

THE SOCIAL AND PROFESSIONAL PROFILE OF THE TB PATIENT IN THE TERRITORY SERVED BY THE RAMNICU VALCEA DISPENSARY OF PULMONOLOGY BETWEEN 2003-2007

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Keywords: tuberculosis epidemic, socio-professional profile

Abstract: România is the hardest hit country in the European Union by the TB endemic. Even though a solid national control program is in place, different regions of the country have different epidemiological profiles of TB. We performed a retrospective 5 year descriptive study in the Pulmonology Outpatient section of the County Emergency Hospital of Râmnicu Vâlcea. A number of 1224 patients diagnosed with tuberculosis between 2003-2007 were studied. The overall sex ratio was 2.4:1 for male patients, with sex differences deepening in rural areas. Also, the median age in the rural areas was bigger than in urban areas. Patients living in urban settings were more frequently divorced or never married. Work in the chemical plant outside the city is 2 to 4 times more frequent in the TB population than in the general population, making it a possible risk factor for TB. Further studies are needed to confirm this hypothesis.

Cuvinte cheie: epidemie tuberculoasă, profil socio-profesional

Rezumat: România este țara cel mai puternic lovită de endemia tuberculoasă din Uniunea Europeană. Chiar și în condițiile aplicării riguroase a programului național de control al tuberculozei, există o mare heterogenitate între diferitele zone ale țării. Am efectuat un studiu retrospectiv pe 5 ani la nivelul Dispensarului de Pneumologie Râmnicu Vâlcea asupra a 1224 de pacienți diagnosticați cu tuberculoza între 2003-2007. Sex ratio a fost de 2,4:1 în favoarea bărbaților, fiind semnificativ mai mare în mediul rural. În mediul rural, pacienții au avut o vârstă mediană mai mare, cu un sex ratio de 2,8:1 în favoarea bărbaților. În mediul urban, pacienții au fost mai frecvent divorțați sau necăsătoriți decât în mediul rural. Cu un procent de 2-4 ori mai mare în rândul pacienților decât în populația generală, locul de muncă pe platforma chimică din apropierea orașului poate fi un factor de risc pentru tuberculoza, însă acest aspect trebuie aprofundat.

INTRODUCTION

The TB endemic is a real and serious public health problem in Romania. A long period of transition marked by social and economical changes accompanied by population migrations from the rural environment to the cities created an epidemiological profile marked by high incidence and prevalence of tuberculosis.

For the control of the TB endemic, strict measures of monitoring and applying therapeutic strategies were taken. DOTS program was implemented and a slow but steady decrease in the incidence of the disease was seen. Even so, this decline is not uniform throughout the country's areas. This is why we consider necessary an analysis of the epidemiological differences between areas with accelerated decline and areas with slower decline. This analysis could reveal modifiable risk factors that are specific to each region, allowing the creation of custom-tailored programs for the control of the TB endemic.

THE AIM OF THE STUDY

Taking in consideration that Valcea county incidence of TB is below the national average, we chose to analyze the situation of the TB endemic in the county capital of Ramnicu Valcea between 2003 and 2007.

MATERIAL AND METHOD

To recreate a faithful image of the evolution of the TB

endemic we chose to conduct an descriptive epidemiological study of all TB patients, new cases and relapses, that were treated in the Ramnicu Valcea Pulmonology Dispensary between 2003 and 2007. Data was collected from the patient's files and analyzed with SPSS 17th ed.

RESULTS

1224 TB patients diagnosed with TB between 2003 and 2007 and treated in the Pulmonology Dispensary, both new cases and relapses, were studied. These patients were living both in rural and urban environment.

Most of the patients (54,2%) were living in the urban environment. 32.5% of them were female. In the rural environment, only 25.71% of the patients were female. The median age of patients in the urban environment – 41.3 is lower than that of rural patients – 45.7 years. 32.4% of the patients were living in Ramnicu Valcea, having a median age of 40.4 years old. Most of the patients were married (56.8%) while 29.1% had never been married and 5.1% were divorced. 2.5% of the patients were widowers and in 6% of the files no data about the marital status was available. Only 3.5% of the patients were declared of roma ethnicity

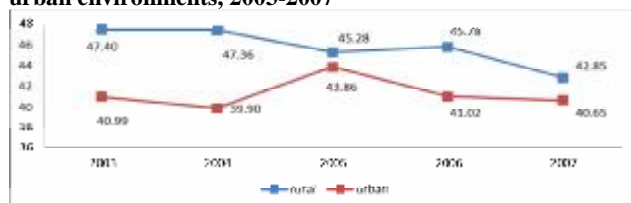
86.6% of the patients had no obvious social or professional risk factors for TB. Out of the 139 patients that had some risk factor, 43.8% worked in the chemical plant on the outskirts of the city, 40.2% were social cases and 9.3% were

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Article received on 26.05.2011 and accepted for publication on 30.09.2011
ACTA MEDICA TRANSILVANICA December 2011; 2(4)173-174

health workers. Only 7 patients had a previous diagnosis of silicosis. The professional status had not been recorded in 9.3% of the patients. 25.7% of the patients were retired, 6.7% were children or students. 32.4% were employed and 23% were unemployed, 1.7% was living on social welfare. 14.6% had a TB contact in the recorded history.

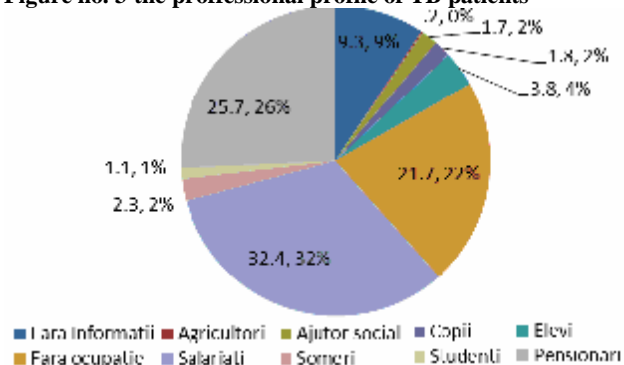
Figure no. 1. Evolution of median diagnosis age in rural and urban environments, 2003-2007



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76.2% of the patients had no comorbidities associated to TB. Out of the rest 291, 38.4% were alcoholics. The rest had chronic hepatic disorders, cardiovascular diseases, ulcer, cancers, mental disorders, diabetes mellitus and renal failure as well as anemia, COPD and epilepsy. HIV coinfection was seen only in 6 patients.

Figure no. 3 the professional profile of TB patients



DISCUSSIONS

The sex distribution of the disease demonstrates a sex ratio of 2.4:1, favouring the male sex. This discrepancy is more accentuated in the rural environment than in the urban setting, probably because of the difference of exposure to risk factors in the conservative rural society. Women developed tuberculosis at an age 7 years younger than men.

The residence environment seems to affect the age of the TB patients. Urban patient's age is 5 years lower than that of the rural patients. This difference can be an effect of the aging tendency of the rural population.

Most of the patients were married at the time of the diagnosis. Urban patients were more frequently never married or divorced while widowers were more frequent in the rural environment. A possible explanation for this fact may be the more unconventional character of life in the city combined with the aging trend of the rural society.

Profession has an impact on TB in 11.4% of the cases. Half of these patients work in the chemical plants around the city, a percentage 2-4 times greater than that of the general population. Healthcare workers or silicosis had a similar percentage in the studied and general population.

Even if 23% of the patients were unemployed at the time of the study, it is very hard to evaluate the impact of poverty on the TB endemic. However tempting it would be to declare all unemployed as affected by poverty, illegal labor and tax evasion makes evaluating the degree of poverty in these patients almost impossible. The unemployed are also younger than the working population.

Taking into consideration that most patients were rather young, the lack of comorbidities is unsurprising. The most frequent comorbidity is alcoholism, another unsurprising fact in the epidemiology of a disease often associated with poverty and promiscuity.

CONCLUSIONS

In the territory of the Ramnicu Valcea Pulmonology Dispensary, tuberculosis affects the male sex 2.4 times more frequently than the female sex. Females tend to develop the disease at a significantly younger age.

The urban patient is younger, more often never married or divorced than the rural patient, while the latter is more frequently widowed.

11.4% of the patients had obvious risk factors for TB. The percentage of TB patients working in the chemical plants on the outskirts of Ramnicu Valcea is 2-4 times larger than the percentage of chemical plant workers in the general population. It is impossible for this study to confirm a cause-effect relation between working on the chemical plant and the risk of developing TB.

The most frequent comorbidity was alcoholism. 60% of the patients had a suboptimal economic status as declared by themselves.

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