

Unexplained Polyhydramnios and Maternal Fetal Outcome

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ABSTRACT

- Objective** To assess the maternal and fetal outcome complicated by unexplained polyhydramnios.
- Study design** Descriptive case series.
- Place & Duration of study** Department of Obstetrics & Gynecology, Shaikh Zaid Women Hospital, Chandka Medical College, Shaheed Mohtarma Benazir Bhutto Medical University Larkana, from June 2017 to June 2018
- Methodology** All women with singleton pregnancy having idiopathic polyhydramnios were included. Ultrasound was done to find out fetal biometry and amniotic fluid volume was calculated. Patients were carefully managed in antenatal period by ensuring regular visits. During delivery all the precautions were taken to prevent the maternal and fetal complications. Data was entered into a pre designed form and analyzed using descriptive statistics.
- Results** A total of 120 women with polyhydramnios were included. Abruption placentae was found in 20 (16.6%) and chorioamnionitis in 12 (10%) women. Respiratory distress in mothers was noted in 50 (41.6%), and postpartum hemorrhage (PPH) due to uterine atony occurred in 30 (25%) patients. During delivery perineal trauma occurred in 8 (6.6%) cases. Most of the patients had spontaneous vaginal delivery. Fetal malpresentation was present in 60 (50%) cases, prematurity in 25 (20.8%), cord prolapse 10 (8.33%), limb prolapse 6 (13.33%), antepartum hemorrhage (APH) 5 (12.5%) and still birth in 4 (3.33%) cases.
- Conclusions** Proper antenatal checkups are needed in women with polyhydramnios to deal with any adverse events during gestational period. At delivery trauma to mother and baby are potential events and must be prevented. PPH might result due to uterine atony.
- Key words** Unexplained polyhydramnios, Maternal outcome, Fetal outcome.

INTRODUCTION:

Accumulation of amniotic fluid is known as polyhydramnios which happens approximately in 1-2% pregnancies.^{1,2} It may result from increased

fluid formation or decrease absorption.^{3,4} It can result from variety of maternal ailments leading to accumulation of disproportionate quantity of amniotic fluid. In number of patients no cause can be identified. This is called idiopathic or unexplained polyhydramnios. In this condition no apparent cause related to placenta, maternal or of fetal origin is identified.

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Polyhydramnios may lead to number of complications during gestation, at birth and following delivery of fetus and placenta. This includes maternal respiratory distress, pain in abdomen, increase rate of instrumental vaginal delivery and cesarean section. Fetus related adverse outcomes includes malpresentation, cord prolapse, limb prolapse, preterm labor. Antepartum hemorrhage, postpartum

hemorrhage and intrauterine death of fetus are also reported.^{4,5} This study was conducted to report the maternal and fetal outcome in women with idiopathic polyhydramnios in a rural setup where reproductive health related services are scarce.

METHODOLOGY:

This was a descriptive case series conducted in the Department of Obstetrics & Gynecology, Shaikh Zaid Women Hospital, Chandka Medical College, Shaheed Mohtarma Benazir Bhutto Medical University Larkana, from June 2017 to June 2018. Women with singleton pregnancies with idiopathic polyhydramnios were included. Women with diabetes mellitus, gestational diabetes and Rhesus incompatibility were excluded.

Detailed history was taken. Record was maintained for each women from 20 weeks of gestation till the delivery. Pregnancy was monitored. Ultrasound was used to define fetal and maternal anatomy. Amniotic fluid volume was monitored regularly.

RESULTS:

A total of 120 women with singleton pregnancy with unexplained polyhydramnios were included. Of the total 80 (66.6%) patients had mild polyhydramnios with no significant maternal and fetal complications. There were 28 (23.3%) patients with moderate polyhydramnios and 12 (10%) had severe polyhydramnios. Most of the patients with moderate to severe polyhydramnios presented with maternal discomfort, dyspnea and pain abdomen. Amniotic

fluid reduction procedure under ultrasound guided was done in eight patients at 30-32 weeks of gestation in order to relieve dyspnea and pain in abdomen. In two of these women APH occurred. Six of these patients delivered at 35 weeks of gestation with no substantial complication.

Mode of delivery included instrumental aid in 20 (16.66%), SVD in 60 (50%) and cesarean section in 40 (33.33%) women. Regarding maternal complication, abruptio placentae was occurred in 16.66%, PPH in 25%, and perineal trauma 6.66% (table I). Regarding fetal complications malpresentation found in 50%, preterm labor in 20.83%, limb prolapse 13.33% (table II).

DISCUSSION:

Polyhydramnios is one of the important obstetrical complications among pregnant women. It is caused by variety of maternal and fetal conditions. The precise cause is not known in many cases thus the term idiopathic polyhydramnios is used. Lot of research has been done to find out possible etiology. Polyhydramnios is classified into three groups according to severity. Mild polyhydramnios AFI between 25-30 cm, moderate polyhydramnios AFI 30.1-35cm and severe polyhydramnios AFI >35.1cm.⁶ There has been a notable rise in the prevalence of mild polyhydramnios among all cases of polyhydramnios which is associated with low rate of congenital anomalies.⁷⁻⁹ However in our study mild polyhydramnios was noted 66.6% women and there was no associated with congenital anomalies.

Table I: Maternal Complications

Maternal Complications	Number (%)
Abruptio placentae	20 (16.66%)
Chorioamnionitis	12 (10%)
Respiratory distress	50 (41.66%)
PPH	30 (25%)
Perineal trauma	8 (6.66%)

Table II: Fetal Complications

Fetal complications due to polyhydramnios	Number (%)
Malpresentation	60 (50%)
Preterm labor	25 (20.83%)
Cord prolapse	10 (8.33%)
Limb prolapse	6 (13.33%)
APH	5 (12.5%)
Still birth	4 (3.33%)

The incidence of preterm delivery is as high as 20.5% for idiopathic polyhydramnios.¹⁰ In this study the frequency of preterm delivery was 20.8%. Research work done earlier suggests that the preterm delivery is the most common problem related with polyhydramnios. On the contrary some authors could not find this observation in their study.¹¹ A study from Turkey reports two intrauterine fetal deaths (IUFD). Moreover, Pri-Paz et al discovered the two idiopathic IUFD in their study.¹² In their study cases were diagnosed at the gestational age of 40 week and at 28 weeks. Another study reported 30 IUFD in 106 pregnancies with unexplained polyhydramnios.¹³ In our study IUFD occurred in 3.3% cases.

Regarding mode of delivery especially the cesarean section, it has been reported between 22-32%.¹⁰ In our study cesarean section was performed in 40% patients. The main indication of cesarean section is when fetus lying in an unstable position, with malpresentation, cord and limb prolapse. Most of the cases are managed by elective cesarean section. An increase in rate of cesarean section has been reported in other study.¹⁴ It is also reported that the incidence of aneuploidy is around 3.2%.¹⁵ In this study no patient had aneuploidy.

CONCLUSIONS:

Idiopathic mild polyhydramnios was the most common type found in this study. Most common maternal complication was respiratory distress followed by PPH. Fetal malpresentation was the most common challenge at delivery. Four IUFD have been reported.

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Author's Contributions:

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Fozia Shaikh: Data interpretation.

Shabana Soomro: Data collection, data analysis and manuscript writing.

Tanveer Fatima: Data collection.

Rafia Baloch: Critical Review and Final approval of the article.

Conflict of Interest:

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