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Socio-Demographic Characteristics of Abdominal Tuberculosis Patients attended at Tertiary Care Hospital in Bangladesh

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Abstract

Background: The socio-demographic profiles may vary among the abdominal tuberculosis patients. **Objectives:** The purpose of the presents study was to see the socio-demographic characteristics of abdominal tuberculosis patients. **Methodology:** This descriptive cross-sectional study was conducted in the Department of Surgery of Rajshahi Medical College Hospital, Rajshahi, Bangladesh from January 2014 to December 2015 for two years. This study included 100 patients who were admitted in surgery units of Rajshahi Medical College Hospital, Rajshahi, Bangladesh who were diagnosed as abdominal tuberculosis with or without associated pulmonary or nodal TB. Both male and female patients of any age except pediatric age group irrespective of nutritional and socio-economic status were included in study population. The details of demographic variables like age, sex, residence and so one were recorded in a data collection sheet. **Results:** A total number of 100 cases of abdominal tuberculosis patients were recruited for this. Among the 100 cases 52% was within 20 to 30 years of age. The male and female ratio was 2.45:1. Maximum cases (68.0%) were living in rural area. About 82 cases were from lower socio-economic group. **Conclusion:** In conclusion young adult male with low socio-economic condition are most commonly suffering from abdominal tuberculosis. *[Journal of National Institute of Neurosciences Bangladesh, July 2022;8(2):162-166]*

Keywords: Demographic characteristics; abdominal tuberculosis; socio-economic profiles

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Introduction

Tuberculosis was recognized as early as the 4th century BC, and was known as phthisis, lupus, scrofula, or Pott's disease, until the identity was established by Robert Koch[1]. Tuberculosis (TB) remains one of the world's deadliest communicable disease and it remains a major global health problems, responsible for ill health among millions of people each year[2]. TB ranks as the second leading cause of death from an infectious disease worldwide, after the human immunodeficiency virus[3].

In 2013, an estimated 9.0 million people developed TB and 1.5 million died from the disease, 1.1 million among HIV negative people and 0.4 million of HIV positive people[4]. TB is slowly declining each year and it is

estimated that 37 million lives were saved between 2000 and 2013 through effective diagnosis and treatment[5]. However, most deaths from TB are preventable and the death toll from the disease is still unacceptably high and efforts to combat it must be accelerated if 2015 global targets set within the context of the Millennium Development Goals (MDGs) and are to be met[6]. It is typically affects lung but can affects other sites as well in patient with extra pulmonary tuberculosis, abdomen is involved in 11.0% of patient[7].

Bangladesh is a low middle income country. Economic condition as well as nutritional status of average population are bearing low status[4]. Due to dense population many people live in a crowded and unhygienic condition with poor sanitation. Majority of the people are illiterate and resultantly are unaware of health and disease[8]. Due to these risk factors tuberculosis is a major health issue in our country.

According to WHO the annual estimated incidence for all cases in 224 per 100,000 population per year[9]. The prevalence (all case) is estimated to be 402 per 100,000 population per year and the multi-drug resistant tuberculosis (MDR-TB) rate among the new case of TB was estimated to be 1.4% cases[10]. This rate among the re-treatment cases is estimated at 29.0% cases and the estimated TB mortality is 51 per 100,000 population per year[11]. The extra pulmonary new TB case notified was 33,704 cases[9]. The purpose of the presents study was to see the socio-demographic characteristics of abdominal tuberculosis patients.

Methodology

Study Design and Population: This descriptive cross sectional study was conducted in the Department of surgery of Rajshahi Medical College Hospital, Rajshahi, Bangladesh from January 2014 to December 2015 for two years. This study included 100 patients who were admitted in surgery units of Rajshahi Medical College Hospital, Rajshahi, Bangladesh who were diagnosed as abdominal tuberculosis with or without associated pulmonary or nodal TB. Both male and female patient of any age except pediatric age group irrespective of nutritional and socio –economic status were included in study population. Sampling was done by non-randomized, purposive, convenience technique. All admitted patients who were diagnosed abdominal tuberculosis with or without associated pulmonary or nodal tuberculosis were included in this study. Patients of paediatric age group (less than 18 years), pregnant woman or suspected abdominal TB under trial of anti-tubercular chemotherapy were excluded from this study. The details of demographic variables like age, sex, residence and so one were recorded in a data collection sheet.

Study Procedure: Patients who were diagnosed as abdominal tuberculosis with or without associated pulmonary or nodal TB. Both male and female patient of any age except pediatric age group irrespective of nutritional and socio –economic status were included in study population. Detailed history of each patient under study was recorded in respect to age, sex, mode of presentation, symptoms relating to abdominal tuberculosis and its complications, present or past history regarding tuberculosis, relevant personal, family or close contact tuberculosis and socioeconomic history.

Statistical Analysis: Collected data was compiled, checked and edited. Data processing and analysis was done with the help of computer using statistical software SPSS (Statistical Package for Social Science) version 15.0 for windows. The test statistic used to analyse the data was descriptive statistics and Chi-square test. The level of significance was set at 0.05 and $P<0.05$ was considered significant.

Results

A total number of 100 cases of abdominal tuberculosis patients were recruited for this after fulfilling the inclusion and exclusion criteria. Among the 100 cases 52.0% was within 20 to 30 years of age. Only 3.0% was found beyond the age of 60 (Table 1).

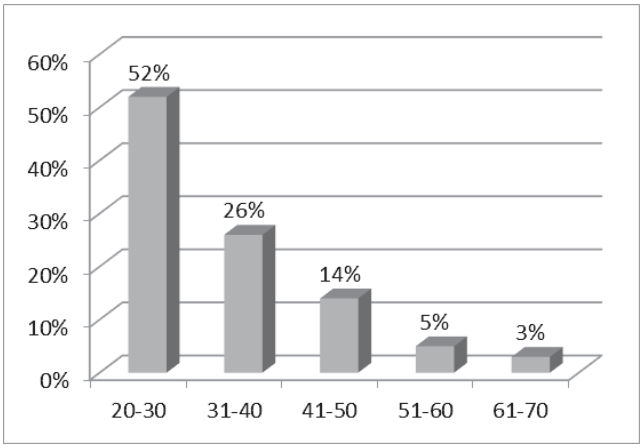

Figure I: Distribution of Different Types of Stroke

Both male and female patient were included in this study. In this study 71.0% cases were male patients and remaining 29.0% cases were female. The male and female ratio was 2.45:1 (Figure II).

It was also found that maximum cases (68.0%) were rural, 18 cases were slum and14 were urban (Table 1).

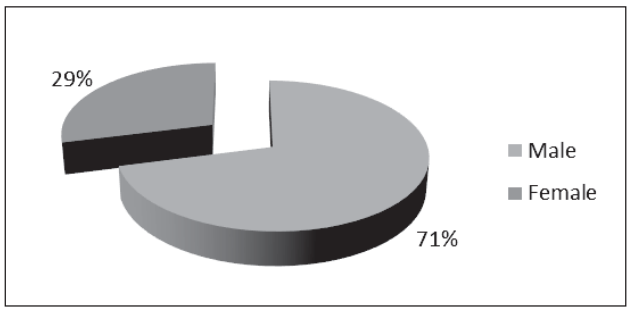

Figure I: Distribution of Different Types of Stroke

Table 1: Distribution of Residence among Study Population (n=100)

Residence	Frequency	Percent
Urban	14	14.0
Rural	68	68.0
Slum	18	18.0
Total	**100**	**100.0**

In this study 60.0% patient were found to be a farmer. However, housewife, students and service holders were also found among the study population which was 14.0% cases, 11.0% cases and 8.0% cases respectively (Table 2).

Table 2: Distribution of Occupation among Study Population (n=100)

Occupation	Frequency	Percent
Farmer	60	60.0
Businessman	7	7.0
Student	11	11.0
Service	8	8.0
Housewife	14	14.0
Total	**100**	**100.0**

Among 100 abdominal TB cases 82 were from lower socio-economic group, 12 were from middle class and remaining 6 from upper class (Figure III).

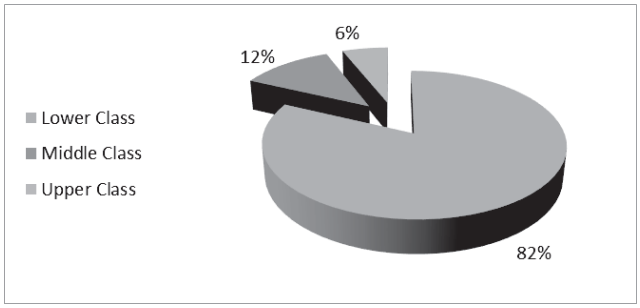

Figure III: Showing the Socio-economic status among the study population

In this study 35.0% cases were smokers and 40.0% cases were betel nut user. However, oral gul user and alcohol user were found in 20.0% cases and 3.0% cases respectively (Table 3).

Table 3: Distribution of Personal Habit among Study Population (n=100)

Personal Habit	Frequency	Percent
Smoker	35	35.0
Alcoholic	3	3.0
Betel nut user	40	40.0
Gul user	20	20.0
Total	**100**	**100.0**

Regarding dietary factor only 7 cases were found to have drink unboil milk and the rest of the 93.0% cases were not take the drinking unpasteurized milk or unboil milk (Table 4).

Table 3: Distribution of Personal Habit among Study Population (n=100)

Dietary Factor	Frequency	Percent
Drinking of unpasteurized milk or unboil milk	7	7
Not drinking unpasteurized milk or unboil milk	93	93

In this study 92% of patients had poor nutrition. Only 02% patients had good nutrition (Figure IV).

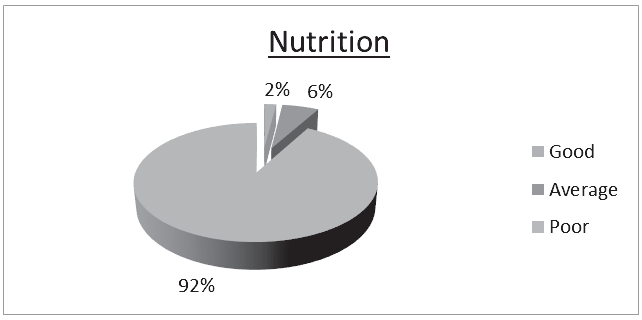

Figure IV: Showing the Nutritional status of study population (n=100)

Discussion

Tuberculosis is an infectious disease caused by bacilli called Mycobacterium tuberculosis. Abdominal tuberculosis can involve the luminal gastrointestinal tract, solid organs, peritoneum and genito-urinary tract[6]. However, the diagnosis of abdominal TB can often be difficult to establish because the disease may present with a wide variety of non-specific symptoms and signs.

In addition, the pattern of disease is changing, and many patients with abdominal TB do not have the associated pulmonary disease that may aid diagnosis[12].

In this study a total 100 cases were included. Both male and female patients were included according to the selection criteria. Admitted patients in Department of Surgery of Rajshahi Medical College Hospital, Rajshahi who were diagnosed as abdominal TB were selected as a sample. Detailed history and clinical examination performed of every patients. This study was carried out on 100 cases of abdominal tuberculosis. Among them most of the cases 52.0% cases were aged between 20 to 30 years; 26 cases were aged between 31 to 40 years; only 3 cases were beyond 60 years. Both male and female patient were included in this study. Most of the patient (71.0%) were male and remaining 29.0% cases were female. It was also found that maximum cases (68.0%) were rural; 18 cases were slum and 14 cases were urban. About 60.0% patients were found to be farmer. In this study 35.0% were smoker and 40.0% were battle nut user. Regarding dietary factor only 7 cases were found to have drink unboil milk.

Age varies widely among the patients of abdominal TB ranging from 20 to 70 years. Among the 100 cases 52.0% was within 20 to 30 years of age. Only 3.0% cases was found beyond the age of 60 years. Rahman et al[13] show most of the patients were in the age of 21-30 years which is similar to this present study. Sharm and Bhatia[15] also showed similar result. Bhargava et al[14] found two thirds of the patients with abdominal TB are 21 to 40 years old.

In one Indian studies age at presentation was variable with maximum cases in 21 to 40 years age group (58% cases) with mean age of 32.7 years[16]. Bolukbas et al[17] found age 31.4±15 years in their series of abdominal tuberculosis. This indicate high prevalence of tuberculosis among earlier, economically productive age group in our country. The possible cause of affected group is working in the community getting the infection from environment by organism that spread by open cases of pulmonary tuberculosis. On the other hand age incidence of elderly persons are also low possibly because of late presentation of constitutional symptoms. Sometimes neglected elderly patients of abdominal tuberculosis do not reach hospital for treatment.

In this study 71.0% cases are male patients and remaining female; the male and female ratio is 2.44:1. Sinan et al[18] showed male predominance in his study which is similar in this study. Baloch et al[19], Bolukbas et al[17], Mazumder[20] showed M:F ratio 1:2, 0.83:1 and 0.61:1 respectively in their series. All these show female predominance which are dissimilar to the present series. Niaz and Ashraf[21] and Thapa et al[22] found it 1.2:1 and 2:1 respectively in their study. In a study of tuberculosis and patient gender in Bangladesh Begum et al[23] have shown male dominance in pulmonary tuberculosis with male to female ratio 1.96:1 which is in close proximity to the result of present series. The reason for this discrimination between male and female is probably because of less access of women to health care delivery system and they are socially and economically more suppressed[24].

In this study most of the patients were rural (68%). About 18.0% patients were from slum and only 14.0% cases were from urban. This findings well corresponds to study done in Bangladesh Mozumder[20]. About 80.0% population of Bangladesh live in rural area. This study was conducted in Rajshahi Medical College Hospital where patient come from whole of the north bangle side of Bangladesh. Hence in this study majority of the patients of abdominal tuberculosis were found to have come from rural area. Again higher incidence of abdominal tuberculosis in rural area are due to illiteracy, poor nutritional status and lack of knowledge regarding food and personal hygiene. On the other hand, population of urban area is increasing day by day and more and more people are living in overcrowded condition and in slum areas. In such densely populated condition with poor nutritional status open cases of pulmonary tuberculosis patients easily disseminate tuberculosis to other persons through droplet infection. This is why in this study incidence of abdominal tuberculosis was high in the slum area.

In this study 92% of patients had poor nutrition. Only 02% patients had good nutrition. Among 100 abdominal TB cases 82 were from lower socio-economic group, 12 were from middle class and remaining 6 from upper class. Similar results were shown in a study[21] and they reported that majority of the patients (68.0%) were in poor socio-economic condition and 84.0% of them were rural dweller.

Conclusion

In conclusion the young adult is the most common age group of study population suffering from abdominal tuberculosis. Male is predominant than female. Majority are living in the rural area. The most common occupation are farmer, housewife, students and service holders among the study population. Lower socio-economic condition is the most commonly reported study population. Therefore, the patients presented with abdominal tuberculosis should be

monitored carefully.

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