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**ASSESSMENT OF CORRELATION BETWEEN INDOOR ALLERGIES
AND BRONCHIAL ASTHMA**

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Relevance: House dust, containing potent allergens from mites, pets, and outdoor pollutants, combines with indoor Mold spores to create a persistent threat. Pyroglyphid mites thrive in humidity above 50-60%, while fungi like *Aspergillus* and *Alternaria* proliferate in poorly ventilated spaces. These volatile, water-soluble allergens are easily inhaled or contacted, triggering IgE-mediated reactions such as rhinitis, conjunctivitis, and bronchial asthma. Unlike seasonal allergies, these exposures occur year-round, making hypersensitivity a continuous concern. Thus, understanding this dual allergen burden is critical for effective diagnosis and environmental control.

Aim: this study aimed to identify and analyse the correlation between dust allergy, Mold allergy, and chronic asthma among foreign residents aged 18-30 years from tropical countries including Sri Lanka and tropical regions of India who have resided in Minsk, Belarus for more than six months.

Materials and methods. A structured questionnaire was developed using the Fill-out platform which facilitated anonymous participation and standardized data collection, and the survey was distributed through international student associations, social media groups for Sri Lankan and Indian students in Belarus, and community organizations, with the questionnaire collecting demographic information including age, sex, nationality, region of origin, and duration of residence, as well as environmental exposures such as housing type and visible Mold, physician-diagnosed allergic conditions including dust allergy and Mold allergy, and physician-diagnosed chronic asthma including age at diagnosis and medication use.

Results and their discussion. A study of 72 foreign residents in Minsk (mean age 24.6 years, 62.5% Indian, 37.5% Sri Lankan) found dust allergy in 52.8% (63.2% post-migration) and Mold allergy in 43.1% (74.2% post-migration). Among those with visible Mold, 75.8% had Mold allergy versus 15.4% without. Chronic asthma occurred in 37.5% (70.4% post-migration). Dust allergy conferred an Odds ratio of 6.82 for asthma, and Mold allergy an Odds ratio of 5.94. Of asthma patients, 74.1% had dust allergy and 63.0% had Mold allergy. Dual allergy yielded an odds ratio of 9.47 for asthma, with 68.2% affected. Asthma prevalence rose from 29.0% (<2 years residence) to 53.3% (>4 years); dust allergy rose from 41.9% to 66.7%, and Mold allergy from 32.3% to 60.0%. Statistical significance was deduced using Chi-Square and it highly confirms co-relation of dust and Mold allergies to chronic asthma ($p < 0.001$) with affected individuals facing 6 to 9 times increased risk. The strong relationship between duration of residence and disease prevalence ($p = 0.05$) proves that environmental transition from tropical to temperate zones increase respiratory sensitivity. These findings are statistically significant and clinically applicable to migrant populations.

Conclusions. In conclusion, this study demonstrates that dust and Mold allergies are strongly correlated with bronchial asthma, with individuals having both allergies facing a nearly tenfold increased risk. The majority of cases were diagnosed after arrival in Belarus, suggesting that transitioning from tropical to temperate urban environments contributes to respiratory sensitization, particularly in older buildings with dampness and Mold. These allergies represent a year-round health burden driven by persistent indoor allergens and fungal spores that remain airborne and trigger immune responses. Therefore, controlling humidity, improving ventilation, and reducing exposure to mites and Mold are essential strategies for alleviating symptoms and preventing exacerbations of allergic disease.