A RETROSPECTIVE STUDY OF SEASONAL VARIATION IN SPUTUM POSITIVITY AMONG MYCOBACTERIUM TUBERCULOSIS PATIENTS IN DISTRICT MUZAFFARNAGAR OF NORTHERN INDIA

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(Accepted 5 April 2013)

ABSTRACT – Globalization is facing persistent several unedited chapters of global warming because of increasing level of green house gases in the environment, which deteriorate the seasonality of global patterns. Seasonal variations of tuberculosis have been reported from different parts of the world but no definite and consistent pattern has been revealed. The aim of this study was to assess the seasonality of tuberculosis in different pockets of district Muzaffarnagar of northern India. The present study was from Govt. hospitals at Muzaffarnagar. These hospitals run daily out-patient department (OPD) with facility for indoor patients in urban and semi-urban areas. While in rural areas the primary health centers run OPD only and indoor patients are nominal. Patients with tuberculosis symptoms were referred to nearest tuberculosis unit for sputum microscopic study. Effect of seasonality was analyzed from collected data. The significance of the difference between highest and lowest values was analyzed for the variables, i.e., sputum positive and sputum negative patients both suffering from Mycobacterium tuberculosis infection. The duration of the study was from Jan 2009 to Dec 2010. According to this study, sputum positive cases and Mycobacterium tuberculosis infection was found at peak in April-June 2009 and Jan-March 2010. A seasonal pattern of tuberculosis was observed for sputum positive tuberculosis patients. The considerable peak of tuberculosis infection was found in summer season and considerable fall in winter season revealed. This information would be useful for administration and managers to take extra care to arrange and provide extra facilities during summer season. This information would also be useful for public health authorities to educate and alarm the people on tuberculosis seasonality.

Key words : pulmonary tuberculosis, seasonality, Mycobacterium tuberculosis.