



## Summer and Oligohydramnios

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## Abstract

Pregnant women have a higher incidence of insufficient amniotic fluid levels (oligohydramnios) in the summer months due to dehydration, according to this study. During the study period, 266 cases were diagnosed with idiopathic oligohydramnios. Of these, a proportionally higher number, 131 cases (49 percent), occurred during the three summer months (March, April and may), while 135 cases occurred during the other nine months of the year (51 percent)

**Keywords:** Summer, Dehydration, Oligohydramnios, NICU Admission

## Introduction

Amniotic fluid is crucial for the lung maturation, gastrointestinal tract development, and neuromuscular development of the fetus. Approximately 98% of the amniotic fluid comprises water.

The amniotic fluid volume increases from around 30 mL at 10 weeks of gestation to 800 mL during the mid-third trimester.

The amniotic fluid volume is regulated by four main pathways: (i) fetal urination, (ii) intramembranous osmolality difference, (iii) respiratory tract, and (iv) fetal swallowing.

An abnormality in the amniotic fluid volume may result from fetal or maternal placental pathology

## Aims and Objectives

To Determine the Risk of Oligohydramnios in the Summer Season in Comparision with Rest of the Year Among Patients Admitting in Basaveshwara Teaching and General Hospital and Sangameshwara Teaching Hospital.

## Materials and Methods

This is a retrospective observational study conducted in Basaveshwara Teaching and General hospital and Sangameshwara teaching hospital, Kalaburagi, between the period of January 2024- December 2024.

AFI maternal and fetal outcome of All the ANC patients with AFI  $\leq 8$  were studied Kalaburagi, one of the district of north Karnataka, experiences hottest climatic

conditions ,where average temperature in summer ranges from 38 degree celcius to 42 degree celcius, 43 degree celcius was the highest temperature recorded in 2024, in the month of April.

#### Inclusion Criteria

- All the Antenatal cases with AFI Less than or equal to 8
- Women knowing exact date of their last menstrual period or having their dating scan
- Singleton pregnancies

#### Exclusion Criteria

- Multifetal pregnancy
- Anomalous baby
- Cases of pregnancy induced hypertension
- Cases with placental disorders
- Gestational age >41 weeks.
- Cases with premature rupture of membranes

Table 1: Total Number of Cases

| AFI | SUMMER | NON SUMMER |
|-----|--------|------------|
| 5-8 | 40     | 50         |
| <5  | 91     | 85         |

Table 2: Association of Number of Cases of Oligohydramnios with Maternal Age

| Age        | Summer | Non summer |
|------------|--------|------------|
| <20 yrs    | 18     | 29         |
| 21- 25 yrs | 68     | 72         |
| 26- 30 yrs | 38     | 35         |
| > 30 yrs   | 16     | 15         |

According to this study – The women in the age group between 21-25 years were more prone

Table 3: Association of oligohydramnios with gestational age

| Gestational age | Summer | Non summer |
|-----------------|--------|------------|
| <37 weeks       | 6      | 21         |
| 37-39 weeks     | 33     | 54         |
| 39-41 weeks     | 71     | 91         |

According to this study – The women with 39-41 week of gestational age were more prone to

Table 4: Association of oligohydramnios with parity

| parity       | Summer | Non summer |
|--------------|--------|------------|
| Primigravida | 77     | 70         |
| Multigravida | 64     | 65         |

Table 5: Outcome of pregnancy

| OUTCOME                 | SUMMER | NON SUMMER |
|-------------------------|--------|------------|
| CESAREAN SECTION        | 89     | 140        |
| VAGINAL DELIVERY        | 17     | 14         |
| CONSERVATIVE MANAGEMENT | 5      | 11         |

According to this study incidence of lscs was more due to oligohydramnios

Table 6: Perinatal outcome

| OUT COME       | SUMMER | NON SUMMER |
|----------------|--------|------------|
| HEALTHY        | 95     | 130        |
| NICU ADMISSION | 20     | 31         |
| STILL BORN     | 0      | 0          |

#### Results

During the study period, there were 266 cases were diagnosed with idiopathic oligohydramnios.

Of these, a proportionally higher number, 13 (49 percent), occurred during the three summer months (March, April and May) while 135 occurred during the other nine months of the year.

## **Conclusion**

Incidence of Oligohydramnios Is More In Summer Season Which Attributes To Increased Rates Of Operative Deliveries And NICU Admissions.

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