Prevalence of Latent Tuberculosis among Prisoners; A Cross Sectional Study Conducted in a Jail of Pakistan

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ABSTRACT

Objective: To determine frequency of prisoners having pulmonary tuberculosis in latent phase.

Design and duration: This is a cross sectional study of observational type, completed in duration of 4 months.

Setting: Study was conducted in a central jail of Pakistan

Patients and methods: Study was conducted in a central jail of Punjab Pakistan, where all patients were evaluated for pulmonary tuberculosis. Permission was taken from jail administration before conducting the study. All cases in study group were divided into two groups group-A containing those who had spent more than 9 months in jail and in group-B which spent less than one month. After taking biodata like name, age, duration spent in jail, history was taken for any fever, cough or weight loss, previously had pulmonary T.B or not, history of smoking was asked as well. Digital chest X-ray postero-anterior view of chest showing both lungs were done for all cases in study group and diagnosis was established on the basis of X-rays. All data was properly documented and analyzed using micrososft office (version 2016) and SPSS software (version-20). Results were obtained in the form of frequencies, percentage and means and presented via tables and graphs.

Results: Total 90 cases were included in our study group. 50 were in group-A and 40 in group-B. There were 10 cases in group-A having latent tuberculosis and no patient found in group-B having latent tuberculosis. Ages of cases were 20-70 years with mean age of 38.5 years. Most of the cases were above 35 years of age. Prevalence of latent tuberculosis among prisoners was found 11.1%.

Conclusion: Prisoners living in jail more than nine months duration are at high risk of having pulmonary tuberculosis and most of them are in latent phase. Short stay in jail has very low chance of infection.

Key words: Pulmonary tuberculosis, latent phase, chronic cough, Jail in Pakistan

INTRODUCTION

Latent tuberculosis is a type of tuberculosis in which patients shows no signs and symptoms and apparently he is asymptomatic but inside him disease is present and it is confirmed on special tests like montox test for TB. Chest x-ray also shows findings of pulmonary tuberculosis but patient has no symptoms. In this study our purpose was to find prevalence of latent tuberculosis among prisoners of jail. There is non-hygic environment usually in jails and chances of getting infection from other prisoners are high as congested space. We studied such prisoners in which no signs and symptoms of pulmonary tuberculosis were found. This disease is caused by mycobacterium tuberculosis. According to a survey done in Pakistan prevalence of pulmonary tuberculosis is 40%. This value is very low in developed countries and much higher in under developed countries.

Patients and methods

This is a cross sectional study of analytical type conducted in a jail of Pakistan. Study was started in January 2019 and completed after 4 months in April 2019. Only those cases were included in this study which were having no apparent signs and symptoms of pulmonary tuberculosis, have not taken any treatment for tuberculosis previously. Study was conducted in a central jail of Punjab Pakistan, where all patients were evaluated for pulmonary tuberculosis. Permission was taken from jail administration before conducting the study. All cases in study group were divided into two groups group-A containing those who had spent more than 9 months in jail and in group-B which spent less than one month. After taking biodata like name, age, duration spent in jail, history was taken for any fever, cough or weight loss, previously had pulmonary T.B or not, history of smoking was asked as well. Digital chest X-ray postero-anterior view of chest showing both lungs were done for all cases in study group and diagnosis was established on the basis of X-rays. All data was properly documented and analyzed using micrososft office (version 2016) and SPSS software (version-20). Results were obtained in the form of frequencies, percentage and means and presented via tables and graphs.

Results: Total 90 cases were included in our study group. 50 were in group-A and 40 in group-B. There were 10 cases in group-A having latent tuberculosis and no patient found in group-B having latent tuberculosis. Ages of cases were 20-70 years with mean age of 38.5 years. Most of the cases were above 35 years of age. Prevalence of latent tuberculosis among prisoners was found 10(11.1%). There were 20 cases between 20-30 years, 28 between 30-40 years, 25 between 40-50 years, 10 between 50-60 years and 7 between 60-70 years of age.
DISCUSSION
Tuberculosis is much prevalent in Pakistan and specially in under developed areas and among people having low socioeconomic status. It is less common among people having good socioeconomic status and living in hygienic environment. Poor people usually live in crowded places and hygienic conditions are compromised so they are mostly infected and it is easily transmissible from one person to other via cough air born droplet infection. There is complete course of 9-12 months for pulmonary tuberculosis in which anti tuberculous medicines are given according to weight of the patient. If untreated it can lead to serious complications and mortality rate is high in that case. It can be cured by early diagnosis and prompt treatment with ATT. Good diet also play important role in its prevention by enhancing body immune system. Which people have weak immune system due to any reason either dietary deficiency or any other disease, they are more prone to this disease.

Conclusion: Prisoners living in jail more than nine months duration are at high risk of having pulmonary tuberculosis and most of them are in latent phase. Short stay in jail has very low chance of infection.

REFERENCES