04 at the 5% level of significance, however the tabulated "F" values were 3.44(df=2,22), which are significantly higher. Additionally, the computed "p" was calculated to be 0.95, which is significantly higher than the permitted level.

DISCUSSION:

Based on the study's goals, the findings are examined. This section evaluates the maternal and newborn outcomes of oligohydramnios in ANC women. The result is obtained from the checklist. the information collected to describe the sample's age, education, annual income, parity, and gestational age, in that order [1-18].

Three sections comprise the findings. With reference to their demographic features, ANC mothers are distributed percentage wise in section (A). ANC moms from the AVBR Hospital Sawangi Meghe Wardha are the subjects of section (B), which examines the assessment of maternal and newborn outcomes of oligohydramnios. In section (C), it is discussed how demographic factors and the maternal and newborn outcomes of oligohydramnios in ANC mothers from a particular hospital are related [19-31].

According to section A’s distribution of ANC mothers by age in years, 48% of them were in the 20–25 age range, 36% were in the 26–30 age range, and 16% were in the 31–33 age range. According to their level of education, ANC moms are distributed as follows: 24% of them have a doctorate degree, 44% have a high school diploma, and 32% have only completed their primary education [32-40].

Percentage wise distribution of ANC mothers according to their annual income [Rs] are 28% of ANC mothers had annual income of rupees30000-50000,48% of them had between rupees50000-70000 and 24% of ANC mothers had annual income of rupees70000-9000.

Percentage wise distribution of ANC mothers according to their Parity are 72% of ANC mothers were primigravidas and 28% of them were multigravidas. : Percentage wise distribution of ANC mothers according to their gestational age(wks) are 36% of ANC mothers were having gestational age of 28-30 weeks, 44% of them had between 31-33 weeks and 20% of them had gestational age of 34-36 weeks [41-50].

The clients checklist shows that sepsis was present in 36% of ANC mothers, premature rupture of membrane was present in 12% of ANC mothers, low birth weight baby was present in 60% of ANC mothers, admitted in NICU was present in 72% of ANC mothers, intraterine growth restriction was present in 36%, birth asphyxia was present in 44% and fetal distress was present in 4% of ANC mothers. restriction was present in 36%, birth asphyxia was present in 44% and fetal distress was present in 4% of ANC mothers.

the correlation between the age in years of ANC women from a certain hospital and the oligohydramnios score for maternal and neonatal outcomes. The estimated "F" value, 34.74 at the 5% level of significance, was substantially higher than the tabulated "F" values of 3.44 (df=2,22). Additionally, the calculated 'p'=0.0001 was significantly below than the permissible
level of significance, which is 'p'=0.05. As a result, it is inferred that the oligohydramnios score of ANC moms is statistically related to both their maternal and neonatal outcome.

The relationship between the oligohydramnios score and the educational status of ANC moms from a particular hospital. The computed "F" value at the 5% level of significance was 17.89, however the tabulated "F" values were only 3.44 (df=2, 22). Additionally, the computed p value of 0.0001 was substantially lower than the permissible level of significance, p=0.05. As a result, it is inferred that the oligohydramnios score of ANC moms is statistically related to both their maternal and neonatal outcomes.

the relationship between the oligohydramnios score and the annual income of ANC moms from a certain hospital and the maternal and newborn outcome. The estimated "F," which was 1.39 at the 5% level of significance, was substantially lower than the tabulated "F" values, which were 3.44(df=2,22). Additionally, the calculated "p" value of 0.26 was significantly greater than the allowed level of significance, which is "p"=0.05. As a result, it is inferred that the oligohydramnios score of ANC mothers' maternal and neonatal outcomes is statistically correlated with their annual income [51].

the correlation between the parity of ANC moms from a certain hospital and the oligohydramnios score for maternal and neonatal outcomes. The estimated 't' value, 0.73 at the 5% level of significance, was substantially lower than the tabulated 't' values of 2.07(df=23). Additionally, the calculated "p" value of 0.47 was significantly greater than the accepted level of significance, which is "p"=0.05. So it follows that oligohydramnios score, a maternal and neonatal outcome, is statistically related to the parity of ANC women.

the relationship between the gestational age of ANC moms from a particular hospital and the oligohydramnios score's effects on both the mother and the baby. The tabulated "F" values were 3.44(df=2,22), which is significantly larger than the calculated "F," which was 0.04 at the 5% level of significance. Additionally, the calculated 'p'=0.95, which was significantly greater than the accepted level of significance, i.e. 'p'=0.05, was used. As a result, it can be inferred that the gestational age of ANC moms is statistically related to both their maternal and neonatal outcome of oligohydramnios score.

By using Parallel form method of reliability, it is found to be 0.8207 and hence tool is reliable and valid.

This study was carried out to evaluate the maternal and newborn outcome of oligohydramnios among ANC women. In order to evaluate the maternal and neonatal outcome, a descriptive research design was used [52-54].

**RECOMMENDATIONS:**

On the basis of the findings of the study, it is recommended that the following studies can be conducted,

To determine the prevalence of oligohydramnios among ANC moms, a comparable study can be conducted on a wide scale in rural areas of the nation.

To determine the prevalence of oligohydramnios among ANC moms, a large-scale investigation can be conducted that includes urban locations across the nation.

A study can be under taken with large sample size to assess the maternal and neonatal outcome of oligohydramnios among the ANC mothers.

A 24hours dedicated helpline could be set to provide assistance to those who want to know about the oligohydramnios

Based on my study on assessment of maternal and neonatal outcome of oligohydramnios among the ANC mothers who are suffering from the symptoms of oligohydramnios .

I would like to recommend routine screening and antenatal visit of at risk population followed by early and adequate treatment of all women with oligohydramnios.
CONCLUSION:

This thesis leads to the following conclusion, which examines how the researcher used a descriptive research design to evaluate the maternal and newborn outcomes of oligohydramnios among ANC moms after doing a thorough analysis in this section. The maternal outcome was divided into the following categories: sepsis, perineal laceration, postpartum haemorrhage, preterm delivery, and stillbirth. The neonatal outcome is further divided into the categories of low birth weight infants, Apgar scores at 1 and 5 minutes, reflexes, congenital anomalies, admission to the NICU, intrapartum depression, birth asphyxia, foetal distress, delayed lung maturation, preterm delivery, and stillbirth.

Association of maternal and neonatal outcome of oligohydramnios with their demographical variables found is not significant with the demographic variables. In conclusion, our current study shows that the assessment and low level of amniotic fluid, due to adverse outcome, it is recommended that all the women may be increase the ANC visit to reduce the risk of oligohydramnios in ANC mothers.

REFERENCES


