Poster Presentations
Epidemiology

Ten Years of Detecting Leprosy Cases in Brazil

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Objective: To analyze leprosy trends in Brazil according to the historical sequence of the leprosy detection rates in the period from 1997 to 2006. Material and Methods: Ecological study of the trends in the historical sequence of leprosy cases diagnosed in Brazil in the period from 1997 to 2006, analyzing the detection rate per region and age group and utilizing data from the National System on Diseases of Compulsory Notification and from state leprosy programs. Results: The 36% reduction in leprosy detection from 3.3 to 2.1 per 10,000 inhabitants in Brazil over the last 10 years was verified. From 2003 on there has been a declining trend in general detection coefficients and in children under 15 years of age. Conclusion: One can conclude that an important decline in the leprosy detection rate has been taking place in Brazil over the past ten years, both overall and in children under 15. This trend is probably the result of initiatives that included the introduction of multidrug therapy (MDT) in 1987, of the strategy of increasing access to integrated diagnosis and treatment to primary healthcare services, and of efforts to change the image of leprosy within society. Keywords: tendency, detection rate, leprosy, epidemiology, Brazil

Global Burden of Disease (GBD) of Leprosy in Brazil, Among Neglected Diseases (ND)

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Introduction ND: have not received enough attention, but are still responsible for important quality of life losses, especially in developing countries. Objectives: Our mail goal was to describe the proportions and ranking of leprosy among ND in Brazil. Methods: The first National Brazilian GBD study was conducted in 2002-2004. Mortality was corrected for covered and garbage-codes and ill-defined causes of death were redistributed. Clinical-epidemiological parameters over 100 health conditions were collected by sex, age groups, and five great regions of Brazil. Disability-Adjusted Life Years (DALY) were estimated. Results: Among ND, leprosy was the fourth cause in ranking with 1.7%. In 5-14 and 15-29 age groups, leprosy represented 3.0% of the whole GBD for ND. Confirming inequality of the country, in two regions, North and Center-West Great Regions, both including the Amazon area, leprosy represented 5.0% of the total GBD for ND, and less than 1.0% in other three regions. Conclusions: Although the GBD for leprosy was low, it continues to be important in specific geographic areas and/or specific age groups.

Detection of M. leprae in the Blood of Leprosy Patients and Healthy Inhabitants Live in Endemic Leprosy Area

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Introduction: AFB has been detected in Multibacillary Leprosy cases, indicated that bacillemia is occurred. In endemic leprosy area, people are continuously exposed with M. leprae and these bacilli could reach the blood circulation. Aim: To detect M. leprae in the blood of leprosy patients and inhabitants of endemic leprosy area. Methods: Venous blood samples were collected from 52 new leprosy cases and 281 healthy inhabitants live in endemic leprosy area. PCR was performed to detect M. leprae in the blood, using Lp1-Lp4 primers. Results: M. leprae were detected in blood of 70% MB, 3% PB cases and 4% of healthy inhabitants of endemic leprosy area. Discussion: Bacillemia in the blood of healthy individuals could be a preliminary process of infection, when the bacillus enter the body and reach the blood stream. Conclusion: Detection of M. leprae in the blood of healthy individuals indicates the early process of infection. Key words: M. leprae - blood - healthy contacts.
Consistent Parameters of Incidence Rate of Leprosy in Brazil

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**Introduction:** A Global Burden of Disease (GBD) Study was conducted in Brazil in 2002-2004. Clinical-epidemiological parameters were collected through a broad literature review, and epidemiological data, when available, for more than 100 health conditions, including leprosy. **Objectives:** Our main goal was to describe the incidence rates estimated for Brazil and its Great Regions. **Methods:** After corrections for underestimation of the Mortality System, and distribution of garbage-codes and ill-defined causes of death, clinical-epidemiological parameters for leprosy morbidity were checked for consistency through a free software DISMOD II, for estimation of Disability-Adjusted Life Years (DALY), by sex, age groups, and five great regions of Brazil. **Results:** Table 1 presents the rates estimated after consistency checking in Dismod II. Incidence rate of leprosy (GBD Code: IA10) by sex, age group and Brazilian Great Region.

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**Conclusions:** Although the GBD for leprosy was low, it continues to be important in specific geographic areas, such as North and Center-West Regions, especially in specific age groups.

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Descriptive Epidemiology of Leprosy in Adilabad District, Andhra Pradesh, India

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Secondary data on Leprosy cases in Adilabad district, Andhra Pradesh, India were compiled and analyzed (1991-2006). A total of 25196 new cases could be accounted from programme records since 1991. Proportion of multibacillary to paucibacillary cases is in the ratio of 4:6. Geographical distribution revealed clustering of cases in rural areas of the district followed by tribal and then urban areas. In the year 2006 the proportion of leprosy cases were observed more in scheduled class population than scheduled tribe. Although cumulative number of cases(prevalence) showed a descending trend between 1991 to 2006, there was plateau observed between 1994 to 1999 with a slight peak in 1997. The declining trend from 2004 to 2006 suggests stabilization of prevalence rate and achievement of elimination target. However the new case detection rate is increasing proportionately and reached its peak in the year 2006 amounting to 70%. The reasons attributed to this increase were increase in awareness levels, strengthening of referral systems and integration programme in public sector. This analysis highlights that though prevalence rate is decreased new case detection rate is increasing at alarming speed and hence need to be addressed in future programme planning.
Pattern of Relapse in Leprosy in An Out Patient Clinic in Hyderabad

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Introduction: Duration Multi-drug therapy (MDT) regimen reduced from 24 months to 12 months may result in more relapses in leprosy patient. This prospective study was undertaken to document the pattern of relapse. Methods: 28 cases of leprosy presented with relapse from Jan 2003 to July 2007. These cases were confirmed histologically. Results: Among 28 cases of relapse, 79% were males and 22% were females. Clinical and histological classification correlated in 22 (79%) of relapsed cases.23 were multibacillary (MB) & 5 were paucibacillary (PB) relapse. Minimum and maximum duration of relapse after release from treatment (RFT) in MB cases was 8 to 38 years respectively, while in PB cases it was 1 to 3 ½ years. 86% of the relapse cases presented with the same type of leprosy as seen previously. Conclusion: PB cases relapsed earlier than MB cases. Further long term follow up of MB cases is required. Key words: Leprosy, Relapse, MDT, Multibacillary, Paucibacillary.

Mycobacterium leprae in the Environment of Patients Using 16sR RNA as a Marker of Viability

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Introduction: This study was aimed at detection of viable leprosy bacillus in the soil from households of leprosy patients using For proof of viable bacteria, reverse transcribed RNA or complementary DNA and 16SrRNA gene amplification was used. Methodology: Soil DNA was extracted using TENP-Sepharose 4B column that successfully removed soil humic acid, an inhibitor for PCR. Recombinant plasmid pGEM3Z cloned with 116bp insert of known 16SrRNA gene (internal construct of 171 bp) was isolated in vitro-transcribed to obtain RNA. This RNA was used as a standard against the unknown RNA of clinical samples in RT PCR assay. Results: M.leprae DNA was not detected in 50 soil samples collected from the households of leprosy patients. That the test was correctly performed was indicated by the presence of viable M.leprae in skin biopsies of leprosy patients as well as soil spiked with freshly obtained M.leprae from skin biopsies. Conclusion: Viable leprosy bacilli were not detectable in the environment of house hold of leprosy patients. Further studies are ongoing to detect viable M leprae in soil samples collected during different seasons. Key Words: humic acid, 16SrRNA, in vitro transcription, leprosy.

Leprosy Situation in Eastern Mediterranean Region (EMRO) with Special Concentration on Arabian Peninsula

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In 1937 W. H. Storm published the first document about leprosy in the Arabian Peninsula, since then different articles appears about leprosy in Yemen and gulf areas. At present except Yemen, Egypt, Somalia, Sudan, Pakistan and Afghanistan all the EMRO region members almost completely got rid of leprosy as health and social problem. The recently published epidemiological situation by WHO and the magnitude of Leprosy problem in EMRO who region will be discussed in this presentation with special concentration on the situation of countries in the Arabian peninsula.

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Immediate Post Elimination-Leprosy Scenario - A Study

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Introduction: Leprosy is no more a major threat. Having achieved PR 1 per 10000, zero PR is the next goal. A retrospective study was done at Sacred Heart Leprosy Centre, Sakkottai, South India to assess the leprosy scenario in immediate post-elimination period. Method: The clinical and microbiological status of new leprosy patients treated in OPD from January 2006 to December 2006 were analysed. Results: Total leprosy patients: 7588 New leprosy patients: 427 (M: 283, F:123, C:21) New Case Details: Treated for leprosy elsewhere: 277 Never treated before: 150 Smear for AFB positive: Adult: 49 Children: 2 Deformation pattern of new cases: Grade 0 Grade 1 Grade 2 Treated cases: 91 18 167 Untreated cases: 66 22 5 Children: 17 2 2. Discussion: This is a Referral Hospital with attendance from 12 districts and few neighbouring states. 427 new cases, Skin smear positivity 51, new children victims 21 and 27 patients with deformities among untreated cases run an alarming signal. High level vigilance and microlevel surveillance are needed. New smear positivity needs special attention. When they got infected?? Missed? Having integrated leprosy to general stream, health system needs quality infrastructure to manage active cases and deformities in leprosy. Key Words: New cases, Smear positivity, Deformity.

Smear Positivity - An Indicator of Magnitude of Leprosy - A Hospital Study

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Introduction: Slit skin smear is the time tested simple laboratory tool and the gold standard for diagnosis of leprosy. A study was undertaken in Sacred Heart Leprosy Centre, Sakkottai, South India to analyse the smear positivity trend from 1991 to 2006. Method: All patients who underwent smear test were included in this retrospective study. As hospital policy, smear test was done to all patients before and after therapy and during follow-up. Result: Yield of skin smear. Year Total smear Positive Negative Positive in done new cases (total new) 1991-1995 16267 2119 (13.0%) 14148 (87.0%) 735 (6302) 1995-2000 16904 1309 (7.7%) 15595 (92.3%) 490 (5160) 2001-2005 12220 723 (5.9%) 11498 (94.1%) 286 (3160) 2006 (1 year) 2140 105 (4.9%) 2035 (95.1%) 51 (150). Discussion: It is obvious that smear positivity shows decline. But 2006 has recorded 51 new positivity. This is the immediate post elimination period? tip of iceberg? when they were infected?? This has to be addressed urgently with long time perspective. Highly active micro level surveillance needed. Conclusion: Smear positive cases are scattered. Regional centre for skin smear test is to be identified with special focus on new active patients. This will be a milestone to achieve a world without leprosy. Key Words: Slit Skin Smear, Positivity.

Gender Dimension in Leprosy – An Analysis

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Introduction: In most part of the world, ‘males are affected more frequently than females often in the ratio of 2:1 in leprosy. LEPEA Society supported NLEP in Koraput and Malkangiri districts of Orissa in the year 1992. This paper presents the gender dimension of the total cases detected till July 2007 and compares with the findings of contact survey undertaken during 1993-2002. Methodology: During the period, the project has registered 17,854 cases among which 13042 are PB and 4812 are MB. Of them, the distribution of adult and child are 15440 and 2414 respectively. Sex distribution of identified cases was done year wise for the registered cases and contact cases both in case of PB & MB for adult and child. A consolidated gender analysis of these two groups is presented. Results: Out of 17,854 registered, 8088 cases are female (45%) which is almost equal to the rate of adult and child cases. It is found that in case of MB child which is about 6.8% of the total registered MB cases, the female percentage is 34% whereas it is 50% in case of PB cases. However, in the contact survey, the female percentage is higher than the male. In case of MB child the female percentage is 34% whereas the same is 60% in case of contact cases. On the other hand the female percentage in total registered cases is 45% and that is 55% in case of contact cases. Conclusion: The disease affects both males and females more or less equally. The higher percentage of female cases in contact group justifies that there is less and late reporting of female cases. It also concludes that voluntary reporting is also less in case of females Key words: Gender dimension, Contact survey, PB, MB.
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AIDS and Hansen's Disease Databases Linkage in Brazil

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Introduction: Hansen’s Disease is prevalent in all of states and Brazil has the second largest number of cases of this disease in the world. The first AIDS cases were notified in the 1980s, and as at 2005 403,145 cases were notified. AIDS and Hansen’s Disease are compulsorily notifiable in Brazil on the SINAN (Notifiable Diseases Information System). Methods: In order to link AIDS and Hansen’s Disease, the SINAN databases for both diseases will be used with REC-LINK software with specific keys for relating cases. Results: It is expected that by linking the AIDS and Hansen's Disease databases using appropriate software and methodology it will be possible to verify AIDS/Hansen’s Disease coinfection, case under-reporting, in addition to implications regarding the clinical evolution of the disease. Conclusions: Hansen's Disease, an endemic disease in Brazil, is predominant among the poorest populations. AIDS in the world and in Brazil is undergoing a process of pauperization, which is leading to an increasing number of cases of co-infection with consequences for clinical evolution, epidemiological data and the approaches used to care for these patients. Key Words: AIDS, Hansen’s Disease, coinfection, SINAN.

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Geography of Leprosy in Brazil

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Introduction: This investigation study the territorial distribution of leprosy in Brazil in order to identify the regularities of its differentiation, and to contribute to the knowledge of the processes of its social production. Leprosy is a public health problem in Brazil, and its spatiality has been studied punctually, without systemization. Methodology: Time trends detection rates were calculated for regions and states of the country, during the 1960/2002 period. A geographical system of information was conformed to make possible the analysis of the spatial difference of the disease. Results: The North and Center West regions maintained the highest detections, the largest increments and defined the spatiality of leprosy in Brazil. The historical stability in the high incidence in the North, as well as the low incidence in the South, suggest the existence of geographical contexts with different vulnerability to the social production of leprosy. Conclusion: This results showed the expansion of the focus of leprosy in the North, Center West and North-East Regions, associated with the agricultural colonization in Legal Amazon and the development of some cities and metropolitan areas. Key words: Leprosy, Detection rate, Time trends, Spatial differentiation, Social production.

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How Effective is Treatment of Leprosy Women? A 28 Year Cohort Study

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Purpose was to monitor the course of leprosy during and after pregnancy. A cohort study followed 88 leprosy and 22 non-leprosy women during pregnancy and lactation for 15-28 years. Initial classification of leprosy patients was LL (27), BL (29), BT "active" (15) and BT “cured” (17). Treatment was: DDS monotherapy: 45/88, DDS with 2 years MDT: 30/88, DDS/Clofazimine: 4/88, DDS with other drugs 9/88. Most were released from treatment (RFT): DDS monotherapy in 1984 and DDS/MDT in 1986. 76% had one or more pregnancies after that. Analysis was by LL, BL, BT (Ridley & Jolping), and MB, PB. Evidence for "new" nerve function impairment (NFI) was loss of deterioration in VMT, STG, facial sensation (FaSTG), corneal reflex (CR), and stocking & glove hypoaesthesia (SGH). New leprosy: 9 cases. 73/88 leprosy patients had relapse and/or new NFI after “cure”/RFT: Relaps: 23%MB, 37%PB; SGH: 86%MB, 44%PB; VMT/STG: 68%MB, 34%PB, 14%HC; FaSTG: 45%MB, 28%PB; CR: 34%MB (3 with blindness), 28%PB. Impaired VMT/STG and SGH in BL v. LL (all had MDT) indicate increased risk in immunologically unstable BL women of childbearing age. Women treated for leprosy need long-term follow-up even after MDT. Keywords: leprosy, women, pregnancy, nerve function impairment, Ethiopia.
Retrospective Analysis of ENL Cases Treated in an Urban Leprosy Project at Hyderabad

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In Hyderabad Urban Leprosy Project of LEPRA Society situated at Hyderabad, 13,406 cases of leprosy were registered for MDT during last 15 years. The case detection and registration was done according to National Leprosy Eradication Programme (NLEP) guidelines. All the cases were screened and put under MDT as PB and MB. Among the 13,406 cases 2106 (16%) were MB. All the cases were followed up for a minimum period of three years. The follow up consists of clinical examination once in three months and bacterial examination once in a year. The clinical examination consists of looking for exacerbations of symptoms and nerve function assessment. Over this period of 15 years the definition of MB and duration of treatment varied in accordance to guidelines of WHO. A retrospective analysis of the data on 2106 MB patients was carried out and it was noted that 85(4%) patients developed ENL reactions. The ENL is managed with standardised regimen using prednisolone and Clofazimine depending on recurrence and severity. Patients showed recocurrence of ENL - Five (5.8%) patients, for six times. Three (3.5%) patients 5 times, five (5.9%) patients 4 times, eight (9.4%) patients 3 times, sixteen (18.8%) patients 2 times and forty eight (56.4%) patients one time patients showed a recocurrence of ENL. 56(65.9%) patients developed ENL reactions during treatment, 23 (27%) patients before treatment while 6(7.1%) were found with ENL reactions during the follow up examinations. Observations from analysis on age and gender distribution, recocurrence of ENL and recovery status with reference to bacteriological status and nerve function assessment will be presented in the paper.

Social Epidemiology of New Leprosy Patients at the Skin Clinic, Office of Disease Prevention and Control, Region 5, Nakhonratchasima Province, Thailand Between 2002-2005

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The authors have conducted the social epidemiological research study of 46 new cases of leprosy who attended the special skin clinic of the office of disease prevention and control, region 5, Nakhonratchasima Province Thailand from 2002-2005. Data were collected by both quantitative and qualitative tools using designed forms and focus group discussion. Among total 46 studied cases, 29 were male, 17 were female who came from Nakhonratchasima (45.6%), Buriram (26.1%), Chaiyaphum (21.7%), Surin (4.3%) and Khonkaen province (2.2%) respectively. Thirty two percent of them have family history of leprosy. They were classify from the Ridley - Jopling classification and WHO-classification as multibacillary leprosy : MB (42 cases) and paucibacillary leprosy : PB (4 cases) whose 78.3% were acid fast bacilli positive from slit skin smears. Numbers of cutaneous lesions at clinical onset showed 1-5 lesions (17.4%) and over 5 lesions (80.4%). The other clinical onsets revealed anesthetic macules (65.2%) infiltrative skin lesions (21.8%), infiltrative mucous membrane of the nose (4.3%) and anesthetic hands and feet (6.5%). They were detected from several methods including referral system (32.6%), advice from neighbourhoods (23.9%), advice from relatives (21.7%), counseling from health staffs (13.0%) and attended clinic voluntarily (8.7%). The mean duration since onset to the time at first detection was 4.1 years while 13.1% were early detected before one year since onset as compared with grade two deformity-rate of 8.7% Previous antileprosy treatment were found among 32.6 percent who received drugs mostly from drug stores and medical clinics. Patients received and perceived previous leprosy knowledge from several sources and medias such as printed media (59.2%), mass media (22.2%)< personal media (14.8%) and the mobile rapid village survey team (3.7%). Study on psychosocial factors revealed from patients expression that 89.1 having fears and worry of deformities and ulcer (24.4%) together with being afraid of spreading the disease to the other(12.2%) and unemployment (4.9%). Results from focus group discussion among those 6 cases who were earlier detected before one year since onset whose 66.6% were household contacts of index cases perceived that leprosy is hereditary disease (50%) meanwhile from 10 cases who were detected lately than one year confessed that they received previous treatment from near by health centers (80%) and drug store (20%). Authors have given recommendation to retain and better developed the special skin clinic as secondary care and referral unit for the Northeastern region in order to help supportive sustainable elimination of leprosy together with launching of mass education campaign and empowerment of integrated health workers.
Seroprevalence ML Flow Test in Leprosy Contacts in Minas Gerais – Brazil

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The epidemiological control actions of leprosy are based on the diagnosis and treatment of patients and on household contacts surveillance. Serological tests in leprosy could identify among contacts which of them have subclinical infection and a higher risk of developing leprosy in future. ML Flow is a serological test of quicker and easier execution which was applied in 2,840 household contacts of new cases of leprosy diagnosed from October 2002 to March 2004, in 13 municipalities of Minas Gerais state - Brazil. ML Flow was positive in 20.5% of leprosy contacts. Seropositivity was higher among males (22.4%, OR=1.25), people over 15 (21.7%, OR=1.38), people in contact with multibacillary cases (23.9%, OR=1.75), and people who lived in municipalities where the detection rate was very high (37.7%, OR=1.39). The interpretation of these results supports epidemiological concepts already known in leprosy, and indicates that the follow-up of these contacts is necessary to evaluate the real role of seropositivity in the development of leprosy disease among contacts. Key-words: leprosy, serology, epidemiology, prevention and control.

Leprosy in Children

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One hundred and eighty six cases of childhood leprosy cases were observed during the last decade. They comprised of 7.2 cases of leprosy cases and 0.1/1000 of the hospital outpatient population. Male female ratio was 2:1. Six percent of cases belonged to multi bacillary group (BL & LL). Nerve involvement was observed in 16.8% of cases. This group needs to be monitored carefully for impending paralysis. Reactions were not observed in children. On adequate follow up in 94 patients there was evidence of relapse in 3.6 % of patients.

Migration and Leprosy in Mato Grosso State, Brazil

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Leprosy in Brazil has been an important public health problem: the country diagnoses 90% of the cases in the Americas and it is the second country in absolute number of cases in the world. Among the natural premises of the leprosy geography we find the climate, the relief, kinds of vegetation and certain ecosystems. Among the social premises the unfavorable dimensions of life condition such as the economic, hygienic-sanitary, biological and behavioral are renewed within the social relations. The Amazon Region despite having only 10.4% of the country population, concentrates nearly 40,0% of the leprosy cases detected, presenting a coefficient of detection of 8,50/10 000 inhabitants, while the coefficient of the rest of the country is of 1,85/10 000 inhabitants, which shows its territorial focalization in the country. The state of Mato Grosso presents one of the most unfavorable situations of this region, maintaining high coefficients of leprosy detection in the last decade. Not disregarding the possible influence of the environmental and even operational factors, of the health services, this investigation intends to characterize the participation of migratory movements in the maintenance of the high coefficients of leprosy in the State of Mato Grosso. Key-words: Leprosy, Detection rate, Space differentiation, Social production.
Analysis of Reactions and Complications

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This poster presents the proportionate study of Reactions and Complications among the leprosy affected persons in Adilabad district of Andhra Pradesh. Adilabad Leprosy Eradication Project (ADILEP) is one of the direct projects of LEPR Society started in 1997 to carry out NLEP activities in 21 NLEP centres. The study presents the analysis of newly detected reactions and complications cases from 2004 to second quarter of 2007 among 390 patients. From 2004 to 2007 around 100 new complications were identified among 190 leprosy new cases and 3490 surveillance cases. At the same time from the year 2000 to 2004 only 115 complications identified among 2300 newly registered and 3875 surveillance cases. It is observed that before 2004 the percentages of complication cases are in small numbers and after 2004 it is showing an upward trend. Around 54 new MB active cases and 24 type-I, 10 type-II and 24 neuritis were observed during 2004-07 period of time. It makes clear that due to discontinuity of active search the number of complications and reactions are escalating. Another interesting observation is that the prevalence rate by the end of 2003 was 4.3 per 10000 and current prevalence rate is 0.97 per 10000.

Do Females Suffer Less From Leprosy?

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Introduction: The issue of gender disparity is often talked about, due to the lower percentage of women availing leprosy related services. This disparity can mean that females are equally suffering but are not detected or fewer females suffer from the disease as observed in some studies. In either case the subject is interesting, needs attention. Methodology: The present paper analyzes data on some epidemiological parameters related to female patients based on the observations from BOLEP, one of the LEPRA Projects in Orissa. The project has survey mode of case detection until 1998. Then special elimination campaigns were organized from 1998 to 2005. An attempt has been made to calculate the female specific NCDR, MB rate and disability rate and compared with annual percentages for a period of 16 years from 1991 to 2006. Results: The specific NCDR, MBR and DR are more informative when compared to mere percentages. It has been observed through years that percentage of female case varies greatly compared to the specific rate. For example in 2006 the female NCDR, MBR and DR are 40.4%, 32 and 0. The corresponding female specific rates are 2.7, 0.9 and 1% respectively. Similar to total NCDR, female specific case detection rate shows three sudden falls on the year 1992, 2002 and 2005. They seem to reflect more of change of strategy in case detection than disease behaviour. The percentages do not reflect the programme effects. Special campaigns (which are partly active mode of case detection) have not detected more female cases, which probably indicates lower incidence of disease in female. Disability and MB rates also do not seem to indicate late detection in females. Conclusion: Female specific rates are more informative and reflects the programme impact Special campaigns did not show increase detection of female cases. Key words: Gender disparity, NCDR, MBR, Disability rate.

A study on Life stress Events as a Trigger in the Onset of Reactions in Leprosy

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Introduction: Psychological stress has been claimed to be one of the risk factors in reactions in leprosy. There is a lacunae in studies to explore the association between reactions and stress. Study results could lead to finding appropriate interventions in reducing the impact of stress events. The aim of this study was to ascertain occurrence of life stress events as a triggering factor in the onset of leprosy reactions, using a case control approach. Methodology: The cases included patients who have had reactions after the diagnosis of leprosy or even during the time of diagnosis. The control group was leprosy patients without reactions and should have completed up to 9th pulse of MDT. The stressful life events scale modified and standardized was used. The inventory items are clubbed into 12 different categories. Conclusion: Preliminary analysis indicates that occurrence of life stress events in the reaction group was higher than in the control group. The analysis is yet to be completed.
Clinico-Epidemiological Study of Pure Neural Leprosy
From a Tertiary Hospital in Delhi

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Introduction: Pure neural leprosy (PNL) continues to be common in India. This form of disease is least studied and very little information exists in literature. We analyzed the demographic profile and clinical aspects of PNL at our center. Methodology: Retrospective analysis of confirmed PNL registered in leprosy clinic in our institute between January 2003 and July 2007 was undertaken. Demographic and clinical profile including onset of disease and presenting complaints, pattern of nerve involvement, presence of nerve absciss and deformities were analyzed. Investigations such as slit-skin smear (SSS), skin biopsy, electrophysiological study (EPS) and nerve biopsy were done. Results: Of 1975 leprosy cases seen during this period, 188 (9.5%) had PNL which included 160 (85%) males and 28 (15%) females, with 121 (64.36%) cases within 20-40 years. Presenting symptoms were paresthesia, pain, sensory loss and motor weakness. Majority of patients i.e 119 (63.3%) had e”2 nerve involvement while 49(26%) had e”5 nerve involvement. Ulnar nerve was most commonly involved in 130 (69.14%) cases followed by common peroneal in 91 (48.4%). Deformities included claw hand in 50 (26.6%), foot drop in 21 (11.17%) facial palsy in 2 and wrist drop in one patient only. Nerve biopsy revealed features ranging from normal, to infiltration with epithelioid cell granulomas, fibrosis, lymphohistiocytic infiltrate and AFB positive foamy histiocytes. EPS showed features of sensory/motor axonal neuropathy, demyelination, denervation with poor to moderate renervation or decreased sensory nerve action potential. Conclusions: PNL is a distinct type of leprosy in India. Men are more commonly affected and ulnar nerve involvement is the most common manifestation. Sensory complaints are early and more common. Early diagnosis and treatment is helpful in preventing sequel due to nerve damage.

Spatial Distribution of Leprosy Among School Children in Paracatu, State of Minas Gerais-Brazil

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The detection rate of leprosy in the district of Paracatu is increased in people with less than fifteen years old, 6.8/10,000 inhabitants in 2003 (hypeendemic). The study aims the territorial distribution of the leprosy-cases in teenagers and school children, using the strategy of the case finding. A prospective cohort and ecologic study has been used with 16,623 scholars from January of 2004 till June of 2006. 68 cases of the disease had been diagnosed (25.1%, multibacillary forms). About 85.2% lived in the urban area, 55.8% were women, predominating in an age group from 10 to 14 years old. There has been an increasing of 38.2% in the detection rate cases, giving visibility to the unknown prevalence. In considering of the case finding eight micro regions of Paracatu were distinguished. The geoprocessing of the information through the case finding among scholars, allowed a visibility of the high detection rate of leprosy by region in Paracatu-MG. Keywords: leprosy, scholars, case finding, spacial distribution.

Subclinical Peripheral Autonomic Neuropathy in Contacts

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Early detection of leprosy is essential for treatment and control of the disease. Vasomotor reflex (VMR) evaluates small myelinated nerve fibers which are the first to be damaged in the disease. A total of 500 household contacts of multibacillary patients, aged 12-65 years, were evaluated in order to detect early manifestations of the disease. Laser Doppler fluxometry (LDF) and presence of PGL-1 antibodies in serum were assessed. The analysis showed that 26.6% of the contacts had altered VMR and 24.2% had anti-PGL-1 antibodies. Both tests were positive in 6.8% of the contacts. No association was observed between VMR alteration and anti-PGL-1 antibodies. Most of the cases with antibodies anti-PGL-1 (64.5%) and with altered VMR (59.4%) were contacts of lepromatous patients but no association between the variables was observed. VMR was more frequently altered in the fifth fingers than in the second fingers. Alteration of the peripheral autonomic function determined by LDF suggests sub-clinical infection in contacts. Further study of autonomic alterations can provide with new information to elucidate the pathology and evolution of neuropathy in leprosy. Keywords: contacts, vasomotor reflex, autonomic neuropathy, PGL-1.
Clinical and Epidemiological Profile of New Leprosy Cases Detected Through a Sample Survey in Greater Mumbai

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Mumbai is an important urban centre in India with 13 million people and about 60% are living in slums. The ‘intermediate’ goal of leprosy elimination (<1 case per 10,000 population) is achieved in Mumbai (March 2005). The rate of annual decline in PR was 53% in 2005 as against the worldwide decline of 2 to 12%. This calls for an enquiry. ALERT-INDIA maintains a ‘central registry’ of all new leprosy cases registered in Mumbai city to monitor the epidemiological trend in leprosy under Leprosy Elimination Action Programme (LEAP). A sample survey was undertaken to review the leprosy status in Mumbai authorized by Municipal Corporation of Greater Mumbai (MCGM). From January to September 2007, 154,200 (76%) out of 201,302 enumerated population in 8 Health Post areas randomly selected were examined by the trained workers of 4 NLEP units. 79 new leprosy cases (NCIR: 5.18 / 10,000 population) were detected from areas reported with a PR of 0 to 2 per 10,000 population. The clinical presentation, epidemiological features, duration of disease and knowledge about the disease of all these cases were assessed. It was observed that 56% of new cases had leprosy for more than 6 months before detection and 50% of them were residents for more than 5 years. The rest were migratory population from other states. The sample survey revealed existence of endemic pockets that need focused interventions.

Change in the Profile of Disabilities and Deformities in Leprosy

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An effective leprosy control measure means that every leprosy patient is detected early and cured without disabilities and deformities. Analyzing the incidence and prevalence of disabilities and deformities at the time of registration, during and after the course of treatment will help to provide feedback to service providers and programme managers. A field based retrospective analysis of 2178 records of leprosy patients’ registered with the urban leprosy project of ALERT-INDIA for the period from 1985 to 2006 in one of the Mumbai suburbs was undertaken to ascertain the change in the profile of disabilities and deformities. The data were analysed mainly on 1) the clinical type of leprosy, 2) the type of physical deformity / disability and 3) change in the deformity / disability status. Out of the 2,178 leprosy cases studied, 281 (13%) reported with disability / deformity at the time of registration. The disability status after completion of treatment (RFT) and after completing the surveillance (RFC) was compared. Analysis of data showed changes in the disability / deformity status depending on quality care. Hence the need for a long-term care is emphasized. The role of effective support services by the leprosy trained personnel, training and equipping GHC personnel to identify and manage early disabilities / deformities and integrating specialized leprosy services into the general health system are stressed.

Incidence of Silent Neuritis and Identifying the Predisposing Factors in Leprosy

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It has been well documented that ‘silent neuritis’ occurs without pain, swelling and signs of inflammation as compared to acute neuritis in leprosy. Detecting silent neuritis due to leprosy at an early stage and managing successfully without loss of nerve function is most challenging even at the hands of experienced leprosy workers. The Leprosy Referral Centres (LRCs) established by ALERT-INDIA in the project areas (Mumbai and Navi Mumbai) under its Leprosy Elimination Action Programme (LEAP) provide support services for confirming diagnosis and offer comprehensive services to all leprosy patients referred by the GHC personnel. A longitudinal, observational study was undertaken to measure the incidence of silent neuritis and to identify the predisposing factors. 283 leprosy cases registered at LRCs during 2005 and 2006 were assessed every month for loss of sensory and motor functions of the nerves. The sensory function was tested using monofilament and the motor function was assessed using voluntary muscle testing (MRC scale). All these patients were followed-up for 2 years. 28 (10%) out of 283 cases were diagnosed with silent neuritis. The host (age and sex) and disease (number of skin lesions and its distribution) factors were studied. 90% of these cases were detected with silent neuritis at the time of diagnosis. It was observed that there is an association with the number and distribution of skin lesions. Male adults and middle age group cases are found to be more susceptible for silent neuritis.
Detection of *Mycobacterium leprae* in Nine Band Armadillos

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In Colombia, the consumption and contact with the nine banded armadillo (*Dasypus novemcinctus*) are common practices, ignoring the fact that this animal is reservoir of *Mycobacterium leprae*, the causal agent of leprosy, and can also suffer this disease. Methods Ear lobe biopsies of twenty two (22) nine-banded armadillos were studied during a period of 2 years. The biopsies were processed for DNA extraction and amplification by nested polymerase chain reaction (PCR), using the LP1-LP2 and LP3-LP4 primers. Biopsy extraction was performed without causing any pain and stress to the armadillos using a combination of Acepromazine and Lidocain. Results: Ten of 22 (45%) of nine-banded armadillos evaluated are positive hosts of *M. leprae*. It is necessary to do deeper investigations to find out if they are transmitting leprosy and establish what the symptoms they present if they are affected are. Conclusions: This is the first investigation about the presence of *M. leprae* in nine band armadillos used for consumption in a region of Antioquia State of Colombia. The leprosy transmission due to contact and consumption of the animal or its blood with therapeutic proposals, have to be investigated in deep.

A Descriptive Study of "MDT Services" in Chhattisgarh

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Introduction: The study was conducted to ascertain the registration status, time lag and reasons for non/delayed registration, pattern and sources of MDT, among new cases of leprosy, initially reporting to a tertiary level institution and subsequently referred after diagnosis, to Primary Care institutions. Methodology: All new cases referred from RLTRI, Raipur to three adjoining blocks between Nov. 2005 and Oct. 2006 were listed and followed at monthly interval at the PHC/CHC, Sub center and household level. Results: A total of 371 cases were referred, of which 326 (86.9%) could be traced. The level of PHC/CHC registration of cases, which was 58% after 2 months, rose to 80.4% after 6 months of follow up. 82.9% of the registered cases collected subsequent doses of MDT from the nearest SubCenter or PHC. Main reason for non/delayed registration were delay in reporting from patient side (30.7%), Non availability of MDT at PHC (24.1%), Non-availability of concerned staff (7.3%) and other operational problems (38.0%). Conclusion: The study highlighted the need to strengthen the "MDT Services" through monitoring and supervision of leprosy activities delivered by General Health Services in post integration phase. Keywords: MDT services, Leprosy, Description study.

Leprosy in Children: A Retrospective Study in the Dominican Republic: 2000-2006

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The Dominican Republic leprosy control program has detected 12,156 cases. 2,630 (22%) were children. The percentage of children with leprosy reflects the disease’s transmission and the efficiency of control programme. This study was undertaken on 223 newly diagnosed leprosy children between 2000-2006. The children incidence rates decreased from 18% (2000) to 8% (2006). 90% of the children cases were six years old or younger. The sex distribution showed no significant difference. 22 (55%) children presented only one lesion and 187 (84%) less than 5 lesions. 160 (72%) were Pausibacilar and 63 (28%) Multibacilar. Familial contact was the source of infection for 158 (71%) children, 95 (43%) were detected by contact examination and 55 (25%) children by other active surveys. The duration of the leprosy symptoms varied from one month to one year. Reactional episodes and disabilities were rare. The Dominican Republic leprosy programme has a sustained high percentage of children with leprosy. Probables causes are the country population and the active survey regulary performed. Keywords: Leprosy, children, Mycobacterium.
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**Epidemiology in Estuary of Iguazu-Parana-Brazil, to Verify if to Hiper Endemic Disease of Leprosy in the City it is of Genuine Residents**

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**Introduction**: The city of Iguazu places in the triple region border with Argentina, Paraguay, Brazil, also is greatest touristic polar region, having intense flow of people in search of better conditions of life and work. In this city, the state of the Paraná with the biggest number of new patients general and in minors of 15 years. The study epidemiologist it aimed to clarify if detected cases were resident have 5 years more than (genuine resident), or mattered of the neighboring countries or other city of the State that migrates for the city. The study if it gave through domiciliary visit for confirmation of the residence informed for occasion of the registration in the Program of Control of Hanseniasis in the period of 2000 the 2005. **Methodology**: Historical Retrospect; Data-collecting in the SINAN (System of Information of Illnesses of Notification); Domiciliary Visit in 734 addresses; Analysis of the data. **Results**: 514 domiciles had been visited and 434 (84.4%) had been found, of these, 278 (79.4%) had informed to inhabit in the city for 5 years more than. They inhabit in Paraguay 5 (1.48%) and 1 (0.30%) in Argentina, exceptively the 18, 8% are Brazilian residents in other cities or with less than 5 years of residence. **Conclusions**: The data make possible to confirm as resident in the city, the informed cases of leprosy as. The number of users found at the moment of the domiciliary visit consists in an excellent information if not detecting false addresses. The service of leprosy of the city always took care of to resident people of other countries or cities, and the negation of the address revealed as not being cause to hiper endemic disease presented for the city. The people are received and know that they will be treated and this is given credit has contributed for the inexistence of false addresses. Therefore one concludes that the endemic disease can be genuine residents. **WORDS KEY**: false addresses, triplice border, tourist polar region, domiciliary visit, genuine resident.

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**Leprosy and Immigration: A Study on the Occurrence of the Disease in Foreigners in Sao Paulo – Brazil 1924-1943**

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Leprosy is a disease, which incidence in Brazil can be traced since colonial times. Strong stigmatization and fear of infection contributed for the search of ways to segregate the patients from society by the government. However, only in the beginning of the 20th century, the real confinement took place through the compulsory confinement policies. The fast growth in number of patients in the State of Sao Paulo coincided with a period of great economic growth and arrival of a great number of immigrants during the first decades of the century, forcing the creation of a system of asylums big enough to accommodate all the infected people. Those asylums were run with strict organization and rigorous physical as well as bureaucratic control. The objective of this research was to analyze that disease's path and its incidence on different groups of immigrants. **Methodology**: We analyzed the specific bibliography on leprosy and immigration movements, and medical articles. More than 7,000 medical records concerning patients admitted to hospitals in the State of Sao Paulo between 1924 and 1945 were analyzed. The incidence of the disease among different nationalities, gender and clinical form was also analyzed, and the data, compared to the one referred to the natives from the country. **Results**: We verified that leprosy would affect mostly the foreigners and their descendents born in Brazil, being those two groups responsible for 48% of the cases during that period; that the highest incidence was on males, which group was multibacillary in their majority. **Keywords**: leprosy, immigration, epidemiology.

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**A Novel View on Leprosy Epidemiology**

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Detailed investigation of *M. leprae* isolated from the soil revealed a number of biological properties shared by *M. leprae* and *M. lepraemauritaniae*. It is shown that *M. leprae* are capable to induce a leprosy-like generalized disease in immune modulated mice with formation in the animal innerals of macrophage granulomas with numerous mycobacteria inside macrophages. With using anti-*M. leprae* monoclonal antibodies (WHO Bank) a specific epitope common to *M. leprae* and *M. lepraemauritaniae* was found out. In *M. leprae* high DOPA-oxidase activity as well as other properties particular for *M. lepraemauritaniae* are found out. *M. leprae* preparations markedly inhibited *M. leprae* multiplication in foot-pads of mice. Protective effect of *M. leprae* is far higher as compared with vaccines based on BCG *M. vaccae* and viable and killed *M. leprae*. Diagnostic tests for leprosy based on *M. leprae* antigen were developed. The data obtained permit to conclude that *M. leprae* is extra-organism part of the population of leprosy bacilli. We have good reasons to state that *M. leprae* are capable to survive autonomously in the environment outside of host organism, in particular in the soil. Since the soil, infected people and different vertebrate animals serve for natural life activity of *M. leprae* as pathogen, leprosy might be considered as saprozoosoonosis. **Key words**: leprosy, saprozoosoonosis.
Study of Prevalence and Correlates of Leprosy in a Highly Commercial Sex Area of Bihar – Muzaffarpur

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Introduction: Leprosy being a disease mainly of poverty, compromised hygiene and sanitation, is bound to affect Muzaffarpur. People belonging to this area are even reluctant to visit the hospital. Thus, door to door screening for leprosy by using diagnostic tools has been performed. This study will enable us to get a clear picture of the prevalence of leprosy among the actively involved commercial sex workers and their family members. This area covers a population of about 5200. It comprises of 1500 families. Methods: The study consisted of five teams whose job was to visit each and every family and their members, and conduct a thorough examination for the signs and symptoms of leprosy. Results: The total no. of cases (active/inactive) detected was 28 (0.53%). Out of 28 leprosy cases detected, Total no. of active leprosy cases detected were 14 (50%) and the total no. of inactive leprosy cases were 14 (50%). 7 cases not yet registered anywhere. Prevalence rate of leprosy among the actively involved commercial sex workers and their family members was 26.9. Key words: leprosy, commercial sex workers.

A Pilot Study on Cohort Analysis of Treatment Completion Rates in Uttar Pradesh, India

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Introduction: COHORT analysis of treatment completion rates is an important tool in monitoring the operational efficiency of service delivery which is rather infrequently used. A study of over 5000 cases was conducted in 19 of the 70 districts in September/October 2006. Methodology: A standard proforma to collect the information was designed and the District Technical Support Teams were trained in COHORT analysis involving the Government staffs who maintain the records at the health centers. The reference period for COHORTs (newly registered cases) is 2004-2005 for PB leprosy and 2003-2004 for MB leprosy.

Results:
PB cases: 2297 out of 2415, completed 6 doses in 9 months (95.1%)
MB cases: 3157 out of 3508, completed 12 doses in 18 months (89.9%).

In inter-district comparison the median was 96.5% for PB completion and 89.3% for MB completion. This study reveals a healthy treatment completion rates both for PB and MB leprosy in most of the districts.

Decadal Changes in MB: PB Ratio Among Leprosy Cases Registered at a Referral Hospital In Naini, Uttar Pradesh, India

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The advent of multidrug therapy has drastically reduced the prevalence of leprosy to less than one case per 10,000 populations globally except for a few countries. India achieved elimination in 2005. MDT should also reduce transmission rates and the ratio of MB to PB change as we progress towards eradication. A study was therefore undertaken at a referral hospital in Uttar Pradesh based on new cases registered during 1996 to 2005. Percentage of MB cases to total was calculated for each year, as well as by gender, age and place of residence. Although the numbers of MB and PB cases have declined, the ratios have not shown any significant declines. The implications of these findings are discussed. Key words: decadal changes, MB: PB ratio.
Trends in Skin Smear Positivity Among New Leprosy Patients Seen at a Referral Hospital in Naini, Uttar Pradesh, India

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Introduction: this study was conducted to determine any significant change in the percentage of positivity. Methodology: All new cases having bacteriological index positive 4+ and above, any site positive 4+ and above were chosen for the study. Percentage of positivity was observed. It was a lab oriented study, data collection from laboratory skin smear master register form the year January 1995 to December 2006. Results: The number of new cases each year was around 2800 initially, declining to about 2300 by the end of the decade. The proportion of positive bacterial index was 21% initially increasing to about 23%; percent with BI 4+ or more show a slight increase from about 6% to 10%. Among the positive BI, patients with 4+ or more was 31% increasing to 40%. The percent showing positive BI 4+ or more at any site increased from 3% to 6%. Conclusion: As multibacillary cases of leprosy decline, those with highly positive Bacterial Index seems to be on the rise, which needs urgent enquiry and appropriate action, if we need to progress towards eradication of leprosy. Key words: skin smear, trends.

Association of BCG Vaccination and Incidence of Leprosy

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It has been postulated that BCG vaccination administered during infancy has some protective effect on incidence of leprosy. A study was planned at our referral hospital to examine carefully for BCG scar among a random sample of leprosy patients along with an age-sex matched nonleprosy patients attending the hospital from similar geographic areas. 92 leprosy and 100 nonleprosy patients were studied. 44.3% had a BCG scar; 45.7% among leprosy patients and 43.0 among the nonleprosy patients, the difference not statistically significant. The differences were significant among males and younger age-groups, with higher percentage of BCG scar among nonleprosy patients. There was no difference in the manifestation of type of leprosy. Further studies on larger samples from different geographic areas will be necessary to test this interesting hypothesis. Key words: BCG in leprosy.

New Case Detection Trends of Leprosy Among The Inmates of Central Prison of Muzaffarpur - Bihar

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By view of existing living and working environment, prisoners are at a high risk of developing leprosy, which may manifest while they are in prison. Neglect of such persons would not only be debilitating the individual with progressive deformities, but also pose a problem of transmission of leprosy to other inmates. The Leprosy Mission Hospital, Muzaffarpur has taken care of leprosy patients identified in the Central Jail at Muzaffarpur during the past ten years with MDT as well as for managing various complications. Since 2000 till date, 119 active leprosy cases were treated, of which 46 were MB and 73 PB. Regular screening was done by medical and physiotherapists using standard techniques of body-charting, nerve function assessment and slit skin smear tests. Details of the patients and their problems are presented. It is concluded that regular screening camps should be organized in the jail and treatment provided to those in need. Thus, the high prevalence of leprosy in the Prison populations can be brought down and infections minimized.
Lipid Profile Behavior in Hanseniasis Patients

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Introduction: M. leprae has lipid-rich walls and multibacillary patients do not have the ability to destroy bacilli, which multiply in Virchow’s cells. It is possible that this fat may go into the blood stream. Therefore, the massive kibacilli killing by polychemotherapy may interfere with the patient’s lipid profile. Methods: Forty-three patients with multibacillary and paucibacillary hanseniasis were assessed by measuring 12-h fast total cholesterol and cholesterol fractions before treatment and after the 6th and 12th dose. Results: Before treatment, increased total cholesterol and decreased HDL were observed. After the 6th treatment dose, PB patients showed increase in HDL and reduction in the remaining parameters, with significance for HDL and CT. After the 12th dose, MB exhibited enhanced HDL and decrease in the other parameters, with only LDL showing statistical difference. Conclusion: According to the results, hanseniasis patients are predisposed to cardiovascular disease before treatment. Specific treatment itself is a preventive measure against cardiovascular disease. Key words: hanseniasis, lipids, cardiovascular disease.

Fading of Morbidity of Leprosy in Armenia

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Our purpose has been to highlight the dynamics of leprosy for the last 85 years. Majority of patients, namely 240 people (~4.9%) were revealed in first two decades (1921-1940 years). The remaining 130 (35.1%) were revealed in the next six decades. After 1940 a tendency of decrease in the general number of patients were revealed in the republic. Endemics of leprosy is characterized by an important indicator which is morbidity of the disease. Thus in the period of 1921 – 1930, the intensive morbidity indicator was 15.05 per 100,000 population, in 1930-1940 – 10.36; in 1941-1945 – 13.77; in 1951-1960 – 3.05; in 1961-1970 – 1.06. For the next three decades this indicator was not defined as only a few cases were found that allows concluding about fading of leprosy in Armenia. Thus in Armenia one outbreak of leprosy was observed ed during 1920 on 1940 evidenced by revealing primary patients, new micro-foci, prevalence of lepromatous type of the disease, registration of children among patients and other indicators.

Analysis of New Detected Leprosy Cases and Misdiagnosis in Wuhan (1990-2004)

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Objective: To analyze the clinical characteristics and the misdiagnosis of the new leprosy patients from 1990 to 2004 in Wuhan. Methods: Date come from database of leprosy prevent the department of Wuhan Institute of Dermatology and Venereology. The history of new detected leprosy’s clinical cases and registration material between 1990 and 2004 has been analyzed. Results: 80 new leprosy cases were detected between 1990 and 2004. 37 cases were detected between 1990 and 1994, and the detection rate was 0.047/100000, the sickness rate was 0.0042/1000, 19 cases were detected between 1995 and 1999, and the detection rate is 0.047/100000, the sickness rate was 0.0042/1000. There were 24 cases detected between 2000 and 2004. The detection rate was 0.052/100000 and the sickness rate was 0.0036/1000. The detection rate of the leprosy was fluctuated between 0.047/100000 and 0.052/100000 in the past 5 years. The detected leprosy type included LL type (24, 30%), BL type (18, 75%), BB type (9, 11.25%), BT type (12, 15%), TT type (20, 25%). The detected cases of MB type were more than PB type (48 versus 32). There were 53 (66.25%) misdiagnosed cases in 80 new detected leprosy patients. There were 2 cases misdiagnosed in our institute and 51 cases were misdiagnosed in general hospital (including the branch hospital). Among them 23 cases were accepted and treated by department of dermatology, and 8 cases were hospitalized repeatedly for more than 3 times. Conclusion: The detection rate and the sickness rate of leprosy in Wuhan city showed an obviously downward tendency since 1990. The detection rate and the sickness rate of leprosy reached the standard of “eliminating the leprosy basically” in 1994. But the misdiagnosis of leprosy can’t be ignored. Key words: leprosy; new detected cases; misdiagnosis.
2000-2006 Year Hunan Province Chenzhou Leprosy Sends Case of Illness to Retard the Diagnosis Correlation Analysis Newly

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In order to understand my city leprosy newly sends case of illness to retard the diagnosis situation at present, retards the diagnosis the age sex distribution as well as the detention diagnoses and discovers the way, the source of infection, at! The level is unbalanced the remnant correlational dependence, has carried on the analysis to 2000-2006 year recent discovery 39 example leprosy case of illness, discovered the delay is longer, causes the male and female sex compared to the drop, the dermatology department to discover the constitution compares outside the rise, the family the infection constitution compares the rise. The level is unbalanced remnant rate also rises. Key word: sends case of illness newly; Detention diagnosis; Correlational dependence.

Epidemiological Investigation of the New Leprosy Patients in Sichuan Province from 2002 to 2006

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Sichuan is one of the provinces in our country where there are high prevalence of leprosy. Patients are distributed in the area where there were both natural situation, low level of economy and sanitation. Since 1984, WHO started a pilot of multidrug therapy. In 1988, multidrug therapy were put in practice all over the province under the help of NSL. In 2003, Sichuan was took as the pilot province of Sino-Netherlands leprosy control item. In order to know about the epidemiological situation, provide the basic data for the item, we give the epidemiological investigation of the new patients from 2002-2006. We analyze the average incidence rate, area and crowd distribution (sex, age, nationality, occupation), source of infection, discovery approach, diagnosing spot, skin lesion, nerve damage, stage, classification and disability, time distribution etc. All of these are the basis of determining the emphasis of the leprosy control. Good leprosy control, decrease of disability more than stage two can improve the cure rate, reduce the psychological and economic burden of patients, improve their life quality, at the same time can decrease investment for leprosy control of the state, reduce the disease burden of the state and build a developing-continuable leprosy control system accord with cost-benefit ratio. Keywords: Leprosy Epidemiology Investigation.

Study on the Relationship Between Clustering of Leprosy in Family and Kin of Low Leprosy Prevalence Region

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Objective: To determine the high risk group and carry out monitoring through discuss the correlation between clustering of leprosy in family and kin. Method: The incidence rate had been surveyed in the Family which have leprosy patients had been found from 1949 to 2005 and analyzed the relationship between clustering of leprosy in family and kin. Results: 4839 leprosy patients had been surveyed, 2679(2679/4839=55.36%) whose family had other leprosy patients. Among 2679, 1486 had kin relationship with other leprosy patients in family, which account for 55.47%(1486/2679). Among 1486, having direct and indirect kin relation were 1143(76.92%) and 343(23.08%) respectively. The incidence rate of having kin relationship group was higher than that of no having kin relationship group (P<0.001) and more close kin relationship had higher incidence rate (P<0.001). Conclusions: The clustering of leprosy in family has high degree relationship with kin. The relative of leprosy patients especially in the children of patients were considered as the high risk group and the monitoring were carried out among them which has great effect to leprosy prevention. Key words: leprosy; clustering of disease in family; kin.
Current Analysis on the Epidemiology After Leprosy Basically Eradication in Guangzhou

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Objective: To analysis the current epidemic of leprosy after basically leprosy elimination achievement and acceptance in Guangzhou in 1998, and guide our work in the future. Methods: Data of current leprosy patient diagnosed since 1998 have been reviewed. From 1998 to 2006, Finding rate and disability rate MB/PB type ratio average delay period was compared every year from 1998 to 2006 between resident patient and floating population patient. Results: Of 131 patients, 35 were residents and 96 were migrants, the finding rates remained at State leprosy basically eradication level (1/100 thousands that 10 times lower than that set by WHO). The disability rate per year has no significance. (P=0.690>0.05). Average age of migrants at which leprosy was diagnosed decreased and much lower than that of resident. (t'-test, P=0.0024<0.05), the same as the number of early case (t=7.147, P<0.05). Conclusion: Leprosy have been keeping at level of elimination basically. But migrant leprosy steps up. Accordingly, we need to take some measures and focus on migrant leprosy when we continue our work for resident leprosy patient. Key words: Leprosy, Epidemiology, Elimination.

Association Between Exposure to Particulate Matter (PM 2.5) and Leprosy Prevalence

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Objectives: To analyze the association between exposure to particulate matter (PM2.5) and leprosy prevalence and detection rates in micro-areas of the Brazilian Amazon. Methods: Ecological study of estimated PM2.5 and leprosy prevalence and detection rates. The estimates for PM2.5 were constructed according to the amount of exposure (in hours) of each area, per defined cutoff point as violation in PM2.5 limit in 50 μg (in aerodynamic diameter). The estimates for the level of pollutants were calculated according to comparing the CATT-BRAMS Model to CPTEC/INPE for 2004 and 2005 along with the leprosy prevalence and detection rate for 2006, per geographic micro-areas in the Brazilian Amazon. Results: A positive correlation was verified from 47% to 51% between exposition variable and leprosy prevalence and detection rates. A statistically significant result occurred from comparing means (ANOVA) using quartiles from the exposure indicator. The areas presenting the greatest number of critical hours for PM2.5 in 2004 and 2005 also presented a leprosy detection and prevalence rate 2.5 times higher in 2006. Conclusion: The increase in the level of exposure to PM2.5 is associated with the increase in leprosy prevalence and detection in the geographic micro-areas studied. Standard-of-living factors in the populations from these areas should explain the ecological association. Air pollution is only an indirect measurement of the ecological changes occurring in the Brazilian Amazon. Keywords: PM2.5, leprosy, air pollution, Amazon. Ignotti, Andrade, Valente, Hacon, Longo.

Treatment of Leprosy in Rio De Janeiro State

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Introduction: Rio de Janeiro State adopted in the last forty years, three different regimes of treatment for control of the leprosy. That study analyze the evolution of these policies of treatment and theirs repercussions in the patient’s quality of life. Material and Methods: It was analyzed registers of multi bacillary cases diagnosed in the period from 1980 to 2006. Informations were collected from both historic documents and information system. The variable defined to measure the quality of life was the physical incapacities in the multibacillary patients diagnosis at the same period. Results: From 1980 to 1989 coexisted a lot of regimes of treatment: since the longest one until the most innovative which is the MDT that appears in the end eighties. The length of treatment in the multibacillary leprosy cases was reduced of seven years in the period from 1980 to 1989 to seventeen months in the period from 2000 to 2006, when should last only twelve months. In all studied period, the percentage of physical incapacity found in the diagnosis was for over ten per cent. Conclusion: The delay to accept and introduce the MDT regime in the entire basic net, contributed in the persistency of the late diagnosis and in the installation of the physical incapacities in the last twenty seven years. Key words: leprosy, MDT, physical incapacities, Vale, Andrade, Andrade, Bitencourt, Moreira.
Free-Living Pathogenic Amoebae as Potential Reservoirs / Vectors in Leprosy Transmission

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Leprosy transmission remains poorly understood, though, prolonged skin contact and infection via nasal mucosa, are considered probable. Problematic in any hypothesis is the fastidious nature of *M. leprae* outside its host cell and a requirement for temporary survival in soil and/or water. In this study we show that *Acanthamoeba castellanii* a free living soil amoeba can ingest and concentrate *M. leprae* and the bacilli remain viable. More than 90% of cultured amoeba ingested *M. leprae* at 20:1 multiplicity of infection and infected amoeba thrived and multiplied normally. The ingested *M. leprae* remained viable for at least 72 hrs as determined by their metabolic activity (radiorespirometry) and cell wall integrity (viability staining). *M. leprae* from infected amoeba multiplied at the same rate as freshly harvested bacilli in the foot pads of nu/nu mice. Studies are underway to determine whether *M. leprae*-infected *A. castellanii* and other pathogenic amoebae may play a role in transporting leprosy bacilli through broken skin or the nasal mucosa. Key Words: *M. leprae*, *A. castellanii*, Transmission.

Factors Associated to Seropositivity of ML Flow Test on Leprosy Patients and Household Contacts Under 18

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Data on 115 newly diagnosed leprosy patients and 1,011 household contacts, under 18, were analyzed to determine seropositivity and factors associated to a positive ML Flow. The test was positive in 21.7% of patients and in 19.7% of contacts. Among patients, logistic regression indicated association of seropositivity with positive skin smear (OR = 18) and more than five skin lesions (OR = 5.86). Classification tree indicated association with skin smear, Madrid classification, number of nerves involved and age. In the contact group, index patient classification, age and type of health service were associated to seropositivity in both analyses. Contacts of multibacillary index patients had a chance of seropositivity two times higher (OR = 2.31). For each additional year of age, the chance of seropositivity for contacts was 1.06 times higher (OR = 1.06). The variables which best explained seropositivity were those associated to higher bacillary load. Therefore, the ML Flow test could also be used in children to aid correct classification of patients for treatment and to identify contacts with increased risk of developing leprosy. Key Words: Leprosy, Serologic Tests, Leprosy/Transmission.

An Analytical Report on MB Cases in Terms of Child, Disability

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Introduction: Wherever possible programs are recommended to analyse the main indicator of NLEP to monitor and review the program. In this context the analysis made of MB case in the nine districts, (DTST) covered by LEPRA Society. Objective: To study the trend of child, child disability and disability in MB cases. Method and materials used for the analysis: 1. Reports and records of PHCs in 9 districts. 2. Discussion with DLOs/MOs. 3. Reports & records of SLO/DLO offices. Conclusion: Over all more than good achievements seen after analysis. Findings and detail study will be presented.
Leprosy Occurrence by Age in Brazilian Indigenous Population

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Introduction: In the last 5 years the occurrence of leprosy in indigenous people who lives in special communities has been registered and elimination and control activities have been gradually implemented. This study analyzes occurrence of leprosy by age in indigenous population. Methods: Analyze of leprosy data registered from 2003 to 2006 by Special Indigenous Health District (DSEI) using as data source the Indigenous Health Information System – SIASI, maintained by the National Health Foundation. Results: The register leprosy cases (2004/2005) in people less than 01 year old means probably wrong diagnose. The others age groups from 30 to 39, 40 to 49 and 60 and more presented higher number of cases. In 2006 were diagnosed most of the cases of the period as result of trainings carried out to indigenous health professionals. The register of 224 cases in a population of 485,000 individuals in 4 years means that it is necessary to strength the surveillance and assistance activities on leprosy.

Leprosy Occurrence by Gender in Brazilian Indigenous Population

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Introduction: In the last 5 years the occurrence of leprosy in indigenous people who lives in special communities has been registered and elimination and control activities have been gradually implemented. This study analyzes occurrence of leprosy by gender in indigenous population. Methods: Analyze of leprosy data registered from 2003 to 2006 by Special Indigenous Health District (DSEI) using as data source the Indigenous Health Information System – SIASI, maintained by the National Health Foundation. Results: Data from the indigenous information system shows that most of the registered leprosy cases (72% - data under review) occurred in male. This is probably explained by the higher level of contact and exposition of the indigenous male in the urban centers. Although, the access of the female to the health services must be improved in order certified this trend, once in the general population the proportion of males and females with leprosy is basically the same.

Social Participation in People Reached by Leprosy in the Municipality of Sobral, Ceará, Brazil

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Participation restrictions are problems experienced in any life situation or context. The application of a scale to measure social participation is necessary for use in rehabilitation, stigma reduction and social integration programmes. The objective of this study was to evaluate the social participation of people reached for Hansen’s disease (HD) after MDT in a Municipality of the Northeast Region from Brasil - Sobral, Ceará. We use the Participation Scale (v 4.6) to quantify the restrictions in people reached by HD, based on the participation domains of the International Classification of Functioning, Disability and Health. This scale is a new 18-item interview-based instrument. Sixty-nine subjects, 10% of the total number of cases from 2003 to 2005 in this municipality, were evaluated. As a result of the final classification: 64 (92.8%) had no participation restriction, 4 (5.8%) had mild restriction and 1 (1.4%) had severe restriction. The case with great restriction was directed for psychological attendance. The scale allows collection of participation data and impact assessment of interventions to improve social participation. We consider the participation scale easy to be applied in the health services and can be used as useful tool for the integral attention of the people reached for HD. Keywords: Hansen’s Disease; Participation Scale; Stigma; Disability.