

## Effectiveness of significant parameters in identifying polyhydramnios among antenatal mothers at SMVMCH, Puducherry.

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**Abstract:** Polyhydramnios also known as hydramnios refers to an excessive volume of amniotic fluid. It has been associated with an increased risk of various adverse pregnancy outcomes, including preterm birth, placental abruption, and fetal anomalies. The main aim of the study is to assess the effectiveness of significant parameters in identifying polyhydramnios among antenatal mothers at SMVMCH, Puducherry. A Quantitative research approach and a descriptive research design was used for study, 50 antenatal mothers who are admitted in the antenatal ward at Sri Manakula Vinayagar Medical College and Hospital, convenient sampling technique was included in the study. Clinical parameters such as weight gain of the mother, abdominal girth, fundal height, edema, breathing pattern, fetal movements, fetal heart rate, blood glucose level, urine output and amniotic fluid index are some of the parameters to assess polyhydramnios. Out of 50 sample 16(32%) of the mothers were normal and 34(68%) of them were at risk of developing polyhydramnios. There is a association of previous history of diabetes mellitus has significant in risk of polyhydramnios. This present study was to assess significant parameters in identifying polyhydramnios among antenatal mothers at SMVMCH, Puducherry. The study reveals that 68 % of the antenatal mothers were at risk of developing polyhydramnios. The parameters were significantly useful in identifying the polyhydramnios among antenatal mothers.

**Key Words:** Parameters, polyhydramnios, Antenatal mothers.

### 1. INTRODUCTION:

*I will protect you until you are grown and then i will let you fly free but loving you that is for always.*

- CHARLOTTE GRAY

Pregnancy also known as gravidity or gestation, is the time during which one or more offspring develops inside a woman. Polyhydramnios also known as hydramnios refers to an excessive volume of amniotic fluid. It has been associated with an increased risk of various adverse pregnancy outcomes, including preterm birth, placental abruption, and fetal anomalies. Polyhydramnios should be suspected clinically when uterine size is large for gestational age. The diagnosis is made prenatally by ultrasound examination using a non-invasive qualitative or quantitative approach. An underlying disease is only detected in 17% of cases in mild polyhydramnios, in contrast to 91% of cases in moderate to severe polyhydramnios. So, to reduce the risk of polyhydramnios through prenatal assessment hence the researcher decided to conduct "A study to assess the effectiveness of significant parameters in identifying polyhydramnios among antenatal mothers at SMVMCH, Puducherry".

### 2. OBJECTIVES:

- To assess the risk of polyhydramnios by using significant parameters.
- To associate the clinical symptoms of polyhydramnios and antenatal mothers with their demographic variables.

### 3. LITERATURE REVIEW:

Liu ll, (2016) was conducted a case control group study on the topic of prenatal diagnosis and pregnancy outcome analysis of polyhydramnios conducted at tertiary medical center from the period of 2013-2015 and 130 women were involved using an assessment tool to find out the causes of polyhydramnios and the outcome was analysed. The

results shows that 2 cases had chromosomal abnormalities, 7 had severe  $\alpha$ -thalassemia, 15 had fetal anomalies, 4 had maternal fetal disease and 22 had unexplained idiopathic polyhydramnios. The study concludes that polyhydramnios associated with a higher occurrence of adverse perinatal outcomes. Intensive monitoring the maternal fetal condition & prenatal diagnosis is important in patients with polyhydramnios.

#### 4. MATERIALS:

Quantitative research approach and descriptive research design was used for this study. 50 samples are selected using convenient sampling technique. sample consists of antenatal mothers who fulfils the inclusion criteria, data collection was done with the tools of section a consists of 17 demographic data, section b consists of 10 clinical parameters to identify the risk of polyhydramnios. the result was conducted using descriptive and inferential statistics.

#### 5. METHODS:

The data collection done with formal prior permission from consent authorities, 50 samples were selected by using convenient sampling technique. the tools consist of 17 demographic variables 10 clinical parameters were administered to respondents and data were collected.

**Section A:** This section consists of demographic variables such as age, religion, type of family, occupation, monthly income, dietary habits, family history of polyhydramnios, parity, place of living, obstetrical score, weeks of gestation, history of abortion, age of menarche and the history diabetes mellitus.

**Section B:** This section consists of clinical parameters related to polyhydramnios such as weight gain, abdominal girth, fundal height, edema, breathing pattern, fetal movements, fetal heart rate, urine output, blood glucose, and amniotic fluid index.

#### Score interpretations:

score	percentage
1-10	Normal
11-20	Risk for polyhydramnios

#### 6. DISCUSSION:

**Table 1** reveals that association between the clinical parameters with their demographic variables of the antenatal mothers. The demographic variables such as age, religion, type of marriage, type of family, income, educational status, occupational status, dietary habits, parity, obstetrical score, weeks of gestation, any family history of polyhydramnios, previous history of polyhydramnios, place of living, history of abortion, age of menarche, previous history of diabetes mellitus. From this previous history of diabetes mellitus was significantly associated with p value <0.001.

#### 7. ANALYSIS:

The data collection was based on the objective of the study and organized, tabulated, analysed and interpreted by descriptive statistics. Descriptive statistics allows the researcher to organize the data and to examine the quantum of information and inferential statistics is used to determine the relationship. A “p” value of <0.05 was considered to be statistically significant for the interpretation of results. The analysis and graphs are carried out in accordance with the above data for easy comprehension.

#### 8. RESULT & FINDINGS:

Out of 50 sample 16(32%) of the mothers were normal and 34 (68%) mothers were at risk of developing polyhydramnios. There is an association between previous history of diabetes mellitus has significance in risk of developing polyhydramnios.

#### 9. RECOMMENDATIONS:

- This study can also be conducted in other part of the country with a large sample.
- The same study can be conducted in different settings.

**Table 1:**

S.NO.	Demographic Variables	Normal		Risk for polyhydramnios		$\chi^2$	p value
		N	%	n	%		

1	<b>Age</b>						
	a) ≤ 18 Years	-	-	1	2	4.02 Df=3	0.2593
	b) 19-20 Years	2	4	8	16		
	c) 21-30 Years	16	32	19	38		
d) > 30 Years	2	4	2	4			
2	<b>Religion</b>						
	a) Hindu	14	28	28	56	0.259 Df=3	0.9675
	b) Christian	2	4	2	4		
	c) Muslim	-	-	4	8		
d) Others	-	-	-	-			
3	<b>Type of marriage</b>						
	a) Consanguineous marriage	4	8	9	18	1.69 Df=1	0.1936
b) Non consanguineous marriage	13	26	24	48			
4	<b>Type of family</b>						
	a) Nuclear family	11	22	14	28	0.193 Df=1	0.6604
b) Joint family	6	12	19	38			
5	<b>Occupation Status</b>						
	a) Government employee	-	-	-	-	0.86 Df=3	0.8351
	b) Private employee	1	2	5	10		
	c) Laborer	4	8	3	6		
d) House wife	11	22	26	52			
6	<b>Monthly Income</b>						
	a) Rs.2500- 5000	-	-	6	12	0.651 Df=3	0.8847
	b) Rs.5001- 10000	10	20	9	18		
	c) Rs.10001-20000	6	12	17	34		
d) More than 20000	1	2	1	2			
7	<b>Dietary habits</b>						
	a) Vegetarian	-	-	-	-	0.709 Df=2	0.7015
	b) Non vegetarian	-	-	-	-		
c) Both	17	34	33	66			
8	<b>Education</b>						
	a) High school	7	14	6	12	0.4 Df=2	0.8187
	b) Higher secondary	9	18	14	28		
c) graduation (or) professional	2	4	12	24			
9	<b>Parity</b>						
	a) PrimiPara	5	10	12	24	0.79 Df=1	0.3741
b) Multi Para	12	24	21	42			
10	<b>Obstetrical score</b>						
	a) Gravida 1	5	10	11	22	0.851 Df=3	0.8372
	b) Gravida 2	8	16	15	30		
	c) Gravida 3	4	8	4	8		
d) Gravida 4	-	-	3	6			
11	<b>Weeks of gestation</b>						
	a) 28-31 weeks	4	8	8	16	4.93 Df=3	0.177
	b) 32-35 weeks	2	4	4	8		
	c) 36-39 weeks	9	18	15	30		
d) Above 40 weeks	2	4	6	12			
12	<b>Family history of polyhydramnios</b>						
	a) Yes	-	-	-	-	0.085 Df=1	0.7706
b) No	17	34	33	66			
13	<b>Previous history of polyhydramnios</b>						
	a) Yes	-	-	-	-	1.35 Df=1	0.2453
b) No	17	34	33	66			
14	<b>Place of living</b>						
	a) Urban	-	-	1	2	0.715 Df=1	0.3978
b) Rural	17	34	32	64			
15	<b>History of abortion</b>						
	a) Yes	5	10	9	18	2.85 Df=1	0.0914
b) No	12	24	24	48			

<b>16</b>	<b>Age of menarche</b>					0.091 Df=3	0.9929
	a) < 10 years	-	-	-	-		
	b)10 -13 years	3	6	6	12		
	c)13 – 15 years	13	26	27	54		
	d)> 15 years	1	2	-	-		
<b>17</b>	<b>Previous history of Diabetes Mellitus</b>					5.74 Df=1	0. 0166 *
	a) Yes	-	-	4	8		
	b) No	17	34	29	58		

## 10. CONCLUSION:

This present study was to assess significant parameters in identifying polyhydramnios among antenatal mothers at SMVMCH, Puducherry. The study reveals that 68 % of the antenatal mothers were at risk of developing polyhydramnios. the parameters were significantly useful in identifying the polyhydramnios among antenatal mothers.

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