INTRODUCTION

Air is important media to transfer spores from one place to another which may cause disease in various organisms. Air may contain millions of spores, fungal mycelia and pollens.

Indoor aerobiology or intramural aerobiology means study of contamination in a closed environment like hospitals, glasshouses, godown etc. with reference to airborne microbial contaminants.

Now a day’s air quality of Indoor environment has become an important health concern. Microorganisms present in the Indoor environment have attracted the attention of many workers Lumpkins et.al. (1973), Makinen (1974), Long D.L. and C.L. Kramer (1972). Microbes in Indoor air may come from out door by ventilation or originate within. In the present investigation Survey Indoor air mycoflora was carried out in outside the Vegetable Market at Ambajogai using Rotorod air Sampler.

Air contains many components organic as well as inorganic components like pollengrains, fungal spores, hyphal fragments, plant hairs dust particles and other components. This was referred as ‘Air spora’ by Gregory (1952).

Fungal spores, mycelia of fungi and pollen grains get determined major source of contamination is plant in bloom, animal excreta, and infected plant parts. Microbes growing on decaying of drying plant parts saprophytically, coughing and sneezing of diseased persons generate aerosol which also contaminate the air.
Many workers have undertaken their research in outdoor aerobiology however much less attention has been paid towards the study of indoor aerobiology. The contamination of indoor environment with presence of microbial population other contaminates is certainly cause a major health problem.

Indoor aerobiology was completely on back foot as compared to outdoor aerobiology because so many researches were conducted their work on outdoor aerobiology.

Indoor aerobiology can be studied inside the buildings, schools, hospitals, colleges, libraries, vegetable markets, poultry farms, cowshed, goat farm, sheep farm caves, jail etc.

Indoor microbial population is main reason of so many allergic diseases and health problems. When houses are under repairing concentration of microbes may increase (Mounsell1954).

Different types of information obtained by different spore types. Microscopic assessment is the least selective allowing all the spores to be counted and classified but identification up to species level is rarely possible and often genera cannot be distinguished. More precise way of identification is isolation of spores and their growth in culture but numerical estimates of spores of culture media rarely coincide with microscopic counts which may due to distribution of spores of unsuitable isolation media or incubation temperatures. Spores obtained in culture may differ from that deposited and these can be counted microscopically *Leptosphaeria* spores produces phoma colonies in culture.
FUNGL ALLERGY

Van Pirquet (1906) coined the term allergy. Allergy is an accelerated or altered reaction of a person to second or subsequent exposure to a substance to which his body has already become sensitized by a previous exposure. Allergens are substances which cause allergy. Hay fever and allergic branchial asthma are best examples of allergy. Many allergens are found in nature like pollengrains, fungal spores, insects, dust, danders, feathers, cosmetic synthetic fibres, food articles, drugs and chemicals.

In India nasal, bronchial, dermal, gastro-intestinal as well as auto immune diseases are common allergic diseases. With regard to the incidence of all the major allergic diseases. In India, the total is estimated in the neighbourhood of 10% of the population (Vishwanathan 1964). The figure varies from 10-20 % in U.S.A.

Different types of bio pollutants are found in atmosphere out of which fungal spores constitute a major portion. Aerial fungal spores play an important role in etiology of allergic manifestation was proved by investigations all over the world.

In 1873 first case of fungal allergy was reported by Blackly. He observed a number of mould spores on the slides exposed for pollen counting. Blackly was a patient of Hay Fever from childhood and reported severe reactions to the inhalation to Chaetomium and Penicillium spores. After 5 years later, Van Leeuven (1924) suggested that Asthma was caused by Miasmata or climate allergen in Holland and he reported a patient who was sensitive to feathers.
In 1924 Cadham also reported three cases of allergy due to the organism causing wheat rust i.e. Puccini graminis. He used antigenic extracts of air borne fungi for the purpose first time and he observed that patient got relief from this therapy.

Climatic asthma in Spain was due to presence of more fungal spores in the air and also on the household articles was reported by Jiamenez Diag and his co-workers (1932).

Mould allergy was studied by Prince and his associates. Pollens, dusts, danders and mould are allergic and many persons are sensitive for them was observed by Prince and Morrow, 1937. They found that moulds are primary allergins and rest of the components are secondary.

Fungal allergy in 1936 was studied by Feinberg and little slides exposed for pollens are full with number of moulds were observed by Bernstein and Feinberg (1942). When pollen counts were low at that time also some patients suffer from hay fever (Feinberg). He also correlates the seasonal frequency of Alternaria extracts.

Aerobiological work in Great Britain was carried out extensively. But work on mould allergy was carried out by Hyde and co-workers Hyde and Williams, (1949),(1953); Hyde, Richards (1956). Skin tests were also performed in the same study with the extracts of certain fungi. Major cause of asthma is mould spore concluded by them.

Role of fungal spores in the allergic disorders were reported from various parts of world by this time C.Ellis,(1936); Brown, (1936); Pratt,(1938); Harris, (1941); Hamilton,(1959)
Many other workers were also involved in this field like Colin et.al. (1961) were reported moulds of all allergenic significance in the Puget Sound area. In Haifa mould allergy was studied by Lambskin (1965) and attempted to correlate the incidence of asthmatic attack with the average relative humidity and no. of colonies, pollens and mould spores and some other inhalants are etiologic agents of respiratory allergy in the Central part of Turkey has studied by Ozkaragoz (1967). Mould allergy extensively studied by Prince and Mayer (1976). In Agriculture community also show allergic patients and fungal spores were also found in their homes to Roby and Sheller (1979). They also tried to correlate with clinical data.

An occupational respiratory disease due to moulds in miller and bakers was studied by Gesa et.al.(1980).

The airspora of Derby Chest and Allergy Clinic in England and its relevance to incidence of allergy was studied by Brown and Jakson (1978). They also explained the value of aerobiology to an allergy treatment centre. Modern aerobiology has med a major contribution to the study of respiratory allergic disorders, particularly those occupational origin.

In India Cunningham (1971). studied respiratory allergy earlier . In few places of India like Delhi (Shivpuri er.al. 1962), Kanpur (Rajan et.al. 1952), Lucknow (Lakhanpal and Nair, 1958), Jaipur (Kasliwal et.al.1959), Calcutta (Chand et.al. 1977), Aurangabad (Tilak S.T. and his associates, 1978, Babu, 1983). The aerobiological work in relation to respiratory allergy was carried out later on.
Kasliwal et.al. (1955) firstly carried out comprehensive studies in aerobiology in relation to allergy. In India and reported that airborne fungal spores or fragments of mycelium are responsible to cause respiratory allergy Bhargava et.al. (1961) from Jaipur reported preliminary study of fungal allergy values of skin tests in allergy was reported by Kasliwal et.al. (1961).

In Delhi detailed allergic fungal study was conducted by Shivpuri (1962, and onwards), Sandhu et.al. (1964) and Agarwal et.al. (1969 and 1974). Shivpuri and associates (1962, and onwards). From V.P.Chest Institute, Delhi performed systematic study of Aerobiology, preparation of antigens from locally isolated cultures and their role in etiology of respiratory allergy in Delhi and New Delhi.

In recent years the incidence of allergic disorders in India is very well documented and is reported. But the work on fungus as allergic pollutants was not performed in large amount In India.