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Prenancy Outcome in Oligohydramnios – A Retrospective Study

Medical Science

KEYWORDS :

Soumya Ramakrishnan	Yenepoya Medical College
Rajalaxmi Kamath	Yenepoya Medical College
Yogesh Bangera	Yenepoya Medical College
Tanya Susana	Yenepoya Medical College

ABSTRACT

Background : Oligohydramnios is decreased amount of amniotic fluid affecting3-5% of all pregnancies. Pregnancieswitholigohydramnios are associated with increased risk of maternal & fetal morbidity. Early detection of oligohydramnios and its management may help in reduction of perinatal morbidity and mortality and maternal complications.

Objective : To study the maternal&fetal outcome in pregnancies complicated by oligohydramnios .

Material& Methods : A retrospective hospital based study was carried out in the Department of Obstetrics&gynecology of Yenepoya Medical College; a tertiary health care referral centre in Mangalore, Karnataka over a period of 2 years from February 2012 to February 2014.Statistical analysis was not used since it is a descriptive study.

Results : Out of the 50 patients subjected to this study, majority of the patients were multigravidas belonging to the age group 20- 30 years. The incidence of hypertension in preganacy, postdatism, IUGR, fetal anomalies were 24%, 20%, 28% & 10% respectively; Idiopathic oligohydramnios being 14%.14% had spontaneous vaginal delivery, 18% delivered vaginally after induction, 42% had emergency caesarean section& 26% had elective caesarean section.The incidence of fetal distress was 36%& 1 min APGAR of <7 was 46% (n=23).

Conclusion : The conclusion from this study is that oligohydramnios is a high risk factor in pregnancy & requires proper antepartum care, intensive fetal surveillance and intrapartum care.

INTRODUCTION

Oligohydramnios is decreased amount of amniotic fluid affecting 3-5% of all pregnancies. The expected amount of amniotic fluid varies with period of gestation. Oligohydramnios is defined as amniotic fluid index (AFI) less than 5cms or single deep vertical pocket (SDP) less than 2 cms. Oligohydramnios can occur in any trimester but is more common in 3rd trimester. About 12% of women, whose pregnancy continue for two weeks beyond expected date of delivery develop oligohydramnios.

Amniotic fluid volume is an important indicator of fetal well being. Pregnancies with oligohydramnios are associated with increased risk of induction of labour ,increased risk of caesarean section, risk of adverse perinatal outcome such as congenital anomalies, fetal distress in labour, meconium passage, low APGAR score of neonate, neonatal resuscitation etc. Decreased liquor specially in 3rd trimester has been associated with multiple fetal anomalies like pulmonary hypoplasia & IUGR. Oligohydramnios in 3rd trimester has better prognosis than in 2nd trimester. Early detection of oligohydramnios and its management may help in reduction of perinatal morbidity and mortality and maternal complications.

This study was conducted to find out the effects of oligohydramnios - its maternal & perinatal outcome

MATERIAL & METHODS

A retrospective hospital based study was carried out in the Department of Obstetrics & gynecology of Yenepoya Medical College; a tertiary health care referral centre in Mangalore, Karnataka over a period of 2 years from February 2012 to February 2014. Ethical Clearance was obtained for this study from the institution. Inclusion criteria for the study group was singleton pregnancy of any period of gestation with intact membrane &ultrasound showing AFI ≤ 5cms. Exclusion criteria was multiple gestation &patients with history of premature rupture of membrane.

All selected outcome variables were recorded on a printed profoma in the hospital & the data analysed. Findings were analyzed with special emphasis on maternal outcome & fetal outcome. Selected outcome variables included : maternal age, gestational age, amniotic fluid volume, birth weight, parity, maternal complication, mode of delivery, neonatal morbidity, congenital anomaly, APGAR score & perinatal mortality. Statistical analysis was not used since it is a descriptive study

RESULTS

50 pregnancies which met all the parameters in the inclusion criteria were taken into consideration in this study

Maternal age	No of patients (n =50)	Parity	No of patients (n=50)
< 20yrs 20-30yrs > 30yrs	4 (8%) 32 (64%) 14(28%)	Primigravida Multigravida	21(42%) 29(58%)

Gestational age	No of patients (n =50)	Amniotic fluid index	No of patients (n=50)
< 30 weeks	3(6%)	1	6(12%)
30-34 weeks	5(10%)	2	5(10%)
34-37 weeks	11(22%)	3	10(20%)
37-40 weeks	21(42%)	4	14(28%)
> 40 weeks	10(20%)	5	15(30%)

Risk factors associated with oligohydramnios(maternal &fetal)

Risk factor	No of patients
- Hypertension in pregnancy - Postdated - IUGR	12 (24%) 10(20%) 16(28%)
- Fetal anomalies - Idiopathic	5(10%) 7(14%)

Mode of delivery

Mode of delivery	No of patients
- Spontaneous vaginal delivery	7(14%)
- Induced delivery	9(18%)
- Elective lscs	13(26%)
- Emergency lscs	21(42%)

Fetal outcome

Fetal outcome	
1) Apgar score (<7)	
- At 1 minute	23(46%)
- At 5 minute	16(28%)
2) Meconium aspiration	4(8%)
3) Fetal distress	18(36%)
4) Still birth	3(6%)

Out of the 50 patients with confirmed oligohydramnios; 64% (n=32) belonged to the age group 20-30years. By parity, 58% (n=29) were multigravidas&42% (n=21) were primigravida. Considering gestational age 20% (n=10) were postdated.

Maternal complication like hypertension in pregnancy was associated with oligohydramnios in 24% of cases(n=12) & IUGR in 28% of cases (n=14). Considering mode of delivery 14% (n = 7) of patients had spontaneous onset of labour& delivered vaginally with requirement of augmentation , 18% (n=9) patients had successful vaginal delivery after induction, 26% (n=13) patients had elective caesarean section considering other obstetric indication &42% (n=21) patients had emergency caesarean section ; the main indication being fetal distress. 10% (n=5) of fetuses were associated with congenital anomaly; mainly urinary tract anomalies. The incidence of fetal distress was 36%(n=18) , 1 min APGAR of <7 was 46% (n=23).

DISCUSSION

Out of the 50 patients subjected to this study, majority of thepatients were multigravidas belonging to the age group 20- 30 years. 42% of patients belonged to gestational age of 37-40 weeks.The incidence of oligohydramnios is more in multigravidas in our study. In a similar study conducted by Krishna Jagathia et al the incidence was more in primigravida(12).

Hypertensive disorders which cause chronic placental insufficiency is a major factor causing oligohydramnios. In the present study 24% of hypertensive patients (mild & severe preeclampsia) were associated with oligohydramnios. In a similar study conducted by Preshit chatte et al 8% of patients had mild or severe preeclampsia(6).Postdatism is another important etiologic factor for oligohydramnios; the reason being placental insufficiency.In this study 20% of patients were postdated.

In a similar study conducted by Guin Gita et al 54% of patients were postdated(1).

IUGR was associated with oligohydramnios in 28% of cases in the present study. In a similar study conducted by Vidhyadhar B et al the association of IUGR was 20%(5).

Shipp TD et al in their study found the association of IUGR to be 20.4%(3).

Fetal congenital anomaly is another associated etiology of oligohydramnios. In our study we found 10% association of fetal anomaly (1 case with bilateral hydroureteronephrosis, another with dysplastic kidney & the other two being skeletal anomalies). In a similar study conducted by Golan A et al there was 11% fetal anomalies; the skeletal & urinary system most predominant(9).

Fetal distress (non reassuring NST) was seen in 36% cases in present study. In a similar study conducted by Sriya R et al 36.11% had fetal distress(8). Umber A conducted a similar study & found that 7% of patients had non reassuring NST & 71% patients had deceleration of fetal heart rate(5). 42% of patients in the present study underwent emergency lscs, of which the indication in 85% was fetal distress. In a similar study conducted by Sadaqat Jabeen et al 38.4% of cases underwent emergency lscs& majority of it were for fetal distress(2). But Grub et al in their study did not observe any significant increase in caesarean section in patients with oligohydramnios when compared to those with normal liquor(7). In this study 46% of neonates had low APGAR (less than 7 at 1 minute). In a study conducted byPreshit Chatte 16% of patients had low APGAR (less than 7 at 1 minute) (6). In a similar study conducted by Ek S et al on patients with oligohydramnios; no significant differences were found for any maternal or neonatal outcome(10).

CONCLUSION

The incidence of oligohydramnios is increased in presentscenariodue to routinely performed obstetric ultrasound.Oligohydramnios is an indicator of poor perinatal outcome. It is associated with fetal heart rate abnormalities, meconium staining of amniotic fluid, umbilical cord compression, poor tolerance of labor, lower Apgar scores, and fetal acidosis. In cases of intrauterine growth restriction (IUGR), the degree of oligohydramnios is often proportional to growth restriction & is reflective of the extent of placental dysfunction. The time & mode of delivery depends on the severity of oligohydramnios & status of fetal wellbeing. From this study we conclude that oligohydramnios is a high risk pregnancy &proper antepartum care, intensive fetal surveillance and intrapartum care are required in a patient witholigohydramnios.

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