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273. Tuberculous and non-tuberculous mycobacterial infections: epidemiology I

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High completion rates with directly observed preventive treatment (DOPT) of latent tuberculosis infection (LTBI) in Ethiopian immigrants (EI) to Israel
 Hashem Bishara¹, Liora Ore², Najat Armaly¹, Daniel Weiler Ravell³.

¹Pulmonary Division and Tuberculosis Center, Nazareth Hospital, Nazareth, Israel; ²School of Public Health, Faculty of Social Welfare and Health Science, University of Haifa, Israel; ³Division of Respiratory Physiology and Chest Disease, Carmel Medical Center, Haifa, Israel

Background: Previous studies show rates for completion of treatment of LTBI in immigrants from high TB burden countries between 22%-60%. In a study in southern Israel only 16.4% of EI completed their course of treatment. Since all EI in our catchment area were located in absorption centers, we applied DOPT to all. Each patient was examined by a physician once on evaluation and twice for follow up.

Objective: To evaluate the efficacy of a nurse-managed, active outreach DOPT program with minimal physician involvement, in a cohort of immigrants from a high TB burden country.

Methodology: A retrospective cohort analysis of 710 medical records of EI at absorption centers in Zefat who had started DOPT for LTBI and were followed up during 2005-2010.

Findings: Forty three individuals were excluded due to translocation during treatment and DOPT was stopped prematurely in 4 women who became pregnant. Of the 663 EIs included (359 males), 628 (94.7%) completed treatment. Of the 35 who failed to complete INH therapy, 23 went on to complete 4 months of Rifampin. Thus 98.0% completed LTBI therapy. Demographic factors did not predict treatment completion; however side effects were significantly ($p<0.001$) associated with non-completion.

Conclusions: High completion rates for LTBI were attained among EI in absorption centers, through outreach DOPT. Skilled and dedicated nursing made routine physician involvement redundant.

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P2653**Results of a tuberculin skin test survey performed in a national representative sample of young Albanian students**

Hasan Hafizi¹, Edlira Sharra², Albana Fico³, Rosella Centis⁴, Giovanni Battista Migliori⁴, Lia D'Ambrosio⁴, Paolo Castiglia⁵, Giovanni Sotgiu³. ¹University Lung Diseases Hospital, "Shefqet Ndroqi", Tirana, Albania; ²National Institute of Public Health, Tirana, Albania; ³Centre for Respiratory Health & TB, Tirana, Albania; ⁴World Health Organization Collaborating Centre for Tuberculosis and Lung Diseases, Fondazione S. Maugeri, Care and Research Institute, Tradate, Italy; ⁵Epidemiology and Medical Statistics Unit, Department of Biomedical Sciences, University of Sassari, Italy

Background: Tuberculosis (TB) epidemiology in Albania has significantly improved in the last decades owing to advanced TB control activities following financial support from different sources. In 2010, WHO estimated a TB incidence and mortality rate of 14 and 0.38 per 100,000 population, respectively.

Objective: To estimate the Albanian prevalence of latent TB infection (LTBI).

Methods: A national Tuberculin Skin Test (TST) survey was carried out in 2010. Furthermore, a standardized questionnaire was distributed to a representative sample of students to assess the knowledge and attitudes on TB.

Results: Three districts (Dibra, Tirana-Kamez, Vlora) were selected based on representativeness criteria (location, incidence and migration patterns). The survey performed according to WHO recommendations enrolled 4,722 students (2,359, 49.9%, were males); proportions of educational level were: grade 5 (30%), grade 6 (33%) and grade 7 (37%). Results were evaluated in 98.5%. Induration size exceeds 15 mm in 16%, while in 56% of the cases ranged from 6 to 10 mm. Prevalence of LTBI was higher in Dibra District and Kamez (12.0% and 9.5% respectively), strictly related to TB incidence. 2,814/3,242 could answer an anonymous questionnaire on TB. Students living in the district of Dibra showed the highest proportion of positive responses on TB items, probably explained by the high TB incidence and by the high frequency of information from television programmes.

Conclusion: Estimated LTBI prevalence is low in Albania, although a high geographical variability was described. Students' knowledge on TB was deemed not satisfactory, despite 87% knew the presence of the disease.

P2654**Stigma associated with tuberculosis among Tajikistan labor migrants**

Bekhriz Salikhov, Oktam Bobohodzaev. *Phthisiopulmonology, Tajik State Medical University by Abuali Ibn' Sino, Dushanbe, Tajikistan Republican Centre for Tuberculosis, Republican Centre for Tuberculosis, Dushanbe, Tajikistan*

Problem statement: Stigma is the most significant barrier in prevention of TB transmission, provision of adequate care, support, treatment and decreasing negative impacts. Currently, TB issue and stigma associated with labor migrants have not been learned yet in republic of Tajikistan.

Goal of the survey. The goal of the survey was deep understanding of stigma among TB migrants in Tajikistan and development of mechanisms for mitigating the stigma.

Materials and methods: The survey was done through individual interviews at respondents houses. We used qualitative and detailed interviews for detection of barriers which labor migrants have relating to TB stigma and reasons of late TB diagnostics. 509 people of 7 rayons (out of 66 rayons) of the country were interviewed at total.

Results of the survey and discussion: Majority of TB migrants (70.7%) would feel depression in case of TB diagnostics. Other widely spread reaction was feeling/sensation of fear, astonishment, confusion and shame.

Majority of labor migrants (82%) would discuss their disease with doctor or other health workers. Only 6 labor migrants (1.2%) noticed that they would not talk about the disease in case of contracting TB. 231 people (45.5%) noticed that they would apply for health care services in case of symptoms related with TB.

Summary: Stigma and low TB awareness might result in late and low TB case detection among labor migrants. Majority of labor migrants do not apply for health care services because of wrong perceptions. National bodies and organizations should complement each other with goal to create favorable environment for stigma elimination and provide information campaigns focused at decreasing of fear and misperceptions.

P2655**Impact of health education on the knowledge and awareness of tuberculosis among high school students**

Roland Panaligan, Jude Guiang. *Pulmonary and Critical Care, UST Hospital, Manila, Philippines*

Background: Various misconceptions coupled with the lack of knowledge on tuberculosis are still on alarming levels. It's stigma and misinformation indeed contribute as a major barrier to TB diagnosis and treatment. Intervention through health education together with successful control programs will help improve both the public's awareness and recognition of the disease.

Objective: To determine the effect of proper health education on the knowledge and awareness of pulmonary tuberculosis among high school students.

Materials and methods: A cross sectional study was conducted at a Philippine high school with a total population of 1906 students. A twenty minute lecture about TB epidemiology, signs and symptoms, cause, risk factors, transmission,

diagnosis, prevention and treatment was given. Data were collected using a questionnaire consisting of demographic characteristics followed by a pre and post test questionnaires divided into 5 TB knowledge domains.

Results: Students placed physicians as the third most trusted source of TB information. The baseline TB knowledge of high school students was 65.22% and was increased to 86.83% after a health education intervention ($p < 0.001$). There was no significant difference between the baseline knowledge if compared to the year level, income bracket, and place of usual residence. Students with TB history in the family has significantly higher baseline knowledge.

Conclusion: High school students' knowledge and awareness regarding cause, symptoms, transmission, and treatment of TB was significantly higher after a simple, 20-minute, educational intervention in the form of a lecture.

P2656**Prospective study of nosocomial spread of tuberculosis**

Tushar Sahasrabudhe, Anishkumar Khan, Tinku Joseph. *Department of Pulmonary Medicine, Padmashree Dr. D.Y. Patil Medical College, Pimpri, Pune, Maharashtra, India*

In view of large number of Tuberculosis cases and shortage of beds in India, the hospitalized TB patients are not isolated or quarantined. The non-TB patients in the same ward do feel concerned about acquiring TB, though it is generally believed that the hospitalized TB patients on treatment quickly become non-infectious and a prolonged close contact is necessary for spread of TB. We evaluated this belief by a prospective study. The non-TB patients admitted in the hospital ward having sputum positive pulmonary TB patients on nearby beds, were evaluated. Also frequent visitors to the ward, such as friends or relatives of these patients were evaluated. Those with history of TB or contact with a TB case in past were excluded. Also persons with HIV, diabetes and other immuno-compromising states were excluded. Those with negative Tuberculin Skin Test (TST) with 1 TU tuberculin i.e. induration of less than 10 mm, were followed up. A repeat Tuberculin test was performed after 3 months to allow time for tuberculin conversion and also to avoid booster effect of repeat TST. Out of 70 patients, 58 were TST negative. Out of these, 53 followed up. 9/53 (16.98%) had turned TST positive after 3 months. Duration of stay in the wards as well as number of TB patients in the ward during their hospital stay was found to have proportionately increased the risk of transmission ($P < 0.001$). Out of 117 visitors, 98 were TST negative. Out of these, 61 followed up. 4/61 (6.56%) had turned TST positive after 3 months. This study indicates that there is a small but definite risk of nosocomial spread of TB. Isolating TB patients in a separate ward and restricting frequent visitors may help.

P2657**Prognostic factors in tuberculosis related mortalities in hospitalized patients**

Ashok Kumar, Ghazal Haq, Fatima Saifuddin, Shaista Ghazal, Nadeem Rizvi. *Chest Medicine, Jinmah Postgraduate Medical Centre, Karachi, Sindh, Pakistan*

Introduction: Despite effective treatment regimens available, Tuberculosis (TB) stands among one of the leading causes of death in Pakistan.

Objectives: To evaluate the factors concerned with in-hospital deaths in patients admitted with Tuberculosis at a tertiary care centre.

Methods: A retrospective case-control study was undertaken at the Pulmonology department of the largest state-run tertiary care centre in Karachi, Pakistan. For patients hospitalised with TB, sixty of those who were discharged were compared with sixty of those who could not survive during hospitalisation. Radiological findings, clinical indicators and laboratory values were matched between the two groups to locate poor prognostic factors.

Results: Factors concerned with in-hospital mortality listed female sex ($p < 0.01$), late sequels of disease ($p < 0.01$), not taking anti-tuberculosis therapy (ATT, $p < 0.01$), smoking ($p < 0.01$), longer duration of illness ($p < 0.01$), and low haemoglobin levels ($p < 0.02$). Extrapulmonary TB, dissemination of disease, bilateral radiological findings, co-morbidities and multi drug-resistance were not implicated in higher mortality. Most deaths occurred during the first week of admission indicating late referrals and late presentation as an important factor related to in-hospital fatalities.

Conclusions: Poor prognosis in TB patients was associated with non-compliance to therapy, anaemic states, late presentation of disease, and development of complications. Patients not taking ATT and hence having longer duration of illness showed higher mortality and so a more radical and effective treatment regimen is required to eliminate TB early on during the onset of disease.

P2658**Influence of social adaptation of tuberculosis patients on the TB form and a chemotherapy outcomes**

Mikhail Chernov¹, Sergey Strerlikov¹, Elena Bogorodskaya¹. ¹University Clinical Hospital of Phthisiopulmonology, First Sechenov Moscow State Medical University, Moscow, Russian Federation; ²Research Institute of Phthisiopulmonology, First Sechenov Moscow State Medical University, Moscow, Russian Federation; ³Research Institute of Phthisiopulmonology, First Sechenov Moscow State Medical University, Moscow, Russian Federation

The problem of chemotherapy (CT) efficiency in pulmonary tuberculosis (PTB) patients is one of the most burning one at the organization of TB aid.

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Aims and objectives: Connection between social adaptation and stages of PTB (presence of SS+ (sputum smear positive) and cavitary lesions) have been studied. The CT efficiency in the patients with SS- (sputum smear negative) and without lung cavity decay, and in the patients with SS+ and lung cavitary lesions, receiving CT regimen 1 have been assessed.

Methods: Data of 2663 newly detected PTB patients, registered in 2008, from 8 regions of the Russian Federation have been studied. Patients with less severe TB forms (SS- and without lung cavity decay) were selected in the group 1 (467 persons), and the patients with extended TB forms (SS+, cavitary lesions) - in the group 2 (255 persons).

Results: In group 1, there were 41.1%, [95% CI 36.6-45.6] of socially-adapted patients (SAP) (workers, employees, students) and 40.5%, [95%CI 36.0-44.9] of socially-vulnerable patients (SVP) (jobless). In group 2, there were 24.3% [95%CI 19.0-29.5] SAP and 53.3% [95%CI 47.1-59.4] SVP. CT efficiency in group 1 was 92.7% [95%CI 90.3-95.1], in group 2 - 69% [95%CI 63.3-74.7]. In group 2, CT efficiency in SVP was 58.2% [95%CI 49.9-66.4], and in SAP -78.7% [95%CI 68.4-89.0], $p < 0.05$.

Conclusions: In SAP, detection of TB with SS- and without lung cavity decay and effective treatment are more frequent, than in SVP. Therefore TB patient social support measures should be brought into all TB programs.

P2659

Extrapulmonary tuberculosis (TB): 40 years observations in Poland

Maria Korzeniewska-Kosela. TB Epidemiology and Control, National Tuberculosis and Lung Diseases Research Institute, Warszawa, Plocka26, Poland

Aim of the study: To describe changes in extrapulmonary TB epidemiology in Poland since 1970 (beginning of notification of different forms of extrapulmonary TB)

Methods: Retrospective analysis of data from National TB Register. Data presented in ten years intervals.

Results: Since 1970 the systematic decline of number of all TB cases (from 41536 to 7509 in 2010) with the shift to older age groups and decline of extrapulmonary TB cases (from 4848 to 716 in 2010) has been recorded in Poland without significant differences of fraction of extrapulmonary TB among all TB cases (11.6% in 1970; 11.2% in 1980 to 9.0% in 1990, and 9.8% in 2000, 9.5% in 2010). Some differences in profile of extrapulmonary TB was noticed. The decrease in pleural tuberculosis occurred (5.8% of all TB and 50% of extrapulmonary TB in 1970; 5.8% and 49.6% in 1980; 4.8% and 52% in 1990; 5.2% and 53.8% in 2000; 2.6% and 27.8% in 2010) and in the bone and joint tuberculosis (2.0% of all TB and 17.3% of extrapulmonary TB in 1970; 1.4% and 12.9% in 1980; 0.9% and 10.2% in 1990; 0.9% and 9.1% in 2000; 0.9% and 9.2% in 2010) also in central nervous system TB (0.3% of all TB and 2.8% of extrapulmonary TB in 1970; 0.2% and 1.9% in 1980, 0.1% and 1.7% in 1990, 0.1% and 1.4% in 2000; 0.1% and 1.3% in 2010).

Conclusions: The demographic characteristics of TB patients changed in Poland in last 40 years with the shift to older age groups however the proportion of TB at extrapulmonary sites remained stable. It is interesting although unexplained finding.

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Predictors of delayed smear conversion after 2 months of tuberculosis treatment

Hajer ben Abdelghaffar, Eya Tangour, Leila Fekih, Soraya Fenniche, Ines Akrou, Hela Hassene, Dorra Greb, Hela Kammoun, Wided Ben hamad, Dalinda Belhabib, Mohamed Lamine Megdiche. IBN NAFIS, Abderrahmane Mami Hospital, Ariana, Tunisia

Late smear conversion after 2 months of tuberculosis (TB) treatment represents a major problem.

Objectives: Isolate the environmental, clinical, radiological, bacteriological and biological factors associated with a delayed smear conversion.

Methods: We analyzed records from 60 tuberculosis patients, from which 20 had a delayed smear conversion. Those patients were compared in terms of clinical presentation, radiological, bacteriological and biological results, environmental data and evolution under treatment.

Results: Smoking was significantly associated with delayed smear conversion (85% of patients with a late conversion were smokers versus 47.5%, $p = 0.05$), as well as history of diabetes type II (25% with late smear conversion versus 4% of controls $p = 0.035$). This correlation was established for a delayed consultation (2 months) $p = 0.01$. Radiological data showed that bilateral lesions and extended unilateral lesions were significantly associated with delayed smear conversion ($p = 0.03$, $p = 0.003$). Biologically, a frank increase in CRP was statistically predictive of late conversion. ($p = 0.02$). A positive association between the occurrence of adverse events that did not require discontinuation of treatment and delayed smear conversion was also found ($p = 0.02$). A positive correlation has not been established for the geographical distance, the low economic level, for a body mass index below 18.5 kg/m². In terms of bacteriology, the load of bacilli was not significantly associated with delayed smear conversion.

Conclusion: Identifying predictors of late smear conversion may allow us to set up effective preventive measures to fight against the spread of the disease and limit its complications.

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Screening for tuberculosis in patients with rheumatic diseases commencing anti-TNF- α treatment: A regional survey

Elena Karampini, Ramamurthy Sathyamoorthy. General Medicine, City Hospital, Birmingham, United Kingdom

Introduction: The increase in active tuberculosis (TB) associated with anti-tumor necrosis factor α (anti-TNF- α) treatment has led to screening for active/latent TB before anti-TNF- α is given. Marked variation in TB incidence has been noted depending on patients' ethnicity, country of birth and, for those not born in the UK, the length of time since their first entry. We aimed to evaluate our risk assessment mechanism.

Method: Retrospective study of 227 patients (F 65.2%, M 34.8%; median age: 53 yrs) with rheumatic diseases receiving anti-TNF- α (infliximab, etanercept, adalimumab) in 2001-2009. This sample represents a particularly multiethnic patient population.

Results: 1 patient (0.44% of the total) underwent tuberculin skin testing (TST). All patients were on additional immunosuppressants interfering with the accuracy of TST. No patients underwent interferon-gamma assay testing for latent TB. 9 patients (4% of the total) received chemoprophylaxis prior to anti-TNF- α . 2 patients (0.88% of the total) who had not received chemoprophylaxis developed active TB. The first was on etanercept & adalimumab prior to developing miliary TB. The second was on adalimumab & infliximab prior to TB diagnosis. Both patients recovered with quadruple anti-TB therapy. Both patients were born in the Indian subcontinent and had been in the UK for over 5 years. The TB incidence rate was 196.8 per 100,000 patient-years.

Conclusion: TB screening prior to starting anti-TNF- α can be improved so as to facilitate appropriate chemoprophylaxis targeting. Interferon-gamma assays could be a useful tool in the diagnosis of latent TB when patients are already on immunosuppressants.

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Childhood tuberculosis in Romania

Ramona Nedelcu¹, Nicoleta Cioran², Elmira Ibrahim³. ¹Department of Pneumology, INP Marius Nasta, Bucharest, Romania; ²Department of Pneumology, INP Marius Nasta, Bucharest, Romania; ³National TB Programme, INP Marius Nasta, Bucharest, Romania

Introduction: TB incidence rate in children sharply decreased in Romania in the last decade. TB etiology is difficult to confirm, as the sample for bacteriological examination is obtained in low proportion of cases. For this reason the diagnosis can often be overlooked.

Aim and objectives: To analyze the trend and the profile of TB epidemic in children in Romania.

Method: The trend of TB incidence rate in children has been observed in Romania in the last decade and all children with TB diagnosis notified in 2009 have been analyzed by gender, residence, age group, treatment history, site and extension of disease, bacteriological status and treatment outcome. Data have been extracted from National TB Register.

Results: TB incidence rate in children failed from 2001 (47.3‰) to 2010 (25.3‰). In the 965 children registered with TB in Romania in 2009, the male/female ratio was 1.1 and urban/rural ratio 0.87. By age group 49 (5.1%) had less than 1 year, 338 (35%) were in 1-4 years age group and 578 (59.9%) in 5-14 years age group. From the total number of 965, new cases represented 98.7%, 14.9% had severe forms of the disease (30 meningitis, 8 miliaria and 106 with cazeo-cavitary pulmonary lesions), 39.3% had pulmonary TB and of them smear and culture positivity rates were 14% and respectively 25.8%. Of 98 culture positive cases, only 34 (34.7%) had a DST and of them 2 (5.9%) had MDR-TB. Overall outcome was favorable in 96.4% of pulmonary cases, but 2 children deceased, 2 failed and 8 abandoned the treatment.

Conclusion: Despite the decrease in incidence rate in Romania, there are still many challenges in the control of TB epidemic in childhood, as early detection of cases, proper diagnostic with confirmation of the etiology and successful treatment.

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Risk factors for Mycobacterium tuberculosis infection among contacts of pulmonary tuberculosis patients

Jaek Seuk Park, Do Hyung Kim, Jee Young Kang. Department of Internal Medicine, Dankook University College of Medicine, Chonan, Chungnam, Republic of Korea

Background: Detection and treatment of tuberculosis (TB) infection with contact investigation is a key component of TB control program. We evaluated the risk factors for TB infection among contacts of recently diagnosed pulmonary TB patients in a tertiary hospital in Korea, an intermediate incidence country.

Methods: 206 contacts of 90 adult pulmonary TB patients underwent tuberculin skin test (TST) and chest radiography. The TST results were considered positive with induration of 10 mm or more, suggesting TB infection. A standardized questionnaire was used to assess risk factors associated with TB infection.

Results: TST was positive in 97 of 206 contacts of TB patients (47.1%) and TST positive rate increased with age. The risk of TB infection was significantly associated with close contact with TB patients (sleeping in the same room) (OR=4.94, 95% CI = 1.43-17.00).

Table 1. Multivariate analysis of risk factors for TB infection (age < 35)

Variables	Univariate analysis		Multivariate analysis	
	OR (95% CI)	p value	OR (95% CI)	p value
Older age (19–34)	1.58 (0.59–4.13)	0.368	1.24 (0.35–4.45)	0.737
Current smoking (+)	2.92 (0.71–12.0)	0.137	1.90 (0.28–12.76)	0.507
Proximity of contact (same room)	7.21 (2.54–20.52)	< 0.001	4.94 (1.43–17.00)	0.011
Contact duration ≥ 30 days	4.77 (0.99–22.58)	0.051	4.04 (0.68–23.89)	0.124
Smear(+) at treatment initiation	1.82 (0.69–4.80)	0.227	1.88 (0.44–8.07)	0.395
Respiratory symptoms(+)	3.80 (0.44–32.70)	0.223	2.77 (0.24–32.27)	0.416
Chest X-ray (MA or FA)	2.55 (0.83–7.82)	0.103	2.04 (0.41–10.17)	0.386
Cavity(+)	3.03 (0.63–14.70)	0.169	1.56 (0.24–10.04)	0.641

Conclusion: TB infection rate was higher in elderly, and risk of TB infection was significantly increased with close contact of TB patients.

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Improvement of treatment adherence and success in homeless patients with tuberculosis in Iasi, Romania

Adriana Sorete Arbore¹, Camelia Macarescu¹, Violeta Cojocariu¹, Marian Berdan², Doina Balasescu², Catrinel Zaharia², Thomas Juers³, Jim Mc Whirter⁴, Ioan Serban⁵, Traian Mihaescu¹, Christoph Lange^{3,6}. ¹Outpatient Service, Clinic of Pulmonary Diseases, Iasi, Romania; ²Rotary Club, Iasi 2000, Iasi, Romania; ³Rotary Club Bad Oldesloe, Bad Oldesloe, Germany; ⁴Rotary Club Henley-Bridge, Henley on Thames, United Kingdom; ⁵Moldova and Bucovina Metropolitan Church, Moldova and Bucovina Metropolitan Church, Iasi, Romania; ⁶Research Center, Research Center, Borstel, Germany

Background: To assess the impact of a program for homeless patients with tuberculosis in Iasi, Romania, on treatment adherence and outcomes.

Methods: Adherence and treatment outcomes were analyzed in homeless patients with tuberculosis in Iasi, Romania, who participated in 2011 in a charity project that offered regular anti tuberculosis treatment together with free food and cloths at a central shelter. WHO recommendations on tuberculosis case definition and treatment results were used. Adherence to treatment and treatment outcomes in these patients were compared with those in homeless tuberculosis patients registered in Iasi between 1998 and 2005 when incentives were not provided.

Results: In 2011, 17 homeless (11 male, 6 female, median age 45 years) with tuberculosis were included in the project following discharge from the hospital. Of 12/17 patients who had completed the treatment at the time of analysis, cumulative adherence to treatment was 1282/1316 (97.4%) doses provided. Of 82 homeless patients with tuberculosis treated in the years 1998 to 2005 (72 male, 10 female, median age 43 years), cumulative adherence to treatment was 5837/10692 (54.4%) doses provided (p<0.001). Treatment success in 2011 was 70.5% compared to 26.8% in 1995–2005 (p<0.001).

Conclusions: Adherence to anti tuberculosis treatment and treatment success significantly improved when food and cloths were offered to homeless patients with tuberculosis on a regular basis at the treatment dispensary.

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Patient awareness in controlling tuberculosis

M. Amin Afridi¹, Ziauddin Ansari¹, Nazim Nathani¹, Bilal Chaudhary¹, Bipin Champaniri¹. *Respiratory Medicine, City Hospital, Birmingham, West Midlands, United Kingdom*

Background: Tuberculosis is spreading specially due close living ties in vulnerable groups. We treat 250 patients/year in a very multi-ethnic community.

Aim: As part of TB control programmes, we assessed the level of our patients' awareness about TB through a written questionnaire.

Results: 60 questionnaires were sent to random patients treated for TB over last 3 years. 22 patients returned them.

Discussion: Educating people improves treatment outcomes and designed multi-professional models have proved significant improvement [2011 Sep 21;7(309):1826–31]. Our study showed, in countries like UK, a significant number of people have limited knowledge of TB and some are taking months to seek help.

Conclusion: Without public awareness, TB control programmes will be difficult to succeed and all measures should be taken to educate general public.

Abstract P2665 – Table 1

Had you heard about TB before you were diagnosed with TB?	Had heard but no knowledge (6) 27%	Had some knowledge (16) 73%
Did you know it was a curable disease?	Yes (17) 77%	No (5) 22%
What was the first symptom that made you seek medical help/advice	Breathlessness (4), Fever (5), Chest pain (4), Night sweats (5), Wt loss (8), Cough (7)	
What was the duration between the first symptom and seeking medical advice?	Days (3) 14%, Weeks (13) 59%, Months (6) 27%	
Are you aware that there is increased incidence of TB among people who were born or whose parents come from these countries with high incidence TB such as India, Pakistan, Bangladesh, Africa etc. Did you get enough information from the general practitioners and community to be aware of symptoms related to TB	Yes (15) 68%	No (7) 32%

The figures in bracket () mean number of patients answering the question and their percentage.

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Tuberculosis in health-care workers: 5-year, multi-institutional analysis of the northern region of Portugal

Ricardo Reis¹, Ana Maria Correia², Marta Gomes³, Raquel Duarte^{2,4,5,6}. ¹Pulmonology, Hospital Centre of Trás-os-Montes e Alto Douro, Vila Real, Portugal; ²Public Health, North Regional Health Administration, Porto, Portugal; ³Occupational Health, Hospital Center of Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal; ⁴Pulmonology Diagnosis, Pulmonology Diagnosis Center of Vila Nova de Gaia, Vila Nova de Gaia, Portugal; ⁵Clinical Epidemiology, Predictive Medicine and Public Health, University of Porto Medical School, Porto, Portugal; ⁶Pulmonology, Hospital Center of Vila Nova de Gaia/Espinho, Vila Nova de Gaia, Portugal

Introduction: Health care workers (HCWs) in high income countries (HIC) have little or no occupational risk for tuberculosis (TB). Portugal is a HIC that had a high TB incidence 15 years ago and little is known about the impact of TB in its HCWs.

Aim: Study the incidence and occupational risk of TB in HCWs in the northern region of Portugal. Evaluate potential risk factors and compare HCWs characteristics with the regional population.

Methods: We reviewed all TB cases among HCWs from Jan/06 to Dec/10 in the region. TB incidence was calculated and compared with the regional rate to obtain occupational odds ratio. Correlation between incidence and both admittances and district incidence was analyzed. TB and individual characteristics were compared with a chi-square test.

Results: Ninety TB cases were notified from a total of 42713 HCWs, with an annual average incidence of 42,1/100000 and an occupational odds ratio of 1,27 (95%CI: 1.03–1.56). Five (27%) of the hospitals had rates above the annual average, from 111 to 45. 81% of cases worked in hospitals but incidence in primary HCWs was similar. TB incidence in hospital HCWs was correlated with TB admissions (p=0,026) but not with district TB incidence.

Cases had a median age of 30 years and 23% were male. 40% were nurses and 31% doctors. One had a risk factor. Median time to diagnosis was 45 days. No differences regarding origin, retreatment, location or resistance were found with the regional population.

Conclusions: Our study showed that HCWs in the north of Portugal have a significant occupational risk for TB that seems related with TB admission rates. Most cases were in young female nurses with no individual risk factors.

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Impact of social of social risk factor on treatment outcome in patients with culture positive pulmonary tuberculosis (CPTB)

Izabela Siemion-Szczesniak¹, Maria Korzeniewska-Kosela², Jan Kus¹. ¹1st Department of Pulmonary Diseases, National TB and Pulmonary Diseases Research Institute, Warsaw, Poland; ²Department of Epidemiology, National TB and Pulmonary Diseases Research Institute, Warsaw, Poland

Objectives: The aim of the study was to evaluate the impact of social risk factors on treatment outcome among culture-positive patients treated for active pulmonary tuberculosis (PTB).

Material and methods: We retrospectively reviewed all medical records of patients notified in 1995 and 2000 in three separate districts in Poland in years 1995 and 2000. The relation between both alcohol abuse and homelessness and poor treatment outcome was evaluated. Treatment outcome was categorized as: cured, treatment completed, treatment defaulted, treatment failure.

Results: 708 patients with culture positive PTB were included to the study (373 in 1995 and 335 in 2000). There were 85 patients with risk factors in 1995 and 101 patients in 2000. 80 of participants in 1995 and 69 in 2000 abused alcohol, 5 and 32 were homeless, respectively. Among alcohol abusers treatment success rate were 45.1% in 1995 and 53.6% in 2000. Among patients not abusing alcohol treatment success rates were 63.8% and 54.1%, respectively (p=0.005 in 1995 and p= 0.0186 in 2000). In 1995 40% of homeless patients had succeeded treatment, while the rate of treatment success among non-homeless was 60%. The difference was not statistically significant (p=0.6532) probably because of small number of homeless patients. In 2000 treatment success rate among homeless participants was 25% and among non-homeless 57.1%, which was highly statistically significant (p=0.001).

Conclusions: Alcohol abuse and homelessness were associated with no success of treatment outcome among patients with PTB. Interventions to improve treatment adherence in patients considered to be at risk for default are necessary.

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P2668**Patients diagnosed of TB in the Ourense area in the last decade: A descriptive study**

Hugo Gómez, Abel Rodríguez, Isaura Parente, Blanco Nagore, Jose Abal, Pedro Velázquez. *Servicio de Neumología, Complejo Hospitalario Universitario de Ourense, Ourense, Spain*

Objective: To assess the annual incidence TB and its epidemiology

Material and methods: Retrospective study on patients diagnosed of tuberculosis during the decade 1999-2009. Data collecting was possible thanks to the "Programa Galego de Prevención y Control de Tuberculosis". The usual descriptive study was then performed based on these data; quantitative variables were expressed as mean \pm SD, whereas the qualitative ones as absolute frequencies or percentages, using the χ^2 test to assess associations among them.

Results: The whole series included a total of 1746 cases, with a greater incidence among males and those between 24 – 35 yr. Exposure to infected persons, smoking habit, alcoholism and immunosuppression were the main risk factors.

The most common site of infection was pulmonary (67.5%), followed by pleural (14%), lymphadenopathies (7.1%) and others (9.3%). With regard to microbiology, the best yield could be obtained from culture (positive in 80% of cases), whereas the detection of AFB was positive only in 41% of patients.

The chest X-ray was pathologic in 93.3%, even though cavitations were only present in 27.6% of cases.

The scheduled therapy was completed and microbiological cure was attained in 85.6%, which fares favourably compared to other published series.

The global death rate was 10.63%, but only 1.1% were attributable to TB.

Conclusions:

- The incidence of pulmonary TB has clearly decreased in the preceding years, although it still prevails in males and in the 24-35 yr.-old group.
- The "pathological X-ray with cavitation" was observed in 28% of cases.
- 85.6% completed the scheduled treatment.
- The global death rate was 10.63%, but TB just accounted for 1.1%.

P2669**Analysis of risk factors of recurrent tuberculosis in Han and Tibetan populations in Southwest China**

Panwen Tian, Fuqiang Wen. *Department of Respiratory Medicine, West China Hospital of Sichuan University, Chengdu, Sichuan, China*

Background: Recurrent tuberculosis (TB) poses significant threats, including drug resistance, to TB control programs. However, the causes of TB recurrence, particularly in Southwest China, which is the high burden area, have not been well described.

Objectives: To investigate the risk factors of recurrent TB, and analyze the differences between Han and Tibetan populations with TB recurrence in Southwest China.

Methods: A population-based retrospective case-control study was carried out in Southwest China. All patients with culture-confirmed TB and drug susceptibility testing were included between 2000 and 2001 and followed until December 2010. Two category logistic regression was used in the statistical analysis.

Results: We found that, among 80 patients (40 Han patients and 40 Tibetan patients) with recurrent TB who completed adequate therapy for a first episode of TB, factors independently associated with a greater risk of recurrent TB were not receiving directly observed therapy (HR 5.867, 95% CI 2.557-13.461), diabetes (HR 3.288, 95% CI 1.301-8.312), smoking (HR 2.387, 95% CI 1.328-4.291) and malnutrition (HR 1.910, 95% CI 1.110-3.285). The independent risk factors of recurrent TB for the Han patients included diabetes and smoking while the independent risk factors for the Tibetan patients included not receiving directly observed therapy and malnutrition.

Conclusions: Our results establish that not receiving directly observed therapy, diabetes, smoking and malnutrition are associated with recurrent TB in Southwest China. To reduce the relapse rate of TB, especially for Tibetan populations, pursuing high-quality DOTS is essential.

P2670**The trends of tuberculosis in Kosovo in the post war period, (2001-2010)**

Bahri Tigani. *GFATM Programme in Kosovo, Community Development Fund, Prishtina, Kosovo, Albania*

Objective: To analyze the trends of Tuberculosis in Kosovo during the first decade of the post war period, (2001-2010).

Methods: The TB National Reports of the years 2001-2010 has been used and different TB indicators has been analyzed and measured.

Results: Number of TB cases for the period 2001-2010 decreased from 1674 (Year 2001) to 920 (Year 2010). TB Notification Rate/100 000 decreased from 78.2 in year 2001 to 43.7 in year 2010, which presents median annual decrease of 3.45%. Number of new sputum smear positive cases during the period 2001-2010 decreased from 461 in year 2001 to 287 in year 2010. Notification rate/100 000 for New sputum smear positive cases in year 2001 was 21.5 and decreased to 13.6 in year 2010.

Bacteriological confirmation (only smear) of TB diagnosis within the pulmonary cases has increased from 41.8% to 50%, (2001-2010).

Extra pulmonary TB has increased from 19% (year 2001) to 33% (year 2010).

Proportion of relapses (SS+) among all TB cases decreased from 6.3% (2001) to 3.2% (2010).

Proportion of children under 15 years old among all TB cases decreased from 6.5% to 3.2%.

The pick of TB cases notified by age-groups was in the age groups 15-34 that is expected due to the very young population of Kosovo, (more than 50% of Kosovo population is under 20 years).

The specific incidence by age groups shows that the highest number of TB cases is in the age group > 65 years.

M/F proportion for all TB cases in all age groups is 1.0.

M/F proportion for New smear positive cases is 1.27.

Conclusion: The trends of tuberculosis in Kosovo during the post war period (2001-2010), give the good perspective of TB situation in the country.

P2671**How much knowledge is healthy? Results of a KAP survey of TB patients in Republic of Macedonia**

Dance Gudeva Nikovska, Stefan Talevski. *Global Fund funded Project for TB Control, Ministry of Health, Skopje, Macedonia, The Former Yugoslav Republic of Tuberculosis, Institute for Lung Diseases and TB, Skopje, Macedonia, The Former Yugoslav Republic of*

Operations research study to explore knowledge, attitudes, and practices (KAP) related to tuberculosis (TB) among new TB patients was conducted in Republic of Macedonia (RM), in the period April-December 2010.

Cross-sectional study was conducted in the period April – June, 2010; TB patients were interviewed with a standardized questionnaire.

45% agreed that TB is a very serious illness and 48.7% think that TB is serious problem in RM. 50% have correctly identified the signs and symptoms of TB, although significantly smaller proportion correctly identified airborne transmission of TB (14.1%). A sizable proportion did not correctly identify ways to avoid transmission, i.e. just over 30% agreed that one can avoid TB by not shaking hands with someone who has TB and 20% said that one can avoid transmitting TB by covering the mouth and nose while coughing or sneezing. 78% believed that TB can be cured by any drug recommended by a pharmacist, and only two respondents reported having heard of drug resistant TB.

Given the low number of respondents who correctly identified how TB is transmitted, the National Tuberculosis Program (NTP) should consider strategies to improve knowledge among people with TB, such as training on client-provider communication skills, new TB patients should receive a standard set of written materials regarding diagnosis, treatment, and infection control with key messages and broader communication campaign aimed at the general population to reinforce the key messages.