



## COURSE OF BRONCHIAL ASTHMA IN PREGNANCY

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## ABSTRACT

**AIM & OBJECTIVES:** To report course of Asthma during pregnancy.

**MATERIALS & METHODS:** Observational study was done in GEMS on Asthmatic pregnant women during a period of 6 months from June 2019 to December 2019. Detailed history noted from medical records regarding exacerbations, use of medication and asthma knowledge during pregnancy

**RESULTS:** A total number of 16 cases were noted in 6 months period. All these were of mild to moderate severity with well controlled Asthma preconceptionally. Most of the cases i.e. 10 showed no exacerbations during pregnancy (62.5%), 4 reported decrease in frequency of episodes (25%) & 2 cases reported worsening i.e. increased frequency or need for use of medication in previously well controlled asthmatics who are not currently on medication (12.5%). Out of 16 cases, only 3 are on medication for asthma (18.75%), others discontinued without medical advice (81.25%).

**DISCUSSION:** Asthma may worsen, improve or remain unchanged during pregnancy. The mechanisms responsible for the altered asthma course during pregnancy are unknown. Some studies have shown significant variation in disease severity during pregnancy. The result of various studies have demonstrated that more severe preconception asthma tends to worsen during pregnancy whereas less severe asthma tends to remain unchanged or tends to improve.

**CONCLUSION:** Asthma has been reported to affect 4-8% of pregnant women making it the most common potentially serious but treatable medical problem to complicate pregnancy. Pregnant asthmatics require regular and intensified monitoring to improve the disease course and maternal and fetal outcomes. Education and support are essential for pregnant women with asthma to optimize pregnancy and neonatal outcomes.

## KEYWORDS :

## INTRODUCTION

- Asthma is a chronic inflammatory airway syndrome with a major hereditary component.<sup>(1)</sup>
- The estimated asthma prevalence during pregnancy ranges between 4 & 8 percent, and this appears to be rising.<sup>(1)</sup>
- Clinical and epidemiological studies, however have failed to provide convincing evidence of any consistent change in the natural history of asthma during pregnancy.
- Physiologic changes in pregnancy affect the pulmonary function with a decrease in functional residual capacity (FRC) and 50% increase in minute ventilation. This change results in hyperventilation in 60-70% of normal pregnancies and a sensation of dyspnea that can be distressing to an asthmatic.
- Most exacerbations of Asthma symptoms occur during the 24th and 36th week of gestation, although increased symptoms are rare during the last 4 weeks of pregnancy.
- 90% has no symptoms during labor and delivery and within three months of delivery nearly 7.5% of women go back to their pre-pregnancy status.<sup>(2)</sup>
- Most pregnant Asthmatic women continue the same disease course during successive pregnancies as their 1<sup>st</sup> pregnancy.<sup>(3)</sup>

## AIM &amp; OBJECTIVES:

The aim and objective of the present study is to report course of Asthma during pregnancy.

## MATERIALS &amp; METHODS:

- Study design:** Retrospective observational study
- Study sample:** All asthmatic pregnant women admitted in OBGY department during a period of 6 months (June 2019 to December 2019)
- Source of sample:** all asthmatic pregnant women admitted in Great Eastern Medical School and Hospital (GEMS), a tertiary care center in Srikakulam district, Andhra Pradesh.
- Methodology:** Medical records of all the asthmatic

pregnant women admitted to GEMS hospital during the specified period of 6 months were retrospectively analyzed and detailed history noted from medical records.

- For each asthmatic pregnant, following variables/indices were noted:
- Course of asthma
- Use of medication
- Parity
- Symptoms in comparison to previous pregnancy

## RESULTS:

- A total number of 16 cases were noted in 6 months period. All these were of mild to moderate severity with well controlled Asthma preconceptionally.

Most of the cases i.e. 10 showed no exacerbations during pregnancy (62.5%), 4 reported decrease in frequency of episodes (25%) & 2 cases reported worsening i.e. increased frequency or need for use of medication in previously well controlled asthmatics who are not currently on medication (12.5%). Out of 16 cases, only 3 are on medication for asthma (18.75%), others discontinued without medical advice (81.25%).

Course of Asthma	Number	Percentage
Improved	4	25%
Unchanged	10	62.5%
Deteriorated	2	12.5%

Use of medication	Number	Percentage
Used	3	18.75%
Discontinued	13	81.25%

Parity	Number	Percentage
Primigravida	10	62.5%
G2	5	31.25%
>=G3	1	6.25%

Compared to previous pregnancy	Number	Percentage
Improved	1	16.7%
Unchanged	5	83.3%
Deteriorated	0	0%

#### DISCUSSION:

- Asthma may worsen, improve or remain unchanged during pregnancy.<sup>(5)</sup>
- The mechanisms responsible for the altered asthma course during pregnancy are unknown. Some studies have shown significant variation in diseases severity during pregnancy.
- The result of various studies have demonstrated that more severe preconception asthma tends to worsen during pregnancy whereas less severe asthma tends to remain unchanged or tends to improve.
- Schatz M. et.al studied the Course of Asthma during pregnancy, post-partum, and with successive pregnancies and reported the percentage of patients who improved ranges from 12% to 69%; those who worsen ranges from 4% to 44%; and those whose diseases course did not change ranged from 15% to 93% , which is similar to the present study.
- In the present study, disease course mostly remained unchanged with deterioration seen only in few subjects.
- And only three subjects out of 16 were on medication i.e. they are aware of their condition, while remaining discontinued without any medical advice in the concept of 'all natural pregnancy', which is similar to the study by Angelina S Lim et al -Asthma during pregnancy :the experiences, concerns and views of pregnant women with asthma.
- When symptom frequency was considered in comparison to previous pregnancy, most of them reported the same course, similar to prospective study by Stenius Aarniala B.et.al.

#### CONCLUSION

- Asthma has been reported to affect 4-8% of pregnant women making it the most common potentially serious but treatable medical problem to complicate pregnancy.
- Approximately one-third of asthmatic patients who are pregnant improve during the course of a pregnancy, one-third deteriorate, and one-third are unchanged.<sup>(4)</sup>
- It is important to maintain good control of asthma as poor control may have adverse effects on fetal development.
- Compliance may be a problem as there is often concern about the effects of antiasthma medications on fetal development.
- Undertreatment of asthma during pregnancy remains a problem in emergency departments.
- With awareness of the patient's prepregnant state, careful monitoring during pregnancy will prevent serious exacerbations and complications.
- So they require regular and intensified monitoring to improve the disease course and maternal and fetal outcomes.
- Education and support are essential for pregnant with asthma to optimize pregnancy and neonatal outcomes, which should be a part routine obstetric care for asthmatic pregnant women.

#### Limitations of the Study:

- The duration of the study was only 6 months.

#### REFERENCES

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