ORIGINAL ARTICLE

MONITORING AND ASSESSMENT OF AEROMYCOFLORA OF INTRAMURAL ENVIRONMENT OF A CLASSROOM: ITS VARIATION, METEOROLOGICAL DETERMINANTS AND HEALTH IMPACT

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Abstract*: Airborne fungal spores in bioaerosol are potential intramural allergens and may cause serious allergic and respiratory problems. The level of indoor allergens are of important concern nowadays, since it has been observed that most people in average spend 90-95% time indoors. So, we have carried out air sampling of non-viable fungal spores in a classroom of a college of Habra, West Bengal, for two consecutive years (May 2015- April 2017) by Burkard Personal Volumetric Sampler. The aim of the present study was to monitor the monthly airborne fungal spore concentrations in the classrooms and to explore the influence of different meteorological parameters on the occurrence of these airborne spores. A total of 27 fungal spore types were identified. Among the recorded aerospora, the predominant fungal spores were Cladosporium (22.85%), Periconia (12.89%), Ascospores (11.52%), Aspergilli/ Penicilli (10.62%), Basidiospores (9.31%), Rust spores (7.79%) and Curvularia (7.11%) etc. Average number of spore concentration in the air of classroom was 2226 ± 576 spores /m³. Maximum spore concentrations (2915±681 spores/m³) was observed in post monsoon and minimum in monsoon (1925 ± 396 spores/m³). In Spearman rank correlation analysis, a significant relationship between the meteorological factors with total and dominant spore concentration was observed. Thus, the present study depicts the exposure level of fungal spores within the college class room in different seasons, which may have important health impact regarding fungal respiratory allergic symptoms.*

Key Words*:* Bioaerosol, intramural, non-viable, meteorological parameters, Spearman rank correlation.