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# OBSERVATIONAL INSIGHTS INTO THE PREVALENCE, ETIOLOGY, RISK FACTORS, CLINICAL FEATURES, DIAGNOSIS, OUTCOMES AND MANAGEMENT OF OLIGOHYDRAMNIOS IN GESTATIONAL WOMEN

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## ABSTRACT

Oligohydramnios is a condition characterized by decreased amniotic fluid volume in gestational women, often associated with complications such as intrauterine growth restriction, premature rupture of membranes, and fetal distress. This study aims to evaluate the prevalence, etiology, risk factors, and management of oligohydramnios in a tertiary care setting. A total of 120 pregnant women diagnosed with oligohydramnios were included in the study. Data on age, gestational age, symptoms, medical history, and pregnancy outcomes were collected. Findings revealed that 27.5% of cases occurred in women aged 22-25 years, with the majority diagnosed between 30-32 weeks of gestation. Common risk factors included hypertension (12.6%), hypothyroidism (16.6%), and inadequate fluid intake (34.2%). Complications such as miscarriage (19.19%) and premature birth (6.66%) were observed. The study underscores the importance of early detection, adequate hydration, and lifestyle modifications to improve pregnancy outcomes. Healthcare professionals, including clinical pharmacists, should play an active role in educating pregnant women on risk factors and preventive strategies.

**KEYWORDS:** Oligohydramnios, amniotic fluid index, intrauterine growth restriction, pregnancy complications, maternal health.

#### INTRODUCTION

Oligohydramnios is a condition characterized by a decreased amount of amniotic fluid, which plays a crucial role in fetal development, movement, and protection.<sup>[1]</sup> The condition is commonly defined by an amniotic fluid index (AFI) of less than 5 cm or a single deepest pocket of less than 2 cm on ultrasound.<sup>[2]</sup> Oligohydramnios can occur due to

various maternal, fetal, and placental factors, making it a significant concern in obstetrics.<sup>[3]</sup>

This observational study aims to provide insights into the etiology, epidemiology, clinical manifestations, diagnosis, and management of oligohydramnios.<sup>[4]</sup> Identifying risk factors such as maternal health conditions, hydration status, and gestational age at diagnosis can help in early intervention and improve perinatal outcomes.<sup>[5]</sup>

The study also explores the clinical signs and symptoms associated with oligohydramnios, including reduced fetal movements, abdominal pain, vaginal bleeding, and leakage of amniotic fluid.<sup>[6,7]</sup> The impact on fetal well-being, mode of delivery, and potential complications such as preterm birth, intrauterine growth restriction (IUGR), and perinatal mortality are also evaluated.<sup>[8]</sup>

By analyzing patient data and outcomes, this study aims to contribute to a better understanding of oligohydramnios and emphasize the importance of early detection, appropriate management strategies, and improved maternal-fetal health care to reduce adverse pregnancy outcomes.<sup>[9,10]</sup>

#### MATERIALS AND METHODS

This observational study was conducted in a tertiary care hospital. A total of 120 pregnant women diagnosed with oligohydramnios were enrolled based on the following criteria:

#### **Inclusion Criteria**

- Pregnant women diagnosed with oligohydramnios (AFI < 5 cm)
- Gestational age  $\geq 20$  weeks

#### **Exclusion Criteria**

- Patients with polyhydramnios
- Women with pre-existing renal or cardiac conditions

#### RESULTS

A total of 120 pregnant women with oligohydramnios were analyzed. Key findings include:

- Majority of cases (58.3%) were diagnosed between 30-32 weeks of gestation.
- 27.5% of affected women were between 22-25 years old.
- The most common symptom was amniotic fluid leakage (61.8%).
- Risk factors included hypertension (12.6%), hypothyroidism (16.6%), and inadequate hydration (34.2%).
- Pregnancy outcomes included miscarriage (19.19%), premature birth (6.66%), and neonatal deaths (6.66%).

#### Table 1: Age Wiste Distribution.

S. No.	Age	No. of Patients	Percentage
1.	19-22	27	22.5%
2.	22-25	23	19.1%
3.	25-28	31	25.5%
4.	28-31	34	28.3%
5.	31-34	1	1%
6.	34-37	3	2.5%
7.	37-40	1	1%
	Total	120	100%



Fig. 1: Graphical Representation of Age Wise Distribution.

## Table 2: Gestational Age.

S. No	Gestational Age	No. of Patients	Percentage
1	24-26	6	5%
2	27-29	41	34.1%
3	30-32	70	58.3%
4	33-35	3	2.5%
	Total	120	100%





## Table 3: Medical History.

S. No	History	No. of Patients	Percentage
1	Primi	41	34.1%
2	Gravida 1	36	30%
3	Gravida 2	30	25%
4	Gravida 3	9	7.5%
5	Gravida 4	4	3.3%
	Total	120	100%



Fig. 3: Graphical Representation of Medical History.

## Table 4: Fluid Intake.

S. No.	Fluid Intake	No. of Patients	Percentage
1.	Adequate	41	34.2%
2.	Inadequate	79	65.8%
	Total	120	100%



Fig. 4: Graphical Representation of Fluid Intake.

#### Table 5: Signs and Symptoms.

S. No	Signs & Symptoms	No. of Patients	Percentage
1	Abdominal Pain	20	16.6%
2	Vaginal Bleeding	26	21.6%
3	Leaking of Amniotic Fluid	74	61.8%
	Total	120	100%



Fig. 5: Graphical Representation of Signs & Symptoms.

## Table 6: Risk Factors.

S. No	Risk Factors	No. of Patients	Percentage
1	Hypertension	15	12.6%
2	Hypothyroidism	20	16.6%
3	Healthy Patients	85	70.8%
	Total	120	100%



Fig. 6: Graphical Representation of Risk Factors.

S. No	Complications	No. of Patients	Percentage
1	Miscarriage	23	19.19%
2	Premature	8	6.66%
3	Living	40	33.33%
4	Deaths	8	6.66%
5	Primi	41	34.16%
	Total	120	100%

## Table 7: Complications.



Fig. 7: Graphical Representation of Complications.

## Table 8: Amniotic fluid levels.

S. No	AFI Level	No. of Patients	Percentage
1	3-4 CM	7	5.83%
2	4-5 CM	5	4.16%
3	5-6 CM	8	6.66%
4	6-7 CM	19	15.83%
5	7-8 CM	38	31.69%
6	8-9 CM	30	25%
7	9-10 CM	13	10.83%
	Total	120	100%



Fig. 8: Graphical Representation of AFI Levels.

#### Table 9: Mode of Delivery.

S. No	Delivery	No. of Patients	Percentage
1	Vaginal	46	38.33%
2	Cesarean	33	27.5%
3	Primi	41	34.16%
	Total	120	100%



Fig. 9: Graphical Representation of Mode of Delivery.

#### DISCUSSION

The findings of this study align with previous research indicating that oligohydramnios is more prevalent in late gestation, with major risk factors being inadequate fluid intake and underlying medical conditions such as hypertension and hypothyroidism. The high rate of fetal distress highlights the need for timely diagnosis and management. Hydration therapy, maternal rest, and medical interventions can significantly improve fetal outcomes. The role of clinical pharmacists and healthcare professionals in patient education and prenatal care is crucial in reducing the adverse effects associated with oligohydramnios. Further research should explore preventive strategies and optimal management approaches to improve maternal and fetal health.

#### CONCLUSION

This study highlights the prevalence of oligohydramnios and its associated maternal and fetal complications. Proper hydration, early diagnosis, and patient education can help mitigate risks and improve pregnancy outcomes. Clinical pharmacists and healthcare providers should emphasize lifestyle modifications and prenatal care to prevent adverse effects.

#### **CONFLICT OF INTEREST**

The authors declare no conflicts of interest.

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