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279. Tuberculosis epidemiology and public health

P2629**Evolution of tuberculosis in an area of Vizcaya**

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Aim: To study the evolution of Mycobacterium tuberculosis (MT) over a period of 21 years in our area and to know the resistance rates to first-line antituberculous drugs.

Material and methods: We studied all cases of MT infection diagnosed between 1989 and 2009 in our hospital, attending a population of 420.000.

Results: In this period, 2.164 cases of MT infection have been diagnosed. The mean incidence rate was 24.5 per 100,000 inhabitants per year (maximum 42.6 in 1992 and minimum 11.9 in 2008). The mean age was 46.8, with a higher incidence in the group of 30-49 years. The gender distribution was 1.8 men/women. In 262 cases there was coinfection with HIV (12.1%), with a maximum of 23.6% (n = 35) in 1993 and minimum of 2.5% (n = 2) in 2004.

The location was pulmonary in 74.2%, extrapulmonary in 20.1% and disseminated in 5.7%. In patients co-infected with HIV, the presentation was pulmonary in 61.4%, extrapulmonary in 13.4% and disseminated in 25.2%. 61 strains have been detected with some resistance (2.8% of general population, which corresponds to 3% in non-HIV and 1.5% of coinfecting). There were 36 strains resistant to isoniazid (1.7%), 11 to rifampicin (0.5%), 3 to ethambutol (0.14%) and 25 to streptomycin (1.2%). 17 strains were resistant to more than one drug. Of these, 6 were resistant to at least isoniazid and rifampicin (MDR-TB).

Conclusions: 1. The incidence of MT has clearly diminished over the study period. 2. There has been no change over the years in terms of gender distribution, age groups and location of MT. 3. HIV co-infection has less importance as a risk factor associated. 4. Resistance to first-line drugs is rare in our area and maintains stable levels. 5. We have found some MDR-TB in the study period.

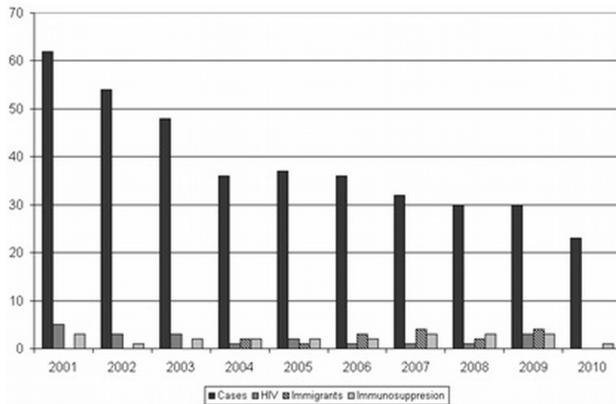
P2630**Evolution of the incidence of tuberculosis in the III health area of the Principado of Asturias, Spain**

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Aim: Description of the evolution of the incidence of tuberculosis (TB) in the last 10 years and the different circumstances that can have influence on it.

Methods: We collected all the cases of cultured proven TB. We describe factors that can have influence: 1. Number of immigrants, HIV co-infection, immunosuppression (biological therapy included). 2. Molecular epidemiology. 3. Treatment follow-up. 4. Contacts study.

Results: Our Health Area has 155,000 inhabitants and we had 388 TB patients in 10 years, with a global incidence of 25/100,000 population per year (15/100,000 last year). 1. The percentage of immigrants, HIV co-infection and immunosuppression is small (figure 1).



2. The molecular study performed in 50 patients (2008-2010) shows clustering in 74%. 3. We had 89% of patients treated with successful results (cure or treatment completion). 4. We had performed contacts study during all the period but we only know data since 2008 when we started a Pilot Programme (we studied 398 contacts from 82 patients, with 128 infected contacts with preventive therapy). **Conclusions:** We had a continuous decrease in the incidence of TB, mainly in the last year, with a small percentage of immigrants, HIV co-infection and immunosuppressive therapy, good therapy compliance, and a Programme of study of contacts in a region with recent TB transmission. All together can explain the decrease of TB incidence.

P2631

Epidemiology of tuberculosis in the province of Siena

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The AA. studied the epidemiology of tuberculosis (TB) from 2003 to 2008 in the Province of Siena. The population increased from 265.907 residents in 2003, to 288.378 in 2008. Its distribution in the districts was at 2008: Val d'Elsa (24%), Siena downtown (23%), Val di Chiana (23%), Val d' Orcia-Amiata (9%), Crete-Val d' Arbia (9%), Chianti (6%), Val di Merse (6%). The% of immigrants at 2008 in the districts was: Chianti 10.9%, Val di Merse 10.5%, Crete-Val d' Arbia 8.4%, Val d' Elsa 7.9%, Val di Chiana 7.9%, Val d' Orcia-Amiata 6.2%, Siena downtown 5.7%. In the period considered, TB constantly increased, and the% of 10 cases/100000 inhabitants of the countries with low incidence of TB, was exceeded in 2007 with 12 cases/100000 inhabitants, 10 cases/100000 in 2008. The incidence between the immigrants exceeded 7 times that between the Italians, from 30/100000 to 65/100000 residents for immigrants, from 4.2/100000 to 9/100000 residents for Italians; probably the incidence in immigrants was underestimated as the study considered only the notified cases and the regular immigrants. The greatest incidence of TB was in the districts of Val d'Elsa and Siena downtown. The immigrant TB patients were younger than Italian patients (35±15 vs 56±20 years old, p<0.05). The 86.4% of the 142 patients examined were affected by TB diagnosed for the first time, the 13.6% by relapses of TB. No significant differences were found concerning the incidence of pulmonary and extra-pulmonary TB; the 66.4% of Italians were affected by pulmonary TB, the 28.2% by extrapulmonary TB, the 5.4% by pulmonary+extrapulmonary TB; the 68.6% of immigrants were affected by pulmonary TB, the 26.8 by extrapulmonary TB, the 4.6% by pulmonary+ extrapulmonary TB).

P2632

A 3 year (2007-2010) tuberculosis treatment analysis in Belfast City Hospital, Northern Ireland

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Introduction: Tuberculosis is on the rise globally. Northern Ireland is facing the enormous task to identify, diagnose and treat tuberculosis. Anti-tuberculosis treatment can be tedious and the side effects can hamper management and outcome. **Objectives:** To note the prevalence among local and immigrant patients, ascertain the HIV status and concordance and tolerance of anti-tuberculosis drugs. **Methods:** A retrospective clinical notes review, microbiology and biochemistry laboratory record analysis.

Results: In total 92 patients, half were originally from Northern Ireland [Table]; 61% male and 39% female. The mean age was 50 (± 21) years with a bimodal age distribution between immigrants (36±11 years) and local patients (66.5±15.5 years).

Table 1

Country of origin	Total	%
Northern Ireland	45	49%
Indian Subcontinent	20	22%
Africa	13	14%
Far East	9	10%
Eastern Europe	5	5%
Total	92	100%

The majority (67%) had pulmonary and 20.5% had lymph node involvement. Rest had skin, bone, peritoneum, and psos abscess disease. Culture positive were 76% and smear positive 45%. The majority (79%) were fully and 4% were partially sensitive to the treatment. One patient was multi-drug resistant. Four percent had HIV. The commonest side effect was minor GI upset (7%). Hepatitis and arthralgia occurred in 5.5%, minor skin reactions in 3%, and renal impairment, peripheral neuropathy, febrile reaction and retrobulbar neuritis in 2% each. Seven percent of patients received directly observed therapy.

Conclusion: Tuberculosis is increasingly prevalent among the local population. Only 4% were HIV positive. Good drug compliance was observed in two third of patients. Treatment was modified in 24%, no treatment was stopped.

P2633

What patients account for the post-socialist increase in pulmonary tuberculosis?

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Background: After a steady decline in tuberculosis (TB) from 1954 (417/10⁵/yr) to 1992 (21/10⁵/yr), along with the overwhelming societal and health care changes after independence was declared in 1991, Estonia experienced a resurgence of TB incidence since 1993, which peaked at 47.5/10⁵/yr in 1998, without immigration playing a major role.

Aims: To reveal whether patients with particular characteristics accounted for the increasing incidence of pulmonary TB (PTB) in the changed societal conditions (1995–2003) compared to the “low incidence period with a decrease” (1985–1991) to determine the populations under significant risk in such circumstances.

Methods: TB-related characteristics of all PTB cases diagnosed during 1985–1991 (n=362, median age 43.0 yr) and 1995–2003 (n=668, median age 44 yr) in Tartu city and county in Estonia were subjected to logistic regression analysis to find determinants of PTB characteristic of the independence period.

Results: During independence, there were significantly more smear-positive patients (OR 2.39, 95%CI 1.57-3.64), those who sought help because of symptoms (OR 2.40, 95%CI 1.73-3.31), and those who had had TB contact (OR 5.03, 95%CI 3.68-6.88), but significantly less alcohol abusers (OR 0.60, 95%CI 0.42-0.87), smokers (OR 0.57, 95%CI 0.41-0.81), and those with a cavitary (OR 0.66, 95%CI 0.46-0.96) and a limited disease (OR 0.55, 95%CI 0.31-0.95).

Conclusions: Despite continuously free access to care for TB, the common social groups like non-alcoholics and non-smokers more often fall ill with culture-confirmed non-limited PTB and account for the increased incidence of TB after the post-socialist changes.

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P2634

Epidemiological investigation in TB diagnosis must be reconsidered

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Aim: The purpose of this study is to prove the importance of the epidemiological investigation in early TB diagnosis.

Material and method: We have analyzed the TB cases registered in three adult tuberculosis districts in Iasi, Romania. The patients have received TB treatment during 2010.

We used the medical records, district records and IT records.

During this period, we treated 211 TB patients: 178 pulmonary TB and 33 extrapulmonary TB cases; we have recorded 168 new cases, 32 relapses, 10 patients were readmitted after failure, default, MDR chronics and one transfer.

Using epidemiological investigation, we identified 22 cases (10.43% out of all analyzed cases). The medical history of the patients revealed that 84 of them (39.81%) had previous TB contact: 86.9% of these had domestic contact and only 13.1% of them had indirect TB contact.

Conclusion: Out of the 211 cases, only 22 have been identified using epidemiological investigation. The medical history of 84 patients revealed TB contact, especially domestic TB contact. Moreover, in a single family, 4 domestic contacts developed pulmonary TB during the past 20 years. They all manifested the same type of drug resistance. This fact has been determined by using epidemiological investigation.

We must reconsider:

- the periodic screening of TB contacts over a greater period of time;
- the key role of the family physician, who must be focused on evaluating a larger number of domestic/indirect TB contacts for a correct and efficient epidemiological investigation.

P2635

The development of tuberculosis in Bucharest in the last ten years

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Bucharest, capitale of Romania, with a population of 1 944 500 inhabitants, constitutes an important problem of epidemiological surveillance of tuberculosis due to a high percent of floating population, numerous overcrowds of persons in locations that are deteriorating (8528 inhabitants/km²), existence of vulnerable groups (homeless, roma population, poor, immigrants) with a lower social, economic and educational level, increasing number of the unemployed, etc.

Objective: The study of the main indicators of the TB endemic in Bucharest in the last nine years.

Material and method: We used the information existing in the official documents of the information system within the National Program of Tuberculosis Control.

Results: A tendency of incidence increase has been installed, reaching from 65,9‰ in 1985 to 154,1‰ in 2001, after which a decrease occurred yearly, reaching 68,3‰ in 2010. A decrease of the incidence with 52% was recorded during 2001 – 2010. The incidence for new cases decrease from 135,8‰ in 2001 to 57,5‰ in 2010 and the incidence for relapses decrease from 18,3‰ in 2001 to 10,9‰ in 2010. The tuberculosis incidence in the 0-14 year children population decrease from 60,8‰ in 2001 to 22,6‰ in 2010. The source density was reduced from 12 sources/Km² in 2001 to 5 sources/Km² in 2009. The rate of the therapeutic success of the new source cases with pulmonary TB (M+) increased from 82,2% in the patient cohort from 2001 to 85,23% in those from 2009.

Conclusions: Tuberculosis control in Bucharest benefits from a rather complex material basis which should be improved according to the present day epidemiological conditions.

P2636

Increasing adherence to TB treatment – Pilot intervention in two counties in Romania

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Introduction: TB is a major public health concern in Romania. All health services are provided free of charge to TB patients and their contacts, through the National TB Programme. However default rate in new pulmonary smear positive cases is over 5%.

Aims and objectives: To measure the impact of a pilot intervention – giving small incentives – on the adherence to treatment of TB patients.

Methods: A pilot intervention, by giving to compliant patients small incentives (around 12 EUR per patient and per month, consisting in tickets for common goods) was unfolded in two counties of Romania (Iasi and Prahova), in the first half of 2009. The incentives were awarded to patients with pulmonary TB and with all treatment doses taken in the previous month. The adherence to treatment was measured as the proportion of patients without default/lost from observation out of total number of registered patients. Transferred cases were excluded from analysis. The adherence rate was compared with that in the first half of the previous year (2008) in the same county.

Results: During the study period 583 TB cases were registered in Iasi and 411 in Prahova and around 70% of them have received incentives. Percentage of TB patients taking all treatment doses until the final outcome was 93.1% in the first semester of 2009 versus 88.8% in the same period of 2008 in Prahova county. In Iasi county the percentages were 94.6% and 92.1% respectively.

Conclusions: The project induced a significant increase in proportion of patients that finalize the treatment in Prahova county (p=0.010), but not in Iasi county (p=0.090). Giving small incentives seems to increase the adherence to the TB treatment during for months.

P2637

The results of DOTS Plus project in Romania (2004-2010)

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Introduction: Although TB notification rate declined significantly in the last 8 years in Romania, from 142.2‰ in 2002 to 90.5‰ in 2010, MDR-TB cases still need a special attention (812 such cases have been reported in 2009). The DOTS Plus project funded by Global Fund and started in Romania in December

2004 has as purpose to provide high quality health services to a part of MDR-TB patients in Romania.

Aim and objectives: To analyze characteristics and treatment outcomes of MDR-TB cases enrolled in DOTS Plus project.

Methods: In the retrospective study have been enrolled 794 MDR-TB cases registered in DOTS Plus project between December 2004 and December 2010. Data have been collected from database of the project and National TB Register.

Results: From the total of 794 cases registered in the project and hospitalized in the 2 MDR-TB excellence centers in the country (57.5% in Bucharest and 42.5% in Bisericiani), 67.7% were males and 32.3% females. Primary MDR was found in 26.6% of the cases. The DST pointed 49.3% with only HR resistance and 50.7% with other drug resistances (HR+1 to HR+5). 13 cases had XDR-TB. The ambulatory phase of the treatment was done at 119 TB dispensaries (62% from all TB dispensaries countrywide). The default rate decreased obviously from 31.5% in 2006 to 12.9% in 2008, consecutive to the distribution of different kind of incentives which improved treatment adherence. Success rate of the GLC patients (62%) was significantly higher than at the patients treated with NTP resources (24.2%).

Conclusions: The favorable evolution of MDR-TB patients enrolled in DOTS Plus project demonstrates real benefits and recommend its case MDR management extension to all MDR-TB cases in the country.

P2638

Assessing the risk of tuberculosis infection in a vulnerable population group (ethnicity rome) in a TB endemic population

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Introduction: High incidence of tuberculosis in our country is related primarily to a reduced standard of living for a part of the population nationwide, including a large segment of the population by ethnic group rome.

Aims: This study analyzes the prevalence of TB infection in vulnerable population groups, in an area with a high prevalence of tuberculosis (138‰), where BCG vaccination is mandatory.

Methods: A prospective study of detection of TB infection in the rome community from the west of the country (Adrad and Timis), from July 2009-December 2010.

Results: Of 1417 persons who underwent tuberculin skin test (TST) to detect latent tuberculosis infection (LTBI), 700 persons (49,40%) had positive TST results. 73.42% the study participants had no BCG scar present in where BCG vaccination is mandatory in our country. 51.43% of those with positive TST were men. 71,20% had recently tb contact.

Conclusion: Considering the fact that TB in our country is a major public health problem in a vulnerable population group (ethnicity rome) should be applied consistently screening to identify latent tuberculosis infection.

P2639

Risk factors for anti-tuberculosis treatment failure

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The effectiveness of DOTS at new TB cases must achieve 95% in Moldova is 70%. The patients with increased risk for failure and relapse are marginalized people. The diagnosis, organization and supervision of the treatment is difficult and the rate of failure is very high. Intrinsic risk factors for treatment failure, those related to the patient, can be under control of the physician, instead extraneous factors, are not related to the disease, but influence the outcome: poverty, ignorance, contact with active TB, they must be covered by the national TB control programs.

We estimated risk factors for treatment failure at 96 new TB cases hospitalized in the municipal hospital of Chisinau. Intrinsic factors revealed were: male sex 69 cases (70%), young age 25-44 yrs, 65 cases (66%), severe forms: infiltrative TB 75 cases (76%) and fibrocavernous TB 9 (10%), disseminated infection 60 cases (61%) with bilateral extension 71 cases (72%), pulmonary bleeding 19 cases (20%), pleurisy 12 (13%), 2/3 of cases had a coexisting pathology (alcoholics 19 cases, smokers 17, COPD 20 cases, 6 HIV-infected), 3 pregnant women, 8 cases with adverse drug reactions with changing of the therapeutic schedules. The extraneous factors were poverty and bad living conditions 90 (91%) unemployment 66 (67%), low educational status 69 (70%), 46 (47%) had a familiar contact with a TB patient, 34 (35%) had MDR strains in the sputum culture. For 77 cases (78%) the diagnosis was established with a delay more than 3 months after the onset of TB. All listed factors associated with the errors in treatment have induced emergence of MDR-TB that contribute to more problems in management of TB control programs.

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P2641**Tuberculosis and gender: Epidemiological trends since 1957 in Poland**

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Aim of the study: To describe changes in TB epidemiology since 1957 in Poland in relation to gender.

Methods: Retrospective analysis of data from National TB Register.

Results: The incidence rates (IRs) of tuberculosis in general Polish population decreased very much between 1957 and 2009 from 290,4 to 21,6 per 100000. The constant regularity in this study period was that IRs among men were higher than among women in every adult age group. It happened that the IR in men group was more than four times higher in comparison to female group. In males the linear relation of IRs and age was observed with the peak usually in 50-59 age group. In women group the more complex pattern occurred. Till the end of nineties the bi-modal relation of IR with age was observed. Originally the highest IRs were among younger and oldest women. Since the end of nineties the distribution of IRs has been similar in both gender groups, namely the older age group the higher was IR of tuberculosis.

Conclusions: The big differences in IRs of tuberculosis among men and women were constantly observed in Poland between 1957 and 2009. The relation of IRs and age in both gender groups came to be similar in the end of nineties. The task is to explain the higher proportion of men among TB cases.

P2642**Tuberculosis treatment completion in migrants, St.-Petersburg, Russian Federation**

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Introduction: Last years migrants in the Russian Federation (RF) are presented mainly by foreign citizens arriving to the RF from former Soviet republics visa-free with the aim of temporary labour activity. Some of these countries have high burden of tuberculosis (TB). These persons can move freely within the RF, they are not obliged to register at the place of actual residence and most of them have no health insurance. By law, TB is the basis for the refusal or cancellation of temporary residence permits or work permits to foreigners in RF.

Objective: To assess TB-treatment completion rates in patients who arrived from countries visa-free with the aim of temporary labour activity.

Methods: A prospective study among migrants-TB-patients diagnosed in Admiralteisky District, St.-Petersburg, Russian Federation, between January 1 2008 and July 1 2010. Examinations and treatment were free for patients.

Results: A total of 126 persons were examined. Active TB was diagnosed in 70 persons, 28 patients did not compete examination. Tax-free treatment was offered to all OÁ-patients (70). 22 patients (31%) refused treatment wishing to return home. Of the 48 patients who started treatment, 21 (44%) did not complete treatment. Thus, only 27 patients (39%) completed treatment, the fate of 43 patients (61%) is unknown. Their places of residence were not established, persons who had close contact were not screened.

Conclusions: In the absence of registration at the place of actual residence, health care staff can not locate the patient and ensure completion of treatment. If treatment can not be completed in the country of temporary stay, a patient transfer to their home country is required.

P2643**Incidence of tuberculosis and primary drug resistance rates in young Turkish soldiers**

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Introduction: Tuberculosis is an important public health problem. Epidemiological results have to be used to control the disease. The aim of the study is to investigate incidence of tuberculosis and primary drug resistance rates in young conscripts.

Methods: Soldiers with tuberculosis between January 1, 2009 and December 31, 2009 is recorded retrospectively. Results of sputum culture positive cases and also cases with drug sensitivity test (DST) were investigated.

Results: All patients were male with a mean age of 22,51±4,63. The total number of newly diagnosed patients in 2009 was 259 while 121 of them were sputum culture positive. Lung involvement was observed in 67,5% (175 patients), organ involvement other than lung in 27,8% (72 patients) and both in 4,6% (12 patients). As the mid-year number of soldiers is 537200 in Turkish Armed Forces, the incidence of tuberculosis is 48,23 per 100000 and incidence of smear positive pulmonary tuberculosis is 22,53 per 100.000. DST's were studied in 104 cases. In vitro primary resistance to at least one drug was observed in 17 (16,3%) of Mycobacterium tuberculosis isolates. Multi-drug resistance tuberculosis (to H+R) was observed in 6 (5,7%) patients.

Conclusions: Although the incidence of tuberculosis in young soldiers is moderately high it showed a significant decline compared to a study published 8 years ago. The results of primary drug resistance to tuberculosis drugs and multi-drug resistance rates were increasing. National Tuberculosis Control Program has to be directed effectively to decrease antituberculosis drug primary resistance and multi-drug resistance rates.

P2644**Drug resistance pattern of directly observed treatment shortcourse (DOTS) category-II relapse patients**

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Background: Multi-Drug resistance (MDR) is an emerging threat to tuberculosis control and resistance pattern depends on factors like regimen, duration of treatment, compliance etc. Currently Cat-II relapses are retreated with Cat-II DOTS and there is scarcity of data on drug resistance pattern in relapse patients.

Materials and method: This prospective observational study included 128 patients of Cat-II relapse. Detailed history of chemotherapy was recorded and sputum was sent for mycobacterial culture and sensitivity before starting Cat II DOTS. Resistance pattern of patient was studied.

Results: 122 out of 128 culture and sensitivity reports were available. 104 (85%) patients were culture positive, 15 (12,09%) were smear positive and culture negative. 3 (2,41%) had contaminated culture. 86 (69,35%) patients had resistance to any drug, of which 66 (53,22%) were MDR. 112 (87%) and 16 (13%) patients were treated previously with DOTS and non-DOTS respectively. History of previous chemotherapy revealed 80 (63%) patients had relapses, 11 (9%) were failures and 37 (29%) were defaulters. 56 (73%) had resistance to any drug and, 42 (54%) were MDR in relapse group. 7 (70%) patients had resistance to any drug in failure group and all were MDR. 57% had resistance to any drug in defaulters and 50% were MDR.

Conclusions: High resistance pattern (53,22%) in Cat II relapse patients, thus patients should not be retreated with Cat-II retreatment regimen but empirically treated with revised line drugs till availability of mycobacterial culture and sensitivity reports. There is scarcity of drug resistance data for Cat-II relapses and an urgent need of generating data on relapses so that the policy to treat these patients can be established.

P2645**To study outcome of directly observed treatment shortcourse (DOTS) category I and category II relapses when put on re-treatment regimen (Cat-II DOTS)**

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Background: Under RNTCP Cat-I and Cat-II relapses are put on retreatment regimen. There is scarcity of data on outcome of these relapses and hence, present study was planned to study the outcome of DOTS Cat I and Cat II relapses when put on retreatment regimen (Cat II DOTS).

Patients and methods: A total 289 relapse (161 cases of Cat-I relapse and 128 of Cat-II relapses) patients were included. 150 cases with history of successful treatment and 2 year follow up without relapse were taken as control. 9 patients were lost to follow up. Cat I and Cat II relapses were treated with retreatment regimen (Cat II). Patients were followed up to see changes in radiological and bacteriological parameters as per RNTCP protocol. Outcome was decided based on smear examination at follow up visits at 2, 5 and at end of treatment. Mycobacterium culture and sensitivity (Myco C/S) reports were collected and bacteriological characteristics of patients were decided. Outcome was defined as per RNTCP guidelines.

Results: Out of 156 Cat-I relapse patients treated with Cat-II DOTS, successful outcome was achieved in 65,37%. Regimen failed in 26,28% and 5,78% patients defaulted. When Cat-II relapse patients were retreated with Cat-II DOTS, successful outcome was achieved in only 36,28% patients. 56,45% patients failed, 4,83% patients defaulted and 2,42% died.

Conclusions: Treatment of Cat-I relapse with Cat-II can be justified with an expected success rate of 65%. The effectiveness of Cat-II DOTS in Cat-II relapse must be elucidated in large multicentre studies and ideally Cat-II relapses should be empirically put on revised line drugs awaiting results of Myco C/S.

P2646**An analysis of mortality among patients with tuberculosis (TB) in Sri Lanka**

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Introduction: Sri Lanka has a TB prevalence of 101 and a mortality of 9.2 per 100,000.

Objective: To define characteristics of patients who died during treatment for TB in a unit from Central Sri Lanka.

Method: We retrospectively analysed TB related deaths during 2006 to 2010.

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Results: We observed a mean mortality rate of 5.4% (228/4199) for the 5-year period. The lowest rate of 3.2% was in 2010. Of the total deaths, 78.5% were males and 50.4% were above 60 years; 4.3% were below 20 years. Pulmonary TB (PTB) contributed to 75% of the deaths.

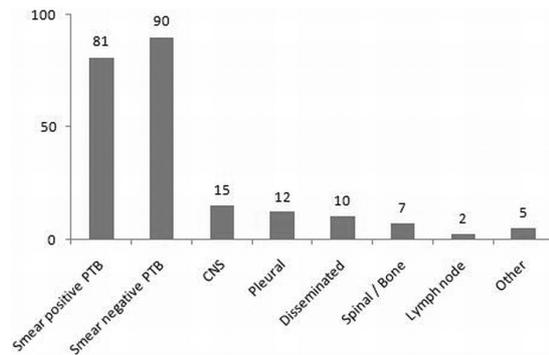


Figure 1: Site of TB among patients who died during treatment
PTB: Pulmonary tuberculosis CNS: Central nervous system.

Significant differences in mortality were noted between males and females (6.7% vs. 3.2%, $X^2=23.1$, $p < 0.001$) and between new and re-treatment cases (5.1% vs. 9.8%, $X^2=9.622$, $p=0.002$). No significant differences in mortality rates were seen between smear positive vs. negative PTB and induction vs. continuation phases of treatment.

Conclusion: Mortality in TB was high among males and retreatment patients.

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A tuberculosis-screening program among HIV-infected patients

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Introduction: Tuberculosis (TB) is still the leading cause of death in HIV-infected patients. Its early detection and treatment is a known priority. In 2008 a tuberculosis-screening program among newly diagnosed HIV patients was implemented in a Central Hospital Infectious Unit.

Aim: Evaluate the screening program, addressing compliance, case detection and potentially prevented cases.

Methods: A before-after intervention study was performed. Analyzed all newly diagnosed HIV patients between 2007-2008 (before) and 2009-2010 after the program was implemented. Screening included: symptom inquiry, chest radiography, two-step tuberculin skin test and IGRA. Sputum smear and culture were performed when TB was suspected.

Results: From 2007 to 2010, 152 patients were diagnosed with HIV (88 in 2007-2008 and 64 in 2009-2010) 75% men, mean age 38,5 y. The before vs after group: 24 (27,6%) vs 36 (57,1%) were injecting drug users (OR: 3.42. CI95%: 1.73 to 6.77); 35 (40,2%) vs 11 (17,5%) had heterosexual risk (OR: 0.31. CI 0.14 to 0.68) and 18 (20,7%) vs 3 (4,7%) homosexual (OR:0.19. CI0.05 to 0.68). 4 vs 11 patients had a known contact with TB (OR: 4.35. CI: 1.32 to 14.39) and 2 vs 7 a previous history of TB (OR5.28. CI: 1.06 to 26.33). Screening for TB was done in 69 patients, 21 (23,8%) in the first and 48 (75%) in the second period. LTBI was diagnosed in 3 vs 11 patients (OR: 5.88, CI: 1.57 to 22.06) and active TB was found in 11 vs 21 patients (OR: 3.42, CI:1.51 to 7.76).

Conclusions: The screening program allowed the early identification of more cases of active TB and LTBI. Screening compliance increased, but there were still 25% of HIV patients in the second period that failed screening. Strategies to increase this compliance must be found.

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Unusual association of tuberculosis with schistosomiasis and tuberculosis with sporotrichosis

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Introduction: Tuberculosis is an infectious disease that causes currently nearly 2 million deaths worldwide. More than 200,000 of these occur in patients co-infected with HIV. There are about 700 000 new cases a year, and we found the presence of two cases with atypical association of schistosomiasis and sporotrichosis.

Objective: To report our experience with concomitant infection tuberculosis with schistosomiasis and sporotrichosis.

Method: Cases study of patients infected with tuberculosis in the Hospital of the UNICAMP-Campinas, Brazil.

Results: We found the case of man, 55 years, alcoholic, with pleural effusion for about a year. Thoracocentesis resulted in exudate and ADA= 66 U/L. Chest CT

showed mediastinal lymphadenopathy. Result of culture of lymph node removed by mediastinoscopy was positive to Mycobacterium tuberculosis and Sporothrix schenckii. The other case is a 32 years old, male, with a history of fever and weight loss with chest x-ray opacity in the left apex. Chest CT showed a mass in right upper lobe permeated by a tree in bud and mediastinal lymphadenopathy. He underwent lobectomy that showed the presence of Schistosoma mansoni and Mycobacterium tuberculosis in parenchyma, pleura and lymph nodes.

Conclusion: Tuberculosis can be associated to other diseases even in HIV-negative patients, including simulating lung cancer.