Research Paper Medical Science

Study of Foetal Outcome in Patients Detected With Oligohydramnios in the Antepartum Period.

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ABSTRACT

Oligohydramnios refers to amniotic fluid volume that is less than expected for Gestational age.
Aim of the Study: - The study of fetal outcome in severe and moderate oligohydramnios.
Materials and Methods: - It is a prospective case control study comparing 100 cases of severe Oligohydramnios with AFI < 5 with 100 cases of moderate oligohydramnios with AFI 5.1 to 8cm.
Conclusion: - Oligohydramnios detected in the antepartum period is an indicator of poor fetal Outcome.

KEYWORDS Oligohydramnios, Ultrasonography, Amniotic Fluid Index.

INTRODUCTION:
Amniotic fluid which surrounds developing fetus in amniotic sac provides several benefits to the fetus. Amniotic fluid volume is an indicator of fetal condition and oligohydramnios is an indicator of chronic fetal hypoxia. Amniotic fluid Index is a predictor for adverse fetal outcome. AFI ≤ 5cm or single deepest pocket < 2cm is defined as oligohydramnios. AFI can be measured by 4 quadrant technique described by Phelan et al in 1987.

AIMS AND OBJECTIVES OF STUDY: -
1. To study the fetal outcome in patients detected with oligohydramnios in the antepartum period.
2. To compare fetal outcome in severe and moderate oligohydramnios.

MATERIALS AND METHODS: -
The study was carried out on two hundred antenatal women who attended the institute of Obstetrics and Gynecology, Government General Hospital, Kurnool from 2012 January to September 2013. It is a prospective case control study comparing 100 cases of severe oligohydramnios having Amniotic Fluid Index less than 5 centimeters as study group with 100 cases of moderate oligohydramnios having AFI of 5.1 to 8cm as control group as well as study group. Both groups are matched for other variables like age, parity and gestational age. The cases were taken randomly.

Inclusion Criteria:-
1. Singleton Pregnancy.
2. Gestational age after 37 weeks of pregnancy.
3. Oligohydramnios confirmed by ultrasound with AFI ≤ 5cm and AFI 5.1 to 8cm.
4. Non anomalous fetus.
5. Intact membranes at the time of testing.

Exclusion Criteria:-
1. Multiple Pregnancies.
2. Pregnancies with maternal complications.
3. Premature rupture of membranes.
4. 1st and 2nd trimester Pregnancies.

Perinatal outcome in these two groups had been studied separately. The criteria for diagnosing oligohydramnios were height of the uterus less than that of gestational age on clinical examination, abdominal girth less than normal, ultrasonographic measurement of liquor pockets and AFI less than normal for that gestational age.

Quantitative amniotic fluid volume was measured by 4 quadrant method, CTG/NST was performed, caesarian section was done in cases with fetal distress. Fetal mortality and morbidity was studied. Perinatal outcome was inferred by noting the incidence of meconium stained liquor, mode of delivery, indication for caesarean section, APGAR Score, admission to NICU and neonatal death. The Chi square test (x2) was applied to compare the two groups. The value of probability (P) < 0.05 was taken as significant. Those with P < 0.01, P<0.005 and P < 0.001 were taken as very significant. The Results were tabulated and analysed.

Figure -1

ULTRASONOGRAM SHOWING AFI 1.8 CM

DISCUSSION AND SUMMARY: -
In the study group I, the mean AFI was 3.3cm with a standard deviation of 1.12cm, in the study group II, mean AFI was 6.85cm. Post term pregnancy was seen in 43% with AFI ≤ 5cm, compared to 25% and 15.38% women in study by Sriya. R and Chandra.P respectively. Incidence of meconium stained liquor 38% statistically higher in AFI ≤ 5cm, coincides with studies of Heish et al, Shmoys et al, Redzko et al, Rutherford et al [1987], Chandra P et al(2000).

In the present study, incidence of induction of labor, incidence of caesarean section (68%), incidence of emergency caesarean section (58), incidence of primary LSCS (85.3%), incidence of fetal distress is statistically higher in the group with AFL≤ 5cm. In the present study, there is an increased incidence of perinatal mortality 9% in study group-I when compared to 3% in study group II, where as it was 1.4% in study done by Casey et al.

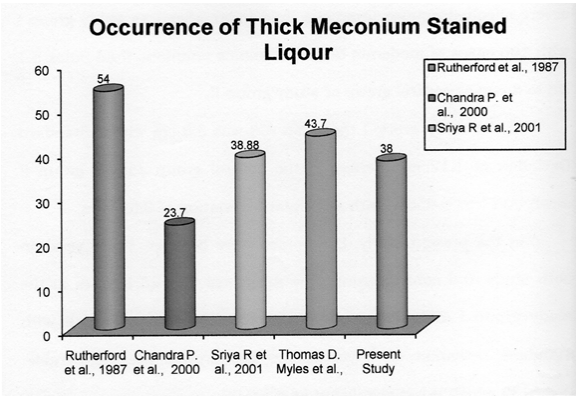
The APGAR score < 7 was seen in 38%, Low birth weight in 41%, 35% of newborns were admitted in neonatal ward for various morbidities like hyperbilirubinemia, birth asphyxia, meconium aspiration etc. Study by Sriya et al [2001] showed even higher incidence of [88.88%] admission to NICU. There were 9 perinatal deaths in study group-I, compared to 3 in group-II. Incidence of respiratory distress syndrome was nil in both groups correlates well with other studies. Incidence of birth asphyxia [14%], IUGR [41%], meconium aspiration syndrome [12%] were statistically higher in group with AFI ≤ 5cm. This is shown in the table No.1

SUMMARY OF FOETAL OUTCOME

Out Come Parameters	Study Group I	Control group/ Study Group II
Thick Meconium Stained Liquor	38	26
Induction of Labour	68	38
LSCS for Fetal Distress	44	21
Forceps Delivery for Fetal Distress	4	3
APGAR score <7	38	16
Birth Weight ≤ 2.5kg	41	25
Admission to Neonatal Ward	35	25
Perinatal Mortality	9	3
Birth Asphyxia	14	10
Meconium Aspiration Syndrome	12	6
Hyper Bilirubinemia	13	8

TABLE NO.1

Incidence of thick meconium stained liquor of other studies is shown in the following picture.



CONCLUSION:

The incidence of perinatal mortality is becoming less. This is due to early ultrasound scanning, detection of decreased AFI in early stage and immediate caesarean section. Also with good nutrition, regular antenatal checkup, serial ultrasonography, early detection of decreased fetal movements, early detection of fetal distress, NST/CTG, with good antenatal care fetal outcome is becoming good. Other factors affecting are early referral from peripheral hospitals, Institutional deliveries and proper education.

Determination of AFI is a valuable screening test for predicting fetal distress in labor requiring caesarean section. In presence of severe oligohydrammios, the incidence of thick meconium stained liquor, development of fetal distress, the rate of LSCS, low APGAR score, low birth weight and perinatal morbidity and mortality are high.

All these findings lead to the conclusion that oligohydramnios detected in the antepartum period is an indicator of poor fetal outcome.

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