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Neonatal Outcome In Oligohydroamnios: A Prospective Study From Government Medical College Baramulla.

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Abstract

Oligohydramnios is a threatening condition and is associated with increasedfetal morbidity and mortality, therefore,early detection ofoligohydramnios and its management may helpin reduction of perinatal mortality and morbidity and hence decrease in caesareandeliveries.Oligohydramnios has been associated withincreased risk ofintrauterine growth retardation (IUGR), Increased caeserian sections due to fetal distress, low APGAR scores and increased NICU admissions.

Aim: Aim of this study was to know the fetal outcome in oligohydramnios.

Methods: A Prospective study of 96 patientswith Oligohydramnios in third trimester of pregnancy wereselected aftersatisfying inclusion and exclusion criteria at GMC Baramulla. Confirmation of Oligohydramnios was done by measuring Amniotic fluid index (AFI).

Results: In our study patients mostly were in age group of 24 to 28. Incidence of oligohydramnios was more inprimipara (66.2%), withoperative morbidityalso more. Most commoncause ofOligohydramnios in our study was idiopathic (45.4%). Operative morbidity in our study wassignificantly. greaterin Non-reassuring Fetal Heart Rate (FHR) (82%) as compared to reassuring FHR (30%).

Conclusions: Oligohydramnios is frequent occurrence and demands intensive feta surveillance and proper antepartum and intrapartum care so that perinatal morbidity and mortality and maternal morbidity can be reduced

Keywords: APGAR SCORE, Amniotic Fluid Index (AFI), Fetal outcome, Oligohydramnios

Introduction

Oligohydramnios relatively a common complication of pregnancy. often encountered in clinical practice.Its incidence is reported in 1 to 5 % of total pregnancies[1,2]. Oligohydramniosrefers to amniotic fluidvolume less than expectedfor gestational age and is typically diagnosed byultrasound examination and described quantitatively as amniotic fluid index [AFI] <5[3,4]. Diminished. An adequate amniotic fluid volume is critical to allow normal fetal growth and movement, and cushions fetusand umbilical cord [4].

Reduction in amniotic fluid volume has been associated with increased risk of meconium aspiration syndrome (MAS), greater risk of IUGR, umbilical. cord compression, congenital anomalies [5,6].

Aims And Objective:

The main aim and objective of our study is to study the effect of oligohydramnios on fetal outcome in terms of Birth weight, APGAR score, NICU admissions and perinatal mortality.

Methods:

Our study was conducted at Government Medical College Baramulla over a period of one year i.e from July 2022 to June. 2023.In our Prospective study total

number of 96 patients were enrolled after fulfilling inclusion and exclusion criteria.

Inclusion Criteria:

Oligohydramnios (AFI <5cm)

Singelton Pregnancy with intact membranes and gestational age >37 weeks.

Exclusion Criteria:

Polyhydramnios

Fetal congenital anomalies

Multiple pregnancies

Premature rupture of membranes

Gestational age less than 20 weeks and>42 weeks of gestation.

After taking informed written consent, all cases were studied for fetal outcome. A detailed history with proper examination and all required investigations were done in all cases in our study. oligohydramnios diagnosed by USG by measuring AFI and fetal surveillance was assessed by Biophysical profile and NST in our study. In present study 38.5% patients were in the age group between 21 to 24 years and 55.2% patients were in the age group between 25 to 28 years.

TABLE 1: Showing Demographic data of patients

AGE GROUP	NUMBER	P-value
21 -24	37 (38 .5%)	< 0.01
25-28	52 (55.2%)	
29-32	7 (6.3%)	
MEAN AGE IN YEARS: RANGE		

In our study 46.9 % cases were primigravida while 26% cases were P 1, 17.7 % cases were P 2 and 9.4 % cases were P3

TABLE 2; Showing number of patients in relation to parity

	NUMBER	P-value
PRIMIGRAVIDA	44 (45.83%)	<0.01
P1	24 (25%)	
P2	16 (16.6%)	
P 3 OR MORE	12 (12.5%)	

Most common cause in our study was idiopathic (66.6 %) followed by PIH (24%).

TABLE 3: Risk Factors Associated with Oligohydramnios

RISK FACTORS	NUMBER (%)	P VALUE
IDIOPATHIC	64 (67 %)	<0.01
BREECH	2 (2 %)	
PIH	23 (24 %)	

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>40 WKS	7 (7 %)	

TABLE 5 : Depicts Fetal Outcome In Oligohydramnios

PARAMETER	NUMBER (%)	P-value
1. APGAR SCORE AT 1 MIN.		<0.01
< 7	22 (23%)	
>7	74 (67%)	

Table 6: Number Of Patients As Per Birth Weight

2.BIRTH WEIGHT (WT)	NUMBER (%)	P-value
LESS THAN 2 KG	10 (10.5 %)	<0.01
2 TO 2.5 KG	50 (52 %)	
2.5 TO 3	22 (23 %)	
MORE THAN 3KG	12 (12.5%)	

Table:

NICU ADMISSIONS			
	YES	NO	P Value
NUMBER	14 (14.6)	82 (85.4)	<0.01
CRITERIA OF NICU ADMISSIONS			
LBW	4 (28.6)		P value
Respiratory Distress Syndrome	7 (50%)		0.596
Meconium Aspiration Syndrome	3 (21.4)		

Table 4: Showsnon-Stress Test

NON-STRESS TEST	NUMBER	PERCENTAGE (%)	P-value
NON-REACTIVE	45	47 %	0.945
REACTIVE	51	53 %	

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Discussion:

Ninetysix (96)patients enrolled with gestational age between 20 to 42 weeks of gestation with amniotic fluid volume (AFI) less than 5 cms were enrolled in our study. Majority of the patients in our study were in the age group between 25 to 28 years with increased incidence of oligohydramnios in primigravida (46.9 %)which is in correlation with the study of Petrozella etal [7] and Krishna Jagatai etal [5].

In or study 23 % neonates were having APGAR Score less than 7 at one minutes ,this is concurrent with reports by Jayati Nath etal[8] . and Nazlima etal [9]. In present study Non stress test (NST) was reactive in 53 % of cases and non-reactive NST was seen in 47 % of cases .while in 47 % cases with non-reactive NST 30 were Idiopathic .12 cases were PIH and 3 cases were >40 weeks gestation which is in consistence with reports from Ghike et al [10] .

In our study. NICU admission rate was 14.6 % which is consistent as reported by Jandial et al and Garmel et al noticed that the rate of NICU admission was found to be 18% and 16% respectively[11,12]. In our study 50% of neonates have birth weight between 2 to 2.5 kg which is consistent as reported by Manning et al [13].

Conclusion:

As we know one of the important components of Biophysical profile is assessment of amniotic fluid volume. Whichin turn is an important tool in antepartum fetal surveillance so as to predict perinatal outcome. The presemt study concludes that women with oligohydramnios experience significantly higher adverse perinatal outcomes. Post term pregnancies and primigravida were important determinants of newborn outcome, therefore increased surveillance among post term pregnancies and primigravida to detect oligohydramnios so that timely intervention can be implemented to prevent perinatal complications.

Ethical Approval: The study was approved by the Institutional Ethics Committee

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