ORIGINAL ARTICLE

Polyhydramnios: Heterogeneity in presentation at tertiary care hospital.

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ABSTRACT... Objective: To determine the presentation and outcome of polyhydramnios in pregnancy at a tertiary care hospital. **Study Design:** Descriptive Cross-sectional study. **Setting:** Department of Obstetrics and Gynaecology, Independent University Hospital Faisalabad. **Period:** 1-Jan-2020 to 31-Dec-2022. **Methods:** All the cases diagnosed as polyhydramnios after confirmation on ultrasonography by measuring single deepest vertical pool were included. **Results:** The total number of patients included in the study were 80. The patients having age <35 years were 62 (77.5%) while the patients having age > 35 years were 18 (22.5%). 16 patients (20%) were primigravida while 64 patients (80%) were multigravida. The patients with Mild polyhydramnios were 52 (65%), moderate polyhydramnios 21 (26.5%) and with severe polyhydramnios 7 (8.7%). The various maternal complications were as preterm labour in 11 patients (13.7%), gestational diabetes mellitus 8 patients (10%), Pre-PROM 7 patients (8.75%), PIH and its complications 3 patient (3.75%) and Placental abruption 2 patients (2.5%). while 49 patients (61.25%) had no complications. Regarding mode of delivery 13 patients (16.3%) were delivered vaginally while 67 patients (83.7%) underwent caesarean section. Fetal outcome was quite good. There were normal alive babies 67 (83.75%), anomalous 9 (11.25%) and 4 babies (5%) were diagnosed as IUD. **Conclusion:** In the present study, polyhydramnios had diversity in its presentation and maternal versus fetal outcome was associated with degree of polyhydramnios.

Key words: Fetal Outcome, Maternal Outcome, Polyhydramnios.

INTRODUCTION

Polyhydramnios is a clinical condition in which there is collection of excessive amounts of liquor in amniotic cavity around fetus. The criteria for polyhydramnios is that the deepest vertical pool equal or more than 8cm or amniotic fluid index is equal or more than 24cm.[1] Incidence is variable ranging from 0.2% to 3.9%.[2] The polyhydramnios may be idiopathic, or it may be associated with maternal or foetal condition. Uncontrolled diabetes mellitus is the most common medical disorder causing polyhydramnios. Different foetal conditions causing polyhydramnios are obstructive gastrointestinal pathologies, congenital anomalies, Rh incompatibility and multiple pregnancies.[3] Polyhydramnios can be associated with adverse outcomes like perinatal mortality, prematurity, respiratory distress syndrome and shoulder dystocia.[3,4,5,6,14,15]

Polyhydramnios is diagnosed by clinical examination when the abdomen is overdistended, the overlying skin is tense and shiny, foetal parts are difficult to palpate, and sometimes the patient is also having respiratory discomfort. All the above signs and symptoms are dependent on degree of polyhydramnios. The clinical diagnosis should be confirmed by USG. Polyhydramnios can be associated with a wide variety of underlying pathologies. Diagnostic ultrasound can attain a diagnosis in the majority of cases.[16] Both methods "The measurement of deepest vertical pool or amniotic fluid index are used for confirmation of diagnosis. Polyhydramnios can be classified as mild (25-29cm) moderate (30-34) or severe >35cm depending on amniotic fluid index.[7]

The perinatal outcome can be affected by various complications like PPROM, malpresentation, Pre-term labour, Cord prolapse, antepartum hemorrhage and postpartum haemorrhage.[5]

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The rationale of study was to find out the variety of presentation of polyhydramnios and relation of its complications associated with degree of polyhydramnios. The significance of this study increased in a teaching setup of tertiary care hospital for the categorization into low risk or high-risk population. As the services of obstetric and pediatric facilities should be categorized so that better and customized clinical approach could be offered to high risk population.

METHODS

This descriptive cross-sectional study was carried out at Independent university hospital Faisalabad from 1-Jan-2020 to 31-Dec-2022 after approval from ethical committee (No.000039-14/01/23). Non probability convenience sampling technique was used. Total number of patients admitted with polyhydramnios were 80. All patients with polyhydramnios of any age and parity after 28 weeks of gestation were included. While pregnancies associated with over distended abdomen other than polyhydramnios and before 20 weeks of gestation were excluded. Patients were recruited through outpatient department, antenatal clinic or from emergency in labour room. Detailed history was taken followed by general physical and abdominal examination. USG was done to confirm the diagnosis and to detect congenital anomalies. All the observation was noted on the predesigned Proforma. Necessary lab investigations were sent and patient's mode of delivery was decided according to obstetrical protocol. The neonate was handed over to pediatrician for detailed assessment and to look any anomaly. Data was collected and analyzed for results

RESULTS

The total numbers of patients delivered in 3 years were 1283. Among them 80 patients were identified with polyhydramnios. Results were collected and tabulated to find the outcome.

The patients having age <35 years were 62 (77.5%) while the patients having age > 35 years were 18 (22.5%).

In terms of parity 16 patients (20%) were primigravida while 64 patients (80%) were multigravida.

The distribution of patients according to amniotic fluid index was that the patient having mild polyhydramnios were 52 (65%), moderate polyhydramnios 21 (26.5%) and with severe polyhydramnios 7 (8.7%).

The various maternal complications that were seen in our study was as preterm labour in 11 patients (13.7%), gestational diabetes mellitus 8 patients (10%), Pre-PROM 7 patients (8.75%), PIH and complications 3 patient (3.75%) and Placental abruption 2 patients (2.5%). while 49 patients (61.25%) had no complications.

Regarding mode of delivery 13 patients (16.3%) were delivered vaginally while 67 patients (83.7%) underwent caesarean section.

Fetal outcome was quite good. There was normal alive fetus 67 (83.75%) Anomalous fetus were 9 (11.25%) and 4 babies (5%) were as IUD.

Maternal age	No. of Patients	%
< 35 years	62	77.5
> 35 years	18	22.5

Table-I. Distribution of patients according to maternal age n=80

Gravidity	No. of Patients	%
PG	16	20%
> P2	64	80%

Table-II. Distribution of patients according to parity n=80

AFI	No. of Patients	%
Mild	52	65%
Moderate	21	26.5%
Severe	7	8.7%

Table-III. Distribution of patients according to degree of polyhydramnios n=80

Presentation	No. of Patients	%
No complication	49	61.25%
Pre term labour	11	13.75%
GDM	8	10%
Pre-PROM	7	8.75%
PIH and complication	3	3.75%
Placental abruption	2	2.5%
Malpresentation	14	17.5%
Fetal death	4	5%

Table-IV. Distribution of patients according to variety of presentation n=80

Mode of Deliveries	No. of Patients	%
NVD	13	16.3%
Caesarean	67	83.7%

Table-V. Distribution of patients according to mode of delivery n=80

Fetal Complication	No. of Fetus	%
Normal alive fetus	67	83.75%
Anomalous fetus	9	11.25%
IUD	4	5%

Table-VI. Distribution of patients according to fetal outcome n=80

DISCUSSION

According to our study 61 patient (78%) were in age < 35 years and 18 patients (22.5%) were in age group of > 35 years. These results were comparable by study Bakhsh et.al in 2021[8] as shown in Table-I.

In present study 16 patient (20%) were primigravida with polyhydramnios and 64 patients (80%) were multigravida with polyhydramnios. these results were comparable by study Buserman and Jacoby[5,9] as shown in Table-II.

In our study mild polyhydramnios were present in 52 patients (65%), moderate polyhydramnios in 21 patients (26%) and severe polyhydramnios in 7 patients (87%). As shown in Table-III. These results are comparable by study Prerna Gupta and Sangeetasen et.al[10]

In our study polyhydramnios with maternal complication 49 patient (60.25%) no maternal complication were identified. Patient with GDM and polyhydramnios was present in 8 patients (10%). In 11 patients (8.75%) patient developed pre term labour, PROM 3 patient (3.75%), PIH and complications 2 patient (2.5%). Results of present study are in close association with study by Prerna Gupta and Jacoby.[9,10] as shown in Table-IV.

According to our study mode of delivery in patients with polyhydramnios caesarean section was high. And these results are comparable by study Taskinand Dorleijn DM[11,12] as shown in Table-V.

In this study 69 babies (83.75%) out of 80 were delivered as normal alive fetus and 9 babies (11.25%) were anomalous and 4 babies (5%) were IUD. This incidence is comparable with the study by Dashe et.al[7] as shown in Table-VI. The rise in cesarean section rate in this study is against the first look study conducted in different countries to find out the variety of presentation. This study showed a rise cesarean section rate due to late presentation of patients with complication, as study area is in low socioeconomic setting. Also, it highlighted the fact that even with early diagnosis of condition, acute and emergency sequels are very common with polyhydramnios. Knowing the fact that major contribution of patients had idiopathic etiology, consequences of condition may vary. The patients with severe polyhydramnios had antenatal as well as intrapartum complications. This necessitates the need of early diagnosis, expertise in ultrasound to define and confirm its diagnosis and early and regular evaluation in antenatal period.

CONCLUSION

The study revealed the heterogeneity in presentation of polyhydramnios and diversity in complications associated with degrees of polyhydramnios. The study necessitates the need of expertise to confirm and earlier diagnosis of condition so that customized clinical care can be offered to patients.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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AUTHORSHIP AND CONTRIBUTION DECLARATION	
1	**Tasneem Azhar:** Main author.
2	**Iram Aslam:** Data Collection.
3	**Nadia Sharif:** References writing.
4	**Uzma Manzoor:** Data collection.
5	**Saadia Bano:** Proof reading.
6	**Uzair Iqbal:** Discussion.