



Study of 50 Cases for Outcome of Labour in Oligohydroamnios

KEYWORDS

Oligohydramnios , AFI , Perinatal morbidity and mortality

Dr Harshil Patel

(MS OBGY) Sheth V.S.General Hospital, Ahmedabad

Dr Shashwat K Jani

(MS OBGY) Asst Prof. Sheth V.S.G.Hospital, Ahmedabad

Dr Sushma R Shah

(MS OBGY) HOU Sheth V.S.G.H , Ahmedabad

ABSTRACT Background: The study was conducted to observe outcome of labour in form of perinatal morbidity and mortality and maternal outcome in form of induction and operative deliveries.

Methods: 50 cases of Oligohydramnios from month of April 2014 to June 2014 in our hospital. Data was collected from indoor case papers of patients admitted during this period of time.

Results: 44% cases were having idiopathic cause and operative morbidity was highest (50%) with PIH.

Higher (54.6%) maternal morbidity observed in NST non-reactive group with no perinatal mortality as compare to abnormal Doppler changes, where operative morbidity is almost equal but perinatal mortality was higher.

7 patients were induced out of them 6 (85.7%) delivered vaginally.

Total 26% of patients had intra-partum complications in form of MSL and fetal distress.

Cesarean done in 19 patients and most indication was fetal distress (37.5%).

13 babies admitted in NICU among them 6 perinatal death noted.

Conclusion: Oligohydramnios is frequent occurrence and demands intensive fetal surveillance and proper antepartum and intrapartum care. Due to high rate of perinatal morbidity, rates of cesarean section are rising, but decision between vaginal delivery and cesarean should be balanced so that unwanted maternal morbidity prevented and perinatal morbidity and mortality reduced.

Introduction

Oligohydramnios is defined as when AFI < 5 cm in USG finding. 1 In other definition a single vertical pocket less than 2 cm is defined as Oligohydramnios. 3 Oligohydramnios is associated with maternal morbidity. Increased induction of labor and elective cesarean deliveries are currently practiced for better perinatal outcome. Early detection of oligohydramnios and its management may help in reduction of perinatal morbidity and mortality on one side and decreased cesarean deliveries on the other side.

Methods

50 patients in the third trimester of pregnancy with oligohydramnios from April 2014 to June 2014 selected after satisfying inclusion and exclusion criteria. Detailed history, investigations, USG, treatment by hydration or amino acids, NST, Doppler (in selected cases), decision of delivery and outcome of baby.

Results

-Around 64% of patients were in 20-25 years while 26% were in 26-30 years age group.

-Incidence of Oligohydramnios was more in multipara (52%) but operative morbidity more in primipara (55%)

Associated conditions and maternal outcome of labor

Table No.1

Associated conditions	Vaginal deliveries		Cesarean	Total
	Normal	Assisted		
PIH	6(50%)	-	6(50%)	12
Postdatism	5(62.5%)	-	3(37.5%)	8
Fever	2(100%)	-	-	2
Idiopathic	14(63.7%)	-	8(36.3%)	22
Others	4(66.7%)	-	2(33.3%)	6

Highest percentage of patients had no associated condition or idiopathic etiology (44%). Highest rate of operative morbidity was associated with PIH (50%).

❖ MANAGEMENT AND MATERNAL MORBIDITY

• NST

-NST4 was done in 17(34%) cases, out of which 11(22%) were non-reactive.

Table No 2

NST	Vaginal delivery		Cesarean	Total
	Normal	Assisted		
Reactive	4(66.7%)	-	2(33.3%)	6
Non-reactive	5(45.5%)	-	6(54.5%)	11
				17

Operative morbidity was significantly higher in NST non-reactive (54.5%) group than NST reactive (33.3%) group.

• DOPPLER

-Doppler4 was done in 14(28%) cases out of which 5 was abnormal.

Table No 3

Doppler	Vaginal delivery		Cesarean delivery	Total
	Normal	Assisted		
Normal	4(44.5%)	-	5(55.5%)	9
Abnormal	3(60%)	-	2(40%)	5
				14

• HYDRATION AND AMINOACIDS

5 Antenatal patients were given intravenous fluids (as hydration therapy) and amino acids, out of which 1 patient raised AFI >8 and delivered baby more than 2.5 kgs. Rest of the patients did not show any improvement.

• INDUCTION OF LABOUR

Total 7 patients induced, 5 by Cerviprime and 2 by Misoprost. All of them had antenatal fetal surveillance in form of NST/ Doppler. 6 of them delivered vaginally while one undergo LSCS for MSL.

Table No 4

	Both N	One Abnormal	Total
Vaginal	2	4	6
Cesarean	-	1	1
			7
LB	2	3	5
SB	-	-	-
NND	-	2	2
			7

2 of them ends into NND who had abnormal Doppler. 2 babies were born 1.7 and 1.2 kg. So we can say if they would have been delivered by cesarean, outcome would have been different.

Same time 3 babies had non-reactive NST out of which 2 delivered vaginally and one by cesarean and all 3 survived.

From this, we can infer that abnormal Doppler is associated with high perinatal mortality if induction and vaginal deliveries undertaken. So, judicious decision in favors of cesarean to be taken in such cases. In cases of abnormal NST, induction and vaginal deliveries can be contemplated hoping well perinatal out come and reducing operative morbidity.

❖ INTRA PARTUM COMPLICATIONS

Out of 50, 13 patients had intrapartum complications in form of MSL and non-reassuring heart rate pattern 7 and fetal distress alone 6. Out of 50, 19 undergone cesarean.

Thus Oligohydramnios is associated with increased operative deliveries and thus increased maternal morbidity.

❖ OLIGOHYDROAMNIOS AND PERINATAL OUTCOME

• Relation to Birth Weight

18(36%) babies had birth weight < 2.5kg

Incidence of low birth weight babies is higher in Oligohydramnios except in post maturity where the babies may have average birth weight.

• Relation to Growth Retardation

In present study, 76% babies were AGA and 24% were SGA3.

• APGAR score and Oligohydramnios

10(20%) babies show APGAR score < 7 in 1 – 5 min.

• NICU admission and Oligohydramnios

13(26%) babies were admitted in NICU

• Congenital anomalies and Oligohydramnios

In present study, 1 baby had congenital anomalies.

Following baby with anomalies expired within 7 days after birth.

Baby was having B/L PUJ obstruction and duodenal atresia.

• Perinatal Deaths and their Causes

Table No 5

Causes of deaths	Number
Septicemia	1
HMD and prematurity	2
Meconium aspiration syndrome	3

• Mode of Delivery and Perinatal Outcome

Table No 6

Mode of delivery	Preterm			Full term		
	Alive	SB	NND	Alive	SB	NND
Vaginal	5	-	2	20	-	3
LSCS	4	-	-	15	-	1

Out of 50, 39 babies were full term out of which 20 delivered vaginally and 3 expired in early neonatal period. One NND occurred in one LSCS case.

Amongst all, 11 babies were pre term, out of which 7 delivered vaginally and among 2 expired in early neonatal period.

DISCUSSION

- Highest percentage of patients had no associated condition or idiopathic etiology (44%). Highest rate of operative morbidity was associated with PIH (50%).
- Operative morbidity was significantly higher in NST non-reactive (54.5%) group than NST reactive (33.3%) group.
- Abnormal Doppler is associated with high perinatal mortality if induction and vaginal deliveries undertaken. So, judicious decision in favors of cesarean to be taken in such cases. In cases of abnormal NST, induction and vaginal deliveries can be contemplated hoping well perinatal out come and reducing operative morbidity.
- Oligohydramnios is associated with increased operative deliveries and thus increased maternal morbidity.
- Oligohydramnios is associated with higher neonatal and fetal morbidity and mortality.

Abbreviations

AFI	Amniotic fluid index
AGA	Appropriate for gestational age
HMD	Hyaline membrane disease
LB	Live birth
LSCS	Lower segment cesarean section
MSL	Meconium stained liquor
NICU	Neonatal intensive care unit
NND	Neonatal death
NST	Non stress test
PIH	Pregnancy induced hypertension
SB	Still birth
SGA	Small for gestational age
USG	Ultrasonography

Declaration

Funding: None

Conflict of interest: None declared

Ethical approval: Not required

REFERENCE

1. William : text book of Obstetrics, 23rd edition , 21: 495-498 | 2. Manning FODDER ARGONOMIST , Hill LM, Platti LD, Quantitative amniotic fluid volume determination by ultrasound : am J Obstet Gynecol 1981 ,139 : 254-59 | 3. IAN Donald's practical obstetric problems ,19: 380-84 | 4. Manning FODDER ARGONOMIST. Harman CR, Morrison I, Menticoglou SM Lange IR, Jhonson JM. Fetal Assessment based on fetal biophysical profile scoring. Am J Obstet Gynecol 1990, 162(3) : 703-709 | 5. Phelan JP, Smith CV, Small M : Amniotic fluid volume assessment with the four quadrant technique : J Reprod Med 1987, 32 : 540-42 | 6. Ronzoni S, Marconi AM, Paolini CL, Teng C et al : The effect of a maternal infusion of aminoacids on umbilical uptake in pregnancies complicated by Intrauterine growth restriction. Am J Obstet Gynecol.2002, September; 187(3) 741-46 |