

Frequency of Congenital Malformation among Females with Pregnancy Along with Polyhydramnios

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ABSTRACT

Objective: To determine the frequency of congenital malformation among females with pregnancy along with polyhydramnios.

Study Design: Cross-sectional study.

Place and Duration of Study: Department of Obstetrics & Gynaecology, M. Islam Teaching Hospital, Gujranwala from 1st January 2020 to 30th June 2020.

Methodology: One hundred and fifty women with ages 20-50 years were enrolled. Patient's detailed demographics age, body mass index were recorded. Ultrasonography was used to confirm the polyhydramnios among the admitted patients (AFI >24cm) and gestational age between 25-36 weeks among pregnant women were included.

Results: Mean age of the patients was 28.9±10.76 years with mean BMI 25.24±2.91 kg/m². Single parity was observed among 67 (44.7%) patients and P5 was observed just in 7 (4.7%) patients. Mean gestational age was 30.12±12.53 weeks among pregnant women. The congenital malformations were found only in 22 (14.7%) patients while it was absent in 128 (75.3%) cases.

Conclusion: The congenital malformations can be controlled in pregnant women by regular follow up of amniotic fluid level.

Keywords: Amniotic fluid, Congenital malformations, Polyhydramnios

INTRODUCTION

The amniotic fluid is required for the proper growth and development of the fetus. It also serves as an infection barrier and assists in the maturity of fetal lung. The gestational age varies. Fetal urine: fetal cavity secretion; water motion and metabolites, fetal cavity secretion. The flow of water in the fetal skin and fetal swallowing are sources affecting the amount of amniotic fluid.¹ Polyhydramnios are the excess amniotic fluid relative to pregnancy, between placenta and fetal blood, the transudation of water and electrolytes by amnion and chorion occurs in 1% of pregnancies.²

The adverse fetal and maternal outcomes may be associated. As epidemiological data are significant, 1-3.5% pregnancies with polyhydramnios are complicated. The key causes for polyhydramnios may be multiple factors, which are fetal malformation and maternal diabetes and multiple gestations. The increase of the rate of death of the pregnant female was noted as a factor that enhances its mortality capacity in accordance with maternal age, diabetes, fetal abnormalities and fetal macrosomy. The death rate with polyhydramnios reported by Tashfeen³ was 42 per 1,000 live births, closer case monitoring during different periods of pregnancy is needed such as antepartum, intrapartum and afterpartum periods to help manage polyhydramniotic complications. The polyhydramnios in females has shown 80% of normal babies while (20%) congenital defects are observed.⁴

When observing the amount of amniotic fluid, it is not sure which abnormality would be present in the fetus. The degree of polyhydramnios in fetal irregular pregnancies is nevertheless linked to the risk of neonate premature birth. In a sample of 272 births retrospectively, there was a fetal anomaly in 89 (32.7%).⁵

MATERIALS AND METHODS

This cross-sectional trial was conducted at Department of Obstetrics & Gynaecology, M. Islam Teaching Hospital Gujranwala from 1st January 2020 to 30th June 2020 and comprised of 150 cases. Patients detailed demographics age and body mass index were recorded. Those patients who had complicated conditions, chronic illness and cardiac diseases were excluded. Ultrasonography was used to confirm polyhydramnios among the admitted patients (AFI >24cm). Gestational age between 25-36 weeks among pregnant women was included. During the calculation of amniotic fluid index, the ultrasound transducers were held perpendicular on the maternal longitudinal axis. Detailed scan for a congenital malformation has been completed and all pregnant women were monitored before delivery. The data was entered and analyzed through SPSS 24.

RESULTS

The mean age of the patients was 28.9±10.76 years with mean BMI 25.24±2.91 kg/m². Single parity was observed majority among 67 (44.7%) patients. Parity 2 was in 32 (21%), 3 parity was 26 (17.33%), 4 parity was 18 (12%), while 5 parity was minimum in numbers 7 (4.7%). Mean gestational age was 30.12±12.53 weeks among pregnant women. The congenital malformations were noted only in 22(14.7%) patients while it was absent in 128 (75.3%) cases (Table 1).

The congenital malformations were observed among 22 (14.7 %) cases. Among these, 5 (22.73%) cases were between 20-35 years of age group and the rest 17 (77.27%) cases were between 35-50 years of age. Gestational age between 25-33 weeks among these

patients was 18 (81.8%) and greater than 33 weeks were 4 (13.6%) [Table 2].

Table 1: Descriptive statistics of the women

Variable	No.	%
Mean age (years)	28.9±10.76	
Mean BMI (kg/m ²)	25.24±2.91	
Mean gestational age (weeks)	30.12±12.53	
Parity		
1	67	44.7
2	32	21.0
3	26	17.33
4	18	12.0
5	7	4.7
Congenital malformations		
Yes	22	14.7
No	128	75.3

Table 2: Comparison of congenital malformations according to age and gestational age (n=22)

Variable	No.	%
Age (years)		
20-35	5	22.7
35-50	17	77.3
Gestational age (weeks)		
25-33	18	81.8
>33	4	18.2

P<0.05

DISCUSSION

Somewhere between 0.5 and 3 percent of the pregnancy were polyhydramnios convolutes. Patient assessment and sonography are used for clinical examination. The fundal tallness and pressure of the uterine divisions are increasingly growing clinically.⁶ The liquid wave symbol is seen on the palpation of the stomach. When exposed to growth, the vaginal examination can introduce the fetal head. As pregnancies develop, there are many possible causes for Polyhydramnios. Diabetes, rhasus, chromosomal defects, pallor fetal, viral diseases (toxoplasmosis, rubella, cytomegalovirus (CMV), herpes, etc.) and fetal malformation are recognized and include these causes are also include diseases.⁷

The mean age of the patients were 28.9±10.76 years with mean BMI 25.24±2.91 kg/m². Single parity was observed majority among 67 (44.7%) patients. The results of present study was similar to the previous studies conducted by Sadiq et al.⁸ Mean gestational age was 30.12±12.53 weeks among pregnant women. The congenital malformations were found in 22 (14.7%) patients while it was absent in 128 (75.3%) cases. These results were comparable to the previous research conducted by Lalchan et al.⁹ Polyhydramnios are associated with congenital malformations.¹⁰

In the current study, the majority of pregnant women were 35-50 years old in the age group. The gestational age between 25-33 weeks was 18 (81.8%) and >33 weeks was 4 (18.2%). This is comparable to Herman et al¹¹ and Dashe et al.¹² In another study, 81.1% of pregnancies examined indicate a link between polyhydramnios and intrinsic

oddy.¹³ These findings are comparable with previous studies, which have shown that females aged 35 or older are bound to have explicit partial difficulties and fetal abnormalities, similar to the effect old enough of our sample and more complex cases revealed in the age of the maternal.¹⁴ In this study, there were no heart defects found and this is comparable to Pri-Paz et al¹⁵ and Boito et al¹⁶ were most commonly associated with polyhydramnios.

CONCLUSION

The congenital malformations can be controlled in pregnant women by regular follow up of amniotic fluid level.

REFERENCES

1. Modena AB, Fienin S. Amniotic fluid dynamics. *Acta Biomed* 2004;75(suppl):11-13.
2. Yefet E, Daniel- Spiegel E. Outcomes from polyhydramnios with normal ultrasound. *Pediatrics* 2016;137(2):e20151948.
3. Tashfeen K, Hamdi IM. Polyhydramnios as a predictor of adverse pregnancy outcomes. *Sultan Qaboos University Med J* 2013;13(1):57-62.
4. Shamim A, Neelofar M, Saima N. Fetal outcome in singleton pregnancies complicated with polyhydramnios from 28-37 weeks. *Pak Armed Force Med J* 2011; 61(3):443-6.
5. Harald A, Sandra S, Markus H. Polyhydramnios and postnatal abnormalities. *Fetal Diagn Ther* 2012;32:251-5.
6. Aviram A, Salzer L, Hirsch L, Ashwal E, Golan G, Pardo J, Wiznitzer A, Yogev Y. Association of isolated polyhydramnios at or beyond 34 weeks of gestation and pregnancy outcome. *Obstet Gynecol* 2015;125(4):825-32.
7. Vendittelli F, Janky E. Suivclinique et paraclinique d'negrossessenormale. *J Gynecol Obstet Biol Reprod* 2001;30: 51-8.
8. Sadiq A, Sadiq U, Hotiana NA, Raja A. Congenital malformation in singleton pregnancies complicated with polyhydramnios. *J Soc Obstet Gynaecol Pak* 2020; 10(1):35-9
9. Lalchan S, Sharma P, Gurung SD. Prevalence of congenital anomalies in polyhydramnios: a hospital based study from western Nepal. *Nepalese J Radiol* 2018;8(11):25-9.
10. Kornacki J, Adamczyk M, Wirstlein P, Osiński M, Wender-Ożegowska E. Polyhydramnios -frequency of congenital anomalies in relation to the value of the amniotic fluid index. *Ginekol Pol* 2017;88(8):442-5.
11. Harman CR. Amniotic fluid abnormalities. *Semin Perinatol* 2008;32(4):288-94.
12. Dashe JS, McIntire DD, Ramus RM, Santos-Ramos R, Twickler DM. Hydramnios: anomaly prevalence and sonographic detection. *Obstet Gynecol* 2002;100(1):134-9.
13. Hara K, Kikuchi A, Miyachi K, Sunagawa S, Takagi K. Clinical features of polyhydramnios associated with fetal anomalies. *Congenit Anom (Kyoto)* 2006;46(4):177-9.
14. Rajgire AA, BK GA. A clinical study of fetomaternal outcome in pregnancy with polyhydramnios. *Int J Reprod Contracept Obstet Gynecol* 2017;6:145-8
15. Pri-Paz S, Khalek N, Fuchs KM, Simpson LL. Maximal amniotic fluid index as a prognostic factor in pregnancies complicated by polyhydramnios. *Ultrasound Obstet Gynecol* 2012;39(6):648-53.
16. Boito S, Crovetto F, Ischia B et al. Prenatal ultrasound factors and genetic disorders in pregnancies complicated by polyhydramnios. *Prenat Diagn* 2016;36(8):726-30.