

## **Incidence of Bronchial Asthma in Pregnancy at Tertiary Care Centre**

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**Abstract:** The objective of the present study is to evaluate the clinical profile of asthma in pregnancy. This prospective observational study was conducted in 20 patients with pregnancy who has been diagnosed with asthma between August 2015 to August 2017 at SVS Medical College, Mahabubnagar. Our study included 20 pregnant females with Bronchial Asthma. The common age group being 21 – 30yrs are 11 cases (55%). Most common in antenatal period 18 cases (90%). Most common in Primigravida 9 cases (45%). Most of the patients present in 3<sup>rd</sup> trimester 10 cases (50%). In most of the patients no complications has occurred because of the Asthma 17 cases (83%). Bronchial Asthma may be the cause of exclusion in pregnant female with acute onset of Dyspnoea.

**Keywords:** Pregnancy, Bronchial asthma, Antenatal, and Post-natal.

### **INTRODUCTION**

Asthma is a common preexisting respiratory disorder encountered in pregnancy. It has been reported that about 3.7 to 8.4 percent of pregnant women are affected by asthma [1]. The risk of an exacerbation requiring medical intervention may be as high as 50% in females with severe asthma. Studies have shown that proper control of asthma in pregnant asthmatic women significantly reduces the risk of perinatal adverse outcomes [2]. The conclusion of the meta-analysis agree that Asthma follows a rule of thirds during pregnancy as one third of the pregnant women get better, one third of the women get remain same and one third worsen in symptoms[3].

Most pregnant Asthmatic women continue the same disease course during successive pregnancies as their first pregnancy [4]. In the large cohort study 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 [5].

### **METHODOLOGY**

#### **Study Setting**

The present study was carried out at department of pulmonary medicine in SVS Medical College, Mahabubnagar.

### **DATA COLLECTION**

This prospective study was performed using a data base with 20 pregnant females who had been diagnosed with bronchial asthma at our hospital, during August 2015- August 2017.

### **STATISTICAL ANALYSIS**

Data was analyzed by statistical package for social sciences (SPSS) Version 16.0. Numerical data was summarized by mean  $\pm$  standard deviation for continuous normal data and median  $\pm$  Inter-Quartile Range for continuous non normal data/ordinal data. Categorical data was summarized by count and percentages. The association between categorical variables was done by Chi square test. All the P values less than 0.05 were considered as statistically significant.

**RESULTS**

This study included 20 patients. The common age group being 21 – 30yrs years (55%) followed by below the 20 yrs 7 cases (35%) then 31 – 40 yrs 2 cases(10%).(Table 1) Most common in antenatal cases 18 cases (90%) followed by postnatal cases 2cases (10%). Most common in Primi gravida 9 cases (45%) followed in order by second gravida 4 cases(20%), third gravida 3 cases(15%) and fourth gravida 2 cases(10%)( Table 2) .Most of the patients present in 3<sup>rd</sup> trimester 10 cases(50%) followed by second trimester 5 cases (25%) and 1<sup>st</sup> trimester 3 cases(15%).(Table 3) In most of the patients no complications has occurred because of the Asthma 17 cases(85%) and premature labor occurred in 2 cases(10%) and 1 patient has landed in ventilator(5%).(Table 4).

**Table-1: Demographic distribution**

AGE DISTRIBUTION	
< 20 YRS	7(35%)
21-30 YRS	11 (55%)
>31 YRS	2 (10%)

**Table-2: Distribution based on period of presentation**

ANTENATAL	
Primi gravida	9 (45%)
Second gravida	4 (20%)
Third gravida	3 (15%)
Fourth gravid	2 (10%)
POST NATAL	
	2 (10%)

**Table-3: Distribution based on trimester**

TRIMESTER	No of patients
First	3 (16.6%)
Second	10 (55.5 %)
Third	5 (27.7%)

**Table-4: Distribution based on outcome**

Type	Number of Patients
No complications	17 (85%)
Premature delivery	2 (10%)
Mechanical ventilation	1 (5%)

**DISCUSSION**

Most of our study belonged to the patients of age group between 21 - 30 years contributes to 11 cases (55%) present study shows more number of asthma cases in prime gravida 9 cases (45%) and decrease in asthma cases as the increase in parity. The mechanism by which increased parity may confer protection against the future development of asthma in women remains unclear Regulatory T cells (Trigs) have been shown to play an important role in moderating allergic asthma [6]. There is experimental evidence that estrogens have anti-inflammatory effects. Pregnancy elevates serum estrogen levels about 100 fold. Increasing parity is associated with an overall increase in lifetime exposure

of sex hormones (including estrogen). Thus, if estrogens are associated with a reduced risk of death from asthma, we would expect pregnancy to offer some protection from asthma death [7].

Asthma is more common in second trimester contribute to 10 cases (50%) which is comparable to other studies. Gluck and Gluck found that the onset of exacerbations was normally distributed around 6 months gestation, with no exacerbations occurring before the fourth month [8]. A prospective cohort study of 504 pregnant women with asthma found that the gestational age of onset of exacerbations was normally distributed, with the majority occurring between 17 and 24 weeks gestation (mean 20.8 weeks)[9]. Similar results were reported by Murphy *et al.* with exacerbations normally distributed from 9 to 39 weeks gestation around a mean of 25 weeks [10]. Present study shows no poor outcomes as 17 cases were well treated with medication which is comparable to other well designed prospective cohort studies have found no significant relationships between asthma exacerbations during pregnancy and poor perinatal outcomes, including preterm delivery, pre-eclampsia and low birth weight, in women with actively managed asthma[11,12].

**CONCLUSION**

Bronchial Asthma may be the cause of exclusion in pregnant female with acute onset of dyspnes.

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