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ABSTRACT
Introduction: It is characterized by inflammation of the airways, causing intermittent airflow obstruction and bronchial hyperresponsiveness. **Aim:** The study aimed to assess risk burden of asthma associated comorbidities and its therapeutic outcomes in a tertiary care hospital. **Methods:** The prospective observational study was carried out for a period of 6 months. The study was conducted in General medicine department in a tertiary care hospital. A written and informed consent was obtained from the recruited patients. A Total of 200 patients were enrolled in the study. **Results and Discussion:** In our study 36-45 years age patients were more 67(33.5%) compared to other ages. In our study Male patients were more 142 (71%), compared to Female patients were 58 (29%). Risk factors profile for Asthma includes Viral infections patients were more 54 (27%) compared to other categories. Family history of Asthma includes positive patients were more 178(89%), compared to Negative patients were 22(11%). Severity of Asthma includes Mild Persistent patients were more 65(32.5%) compared to other categories. Co morbidities associated with Asthma includes Epilepsy patients were more 55 (27.5%) compared to other categories. The Treatment for Asthma includes corticosteroids prescribed patients were 54(27%) compared to other drugs. **Conclusion:** The study concludes that Health care professionals need to update with the current treatment guidelines. Prescribing of generic drugs should be promoted which would lower the economic burden and improve the patient compliance.
Keywords: Asthma, Hyperresponsiveness, Corticosteroids, Generic drugs, Treatment guidelines

INTRODUCTION

Asthma is a prevalent chronic inflammatory respiratory condition affecting millions of people worldwide and presents substantial challenges in both diagnosis and management. This respiratory condition is characterized by inflammation of the airways, causing intermittent airflow obstruction and bronchial hyperresponsiveness[1]. The hallmark asthma symptoms include coughing, wheezing, and shortness of breath, which can be frequently exacerbated by triggers ranging from allergens to viral infections. The prevalence and severity of asthma are determined by a complex interplay between genetic and environmental factors. Despite treatment advancements, disparities persist in asthma care, with variations in access to diagnosis, treatment, and patient education across different demographics. Asthma remains a major global health challenge, affecting approximately 339million individuals and contributing significantly to morbidity, mortality, and healthcare burden[2-3]. Risk factors for asthma development encompass exposures throughout a patient's lifespan, including the perinatal period. The most substantial known risk factor is atopy, which is characterized by the genetic tendency to produce specific immunoglobulin E (IgE) antibodies in response to common environmental allergens. Nearly one-third of children with atopy will develop asthma later in life. Asthma treatment involves a combination of long-term control medications (usually inhaled corticosteroids) to reduce inflammation and quick-relief inhalers (bronchodilators) for fast symptom relief. Non-pharmacological asthma treatments focus on lifestyle changes, environmental control, and breathing techniques to manage symptoms and improve lung function[4-7]. Key approaches include avoiding environmental triggers (smoke, allergens), regular aerobic exercise, maintaining a healthy weight, managing stress, and practicing specific breathing methods like yoga.

METHODOLOGY

The prospective observational study was carried out for a period of 6 months. The study was conducted in General medicine department in a tertiary care hospital. A written and informed consent was obtained from the recruited patients. A Total of 200 patients were enrolled in the study.

Study Design: It was Prospective observational study.

Study Period: The Present study was conducted for a period of six months.

Study site:

The Present study was conducted in General medicine department in a tertiary care hospital.

Sample size: It was 200 Patients.

Inclusion criteria

- Patients with age of more than 18 years.
- Patients who are willing to give consent.
- Patients of either sex, diagnosed with Asthma.
- Patients receiving treatment for Asthma.

Exclusion criteria

- Patients below 18 years.
- Patients who were not willing to join in the study.
- Special population including pregnant women and lactating women.

- Psychiatric abnormalities.

Institutional ethics committee (IEC) consideration:
The research protocol was submitted to ethical committee and ethical Committee was permitted to perform the research work in the selected department of a tertiary care hospital.

Patient data collection and management:
The data collection form contains information regarding age, sex, diagnosis, past medical history, medication history, laboratory data, and diagnosis, dose and frequency of administration and duration of therapy was collected from the patients treatment chart.

Statistical analysis: The data was represented as percentages. The $P<0.05$ was considered to indicate a statistically significant difference.

RESULTS

Table 1: Age

Age	Total N=200	Percentage (%)
25-35	50	25
36-45	67	33.5
46-55	42	21
56-65	41	20.5
Total	**200**	

Table 2: Gender

Gender	Total N=200	Percentage (%)
Male	142	71
Female	58	29
Total	**200**	

Table 3: Residential status

Residential status	Total N=200	Percentage (%)
Rural	119	59.5
Urban	81	40.5
Total	**200**	

Table 4: Socioeconomic status

Socioeconomic status	Total N=200	Percentage (%)
Lower middle	54	27
Upper middle	65	32.5
High	81	40.5
Total	**200**	

Table 5: Occupation

Occupation	Total N=200	Percentage (%)
Employed worker	62	31
Not employed	97	48.5
Retired	41	20.5
Total	**200**	

Table 6: Risk factors profile for Asthma

Risk factors profile	Total N=200	Percentage (%)
Smoking	33	16.5
Alcohol	21	10.5
Viral infections	54	27
Air pollution	41	20.5
Obesity	51	25.5
Total	**200**	

Table 7: Family history of Asthma

Family history of Asthma	Total N=200	Percentage (%)
Positive	178	89
Negative	22	11
Total	**200**	

Table 10: Clinical symptoms of Asthma

Clinical symptoms of Asthma	Total N=200	Percentage (%)
Shortness of breath	51	25.5
Wheezing	40	20
Chest tightness	32	16
Cough with sputum	31	15.5
Dry cough	46	23
Total	**200**	

Table 11: Diagnosis of Asthma

Diagnosis	Total N=200	Percentage (%)
Blood test	57	28.5
Chest X ray	42	21
MRI scan	36	18
EEG	35	17.5
Spirometry	30	15
Total	**200**	

Table 12: Treatment for Asthma

Treatment for Asthma	Total N=200	Percentage (%)
Short acting beta agonist	23	11.5
Antihistamines	20	10
Methyl Xanthines	40	20
Corticosteroids	54	27
LT receptor antagonist	29	14.5
Anticholinergics	34	17
Total	**200**	

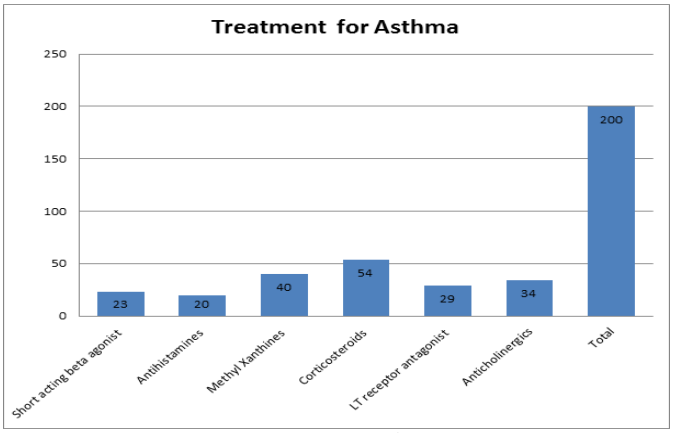

Figure 1: Treatment for Asthma

DISCUSSION

1. In our study 36-45 years age patients were more 67(33.5%) compared to other ages.
2. In our study Male patients were more 142 (71%), compared to Female patients were 58 (29%).
3. In our study rural patients were more 119 (59.5 %), compared to urban patients were 81 (40.5%).
4. In our study Upper class patients were more 81 (40.5%) compared to other categories.
5. In our study Not employed patients were more 97 (48.5%) compared to other categories.
6. Risk factors profile for Asthma includes viral infections patients were more 54 (27%) compared to other categories.
7. Family history of Asthma includes positive patients were more 178(89%), compared to Negative patients were 22(11%)[8].
8. Severity of Asthma includes Mild Persistent patients were more 65(32.5%) compared to other categories.

9. Co morbidities associated with Asthma includes Epilepsy patients were more 55 (27.5%) compared to other categories.
10. The Primary site of Asthma includes Shortness of breath patients were more 51(25.5%) compared to other categories[9].
11. The Diagnosis of Asthma includes Blood test patients were more 57(28.5%) compared to other lab test[10].
12. The Treatment for Asthma includes Corticosteroids prescribed patients were 54(27%) compared to other drugs.
13. Prescription pattern of asthma drugs includes Triple Therapy prescribed patients were more 94(47%) compared to other drug combinations[11].
14. Therapeutic outcomes of Asthma treatment includes Quality of life enhanced patients were patients were more 84(42%) compared to other therapeutic outcomes[12-14].

CONCLUSION

The study concludes that Health care professionals need to update with the current treatment guidelines. Prescribing of generic drugs should be promoted which would lower the economic burden and improve the patient compliance. The Health care prescribers should be encouraged to attend Continuing Education meetings to update their knowledge on treatment guidelines. Among anti-asthmatic drugs inhalational therapy are more beneficial to the patients to enhance the outcomes. Regular following National Asthma Education Program and early detection of risk factors treatment can minimize the future complications of the disease.

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CONFLICT OF INTERESTS

The authors declare no conflict of interest

ETHICS APPROVAL

Not applicable

FUNDING

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AI TOOL DECLARATION

The authors declare that no AI and related tools are used to write the scientific content of this manuscript.

DATA AVAILABILITY

Data will be available on request

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