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PULMONOLOGY SCANNER

EVER INCREASING GLOBAL BURDEN OF ASTHMA, HAY FEVER AND ECZEMA

Mortimer K and colleague conducted the Global Asthma Network (GAN) Phase I, multi-country, cross-sectional, population-based study to estimate the burden of chronic conditions like asthma, hay fever and eczema in adults.

The results of the study were published in the *European Respiratory Journal* as follows:

- A total of 193912 adults were identified across 43 centers in 17 countries. Of these, 104061 were females with mean age 38±7.5 years.
- The overall symptom prevalence is shown in figure 1.
- Prevalence of symptoms differed in centers both within and inter-countries.
- Hay fever and asthma ever, and hay fever and eczema ever showed moderate association at all the centers.

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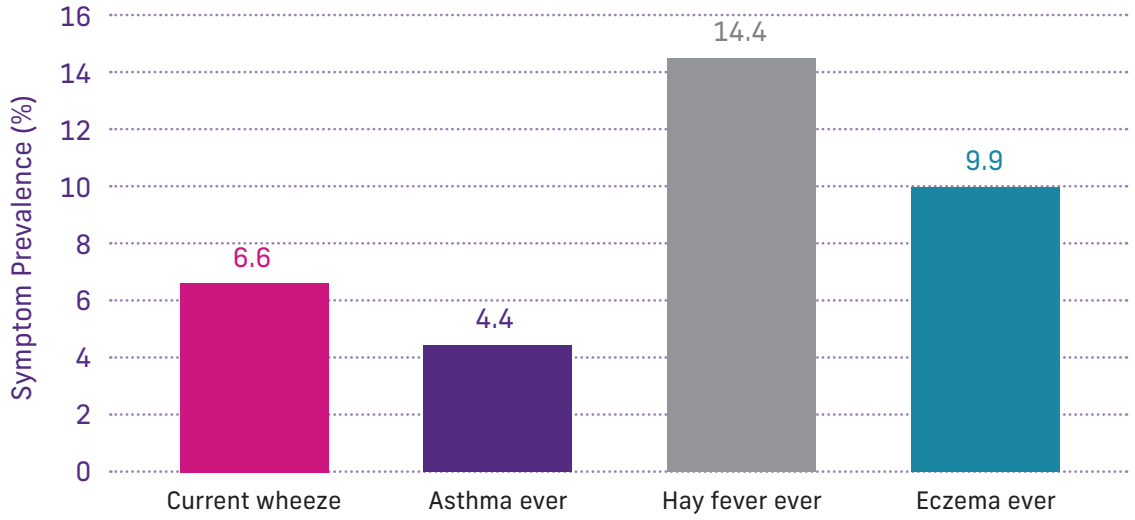
Figure 1: Symptom prevalence according to global asthma network (GAN) phase 1 study



It was concluded that in the countries examined in GAN phase I study, there is a substantial burden of asthma, hay fever ever and eczema ever. These findings point towards need for considering these chronic conditions as major public health concerns and implement strategies to avoid preventable morbidity.

Source: Mortimer K, Lesosky M, García-Marcos L, *et al*; Global Asthma Network Phase I Study Group. The burden of asthma, hay fever and eczema in adults in 17 countries: GAN Phase I study. *Eur Respir J*. 2022 Sep 15;60(3):2102865. doi: 10.1183/13993003.02865-2021. PMID: 35210319; PMCID: PMC9474894.

MOTILE CILIARY DISORDERS AND BRONCHIECTASIS: DO WE KNOW ENOUGH?

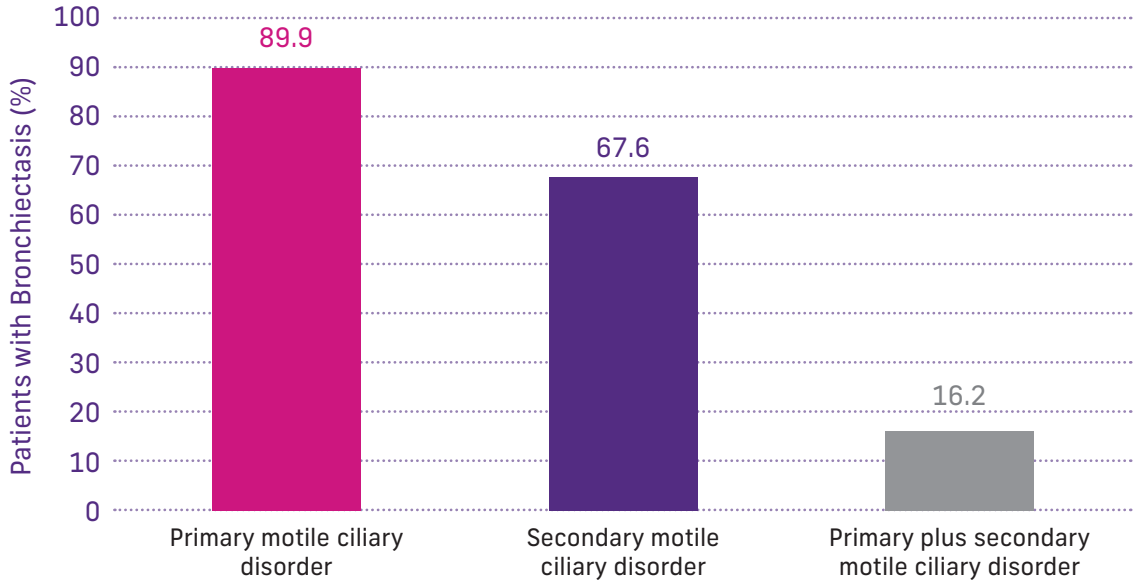
A recent study published in the *Chest* journal found that identification of nasal ciliary markers can help in establishing clinical endotypes of bronchiectasis.

Zhang RL and colleagues performed a research to recognize features of motile ciliary disorder of nasal epithelium and their relationship with clinical endotypes of bronchiectasis including disease severity and inflammatory subtypes.

A group of 167 patients with bronchiectasis and 39 healthy patients were recruited in this study. Patients were subjected to nasal epithelium brushing to obtain bronchial epithelium samples; thirteen patients underwent bronchoscopy and eighteen underwent elective surgery. Blood samples were obtained from 37 patients for advanced sequencing. Patients we re categorized according to systemic and airway inflammatory endotypes in bronchiectasis.

- Motile ciliary disorder types identified in patients with bronchiectasis is shown in figure 1.
- Patients with bronchiectasis divulged abnormal staining patterns of DNAH5, DNAI1 and RSPH9, more pronounced in severe disease, compared to healthy counterparts.
- In patients with bronchiectasis, motile ciliary disorder pattern scores were steady between upper and lower airways, and between large-to-medium and small airways.
- The expression of nasal ciliary markers remained unaffected by comorbid nasal disease and asthma.
- The proclivity for motile ciliary disorder remained unchanged regardless of airway or systemic inflammatory endotypes.
- Motile ciliary disorder was prevalent in mild bronchiectasis with blood or sputum eosinophilia.

Figure 1: Types of motile ciliary disorder in patients with bronchiectasis



It was concluded that profiling nasal ciliary markers can help in distinguishing clinical endotypes of bronchiectasis.

Source: Zhang RL, Pan CX, Tang CL, *et al*. Motile ciliary disorders of the nasal epithelium in adults with bronchiectasis. *Chest*. 2022 Nov 23:S0012-3692(22)04192-7. doi: 10.1016/j.chest.2022.11.022. Epub ahead of print. PMID: 36435264.