

**UNIVERSITY OF MEDICINE AND PHARMACY TÂRGU-MUREȘ
FACULTY OF MEDICINE**

Abstract
TUBERCULOSIS,

**CONTRIBUTION OF PRIMARY CARE TO THE DIAGNOSIS OF THE
DISEASE**

PhD student: **Ács Valéria**

Scientific coordinator: Prof. Univ. Dr. Monica Sabău

Introduction:

Although the number of tuberculosis cases is dropping continually since 2002, Romania is one of the most affected countries by the Koch bacillus infection, which represents a major public health issue with important social and economic impact. The National Strategy for Control of Tuberculosis 2007-2011 has been developed based on the directions set forth by the WHO Global Plan for Stopping Tuberculosis 2006-2015. Achievement of the proposed goals requires active involvement of all responsible factors from the healthcare network, especially general practitioners, who act as "gatekeepers" and have a key role in the early diagnosis of the disease, and active prophylaxis and monitoring of post-hospital therapy. Early diagnosis of tuberculosis in the primary healthcare network is a continuous challenge for the general practitioner.

Objectives

Main objectives:

1. Evaluation of the contribution of general practitioners to the early diagnosis of tuberculosis in the studied period.
2. Evaluation of new pulmonary tuberculosis cases suspected by the general practitioners and confirmed by the pulmonologists.
2. Analysis of cases not diagnosed as active TB, from those suspected by the general practitioner and the real cases with respiratory lesions.
3. Analysis of new pulmonary TB cases diagnosed in the studied period where general practitioners did not suspect tuberculosis.

Secondary objectives:

1. Analysis of suspicion criteria for TB, that are used in primary care medicine.

2. Optimization of prevention measures in tuberculosis

Material and method:

Three studies have been performed: **Study A** is an epidemiologic descriptive study aiming at evaluation of pulmonary tuberculosis in the Mures area between 2006 and 2008.

Study B is an observational epidemiologic study aiming at evaluating the diagnosis of pulmonary TB at the level of primary care medicine.

Study C evaluated comorbidities and risk factors for pulmonary TB in a group made up by 222 patients.

Results: Study A: In Mures county there have been 1532 new cases, accounting for 85.30% of the total number of cases diagnosed with TB, and 264 recurrences, representing 14.70% of the total number of new cases. Of the total number of new cases (new cases and recurrences) diagnosed at the DPF Tg. Mures, the ratio of new cases was 88.16%, and the recurrences represented 11.84%. In the studied period 133 children have been diagnosed with TB in the county, and 77 of these were from Tg. Mures, all of them being new cases (57.89%). In case of children there were no recurrent cases.

Study B: The difference between conformed TB patients that have been referred with the suspicion of TB and those without suspicion is significant ($p < 0.0001$), and the risk of disease estimated by OR was 21.54. More than half of the patients (139), had positive microscopic examination and culturing, representing 62.61%. In 10.36% microscopic examination was positive and culturing was negative (13 patients). Negative microscopic examination and positive culturing were detected in 5.86% of the patients. The majority of suspected / confirmed new patients were living in urban environments. The urban/rural ratio was 1.27. The reasons why the general practitioner suspected tuberculosis, in the order of frequency, were the following: cough / dry cough, sweating / nocturnal sweating, fever / persisting fever. Among the TB types, we noted the large percentage of patients with infiltrating, nodular tuberculosis confined to the volume of one pulmonary segment (30.78%), and 19.87% of the cases were multicavity tuberculosis; also, we noted the presence of caseous tuberculosis with moderate volumes of infiltrates, confined to a pulmonary lobe (18.27%).

Study C: There were 93 patients with associated pathology, representing 41.89% of the studied subjects. The most frequent associated lesion was chronic obstructive pulmonary disease, in 20.43% of the cases. Cardiovascular conditions and anemia were associated in almost identical ratios. Almost half of the patients were active smokers (45.45%). 34 patients were TB contacts (34.34%). Associated risk factors (chronic alcohol abuse and chronic tobacco use) have been found in 13.13% of the cases.

Conclusions: Study A: The ratio of new TB – recurrent TB cases diagnosed in Mures county (14.70%) was lower than the national average (17.22%). This lead to the conclusion that in Mures county the patients have been treated according to guidelines and monitored according to National Strategy for Control of Tuberculosis. 57.90% of the new TB cases in children were diagnosed in Tg. Mures.

Study B: In case of the 516 patients referred by the general practitioners to the Pulmonology Policlinic from Tg. Mures with "*Suspicion of tuberculosis*", we noted that the general practitioners had a correct suspicion in 43.02% of the cases. In case of the patients with the diagnosis of "*Suspect of tuberculosis*", *subsequently not confirmed*, the majority of them were living in rural environments. The extra diagnosis of tuberculosis on behalf of the general practitioners in case of these patients cannot be regarded as an error, as it is well known that the rural environment itself is a major risk factor for TB. The real diagnosis, established by specialists in suspected/unconfirmed cases, comprised the following: respiratory conditions (24.83% pneumonia, 19.39% bronchopneumonia, 17.35% exacerbated COPD). The symptoms of these conditions are suggestive for tuberculosis as well.

Study C: The most frequent conditions associated to tuberculosis were the following: COPD (20.43%), diabetes mellitus (7.53%) and cardiovascular conditions (16.13%) that associated with tuberculosis are able to mask it, and make correct and early diagnosis difficult for the general practitioner. We identified the following major risk factors for tuberculosis: chronic tobacco use (45.45%) and contact with a tuberculosis patient (34.34%).

Key words: tuberculosis, general practitioner, suspect of tuberculosis