

## Original Research Article

# Physicians perception in the management of allergic rhinitis: a Pan-India survey

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### ABSTRACT

**Background:** Allergic rhinitis (AR) affects a wide proportion of the population across all age groups. There are several guidelines and consensus statements in AR management, the effect of this is implicit from a physician's perspective. The present cross-sectional survey was conducted to understand physicians approach to the management algorithm in the treatment of allergic rhinitis and medication choice.

**Methods:** Physicians from diverse specialties such as pulmonologists, consultant physician, paediatricians, Allergists, ENT specialists and general practitioners were invited to participate in the survey, which focused on recognizing the burden of disease, clinical presentation, and management methods.

**Results:** 1,261 Physicians participated in this survey, belonging to different specialties. Oral H1 antihistamine was favoured as a first-line therapy, followed by the combination of oral H1 histamine and leukotriene receptor antagonist. Fexofenadine was the most frequently prescribed. Majority believed, bilastine as antihistamine with the least sedative potential and was identified as the most effective treatment. Bilastine was preferred in patients with mild- moderate hepatic/renal impairment and in patients with persistent allergic rhinitis. Most physicians prefer bilastine in all AR clinical profiles. Aside from AR, bilastine is also use in management of upper respiratory tract infections and urticaria respectively.

**Conclusions:** AR is still a growing challenge in India with majority of physician preferring oral antihistamine either as monotherapy or in combination. Bilastine is a preferred choice in patients with impaired liver and renal function and was also referred as least sedative antihistamine by majority of physicians across India.

**Keywords:** Allergic rhinitis, Anti-histamine, Bilastine, Leukotriene receptor antagonist, India

### INTRODUCTION

Allergic rhinitis (AR) is a heterogeneous disorder affecting a wide proportion of the population in all age groups. This is an unpleasant and debilitating disorder with lifelong remissions and relapses.<sup>1</sup> Epidemiological studies suggest that the incidence of allergic rhinitis is rising worldwide; it is recorded in around 10%-30% of adults and up to 40% of children worldwide.<sup>2</sup> While considered trivial in India, 75 percent of children and 80 percent of adults with asthma reported AR.<sup>3</sup> Symptoms may occur in some patients

throughout the year, or in others during particular periods of the year. It not only affects person's quality of life, but often affects the ability of the person to work, frequently contributing to lose or unproductive time at work and at school and is often associated with sleep disturbances.<sup>4</sup>

Oral antihistamines (OAH) are generally considered as the cornerstone for the treatment of AR, while leukotriene receptors antagonist, nasal decongestants and intranasal corticosteroids are administered depending on the symptoms and general conditions.<sup>5</sup> Given the availability

of drugs in AR management, the prevalence is still high, which has not only resulted in substantial morbidity but has also led to health care spending that has affected the quality of life of patients. There are several guidelines and consensus statements in AR management, the effect of this is implicit from a physician's perspective.<sup>6</sup>

The present cross-sectional survey was conducted to understand physicians approach to the management algorithm in the treatment of allergic rhinitis and medication choice.

## METHODS

Between October 2019 and January 2020, a survey was conducted across India using a 15-item questionnaire, the survey focused on recognizing the burden of disease, clinical presentation, and management methods. The general practitioners and specialist's views were determined on different treatment choices, including the use of oral antihistamines, decongestants and leukotriene receptor antagonists (LTRA) as well as intranasal corticosteroids and combinations.

Physicians from diverse specialties such as chest physician, consultant physician, pediatricians, allergists, ENT specialists and general practitioners were invited for this survey. Physicians with more than 5 years of experience in managing cases of allergic rhinitis and willing to participate in the survey were included. To maintain confidentiality of the participating physician, their name and hospital details was not captured. To avoid region specific response, 2000 physicians from four different zone of country (East-West-North-South) were invited to participate. Confidentiality of the captured data was maintained throughout the study period. A completed survey forms were considered for analysis. As this survey was conducted among physicians treating allergic rhinitis patients and did not involve direct participation of any patient, this survey was not submitted to any ethics committee for approval.

## RESULTS

Of the 2000 physician invited, 1,261 physician belonging to different specialties completed the survey, out of which the highest respondents were general physician (27%), followed by consultant physicians (24.4%) and ENT specialists (22.7%). Majority (63%) of physicians reported AR prevalence as 10%-30% while few (2.7%) replied proportion as >50%. Around three-fourth (74%) of physicians agreed that clinical symptoms are the most commonly used for diagnosing AR. Though majority (57.2%) of physicians follow the ARIA recommendations for treating AR. 18.6% of physicians admitted they preferred local/ national guidance, but 15.9% said guidelines aren't helpful in handling AR.

Oral H1 Antihistamine was favoured by 52.8% of physicians as a first-line therapy, followed by the

combination of oral H1 histamine and LTRA (25.6%). Of the combination treatment, the majority of physicians favoured combination of oral H1 antihistamine with LTRA followed by combination of oral H1 antihistamine with decongestant and oral H1 antihistamine with intranasal corticosteroid. Fexofenadine was the most frequently prescribed antihistamine (32.67%) followed by levocetirizine (24.4%) cetirizine (17.76%) and bilastine (10.2%) respectively. Most physicians (42.5%) reported an average therapy period of 2 to 4 weeks followed by <2 weeks (31.25%).

63.5% responded that they pay special attention to the sedative potential of the medication after effectiveness when prescribing H1 antihistamines. 41.55% of physicians regarded bilastine as antihistamine with the least sedative potential followed by fexofenadine (26.96%), desloratidine (19.59%), levocetirizine (10.79%) and ebastine (1.11%) respectively. Bilastine was identified by a majority of the physician (37.4%) as the most effective treatment, followed by fexofenadine (34.2%) and levocetirizine (20.46%).

In patients with mild- moderate hepatic / renal impairment, 73.1% of physicians favoured bilastine. This was followed by preference for levocetirizine (7.85%), fexofenadine (4.7%), desloratidine (2.8%) and ebastine (1.5%). Most physicians (54%) favoured bilastine in PAR patients followed by fexofenadine, levocetirizine, cetirizine, ebastine, desloratidine and others (FIG 8)

Highlighting the benefit of bilastine in the management of AR, most physicians (48.1%) prefers using bilastine in all AR clinical profiles while 16.2% preferred in patients with co-morbidity like Cardiovascular disease (CVD), chronic kidney disease (CKD), liver impairment. 43.3% preferred bilastine to use along with LTRA while 24.3% prefer bilastine along with decongestants. Aside from AR, 44.7% and 41.5% of physicians used bilastine in URTIs and urticaria respectively.

## DISCUSSION

This pan India survey was designed to assess the physician's perception of AR and their treatment practices. Physician from diverse specialty who are involved in the management of AR have participated in this survey. In our questionnaire-based method, ignoring the seasonal pattern of AR, majority of the physician were of opinion that 10 to 30% of patients attending their clinic have AR. Such high incidence of AR is largely due to changing climatic conditions, rising industrialization and growing allergens exposure. The current incidence and the trend in the rise in incidence of AR over the past two decades, is an urgent call for action.<sup>7</sup> Phase I and phase III of ISAAC study has reported such an increasing trend in the incidence of AR over the last two decades, especially, in the older children's.<sup>7</sup> Similar prevalence was also recorded in the international analysis of AR from 4 different regions— Asia, Europe, America and Africa, i.e. 15 to 25 percent.

The increasing incidence of AR not only affects the quality of life but also increases the incidence of asthma, as both asthma and AR share similar pathological mechanisms and AR is considered as an independent risk factor for asthma.<sup>8,9</sup> Uncontrolled childhood AR is associated with sevenfold increased asthma risk in preadolescence and fourfold increased asthma risk in adolescence.<sup>10</sup>

Second generation H1-antihistamines, according to ARIA guidelines, is the pillar of AR pharmacotherapy and are widely used as monotherapy or in combination with LTRA or decongestant.<sup>11</sup> In our study majority (52.82%) of physician prefers beginning AR therapy with oral antihistamine as monotherapy whereas one-fourth physician prefers it in combination with LTRA. Fexofenadine was most prescribed second generation antihistamine and the average duration of therapy reported by many was 2 to 4 weeks. The duration of treatment is largely consistent with ARIA guideline which recommends 2 to 4 weeks of treatment in patients with mild or moderate to severe persistent AR symptoms or moderate to severe intermittent AR symptoms but not with mild intermittent AR symptoms.<sup>12</sup> The preference for the use of combination therapy was as high as 65% in another Indian study, with preference towards the combination of antihistamine with LTRA.<sup>13</sup> Oral antihistamines are less effective in managing nasal inflammation, asthma and other related complications (ocular symptoms) as a monotherapy. Together with LTRA, studies have shown benefits in improving sleep quality and in reducing nasal congestion and complications.<sup>14,15</sup>

The efficacy of antihistamines is most often restricted by the sedation associated with it and is caused primarily by its inhibition of the central histamine neurons in the brain.<sup>16</sup> Bilastine was reported as the least sedative antihistamine by majority (41.55%) of the physician. Based on the report of the HIRO study, bilastine has least, nearly 0%, brain penetration and is recognized as "non-brain-penetrating antihistamines".<sup>17</sup> Bilastine at a normal dose (20 mg) and double dose (40 mg) did not show any impairment in the psychomotor function or driving performance.<sup>16,17</sup> Bilastine efficacy was also studied in two double-blind placebo controlled trials, assessing safety, efficacy and quality of life (QoL).<sup>18,19</sup> Both the study emphasized significant improvement with bilastine in the TNSS. Okuba et al also reported similar results, in comparison with placebo and fexofenadine, the mean TNSS shift from baseline declining significantly with bilastine.<sup>20</sup> Bousquet et al reviewed the literature available, and considered bilastine 20 mg once daily improved both nasal and ocular symptoms of AR and improved quality of life, which is a significant outcome in allergic conditions. The authors therefore concluded that bilastine meets existing EAACI / ARIA guidelines for medicinal products used in AR care.<sup>21</sup> Similarly, in our survey majority of the physicians corroborated that bilastine as a non-sedative and most effective antihistamines.

Pharmacokinetic data illustrated that bilastine does not interact with cytochrome 450 and is not metabolized in the liver and approximately 95% of bilastine are excreted unchanged in feces or urine.<sup>22</sup> Hence the drug can be used safely in patients with hepatic impairment. Similar results have also been recorded for the assessment of bilastine in renal impaired subjects, 20 mg daily dose can be safely administered to subjects with different levels of renal insufficiency without the need for dose adjustments.<sup>23</sup> Bilastine was chosen by majority in our study, as the drug to be used in AR patients with chronic renal and liver disease. Bilastine was found to be preferred in patient with persistent allergic rhinitis. Patients with persistent allergic rhinitis need long term treatment for controlling their symptoms, hence preferred treatment should not only be effective but also safe for long term use. One year safety data of 20 mg bilastine was highlighted in study by Joaquín Sastre in patients with perennial allergic rhinitis and was reported to be safe and well tolerated over a period of 1 year.<sup>24</sup> Therefore, it is also used in patients with other allergic conditions such as urticaria and URTI, given the safety value of bilastine.

## CONCLUSION

Our study concludes, AR is still a growing challenge in India with majority of physician preferring oral antihistamine either as monotherapy or in combination with LTRA for period of 2 to 4 weeks. Bilastine is a preferred choice in patients with impaired liver and renal function and in patients with persistent allergic rhinitis. It is also the preferred choice, as the most effective therapy and was also referred as least sedative antihistamine by majority of physicians across India.

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