

Descriptive Review of the Patients Suffering from Tuberculosis in the Past 10 Years Treated at Pediatric Clinic of Clinical Center of Sarajevo University

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ABSTRACT

Introduction: Due to the geographical position of Bosnia and Herzegovina and its socio economic momentum even though the standard vaccination program is carried out, the child population continues to suffer from pulmonary tuberculosis in significant percentage. **Material and methods:** The study was retrospective and included patients who were in the period from January 1, 2004 to December 31, 2013 (or the 10 years period) hospitalized at the Department of Pulmonology Pediatric Clinic dually diagnosed with lung TB and start treatment. Data were adopted from available medical records (history of disease). **Goal:** The aim of the study was to determine the epidemiological and clinical characteristics of tuberculosis of the lungs in children who were hospitalized at the Pediatric Clinic. **Results:** In the period from January 1, 2004 to December 31, 2013 there were hospitalized a total of 50 children with a proven active infection with MBT, where it was initiated treatment with a specific therapy. From this number 44% of patients were aged from 5 to 10 years, 22% of patients were aged younger than 5 years. Peak incidence was in 2009. About 66% of patients had a positive history of sick close relative, while 10% of them had a history of contact with other sick person. From baseline 28% of patients were referred to the Department with suspicion of a specific process. From the total 70% of respondents were regularly vaccinated, and 29% of them had a visible BCG scar. In 55% of cases there was anamnestic information - decreased body weight, in 82% of cases the presence of cough, of which 52% of the occurrence of expectoration. In 78% of cases we had positive auscultatory findings of the lungs. In 14% of cases on X-ray of the lungs was noticed changes in terms of the primary complex positive. In this material we had one cavernous and one miliary TB of the lungs. Sputum or gastric lavage was positive in 62% of cases, and Quantiferon because of the lack of the same (in the past) was positive in 34% of cases. All subjects at the time of discharge were classified as recovered. In that period we had proven resistant TB. **Conclusion:** Bosnia and Herzegovina belongs to the group of countries with still present and evident TB. In the investigated period of ten years from the pediatric pulmonary TB, usually have suffered small children and adolescents. At moment of discharge, all patients were classified as recovered. In the teste material we did not have proven resistant TB.

Key words: tuberculosis, children, Bosnia and Herzegovina

1. INTRODUCTION

It has been described until today more than 60 different types of MBT from which one third of them are pathogenic to a man (1). Despite the development of medicine and science in general, which made a more detailed study of tuberculosis as a disease in all its segments, tuberculosis makes one of the three major infectious diseases today with a high rate of morbidity and mortality. WHO has found that the two billions of people is infected with MBT (2), leading to the 9 million new TB patients and 2 million deaths annually. According to WHO one million deaths are sick child population (3). Recognizing the high risk of developing tuberculosis in early childhood, as well as the possible development of malignant form, the WHO recommends initiating therapy for children younger than 5 years who have been in contact with adult, infectious sick

persons, regardless of proven active infection with MBT (4). Due to the geographical position of Bosnia and Herzegovina and its socio economic momentum even though the standard vaccination program is carried out, the child population continues to suffer from this illness in significant percentage.

2. PATIENTS AND METHODS

The study was retrospective and included patients who were in the period from January 1, 2004 to December 31, 2013 (or the 10 years period) hospitalized at the Department of Pulmonology Pediatric Clinic dually diagnosed with lung TB and started treatment. Data were taken from available medical records (history of disease).

3. GOAL

The aim of the study was to determine the epidemiological and clinical characteristics of tuberculosis of the lungs in children who were hospitalized at the Pediatric Clinic.

4. RESULTS

In the period January 1, 2004 to December 31, 2014 there were hospitalized a total of 50 children with a proven active infection with MBT, where it was initiated treatment with a specific therapy. From this number 32 patients, meaning 64% of them were originally from the Sarajevo Canton, equally of male and female gender. The average age of participants was 8 years, the youngest participant was 2 and the oldest 17 years. The 44% of patients were aged from 5 to 10 years, 22% of patients were aged younger than 5 years. Peak incidence was during 2009. From baseline 66% of patients had a history of sick close relative, while 10% of them had a history of contact with other sick person. The 28% of patients were referred to the Department on suspicion of a specific process, while 70% of respondents were regularly vaccinated, and 29% of them had a visible BCG scar. In 55% of cases there was anamnestic information - decreased body weight, in 82% of cases the presence of cough, of which 52% of the occurrence of expectoration. In 78% of cases we had a positive auscultatory findings of the lungs. In 14% of cases on lungs X-ray was noticed changes in terms of the primary complex was positive. In this material we had one cavernous and one miliary TB lungs Sputum or gastric lavage was positive in 62% of cases, and Quantiferon because of the lack of the same (in the past) was positive in 34% of cases. All subjects at the time of discharge were classified as recovered. In that period we did not find any resistant TB cases.

5. DISCUSSION

The study results apply only to patients treated at the Pediatric Clinic CCUS. Due to lack of information system in the Bosnia and Herzegovina, we were not able to compare our data with other centers in Bosnia and Herzegovina dealing with the treatment of pulmonary tuberculosis. Bearing in mind our data the incidence and comparing them with data from the Croatia from 2012, say that B&H belongs to the group of countries with medium high incidence of TB (5). The distribution of males and females was equal. The 56% of the patients belonged to the age group 2 to 5 years and 10 years and over corresponding data and other studies (6), while 22% were younger than 5 years, with 90% of them had clinically manifest signs of active disease (7). In the ten-year period studied, peak incidence was during the year 2009. From baseline 66% of patients had a positive anamnestic data of sick close relative, which is correlated with data from the literature pertaining to the most common sources of infection (8).

From total 70% of respondents had regular vaccination status, with 29% of BCG scar was visible as result of insufficient and/or inadequate applied vaccination or what is more likely that the vaccine does not protect against the possible development of disease after infection from close contact. Clinical manifestations of the disease we had in all patients with active form of the disease. The most com-

mon symptom is a cough in 82% of patients. In 78% of cases we had positive auscultator findings lungs, and in 55% of cases had a weight loss which correlates with the data of other authors (9). In this material we had one cavernous case. The girl with cavernous tuberculosis previously used inhaled corticosteroid because she had allergic asthma which was conducive to the development of this form of the disease. We had one miliary tuberculosis in girl from collective accommodation who was not vaccinated.

Given the age of the respondents we realized sputum or gastric lavage. Cultures were positive in 62% of cases. Quantiferon test was positive in 34% of cases, and its use has been dictated by the unavailability of the same within the specified period. At the time of discharge respondents were classified as recovered and are still controlled outpatient. All subjects responded well to the therapy according to the current protocol. In that period we had not proven resistant TB.

6. CONCLUSION

- Bosnia and Herzegovina belongs to the group of countries with still present and evident TB
- In the investigated period of ten years from the pediatric pulmonary TB, usually have suffered small children and adolescents.
- From total number patients in our sample 66% of patients had a history of positive ill close relative.
- Cough appeared as the most common symptom.
- Radiological positive results we've had in 90% of cases
- In moment of discharge, all patients were classified as recovered
- In the material we did not have proven resistant TB.

CONFLICT OF INTEREST: NONE DECLARED.

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