

**Conclusion:** The trial confirms current practice not to treat long-standing NFI with prednisolone. Spontaneous recovery of nerve function appears to be a common phenomenon in leprosy. Leprosy reactions and new NFI occurred in a third of the study group, emphasising the need for regular nerve assessment.

### PCA 157

#### ULCERATED LESIONS IN LEPROSY

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Erythema Nodosum Leprosum (ENL) or type II reaction is believed to be an immune complex reaction seen in multibacillary leprosy in which the dead bacilli and their products react with antibody in the tissue or blood. Although ENL occasionally develops in untreated patients, it occurs more commonly after

initiation of therapy. This presents most commonly as small papules or larger nodules which are painful and tender to touch. In some cases they may ulcerate, and the histological analysis may show vasculitis pattern affecting superficial and mid-derma vessels, leading to epidermal necrosis, bulla formation and ulceration. Therefore it has been proposed that ENL is a manifestation of immunecomplex-mediated vascular injury. A clinical and histopathological overview of ulcerated lesions in lepromatous leprosy patients will be presented. These patients had necrotizing lesions on the limbs similar as described in "Lucio's phenomenon" and also acute constitutional symptoms. The Lucio's phenomenon is observed in diffuse nonnodular lepromatous leprosy most commonly in Mexico and Central America. Histopathologic studies of Lucio's phenomenon have shown leucocytoclastic vasculitis, endothelial cell proliferation, thrombosis, ischemic necrosis. Is Lucio's phenomenon and Type II reaction a unique variant of cutaneous vasculitis separated only by distinctive clinical settings?

## EPIDEMIOLOGY

### PE 1

#### A ENDEMIAS HANSÊNICA NO NOROESTE DO ESTADO DE SÃO PAULO

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O Brasil após onze anos da implantação da MDT ocupa a segunda posição mundial em relação a prevalência com 4,6 casos /10 mil habitantes. A distribuição da endemia é irregular. O estado de São Paulo, considerado um dos mais desenvolvidos do país, apresenta uma prevalência de 1,6 casos/10 mil habitantes. Há regiões dentro desse estado com prevalências maiores, como por exemplo a região noroeste. Essa região serviu de cenário para esse estudo descritivo, tendo como objetivo analisar a endemia de acordo com alguns indicadores. Foram analisados dados epidemiológicos do período de 1994 a 2001 de 99 municípios totalizando 1.311.763 habitantes (76,9% dos municípios com até 10 mil habitantes) que compõem uma das 24 regiões administrativas da Secretaria de Estado da Saúde de São Paulo, denominada Direção Regional de Saúde XXII. Em 2001, o coeficiente de detecção variou de

zero (47,5% dos municípios) a municípios com 10 casos/ 10 mil habitantes. O coeficiente de prevalência variou, no período, de 6,58 a 2,40 casos/10 mil habitantes, encontrando municípios acima de 10 casos/ 10 mil habitantes. As formas clínicas polarizadas representam atualmente mais de 80% dos casos. Do total dos casos, 95% estão em MDT. Há necessidade de intensificação das ações de controle na região, especialmente o diagnóstico precoce.

### PE 2

#### A MULTICENTRIC TRIAL FOR TREATMENT OF 2-5 LESIONS PB LEPROSY WITH SINGLE DOSE OF ROM

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Our experience in conducting a multicentric trial for treatment of 2-5 lesions PB leprosy with single dose of ROM and under programme conditions is discussed. This study is a double blind randomized controlled clinical trial.

The objective of the study is to evaluate, the efficacy of a combination of Rifampicin, Ofloxacin and Minocycline (ROM) administered as a single dose for the treatment of skin smear negative 2-5 lesions PB leprosy compared to the standard 6 monthly doses of WHO PB MDT regimen.

Six centres for 2-5 lesions PB leprosy had been selected. 1596 skin smear negative patients with not more than one peripheral nerve trunk involvement (adults 1167; children 429) were included.

The total duration of the study is 48 months (six months of intake phase, six months of treatment phase and 36 months of post treatment follow-up).

During intake phase Medical Officers from NIE helped the investigators in selection of patients and documentation. Frequent visits to the participating centres by Medical Officers and Statisticians from NIE are made in order to help the staff in clinical examination, data collection.

Detailed report with reference to the progress of the study will be discussed.

Collaborating Centres: National Institute of Epidemiology (ICMR) and WHO

Participating Centres: Chittoor and Cuddapah districts in Andhra Pradesh; Naini (TLM) in Uttar Pradesh; Champa (TLM) in Madhya Pradesh

### PE 3

A MULTICENTRIC TRIAL FOR TREATMENT OF MONO LESION PB LEPROSY WITH SINGLE DOSE OF ROM

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NIE is conducting an open trial for treatment of mono lesion PB leprosy with single dose of ROM in order to find out relapse rate under programme conditions. A total duration of the study is 48 months. The intake phase commenced in April 1998 and the study is expected to be completed by January 2003.

1263 untreated smear negative single skin lesion leprosy patients (adults 820; children 443) were included and followed up once in six months after completion of treatment. During intake phase Medical Officers from NIE helped the staff in participating centres in clinical examination, selection of patients, documentation of clinical findings and related research methodology. Monitoring is done by making field visits by Medical Officers and Statisticians from NIE to assess the progress of the trial. During follow-up patients who developed new lesions are examined by Medical Officers from NIE. The de-

tailed report on progress of the trial will be discussed.

Collaborating Centres: National Institute of Epidemiology (ICMR) and WHO

Participating Centres: Chittoor and Cuddapah districts in Andhra Pradesh

### PE 4

A MUNICIPALIZAÇÃO DA SAÚDE E O CONTROLE DA HANSENÍASE

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Este trabalho pretende analisar o impacto da municipalização dos serviços de saúde nas ações de controle da hanseníase.

O universo a ser abordado é constituído pelos quarenta municípios que compõem a área de abrangência da Direção Regional de Saúde de Araçatuba - DIR VI - SP.

O estudo pretende verificar o grau de variação de alguns indicadores epidemiológicos e operacionais e o comportamento da endemia no período de 1990 a 2000.

Dentre esses serão focalizados, principalmente, coeficiente de detecção, coeficiente de prevalência, taxa de abandono e alta por cura.

A observação desse quadro comparativo tem como principal finalidade a verificação da interferência da mudança do modelo assistencial no desenvolvimento das ações de controle da hanseníase.

### PE 5

A RECIDIVA DA HANSENÍASE NOS DADOS OFICIAIS DO RJ: VALIDAÇÃO NO ARQUIVO LOCAL DA UNIDADE DE REFERÊNCIA DO MUNICÍPIO DE DUQUE DE CAXIAS

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O presente trabalho compara base dados de nível central e local do Município de Duque de Caxias no Sistema de Informações de Agravos de Notificação (SINAM). A variável do estudo foi a recidiva de casos de hanseníase, analisada através do modo de entrada no arquivo central e validada com as informações dos prontuários dos respectivos pacientes, no registro local. De acordo com a análise dos dados secundários de nível central municipal, no período de 1990 a 2001,

foram registrados no banco de dados 3.112 casos de hanseníase residentes e tratados em DC. Dos 191 casos de recidiva registrados no banco de dados da SMS-DC no período de 1990 à 2001, um total de 180 casos (94,2%) tinham no registro local (prontuário) modo de entrada como caso novo. A grande maioria, correspondendo a 165 (91,6%), tinha ficha de notificação antiga na qual não existe uma formatação compatível com a ficha atual de notificação do SINAN. Apenas 11 casos foram diagnosticados como recidiva (5,8%) de fato, e todos foram casos recentes.

Ao que parece a mudança da ficha de notificação, parece justificar os erros na entrada dos dados. Esse trabalho permitiu a correção do dado oficial de recidiva no município, de 6,1% para 0,0035%, reforçando o baixo percentual geral de recidiva dos esquemas oficiais de tratamento de hanseníase. Faz-se ressalva ao fato de que outros casos de recidiva tratados no município estejam sendo diagnosticados em unidades de referência da cidade do Rio de Janeiro, não constando no registro municipal. Esse dado portanto pode não mostrar a magnitude do problema, especialmente tratando-se de evento raro. É importante que as três esferas de atuação governamental adotem diretrizes e práticas que permitam a utilização das informações existentes nos três segmentos e, o livre fornecimento de dados, de modo a contribuir, para a ampliação e aperfeiçoamento do relacionamento entre as estruturas que compõem o SUS.

### PE 6

A SURVEY OF THE KNOWLEDGE AND ATTITUDE TOWARDS LEPROSY OF THE HEALTH WORKER IN THE EPIDEMIC AREA

Wu Xincheng, Wang rongmao, Ning Yong, Hu Lufang, Li Binyu, Wang Kai, Shi Ling, Hei Lu

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**Objective:** in order to find out the knowledge and attitude towards leprosy of the health workers in the epidemic area and the factors influence on it.

**Methods:** Health workers are surveyed in the field by questionnaire at county, district and village level, analyzed the data by computer.

**Results:** 902 received valid questionnaire showed that health workers fear leprosy in different extent, and detest the leprosy patients.

**Conclusion:** Health workers who are not belonging to the professional leprosy control have wrong knowledge and attitude on leprosy. It is the major step to train these workers about the knowledge of leprosy, changing the pattern in order to eliminate leprosy.

**[Key words]** health workers leprosy knowledge attitude

### PE 7

A SURVEY OF THE KNOWLEDGE AND ATTITUDE TOWARDS LEPROSY OF THE RESIDENTS IN THE EPIDEMIC AREA

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**Objective:** in order to find out the knowledge and attitude towards the leprosy from the residents in the epidemic area and try to find the best method of health education on leprosy.

**Methods:** 300 random residents are selected to fill the questionnaire out in the field. Analyzed the data by computer.

**Results:** 292 received valid questionnaires, showed that it is common phenomenon for the residents to fear leprosy and discriminate against leprosy patients and many factors influence on it.

**Conclusion:** We should carry out the health education, widely and deeply, focus on that leprosy is preventable and curable, not fearful, let the patients and cured patients return to the community. This is the basic condition as well as important procedure to eliminate leprosy as a social problem.

**[Key words]** residents, leprosy, knowledge, attitude

### PE 8

AN ANALYSIS OF THE BENEFITS OF PREVENTION AND TREATMENT OF LEPROSY IN SANMING CITY

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Situated in the Northwestern part of Fujian Province, Sanming City is part of the inland mountainous region; during the reformation of institutions in 1983, the Municipal Dermatology Prevention Institute was formed and a prevention and treatment network established. Beginning from 1986, it implemented MDT scheme and adopted such various means as "five checks", outpatient service and disease reporting to discover patients at an early stage; it also extensively conducted such comprehensive measures of prevention and treatment as health education; as a result, the prevention and treatment were stepped up and the goal of basically eradicating leprosy was reached in 1993. The benefits were quite obvious. We herewith make the following report so as to evaluate the economic benefits of the prevention and treatment of leprosy in a scientific way and provide

useful economic information: we selected the benefits of the two situations in the periods of 1973~1982 and 1983~1992 for evaluation and made calculations using such methods as cost-profit and cost-benefit. Financial investment: in the period of 1983~1992, the allocation of fiscal fund totaled 1,248,400 yuan, which was a 114.66% increase from that in the period of 1973~1982. Social benefits: the adoption of comprehensive prevention and treatment resulted in significant drop in "three rates", reduction in epidemic range and early achievement of goals. Compared with the previous period, the period of 1983-1992 saw a reduction of 169 patients in incidence. Economic benefits: The reduction in the incidence of 169 patients saved 1,334,400 yuan in the cost of providing health service and receiving health service and 1,827,100 yuan of non-incidence earning; a reduction of disabilities for 59 patients due to prevention and treatment and 1,350,900 yuan of economic loss due to disease and disability. Since the MDT scheme was promoted, a total of 320 patients were cured during the period of 1983~1992, shortening courses of treatment and saved treatment expenses of 1,114,000 yuan and 5,766,100 yuan was earned by shortening the courses of treatment. In summary, the economic benefits created by the prevention and treatment of leprosy in the period of 1983-1992 totaled 11,392,500 yuan, excluding the invisible expenses in the economic losses resulted from diseases, i.e. the losses—social expenses resulted from such life quality issues as pain, depression, sadness and social segregation suffered by the patients and their relatives. Therefore, this paper is based on an underestimation of calculation. The ratio of total benefits and total investment reported by this paper is 7.48:1, BCR>1. This manifests that the benefits of prevention and treatment service of leprosy are tremendous and the prevention of leprosy is an undertaking with effective investment and high benefits. However, the basic eradication of leprosy is not the ultimate goal and further efforts need to be made. Therefore, the authors suggested that:

1. Increase the investment for fund of prevention and treatment.
2. Enhance follow-up monitoring of prevention and treatment and strengthen such work as rehabilitation.
3. Consolidate the construction of teams of leprosy prevention personnel, elevate professional proficiency and improve the work quality of service and prevention and treatment.

[Key words] leprosy prevention and treatment analysis of benefits

### PE 9

ANÁLISE DA IMPLANTAÇÃO DA ESTRATÉGIA DO CONASEMS NA ELIMINAÇÃO DA HANSENÍASE NO MUNICÍPIO DE PALMAS - TOCANTINS

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Avaliação da implantação da intervenção do CONASEMS na eliminação da hanseníase no município de Palmas (TO), por meio de enfoques epidemiológico e operacional desenvolvidos em séries de tendências temporal; acompanhamento do nível de autonomia em gestão, de mudanças estruturais que possam modificar a assistência ao doente de hanseníase. Ressalta a importância dos indicadores da redução no coeficiente de detecção em menores de 15 anos e da taxa de prevalência em consequência da detecção precoce principalmente nos casos com lesão única. A intervenção do CONASEMS resulta na articulação entre os gestores municipais em assumir o atendimento ao doente de hanseníase como ação básica de saúde. Tem como hipótese o fato de O "grau de autonomia" técnico-gerencial e financeira na gestão do Sistema Único de Saúde, em nível local condicionar a integralidade da implantação da Estratégia de Aceleração da Eliminação da Hanseníase em nível municipal. Intervenção é considerada uma variável dependente em relação às características contextuais do meio de implantação. Se o contexto é favorável à intervenção, será possível fazer a predição do tempo necessário para a eliminação da hanseníase. Nesse caso, o grau de implantação da intervenção é a variável independente e as variáveis dependentes serão os resultados ou efeitos esperados. As informações foram colhidas na perspectiva de três metodologias diferenciadas em função do propósito a que foram elaboradas:

1- Indicadores epidemiológicos e operacionais propostos como instrumento no controle da endemia (MS, 2000);

2- Indicadores-chave para o monitoramento de eliminação da hanseníase (OPAS, 1998);

3- Indicadores do *Independent Evaluation of Indian Leprosy*, (WHO, 2000).

**Palavras-chave:** avaliação, eliminação, hanseníase.

### PE 10

ANÁLISE EPIDEMIOLÓGICA DOS CASOS NOVOS DE HANSENÍASE RESIDENTES NO MUNICÍPIO DE BELO HORIZONTE, MINAS GERAIS, BRASIL, NO PERÍODO DE 1999 A 2001

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São apresentados e analisados os dados epidemiológicos dos casos novos de hanseníase, residentes em belo horizonte, no período de 1999 a 2001, utilizando-se as informações do SINAN (sistema de informação nacional de agravos notificáveis), implantado nesta secretaria no final do ano 2000.

Esta análise é feita com relação à idade, sexo, forma clínica da doença, grau de incapacidade e baciloscopia ao diagnóstico.

### PE 11

#### ANALYSIS ON NERVE IMPAIRMENT OF THE UPPER LIMB IN 8578 LEPROSY PATIENTS

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In order to make clear the situation of nerve impairment of the upper limb in leprosy cases, we selected 8578 leprosy non-active and active cases who are still living in Hunan province as the study samples. The result showed that about 40.29% of the upper limb in all cases developed nerve impairment. The lateral nerve impairment was 23.15%. It is higher than that of bilateral nerve impairment (17.14%). The nerve impairment among active and relapsed cases was 54.03%. It is higher than that of non-active cases (19.51%). The MB cases developed more nerve impairment (50.15%) which is higher than that of PB cases (21.15%). We also find that 36.55% of the ulna nerve developed nerve impairment, the medium nerve, 16.68% and the radial nerve, 1.64%. The claw hand with the stiff fingers was seen in 73.03% of cases. The nerve impairment has relation with leprosy reaction counted for 41.06%. Most of active and relapsed leprosy cases have the single nerve impairment. The frequency of nerve impairment developed is as following. The first is in ulna nerve, the second, medium nerve and radial nerve. Two third of nerve impairment is in reversible. The nerve impairment in upper limbs is significantly different due to delay of diagnosis of leprosy, leprosy reaction and different type of clinical leprosy

### PE 12

#### ANALYSIS OF NEWLY FOUND LEPROSY PATIENT FORM 1990 TO 2000 YEAR IN GANSU PROVINCE

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**Objective:** To explore epidemiological feature of newly found leprosy patient and relapse leprosy patient in low endemic areas.

**Methods:** A retrospective epidemiological date of leprosy from 1990 to 2000 year in Gansu Province was made.

**Results:** The data analysis showed that newly found leprosy patient 138 cases and the average annual found rate was 0.058/100000, of which MB was 116 cases and PB was 22 cases, MB:PB rate was 5.6:1. The relapse leprosy patient was 52 cases and the relapse rate was 2.64% during 1990 and 2000 year, of which MB was 46 cases and PB was 6 cases, MB:PB rate was 7.7:1. 50 cases were relapsed after cure with DDS monotherapy and 3 cases were relapsed after cure with MDT.

**Conclusion:** The found rate in the early of 1990's was a little higher than that then and it has declined tendency. Leprosy patients should be timely detected and treated so as to eliminate infectious resource.

**[Key words]** Multibacillary Paucibacillary New found leprosy patient Relapse leprosy patient

### PE 13

#### ANALYSIS OF QUALITY CONTROL OF LEPROUS BACILLI MICROSCOPY

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**Objective:** To understand the quality status of Leprous Bacilli Microscopy.

**Method:** 2594 specimens smear were detected at lower level and checked by provincial laboratory during 1990-2001.

**Result:** The quality rate of smear membrane, quality rate of stain, quality rate of BI, medium quality rate of three indices were 94.48%, 94.63%, 93.52%, 94.20%.

**Conclusion:** The quality of leprous bacilli microscopy was high, and the results were creditable in our province. This was favorable to diagnose leprosy and evaluate the treatment effect.

**[Key word]** Leprosy microscopy quality control

### PE 14

#### ARREST OF LEPROSY MORBIDITY AND DISEASE TRANSMISSION IN URBAN AREAS – A MOP UP OPERATION

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Currently available chemotherapeutic agents undoubtedly have offered bacteriological cure to leprosy patients in the shortest possible time. But the sporadic occurrence of relapses in small numbers has been a matter of concern in the context of disease transmission. Transmission due to relapses adds a new dimension to the disease burden and delays the goal of elimination. Relapses are encountered in all types of treatment regimens including the short course chemotherapy regimens with newer drugs. In addition about 10 % of PB leprosy patients develop delayed clinical problems and about 20 – 30 % present with reaction and neuritis leading to nerve damage. This phenomenon increases the morbidity and poses a challenge to the programme managers. Therefore, mopping up of all 'cured' leprosy patients, particularly MB patients, is necessary to identify the complications likely to be encountered so that proper interventions can be taken to minimize the morbidity. We conducted a mopping-up exercise in urban areas mainly to identify relapses and related clinical problems among the cured leprosy patients.

The clinical details of 2664 leprosy patients registered with the clinics of Bombay Leprosy Project from 1-3-2001 to 28.2.2002 and who have completed treatment were collected from the patients' records. An attempt was made to contact these patients. Community Volunteers were given task-oriented training with the help of a pocket card to suspect clinical problems in the field, to be confirmed later by supervisory staff. 968 patients (37%) were physically assessed to identify relapses and other clinical events in the field. Skin smears and skin biopsies were done in 605 cases. Twelve relapses were detected and all of them were confirmed by investigations. 143 (15%) patients had signs of reaction. These were treated with a standard course of steroid therapy. Patients with physical disabilities were provided with necessary disability services.

This mopping-up exercise indicates that patients cured earlier tend to have the risk of developing late reaction as well as relapses, especially in a long-term follow-up. Since this is not a population-based study, one cannot derive any epidemiological observations. It is concluded that leprosy patients who have completed treatment may develop clinical problems and can be assured of relief, if they are given prompt attention at the appropriate time, through a mopping-up exercise. Such an exercise is particularly more relevant in view of relaxation of active surveillance in the leprosy programmes.

## PE 15

### ARTICULAÇÃO DAS AÇÕES DE CONTROLE DA HANSENÍASE AO PROGRAMA SAÚDE DA FAMÍLIA NO MUNICÍPIO DE SÃO JOÃO DO PIAUÍ, BRASIL

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**Introdução:** O Ministério da Saúde vem adotando como estratégica a implantação do PSF objetivando ampla mudança do modelo assistencial em saúde. Neste sentido, programas verticais, como o de Controle da Hanseníase (PCH), também vêm passando por intensas modificações que necessitam serem avaliadas de forma contínua.

**Objetivo:** Descrever o processo da implantação e os primeiros resultados da inserção do PCH no PSF do Município de São João do Piauí, visando otimizar a assistência integral ao paciente com hanseníase.

**Métodos:** Estudo descritivo, operacional, baseado nos dados epidemiológicos e de serviço do Município de São João do Piauí, no período de 1999 a 2001.

**Resultados:** O PCH foi implantado no Município no início dos anos 90, centralizando suas ações no Hospital Regional (Estado) e, posteriormente, alcançando o nível municipal. Mesmo a este nível, apenas em meados dos anos 90 foi possível estabelecer estratégias para avaliação clínica geral, diagnóstico baciloscópico, realização de PQT e prevenção de incapacidades de forma efetiva. Em 2001, com a articulação com a SES, deslocaram-se as atividades do nível Estadual para as duas unidades do Município. Como resultado, observou-se: maior número de profissionais envolvidos (incluindo agentes comunitários de saúde), aumento da detecção de casos, maior cobertura da PQT, melhor abordagem dos estados reacionais e menor grau de incapacidades no diagnóstico.

**Conclusões:** Esta primeira avaliação mostra que ainda é precoce para se ter uma resposta mais clara sobre o impacto deste novo modelo assistencial em saúde. Mesmo assim, importantes mudanças foram alcançadas no Município e trazem uma perspectiva positiva da intensificação das ações do PSF. Estão sendo programados estudos a longo prazo para uma avaliação mais acurada deste processo

### PE 16

#### ASPECTOS EPIDEMIOLOGICOS DA HANSENÍ-ASE NO ESTADO DA PARAIBA

Rose Mary Barros Araújo Madruga; Clélia Albino Simpson de Miranda e Teresa Cristina Moura Rodrigues

O estudo trata de uma seria historia compreendida entre 1990 – 2001 sobre Hanseníase. Teve como objetivo analisar a situação epidemiológica da hanseníase no estado da Paraíba, com vistas a estabelecer ações prioritárias que possibilitem a intervenção buscando a eliminação.

Os dados foram obtidos através do SINAM (sistema de informação de agravos e notificação), no total de 5.621 fichas, obedecendo ao fluxo: serviço de saúde, Séc. municipal de saúde, coordenação de vigilância epidemiológica da Séc. estadual de saúde, onde está inserido o núcleo de dermatologia sanitária.

A análise dos dados deu-se a partir dos coeficientes de detecção de prevalência e avaliação do grau de incapacidade física da casuística analisada. Conclui-se que na Paraíba a hanseníase distribui-se de forma heterogênea em aproximadamente 50% dos 223 municípios do estado, com áreas de concentração em municípios do litoral agreste e sertão. Apresentando assim uma média endêmicas com palavras chaves: hanseníase, epidemiologia, eliminação.

### PE 17

#### AVALIAÇÃO CLÍNICA EPIDEMIOLOGICA DE PACIENTES COM HANSENÍASE ACOMPANHADOS EM UM AMBULATÓRIO DE DERMATOLOGIA SANITÁRIA

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**Introdução:** A hanseníase é uma doença infecciosa considerada problema de saúde pública em nosso país, sendo o quarto no mundo em número de casos, ficando atrás apenas da Índia, Birmânia e Nigéria.

**Objetivo:** Conhecer a distribuição epidemiológica dos pacientes com hanseníase acompanhados no Ambulatório de Dermatologia Sanitária do Instituto de Dermatologia da Santa Casa de Misericórdia.

**Material e Métodos:** Participaram do estudo todos os pacientes de ambos os sexos com o diagnóstico clínico

e/ou laboratorial de hanseníase baseados na classificação de Madrid, que estavam em acompanhamento no Setor de Dermatologia Sanitária, no período entre janeiro de 1999 a dezembro de 2001. Todos os pacientes foram avaliados pelos médicos residentes e quando disponível, foram realizados alguns dos seguintes exames: biópsia cutânea, teste de Mitsuda e baciloscopia. Após confirmação diagnóstica foram tratados com esquema poliquimioterápico (PQT).

**Resultados:** Foram avaliados 184 (100%) pacientes, sendo 89 (48,3%) provenientes do Município do Rio de Janeiro e 95 (51,6%) de outros municípios; sendo classificados nas seguintes formas clínicas: 79 dimorfo (42,9%); 11 indeterminado (6,0%); 1 não classificado (0,5%); 62 tuberculóides (33,7%); 31 virchovianos (16,8%); totalizando 94 (51,1%) pacientes do sexo feminino e 90 (48,9%) do sexo masculino. Dos casos novos detectados foram observados os seguintes graus de incapacitação: grau 0- 137 casos (74,5%); grau 1-18 casos (9,8%); grau 2- 18 casos (9,8%); grau 3-1 caso (0,5%); NC-10 casos (5,4%).

**Comentários Finais:** No Brasil a hanseníase ainda mantém-se endêmica, e o controle desta doença deve ser realizado por todos profissionais da saúde, sua divulgação portanto, se faz necessária principalmente nos meios universitários onde acreditamos ser um ponto fundamental deste conhecimento e divulgação.

### PE 18

#### AVALIAÇÃO DO PREENCHIMENTO DO GRAU DE INCAPACIDADE NA FICHA DO SINAN

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**Introdução:** O Grau de Incapacidade - GI que o caso de Hanseníase apresenta na detecção é o indicador mais importante para avaliar a endemia, por falar da precocidade do diagnóstico, da endemia oculta e da necessidade de medidas de combate à principal causa do estigma social da Hanseníase. A avaliação e o registro do GI, já estão incorporados à rotina na detecção de quase 100% dos casos. O correto registro desta informação na Ficha do **Sistema Nacional de Agravos de Notificação – SINAN**, padronizada no Brasil, que utiliza codificação que pode induzir a erros de preenchimento, onde o grau Zero recebe código 1, o I é = 2 e o II = 3, foi o principal motivo que nos levou realizar o presente estudo.

**Metodologia:** Foram comparados o GI registrado no Quadro de Avaliação e a informação registrada na Ficha do SINAN de 6.774 notificações ocorridas em Minas Gerais de 06/1999 a 12/2001.

**Resultados:** Das 6.774 Fichas, 99% tinham o Quadro de GI preenchido e destes 19% tinham a anotação incorreta do GI no SINAN. Das 1.297 preenchidas com erro, 43% informaram o Grau no lugar do Código, 36% deixaram em branco e 21% preencheram outro código. Dos que não preencheram o Quadro de GI, 82% informaram algum código no SINAN. Por esta possibilidade de erro recomendamos que o SINAN apresente alternativa de informar o GI e não o Código e o Quadro do GI na própria ficha.

### PE 19

#### AVALIAÇÃO DO PROGRAMA DE CONTROLE DA HANSENÍASE NO MUNICÍPIO DE CARUARU/PE

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A hanseníase é uma doença infecto-contagiosa, e endêmica em vários países, causada pelo *Mycobacterium leprae* ou bacilo de Hansen, um parasita intracelular obrigatório que apresenta afinidade por células cutâneas e nervos periféricos. A hanseníase é um sério e importante problema de saúde pública por causar incapacidade física e permanente, apresentando altos índices de prevalência em diferentes regiões do Brasil, com mais de 12 milhões de casos reconhecidos em todo mundo e cerca de 600 mil casos novos por ano. Trata-se de uma doença de transmissão interpessoal cuja fonte principal é o homem, através das formas contaminantes, que não estejam em tratamento, dificultando assim o controle epidemiológico. Procuramos avaliar o programa de controle da hanseníase no Centro de Saúde Amélia de Pontes/CSAP, referência em dermatologia sanitária localizado no agreste pernambucano. Trata-se de um estudo realizado a partir do levantamento de dados contidos nos prontuários dos pacientes tratados e em tratamento no CSAP, compreendendo um período de cinco anos (1996 à 2000). Foram revisados 474 prontuários de pacientes atendidos por demanda espontânea ou indicados. Destes, 133 com residência fixa no município (28.05%), sendo 121 na zona urbana (90.97%) e 12 na zona rural (9.02%). Observamos que indivíduos apresentando boa resposta imunológica exibem lesões em menor quantidade e bem delimitadas, ao contrário dos pacientes com comprometimento da capacidade imunológica que apresenta lesões numerosas e sem limites precisos. Graças ao trabalho multidisciplinar exercido na comunidade, o diagnóstico precoce e o início do tratamento imediato fazem com que a população busque com maior frequência o serviço de referência em hanseníase.

### PE 20

#### AVALIANDO A COBERTURA DE BCG EM CONTATOS DE HANSENÍASE, NO BRASIL

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A vacina BCG confere proteção contra hanseníase em todas as populações estudadas. Os últimos estudos, sobre vacinas para hanseníase, realizados mostram que o BCG ainda é a melhor opção disponível, no momento. Deste 1993, a norma nacional através da portaria nº 814/GM de 22 de julho de 1993, recomenda a aplicação de duas doses de vacina BCG intradérmica a todos os contatos intradomiciliares dos casos de hanseníase independente de forma clínica.

Objetiva-se neste trabalho, avaliar a cobertura de vacina BCG, no Brasil, no período de 1993 a 2001.

Utiliza-se como fonte de dados o Programa Nacional de Imunizações. Os resultados mostram que a cobertura da vacina BCG tem aumentado no período, porém o nível atingido parece ser insuficiente para interferir no aparecimento de casos novos da doença. A baixa cobertura da vacina BCG esta relacionada a um baixo percentual de contatos examinados, atividade que necessita ser priorizada nas ações de controle da hanseníase.

### PE 21

#### BCG EM COMUNICANTE: EFICÁCIA E SUSCETIBILIDADE

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A Hanseníase é uma doença infecto-contagiosa ainda presente em nosso meio. Muitos casos não são notificados levando a uma desatenção por parte da vigilância sanitária e da população.

Como uma das profilaxias da Hanseníase, utiliza-se a vacinação com BCG.

Neste trabalho fizemos um levantamento de todos os casos de pacientes comunicantes hansenícos da Unidade Básica de Saúde IV no município de Itapevi (São Paulo) no período de 1997 à 2001.

Foram registrados 214 prontuários de comunicantes neste período de 6 anos procurando definir e separar nas famílias estudadas a eficácia do BCG dentro da mesma.

Por este trabalho concluímos que: 1 dose parece ser suficiente para a profilaxia da Hanseníase, no entanto

aconselhamos manter a imunidade ativa fazendo um reforço (segunda dose); dos casos que receberam BCG e desenvolveram a patologia, concluímos que possivelmente já estavam no período de incubação ao receberem a vacinação; quando separados por grupos etários, observamos que os comunicantes que receberam BCG e desenvolveram a moléstia tiveram forma paucibacilar (90% deste grupo); e, para finalizar, concluímos com a população estudada, que a vacinação com BCG continua eficaz na profilaxia da Hanseníase.

## PE 22

### BCG REVACCINATION ON LEPROSY CONTACTS: PRELIMINARY RESULTS

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**Introduction:** Studies of large-scale field trials on BCG carried out in Uganda, Burma, Papua New Guinea and India demonstrated that BCG was indeed capable of preventing leprosy, but that its protective efficacy varied widely from about 20% to more than 80%. In Venezuela, studies indicated that the protective efficacy of BCG was directly proportional to the number of doses given. In a 1996 study realized in Africa, Fine postulated that an initial BCG vaccination imparted a minimum 50% protection rate, while two-doses increased protection to around 75%. The Brazilian Ministry of Health has recommended two doses of BCG-ID in household contacts of leprosy patients since 1990, however, to date no studies on the efficacy of BCG in preventing leprosy have been carried out.

**Objective:** Evaluate the efficacy of BCG revaccination in conferring protection against leprosy disease in contacts of leprosy patients.

**Material and Methods:** All the contacts (4,055) aged 1 to 75 examined during 10 consecutive years (June 1987 - December 1999) were enrolled in the study. The healthy contacts, numbering 1,927, who were examined before 1991 were not administered a BCG vaccination at their initial exam irrespective of the presence/absence of a BCG scar. Another 2,128 contacts were examined after 1991. The contacts in this group who upon examination were found to have a BCG scar were then revaccinated with BCG. On the other hand, the contacts without a previous BCG scar were given their first dose at the initial exam and scheduled to receive a second six months later, in accordance with the Brazilian Ministry of Health guidelines.

**Results:** The vaccine efficacy rate among contacts without a previous BCG scar was 70% (95% CI

29.6–87.3) whereas among contacts with previous BCG scar, it was 55%. (95% CI 8.76–77.8). The protective effect of BCG was higher for the multibacillary forms of leprosy, at 89,2 % (95% CI 57,0 – 97,3) than for the paucibacillary forms of the disease, at 81,2% (95% CI 70,4 – 88,0).

**Conclusion:** In view of the results, a second dose of the BCG vaccine confers protection against leprosy among household leprosy contacts.

## PE 23

### CAMPANHA DE COMBATE A HANSENÍASE – SÃO CARLOS – SP – 2001: ANÁLISE DOS DADOS

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O município de São Carlos – SP, participou da Campanha Estadual de Combate a Hanseníase de 23 a 27 de abril de 2001, desenvolvendo atividades de divulgação e estratégias de detecção de casos novos, envolvendo diversos segmentos da comunidade local.

A Campanha teve início com reuniões da equipe de saúde para planejamento e organização das ações e posteriormente com alunos dos cursos de graduação na área de saúde e professores do Departamento de Enfermagem da Universidade Federal de São Carlos, representantes das associações de bairros e das indústrias, profissionais da saúde, religiosos entre outros, com o objetivo de uma grande mobilização social. Os alunos receberam treinamento para aplicação do teste de sensibilidade para atendimento da população durante a Campanha.

Foram desenvolvidas ações educativas na comunidade, testes de sensibilidade em qualquer mancha na pele nos Postos de Saúde e exames clínicos com Dermatologistas, para as pessoas encaminhadas após avaliação sensorial.

Os resultados foram: de 290 pessoas examinadas com manchas, 112 foram encaminhadas para consulta com Dermatologista, dos quais 48 foram avaliados na semana, sendo que 46 foram negativos, 01 positivo e 01 com suspeição diagnóstica.

Espera-se com esta campanha dar continuidade ao processo de divulgação da doença e desta forma contribuir para a melhoria dos indicadores epidemiológicos, sendo que o município de São Carlos, apresentou em 2001 um coeficiente de prevalência de 0,9 por 10.000 habitantes, enquanto que no Estado, no ano de 2000 foi de 1,74.

**PE 24****CAN WE PREVENT LEPROSY AMONG HOUSEHOLD CONTACTS OF LEPROSY PATIENTS ? - A PRELIMINARY REPORT FROM INDIA**

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Studies indicate that the relative risk of leprosy among household contacts varies from 4 to 9 when compared to the population who do not have household contact with leprosy patient. This randomised double blind controlled trial is undertaken to determine protective efficacy of single dose of Rifampicin as chemoprophylaxis to household contacts in reducing the risk of developing clinical leprosy among them. The protective efficacy is measured in terms of reduction in incidence of leprosy among household contacts. Nine NGO leprosy projects supported by Damien Foundation India Trust (DFIT) are participating in the study. All the newly registered leprosy patients during the years 2000 and 2001 were considered as index cases and their household contacts were examined for clinical evidence of leprosy. Families allocated randomly to study and control groups. The followup examination (re-examination) is done annually. There were 1958 newly registered leprosy patients. Among these, 14.8% of families had more than one case at intake and 23.8% of the families had MB cases. A total of 8063 household contacts were enrolled till Dec 2001. Among them 391 had leprosy (previously treated and new) at the time of intake. There were 7672 eligible contacts. The first group of eligible contacts (3271) was re-examined in April 2001 and three new cases were detected giving an overall New Case Detection Rate of 0.9 per 1000. Details of methodology and updated re-examination findings will be presented.

**PE 25****CASE DETECTION AMONG NON-HOUSEHOLD CONTACTS OF NEW SMEAR POSITIVE MB CASES**

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Household contacts of smear positive MB cases are generally considered as high-risk population and hence covered in routine case detection activity. However, leprosy cases like other people also spend

much more time outside their homes, thereby having contact with people residing in surrounding houses, at the place of work and at the place of social activities. In taluka Panvel, 7946 people have been indentified for having contacts with 46 new smear positive MB cases by virtue of their staying in the surrounding houses (4612 people), working with the index cases (1548 people) and having social contact with the index cases (1786 people). Of these 7324 (92%) had been examined to reveal 27 new cases (4 SSL, 16 PB and 7 MB). The New Case Detection Rate (NCDR), observed among extra-household contacts of smear positive MB cases (37/10000) was found to be much higher than that is seen in routine surveys. Among three categories of non-household contacts, the maximum NCDR of 66 cases per 10000 population was observed among the people having social contacts with smear positive MB cases. The results suggest that the non-household contacts of smear positive MB cases should also be considered as high-risk population.

**PE 26****COMPARE OF NEWLY DETECTED LEPROSY CASES BETWEEN BEFORE MDT AND AFTER MDT IN NANKANG CITY**

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**Objective:** To compare the profiles of case-finding and the clinical characteristics of new leprosy cases detected after MDT with that before MDT.

**Methods:** Materials of cases detected before MDT and after MDT in Nankang City were compared.

**Results:** In comparison with before MDT, detection rate has decreased dramatically (0.75/100000) after MDT. The rate of early detection cases in newly detected patients has increased (57.41%). The rate of cases with positive skin smears was higher (74.07%) than that before MDT (53.72%). The rates of cases with single skin lesion and with Grade II disability were similarities between before MDT and after MDT. The way that cases were detected through dermatologic clinic was main mode yet.

**Conclusion:** Detection rate has decreased dramatically after MDT. It suggests that extensive health education of leprosy is the main one of measures on early detection of cases.

**PE 27****COMPORTAMIENTO DE LA LEPROSIA MUNICIPAL CAMAGUEY. CUBA 1984 - 1998**

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Se realizó un estudio descriptivo transversal del comportamiento de la lepra en el municipio Camagüey durante los últimos quince años (1984 – 1998), el universo de estudio estuvo representado por 260 casos, diagnosticados como tal en las historias clínicas familiares e individuales. Como registro primario se utilizaron los informes anuales del departamento municipal de estadísticas de Camagüey y el modelo de encuesta epidemiológica del enfermo de lepra, con los datos obtenidos, se confeccionó una encuesta según bibliografía revisada la cual una vez llenada pasó a ser el registro primario de datos. Los aspectos analizados fueron, la incidencia de la enfermedad su tasa  $\times 100\ 000$  hab, la distribución según grupo étnico, sexo, color de la piel, nivel de escolaridad, ocupación, condiciones de la vivienda, formas clínicas, primeros síntomas y signos referidos de la enfermedad, localización de los mismos, modo de detección, grado de incapacidad, fuente de infección, tiempo de diagnóstico y los resultados de la situación del enfermo con relación al foco.

Entre los resultados obtenidos se observó una tendencia hacia la disminución de la incidencia y su tasa, ligero predominio del sexo femenino, bajo nivel escolar, mayor número de desocupados y de pacientes mayores de 35 años, porcentaje superior de las formas clínicas multibacilares y predominio de la LD y LL.

En los casos de LL predominan los nódulos cutáneos y en la LD, LI y LT las manchas anestésicas. El modo de detección espontáneo y el diagnóstico tardío aportaron el mayor porcentaje, la fuente de infección fue desconocida en el mayor número de enfermos. Predominaron los casos sin incapacidades en el momento del diagnóstico y en los casos discapacitados predominó el Grado I.

## PE 28

CONSTRUÇÃO DO PERFIL EPIDEMIOLOGICO DE PACIENTES DE 0 A 14 ANOS, COM HANSENÍASE, EM UM HOSPITAL ESCOLA NO RECIFE

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A Hanseníase, uma das mais antigas doenças humanas, ainda é um problema de Saúde Pública no Brasil, as condições sanitárias e de nutrição deficientes são responsáveis pela pré disposição em crianças. Este trabalho, trata-se de um estudo quantitativo do tipo descritivo e retrospectivo, cujo objetivo é conhecer o perfil da hanseníase em crianças de 0 a 14 anos de idade diagnosticadas num hospital escola do Município de Recife, no ano de 2001. As variáveis estudadas foram idade, sexo, forma clínica, baciloscopia, grau de incapacidade, modo de detecção e situação atual desses pacientes. Os dados coletados estão em processo de análise.

## PE 29

DADOS CLÍNICOS E DEMOGRÁFICOS DE UM SERVIÇO DE ATENÇÃO PRIMÁRIA A HANSENÍASE EM RIBEIRÃO PRETO-SP

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Nosso objetivo é apresentar dados clínicos/demográficos dos pacientes em tratamento de Hanseníase, de janeiro de 1998 a dezembro de 2001 e as peculiaridades do serviço que estão relacionadas aos resultados obtidos. O trabalho é desenvolvido na Unidade Distrital de Saúde- Zona Sul, da Secretaria Municipal de Saúde, responsável por 81.541 habitantes. Neste período incluímos 37 pacientes, 28 (75,6%) homens e 9 (24,4%) mulheres, com idade média de 37 anos (menor = 6 anos e maior=70 anos), sendo 94,5% de Ribeirão Preto, a maioria migrantes (67,5% de outros estados e 27% de outras cidades do Est.S.Paulo). Em relação às formas clínicas, 16 (43,2%) com Hanseníase virchowiana, 6 (16,2%) foram dimorfos, 9 (24,4%) tuberculóides e 6 (16,2%) indeterminados, conforme diagnóstico apoiado em características clínicas, baciloscópicas e anátomo-patológicas (59,4% multibacilares e 40,6% paucibacilares). Apresentaram grau de incapacidade zero 23 pacientes (62,2%), grau de incapacidade I 9 pacientes (24,4%), grau de incapacidade II 2 (5,4%) e grau III 2 pacientes (5,4%). Do total 12 pacientes (32,4%) apresentaram alguma forma de reação durante o tratamento e 5 (13,5%) persistiram com sintomas reacionais, fazendo uso contínuo de medicação específica após alta medicamentosa. No encerramento dos casos em 31.12.2001 tínhamos alta cura em 23 (62,2%) pacientes, tratamento em curso para 13 (35,1%), onde uma paciente foi transferida (2,7%) foi transferida e nenhum abandono. Consideramos que os bons resultados obtidos pelo serviço, notadamente o índice de abandono zero nos 4 nos incluídos resultam de metodologia de trabalho participativa desenvolvida a partir da abordagem abran-gente do paciente e de seus familiares, com efetivo acolhimento pelos membros da equipe.

**PE 30**

DETECTION OF *Mycobacterium leprae* DNA BY PCR IN BLOOD AND SKIN FROM NINE BANDED ARMADILLO (*Dasyus novemcinctus*): PRELIMINARY RESULTS

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**Introduction:** and purpose: The multiple drug therapy (MDT) is highly effective in killing *M. leprae* in this human reservoir, i.e. infected person. In many countries and in spite of a dramatic fall in prevalence, the number of new cases detected annually does not show a marked decline, maybe, because the sources didn't eliminate. Wlsh et al (1974) described a leprosy-like infection in seven armadillos from Louisiana (EUA). We studied the wild armadillos from Espírito Santo State, Brazil, a hyperendemic leprosy area

**Methods:** Fourteen armadillos, *Dasyus novemcinctus* species, were examined. Blood samples were collected. For amplification of specific *M. leprae* DNA, a set of primers ML-1 and ML-2.

**Results:** Those animals were asymptomatic and none of them presented clinical diagnose of leprosy. Blood from five of fourteen animals had a positive PCR.

**Conclusion:** These are first results in the medical literature and are in accordance with that from American researcher's that also reported the presence of *M. leprae* in armadillos from Texas and Louisiana States of USA. Anyway, these preliminary results suggest that in the Espírito Santo State, Brazil, the nine-banded armadillos could be considered a natural reservoir of *M. leprae*.

**PE 31**

DISTRIBUIÇÃO DA HANSENÍASE SEGUNDO O SEXO NO MUNICÍPIO DE GOVERNADOR VALADARES – MINAS GERAIS / BRASIL

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**Introdução:** A hanseníase em Governador Valadares é considerada hiperendêmica. O nosso pressuposto é o de que a taxa de detecção se distribui desigualmente nos espaços urbanos e também entre os sexos.

**Objetivo:** Analisar a distribuição da hanseníase segundo o sexo em Governador Valadares.

**Metodologia:** Estudo epidemiológico de natureza descritiva de tipo operacional.

**Resultados:** Observamos uma maior proporção de casos em mulheres do que homens, respectivamente 55,3% e 44,7%. Proporção confirmada pela maior taxa de detecção em mulheres, 10,20/10.000 contra 9,27/10.000 em homens. Verificamos que 56,6% dos casos diagnosticados por demanda espontânea são de mulheres. Observamos que o número de casos de hanseníase no sexo feminino é maior nas formas tuberculóide, dimorfa e indeterminada e a virchoviana no sexo masculino. Isto justifica a maior proporção encontrada de casos com incapacidade nos homens, 19,7% contra 9% nas mulheres. Estes dados confirmam a ocorrência de uma maior proporção de diagnóstico tardio em homens.

**Conclusão:** A hanseníase em Governador Valadares incide desigualmente entre homens e mulheres, acarretando maior repercussão nos homens em termos de incapacidades físicas. Desta maneira, este estudo aponta para a necessidade dos serviços de saúde deste município implementarem estratégias que considerem as diferenças de necessidades biológicas e sociais entre homens e mulheres de modo a proporcionar equidade no acesso e proteção à saúde.

**PE 32**

DISTRIBUIÇÃO GEOGRÁFICA DOS CASOS NOVOS DE HANSENÍASE DIAGNOSTICADOS NO MUNICÍPIO DE BELO HORIZONTE, MINAS GERAIS, BRASIL, NO PERÍODO DE 1999 A 2001

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Os pacientes de Hanseníase diagnosticados em Belo Horizonte, no período de 1999 a 2001, foram distribuídos geograficamente segundo os respectivos Distritos Sanitários de residência.

Utilizou-se o banco de dados do Setor de Epidemiologia da Secretaria Municipal da Saúde de Belo Horizonte (Sistema de Informação Nacional de Agravos Notificáveis), e o programa Map-Info da Prefeitura Municipal de Belo Horizonte.

Foram analisados os aspectos socioeconômicos dos Distritos Sanitários em relação ao diagnóstico da Hanseníase.

**PE 33**

EFFECTIVENESS OF BCG VACCINATION IN PROTECTING AGAINST LEPROSY IN VIETNAM

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In order to assess the effectiveness of BCG vaccination in protecting against leprosy, a prospective case-control study was carried out in the North of Vietnam. The objective of the study was to determine the frequency of positive reaction to the BCG vaccine in the patients and in the control groups. If leprosy cases were found to have BCG reactions, this would be evidence for a protection against leprosy by successful immunization with BCG.

90 leprosy patients and 180 controls (2 controls for one case) were paired according to their identical parameters. All patients was investigated by the same clinician. Laboratory tests (BI, Histopathology) was also done for all cases. Patients and controls was matched first for height, weight and sex, living condition, changes of residence. The main feature checked for was the presence or absence of a vaccination scar, this being the physical manifestation of a positive reaction to vaccination with BCG in the past.

The results obtained are shown as below:

1. BCG vaccination seems to provide protection against non-lepromatous leprosy in the North of Vietnam.

2. The BCG vaccine does not have any clear protective effect against lepromatous leprosy.

### PE 34

EPIDEMIOLOGIA DA HANSENÍASE EM MAIORES DE 60 ANOS, MUNICÍPIO DO RECIFE-PE DE 1995/2001

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A Hanseníase é considerada um importante problema de saúde pública para o município do Recife. Na década de 90, o coeficiente de prevalência da hanseníase manteve-se em níveis elevados, variando entre 12.48 e 32.90/10.000 hab, com tendência linear crescente. Na mesma década o coeficiente de detecção da doença manteve-se elevado, variando de 4.47 a 8.61/10.000 hab, sendo o município considerado hiperendêmico para hanseníase, segundo parâmetros do Ministério da saúde. Considerando que o número de idosos vem aumentando em todo o país, esta apresentação tem por objetivo focalizar as características epidemiológicas da hanseníase em maiores de 60 anos, em uma unidade de referência do município do Recife-Pe, no período de 1995 a 2001, através de informações obtidas de prontuários de pacientes acima de 60anos no período, tendo sido consideradas as seguintes variáveis: sexo; modo de

detecção; comunicantes; forma clínica; grau de incapacidade física; classificação operacional e Baar.

### PE 35

EPIDEMIOLOGIA DAS FORMAS DE HANSENÍASE NUM PERÍODO DE TRÊS ANOS EM UM MUNICÍPIO DO ESTADO DE SÃO PAULO (1999/2001)

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USB 4 - Itapevi (Rainha)

Os autores mostram a distribuição da patologia HANSENÍASE nas suas diversas formas, na população de um município da Grande São Paulo; segundo a classificação de Madri, isto é, formas indeterminadas dimorfas tuberculóides e vischovianas. Estudaram-se neste período assinalado 52 casos com a seguinte distribuição:

- formas instáveis: 36,5%
- formas estáveis: 63,5%

Mostram, os autores que as formas bacilíferas correspondem a 50% de todos os casos, compreendendo-se assim, a importância do paciente multibacilar na manutenção da endemia.

Especificamente os 52 casos revistos apresentam a seguinte frequência absoluta:

- forma I: 13 casos
- forma BD: 6 casos
- forma T: 13 casos
- forma V: 20 casos

### PE 36

EPIDEMIOLOGIA DO PROGRAMA DE HANSENÍASE DO MUNICÍPIO DE ROSÁRIO OESTE – MT, NO PERÍODO DE 1992 A 2001

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A hanseníase constitui importante problema de saúde pública no Estado de Mato Grosso apresentando elevados índices de prevalência e de detecção anual de casos. Este estudo objetiva a apresentar as características epidemiológicas do Programa de Controle da Hanseníase do município de Rosário Oeste – MT, no período de 1992 a 2001, através de levantamento de informações obtidas do registro do total de 504 prontuários de pacientes diagnosticados e inscritos no referido programa, sendo consideradas as seguintes variáveis: forma clínica, idade, sexo, área de residência, modo de detecção, tempo de aparecimento de sinais e/ou sintomas, número de pacientes examina-

dos e com BCG id 2ª dose, grau de incapacidade, ocorrência de reações e situação de registro ativo.

### PE 37

#### EPIDEMIOLOGICAL ANALYSIS IN THE URBAN AREA OF WUHAN DURING THE PERIOD FROM 1949 TO 1999

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2441 leprosy patients have been accumulated in the urban area of Wuhan from 1949 to 1999, during which two periods have dominated the peak of onset. The first peak reached 29.041/100,000 in 1949, incidences before 1949 included. The second one was seen within the years from 1950 to 1957 with the average incidence of 8.76/100,000. Since 1957, the incidence has shown a tendency of decrease every year. By the end of 1999, 2,296 patients have been totally cured.

With the development of MDT in 1987, it has shortened the duration and raised the cure rate. And only 14 present MB patients have been detected by the end of 1999. Incidence and prevalence in 1999 was reported respectively as 0.05/100,000 and 0.006. The aim of "leprosy elimination" has been accomplished after the examination and evaluation given by Health Department in Hubei Province and Evaluation Group from Provincial Dermatology Research Department. Four years watch leads to a constantly decreasing tendency of incidence and prevalence in Wuhan.

[Key Words] Leprosy Epidemiological Analysis

### PE 38

#### EPIDEMIOLOGICAL ANALYSIS OF ACTIVE LEPER IN HEILONGJIANG PROVINCE FROM 1990 TO 1999

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Heilongjiang province is situated in the north of China and its average temperature is 1.3°C which belongs to frigid temperate zone. 1,034 lepers had been diagnosed by the end of 1999 since leprosy case was registered in 1949, so it is part of the non-prevalent area. 891 patients had been cured after fifty-year positive prevention and cure, and now only 24 patients were still in active, morbidity of the leper was 0.006/10000. Recent five-years average morbidity was less than 0.001/100000, but also it throughoutly kept a lower level in recent ten years. Now we will make a epidemiological analysis of lepers detected from 1990 to 1999 year as follow:

During ten years, 37 cases (male 23 cases, female 14 cases; M:F=1.57:1) were reported, which contained 29 new patients and 8 relapsed patients and relapse rate was 21.6%. Among them the youngest sufferer was 13 years old, the oldest was 69 years old and the average was 40.1 years old. Main profession were peasants (22 cases, 75.9%), the others were workers (2 cases), cadres (2 cases) and the resident of city (3 cases). Of 29 new patients, 3 cases were LL, 19 cases were BL, 4 cases were BB, 3 cases were BT and nobody was TT, the ratio of type was 89.6%; moreover, 19 patients were diagnosed within six years, 8 patients were diagnosed within six to ten years and 2 patients were detected more than ten years. Before they were reported, the shortest course was 1 year, the longest was 12 years, and the average was 4.6 years. There were 28 patients who had got disability in varying degrees when they detected, accounting for 96.3%. 25 sufferers had ever been to different levels medical units (including countryside, county, city and province), accounting for 86.1%. 16 persons of them had been to the provincial rank hospitals and 12 persons had been to the several provincial rank hospitals. Of the reported ways, multiple hospitals diagnosed 16 cases (11 cases in the provincial rank hospitals and 5 cases in the city rank hospitals), 11 cases were reported by the special medical institution (3 cases in the provincial rank institution and 8 cases in the city rank institution), and two persons were reported by themselves. 29 new patients were distributed over 23 countries (or cities) in Heilongjiang province, which were highly scattered condition. Those who were born in other province accounted 89.6 percentage. The minimum times that patients lived in ancestral home was 8 years, the maximum times was 55 years and the average times was 28.9 years. In ten years, the lowest yearly diagnosed number was 1 case, the most was 6 cases and the average was 2.9 cases. There was only one who got leprosy in family. There were 8 patients who relapsed in all in ten years, of which 7 lepers recurred after the treatment or D.D.S and 1 leper recurred after the treatment of D.D.S+R.F.P. The type of relapse were respectively 2 cases of LL, 4 cases of BB, but also they were all polybacteria kind of lepers. The youngest lepers who recurred was 43 years old, the oldest was 65 years old, and the average was 52 years old. Among 29 new lepers, 8 sufferers had family history, 17 sufferers had contacted with lepers before, and 4 sufferers were unknown contact history.

Heilongjiang province is non-prevalent region of leprosy in history and its character of distribution has close correlation with migration. On one hand leprosy highly scattered, on the other hand, the number of patients is close correlate with number of migration. Polybacteria kind of patients are absolutely predominance, which show that polybacteria kind of patients are chief in low prevalent condition. Average age of attacking leprosy rose, it was 32.9 years old in 1980s, however, it rose to 40.1 years old in 1990s.

lepers can not be detected for long time after leprosy came on shows that medical personnels are generally short of the ability of early cognition to leprosy in our province, which is quite disadvantage to diagnosing lepers early. Training medical personnels for leprosy's knowledge is an important task of preventing and curing leprosy in heilongjiang province.

### PE 39

#### EPIDEMIOLOGICAL ANALYSES OF CHILDREN LEPROSY IN GANSU PROVINCE (1949-2001)

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**Objective:** To study epidemiological features of children leprosy in Gansu province.

**Methods:** The data of children leprosy from 1949 to 2001 in Gansu province were analyzed in terms of gender, age, duration of the disease, infection source, detection modes, regional distribution, incidence.

**Results:** A total of 4801 leprosy cases were detected during 1949-2001, of which 518 (10.79%) were child cases (324 males and 194 females). Average delay in detection was 3.91 years. The main source of infection was directly contact with families, accounting for 94.58%, MB were 399 cases, and PB were 119 cases, the chief age of children were 14 years. The majority of cases were detected through active modes. There have been different degree epidemiological of 12 regions in 14 regions of Gansu province. Epidemiological features of children leprosy in Gansu province were basic correspondence with epidemiological trends of adults leprosy in Gansu province, the top of incidence was 1.01/100 000 in 1954, the degression of incidence was 1 case in 2001.

**Conclusion:** The present study shows the proportion of children leprosy is one of the sensitive indicators of leprosy endemicity, which is one of reference according as evaluation of effectiveness of leprosy in one region.

[**Key words**] Children Leprosy Duration of Disease

### PE 40

#### EPIDEMIOLOGICAL ANALYSIS OF LEPROSY IN JIANGXI PROVINCE

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**Objective:** To summarize the achievement and experience in leprosy control in Jiangxi Province and pro-

vide scientific basis for formulation of leprosy strategies.

**Methods:** Based on the National Leprosy Recording and Reporting System, Epidemiological data of leprosy in Jiangxi Province were analyzed using computer.

**Results:** Jiangxi Province was a leprosy medium endemic area with a higher distribution of leprosy in the south than the north. The prevalence, incidence and detection rates were highest in the 1950s or 1960s and had decreased annually since then. Average incidence rate for the recent 5 years (0.1604 per 100 000) and prevalence rate (0.049 per 10 000) in 1998 reached the criteria of basic elimination of leprosy at provincial level, however, still 15 counties of cities not reaching the criteria.

**Conclusion:** The comprehensive measures including early detection of cases, immediate treatment with multidrug therapy and effective health education are helpful and important for leprosy control.

[**Key words**] Leprosy Incidence Prevalence Epidemiologic factors

### PE 41

#### EPIDEMIOLOGICAL ASPECTS OF THE LEPROSY'S TRANSMISSION AND ARMADILLO MEAT CONSUME

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**Introduction:** and purpose: The leprosy transmission still now a days is a polemic question. Some authors demontred the possibility of the armadillos, *Dasyus novemcinctus* species, be a environmental source of *Mycobacterium leprae*. The epidemiologic inquiry realized to check the correlation between the being human's contact with armadillos and the incidence of leprosy.

The objective of this research is check the frequency of the leprosy cases contacts with armadillos and also the interhuman contact before of the own diagnose.

**Methods:** The inquiry was realized with 107 patients ex-leprosy cases (leprosy cases that had finished the treatment with PQT) that lived in Pedro Fontes Colony - Hospital, in Cariacica, Espírito Santo State, Brazil 29 leprosy cases and 173 no leprosy case from Dermatology Service of the Santa Casa Hospital, Vitória- Brazil. The inquiry included Batas about the armadillo meat consume before own diagnosed, the

existence of known cases and/or familial leprosy cases. It was realized Qui-square test, correlation and Exact Fischer Test.

**Results:** 90.4% of the leprosy's cases or ex-leprosy's cases had ever eaten armadillo meat in their diet before their leprosy diagnose, while 9.6% of the no leprosy's cases had ever eaten armadillo meat. It didn't have correlation between the armadillo meat consume and it has familial and know cases of leprosy before the leprosy diagnose.

**Conclusion:** This research revealed a direct correlation between the armadillo meat consume and leprosy cases.

### PE 42

#### EPIDEMIOLOGICAL TRENDS OF LEPROSY IN GUIZHOU PROVINCE

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**Objective:** To analyze the epidemiological trends of leprosy and evaluate the effectiveness of leprosy control with fixed duration MDT in Guizhou province.

**Methods:** used for the National leprosy data annual report and computer recording system of leprosy in Guizhou province, each epidemiological data were analyzed.

**Results:** Leprosy endemic areas had obviously changed in Guizhou. All 87 counties prevalence were >0.01% and 66 counties were >0.1% among them in 1986. In 2000, only 3 counties were >0.1% prevalence. 49 counties prevalence were during 0.01-0.1% and others were <0.01%. The detection rate decreased from 0.22/10 000 in 1986 to 0.066/10 000 in 2000. The prevalence decreased from 0.24% in 1986 to 0.021% in 2000. During 1986-2000, there were 7 405 leprosy patients treated with fixed duration MDT, regular rate of MDT 95.88%. Three were 18 leprosy relapsed with a relapse rate of 0.24%. The incidence of leprosy in children and the disability rate of new case were still no change trends.

**Conclusion:** The fixed duration MDT was effective to treat leprosy patients. The endemic of this disease has been evidently under control in Guizhou.

**[Key words]** Leprosy, Incidence, Prevalence, Recurrence

### PE 43

#### EPIDEMIOLOGICAL TRENDS OF LEPROSY IN SEVAGRAM CONTROL UNIT

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Sevagram Leprosy Control Unit has been the first control unit in the country started in 1952. Since the inception till 2001 a total of 2050 cases have been detected from a population of 27875. This paper is intended to present the epidemiological scenario of the control unit, after implementation of MDT programme for two decades which needs serious attention while declaring the elimination of leprosy.

The prevalence rate of leprosy was 234/10,000 in the year 1952 which declined to 12.9/10,000 (94.5% reduced) in the year-2001. The deformity rate declined from 9.1% to 2.4% (73.6% reduced). Percent MB cases which include LL, BL&BB also declined from 21.8 to 15.6 (28.4% reduction), while percent PB cases which include TT, BT, IND&PN increases 78.2% to 84.4%. While number of positive cases with BI- 1&2 is decreased the number of cases with BI- 3 and above increased from 2.1% to 5.2%. The new case detection rate also declined from 54/10,000 to 13.6/10,000 (74.8% reduced). It is recent observation that NCDR is more than PR and NCDR has been almost static since last two decades.

The above observations show that the MDT could reduce the number of accumulated active cases in the society but could not hinder the occurrence of new cases and suggest the need for further epidemiological and bacteriological studies which may throw some light on transmission mechanism of leprosy

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### PE 44

#### EPIDEMIOLOGIST AS THE DISTRICT LEPROSY MANAGER: THE SRI LANKAN EXPERIENCE

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Integrating leprosy in the general health services represents an immense organizational and logistical challenge. Sri Lanka, like many other countries, only has a small leprosy team who were responsible for the vertical programme. It was crucial to identify a counterpart within the regional health services to help carry out the numerous activities planned. The regional epidemiologists were selected as the "managers" of the integration process as well as for the monitoring of the integrated programme in their re-

spective district. It was envisaged that they would work in close collaboration with the leprosy worker of the area. A goal oriented project planning workshop was conducted to actively seek their input in formulating the detailed plan.

This paper discusses how and why the epidemiologists were identified as the most appropriate counterparts. The paper will also critically examine the expectations at the outset and the reality of their role after 18 months experience. It will also discuss the challenges faced in translating the concept of empowerment and teamwork into reality. It also addresses the problems encountered in shifting responsibility from a highly committed small team to new players.

### PE 45

#### EPIDEMIOLOGY ANALYSIS OF LEPROSY IN ZHEJIANG PROVINCE

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**Objective:** To evaluate the effectiveness of leprosy epidemic and control in Zhejiang Province.

**Methods:** To adopt the analysis of retrospective study.

**Results:** By the end of 1999, 16461 leprosy patients have been registered, of which 11935 had been cured and only 97 were still active cases. Compare 1999 with 1973, active cases decreased 99.02%. The main character of epidemiology: the mean age of attack increased, the value of type ratio increased, and the incidence of children decreased, accorded with the character of leprosy control later stage.

**Conclusion:** The tendency of leprosy epidemic dropped continuously in Zhejiang province, effect of control is notable and fruit is solid.

**[Key words]** Leprosy, Epidemiology, Analyze

### PE 46

#### EPIDEMIOLOGY AND CONTROL OF LEPROSY IN VIETNAM

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In Vietnam, leprosy is considered as one of social diseases which must be eliminated before the year 2000. Before 1982 (the year of MDT implementation), the prevalence rate was very high and the distribution of leprosy patients was uneven. In mountainous areas, the prevalence was 20 per 10,000,

while in the delta provinces, the rate was only 2 per 10,000. The proportion of children and women cases was 8% and 36% respectively. However, after implementation of MDT, the National Leprosy Control Programme has proved to be very fruitful. The epidemiological status of the disease has remarkably also changed. The national prevalence rate has considerably decreased from 6.7 per 10,000 in 1982 to 0.2 per 10,000 in 2001. By the end of 2001, all provinces of the country have reached already the goal of leprosy elimination.

However, while the prevalence rate has continued to reduce in the recent years, the number of newly detected cases has remained steadily ranging from 1500 to 2000 with a detection rate less than 3 per 100,000. In order to attain the final goal, the national criteria for leprosy eradication are set up and implemented in 2002.

### PE 47

#### ESTADOS REACIONAIS NAS DIFERENTES FORMAS CLÍNICAS DE HANSENÍASE

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Os estados reacionais (ER) são intercorrências comuns no curso da hanseníase, sendo fundamental para o manejo e prevenção de incapacidades o diagnóstico precoce e a conduta terapêutica adequada. O objetivo deste estudo foi analisar os tipos de ER mais freqüentes em cada espectro da doença, bem como a época do aparecimento dos mesmos. Neste contexto, foram estudados retrospectivamente 87 pacientes com diagnóstico histopatológico de hanseníase, submetidos a poliquimioterapia (PQT). Os pacientes foram classificados, de acordo com os critérios de Ridley-Jopling (1962), em 29% de tuberculóide-tuberculóide (TT), 1% de dimorfo-tuberculóide (DT), 15% de dimorfo-dimorfo (DD), 5% de dimorfo-virchowiano (DV), 35% de virchowiano- virchowiano (VV) e 15% de forma indeterminada. Verificou-se que os ER foram complicações freqüentes (64%), sendo classificados com base nos dados clínicos e histopatológicos em: tipo I (27% reação reversa); tipo II (28% eritema nodoso hansênico e 3% fenômeno de Lúcio); e 47% neurite isolada. A reação tipo I predominou entre os pacientes portadores de forma DD (80%), a reação tipo II nos VV (68%), enquanto a neurite isolada na forma TT (83%). Quanto ao aparecimento do primeiro episódio reacional, verificou-se que 46% dos pacientes (50% neurite isolada; 27% tipo I; 23% tipo II) já se encontravam com reação no momento da admissão; em 37% (42% neu-

rite isolada, 33% tipo II, 25% tipo I) a reação surgiu no primeiro ano de PQT. Apenas 1 paciente (4%) apresentou reação tipo II (Fenômeno de Lúcio) durante o segundo ano de PQT e após PQT 2 pacientes (8%) apresentaram reação, sendo uma do tipo I e outra do tipo II. De acordo com estes dados clínicos, pode-se concluir que os estados racionais são complicações comuns nas diferentes formas clínicas de hanseníase, havendo predomínio de reação tipo I na forma DD, reação tipo II nos VV e neurite isolada nos TT. Cabe ressaltar que, devido ao risco aumentado de alterações permanentes nos sistema nervoso periférico durante a reação tipo I e a neurite isolada, estas são consideradas condições emergenciais na hanseníase necessitando portanto de diagnóstico e tratamento precoces.

### PE 48

ESTUDIO COMPARADO DE LA ENFERMEDAD DE HANSEN Y TUBERCULOSIS PULMONAR EN LA SEGUNDA MITAD DEL SIGLO XX EN ESPAÑA

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**Objetivo:** Evaluar la asociación entre hanseniasis y tuberculosis determinando si sus evoluciones siguen un patrón en sus presentaciones, que puede ser competitiva hacia el mismo nicho ecológico, o paralela en cuanto que comparten factores de riesgo.

**Material y métodos:** El material ha sido el conjunto de anuarios del Instituto Nacional de Estadística de España, los informes del Registro Estatal de Lepra y los Registros de Enfermedades de Declaración Obligatoria. Para la recogida de datos y presentación de resultados se ha utilizado el programa informático Excel y para el análisis estadístico el PSPS. La metodología estadística ha consistido, en una primera fase, presentación descriptiva: Comparación de medias globales anuales entre las Comunidades Autónomas de España en el periodo 1950-2000 para incidencia de lepra e incidencia de tuberculosis respiratoria y evolución comparada de ambas incidencias a lo largo del periodo señalado, en una segunda fase, análisis estadístico de las variables utilizando las pruebas de correlación, regresión lineal simple con transformación logarítmica y valoración previa de requisitos de normalidad de distribución y homogeneidad de la varianza.

**Resultados:** Los datos han sido recogidos por provincias, comunidades autónomas y globales para España. Mostraremos los resultados correspondi-

entes a las tasas anuales nacionales presentadas a intervalos de 5 años. La lepra se expresa como incidencia acumulada cada 5 años dado el impreciso periodo de incubación y la baja incidencia. Se ha encontrado un Coeficiente de Determinación  $R^2$  de 0,64, y un valor  $p < 0,01$ .

**Conclusiones:** La asociación encontrada entre ambas variables es significativa a más del 1%, y es de carácter directo, con presentación gráfica en paralelo, por lo que apuntaría, en nuestro caso, hacia la segunda hipótesis de coparticipación de mismos factores de riesgo. Sin embargo, hay amplias variaciones entre provincias y comunidades autónomas.

### PE 49

ESTUDIO ESTADÍSTICO Y EPIDEMIOLOGICO DE CASOS DE LEPRO DETECTADOS EN CONTACTOS EN UN PERÍODO DE 5 AÑOS EN SANTA FE

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Santa Fe es una provincia situada en el área endémica de lepra de la República Argentina. La distribución de los casos no se dan de manera uniforme y las tasa de prevalencia y detección a fines del 2001 fueron de  $0,6 \times 10.000$  y  $2,2 \times 100.000$  respectivamente, habiendo bolsones epidemiológicos que superan tasas de  $4 \times 10.000$  hab. Dentro de la provincia.

A la luz de los conocimientos actuales se sabe que la mayoría de los casos nuevos detectados provienen de contactos tanto intra como extra domiciliarios. Es por ello que nuestro objetivo es conocer el porcentaje de contactos que han enfermado después del diagnóstico del foco principal.

Se presenta un trabajo estadístico y epidemiológico, realizado entre los casos detectados desde enero de 1996 hasta diciembre de 2000, que arrojó cifras significativas, por lo que se propone &#8220; el control de convivientes &#8220;., como estrategia destacada para arribar a la meta de la eliminación de la Lepra como problema de Salud Pública.

### PE 50

ESTUDIO SEROEPIDEMIOLOGICO DE UN FOCO DE LEPRO EN EL HOSPITAL "CELIA SANCHEZ MANDULEY". MUNICIPIO MANZANILLO. GRANMA

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Se realizó un estudio en el Hospital "Celia Sanchez Manduley" del Municipio Manzanillo donde fueron estudiadas 447 personas contactos extradomiciliarios compañeros de trabajo de 6 pacientes de Lepra multibacilar mediante estudio serológico con el antígeno PGL-I por el método Ultramicroanalítico (SUMA) y de acuerdo a los resultados e la serología, prueba de Lepromina y Baciloscopia. El 19,2% de los estudiados mostró niveles de anticuerpos superiores al nivel de corte establecido. Los resultados fueron analizados en relación al sexo, la edad, el tiempo de relación con los enfermos. Se analiza la conducta seguida al final de la Investigación, concluyendo que estos estudios resultan de gran utilidad en el control de la Lepra.

### PE 51

ESTUDO DE INCIDÊNCIA E PREVALÊNCIA DE HANSENÍASE EM MENORES DE 15 ANOS NO MUNICÍPIO DE PARACATU-MG DURANTE UM PERÍODO DE CINCO ANOS

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Paracatu/MG é considerada pela Secretaria Estadual de Saúde como município prioritário para o controle da hanseníase devido aos altos coeficientes de incidência e prevalência desta nosologia em sua população. Foi realizado um estudo de incidência e prevalência de hanseníase em menores de quinze anos diagnosticados e tratados neste município por um período de cinco anos, analisando diversas variáveis como forma clínica, idade, sexo, grau de incapacidade, escolaridade, cicatriz vacinal, contatos, entre outras. O objetivo deste estudo é obter um panorama epidemiológico desta doença visando subsidiar os serviços e secretarias de saúde municipal e estadual em suas ações, contribuindo para eliminar a hanseníase como doença de saúde pública

### PE 52

ESTUDO RETROSPECTIVO DA OCORRÊNCIA FAMILIAR DA HANSENÍASE EM UNIDADE DE REFERÊNCIA NO MUNICÍPIO DE ITAPEVI – SP

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A hanseníase é uma moléstia que nos acompanha desde a antiguidade e ainda está longe de ser erradicada.

O Brasil é responsável por 85% dos casos das Américas, ocupando o 2º lugar em número de doentes em todo o mundo.

Praticamente o único reservatório é o homem, dificultando pesquisas laboratoriais e fazendo com que o contato pessoal seja a principal forma de transmissão. Estudos epidemiológicos tornam-se então instrumentos importantes para compreensão da doença.

Este é um trabalho retrospectivo que se baseou no levantamento de dados de prontuários de doentes e seus respectivos familiares, acompanhados durante o período de 1996 a 2001 no UBS Rainha, unidade de referência para hanseníase, localizada no município de Itapevi - São Paulo. Enfatizamos os comunicantes familiares como integrantes do principal ambiente de propagação da moléstia. Avaliamos 78 casos com 642 comunicantes. A maioria destes últimos era assintomática. Porém, 9% apresentou hanseníase. Destes comunicantes doentes, 66% possuíam forma infectante (Borderline ou Virchoviana) perpetuando assim a transmissão domiciliar.

Variáveis como sexo, relação familiar dos comunicantes e forma do caso índice (multibacilar ou paucibacilar) foram analisados como fatores de risco para aquisição da doença.

### PE 53

EVOLUÇÃO DA DETECÇÃO E PREVALÊNCIA DA HANSENÍASE REGISTRADAS DO CENTRO DE SAÚDE DONA LIBÂNIA – REFERÊNCIA EM DERMATOLOGIA SANITÁRIA - FORTALEZA – CEARÁ PERÍODO 1995 – 2001

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Ao realizar este trabalho, acerca de evolução da endemia hanseníase utilizando indicadores de morbidade (incidência e prevalência) no município de Fortaleza, não podemos deixar de pensar na situação preocupante da referida endemia em algumas secretarias regionais de Saúde da capital cearense. Hanseníase, doença endêmica em todo território nacional, tem colocado o Brasil na incômoda posição de segundo país do mundo e primeiro das Américas em número de casos registrados. A meta preconizada pela OMS para o ano 2000 e postergada para 2005 é redução de 1 caso de hanseníase para cada 10.000 habitantes. O objetivo deste trabalho é estudar a situação epidemiológica e operacional da hanseníase no município de Fortaleza registrados no centro de referência Dona Libânia no período 1995 – 2001.

A metodologia utilizada é de um estudo descritivo e analítico de uma série histórica, no período de 1995 – 2001. A casuística é constituída de todos os casos notificados no período. Os dados foram obtidos do SINAN. Os resultados parciais encontrados foram que a média de casos por ano era de 700 casos e a distribuição por secretarias regionais de saúde – SER, observa-se um grande número de casos na regional VI (30% dos casos da capital), região do Conjunto Ceará e Grande Bom Jardim.

Concluimos que é imperativa a implantação de todas as ações de eliminação de hanseníase, previstas na Norma Operacional de Assistência a Saúde – NOAS para todas as unidades básicas de saúde do município de Fortaleza, e a unidade de referência apoiando esta descentralização, ficando a referência ocupando o seu verdadeiro papel de apoio para – Unidades Básicas de Saúde da Família – UBASF nos municípios de Fortaleza nos casos de difícil diagnóstico e controle.

### PE 54

EVOLUCIÓN COMPARADA DE EL PRODUCTO INTERIOR BRUTO Y LA INCIDENCIA DE HANSENIASIS EN LA SEGUNDA MITAD DEL SIGLO XX, EN ESPAÑA

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**Objetivo:** Determinar si el Producto Interior Bruto y la lepra presentan una asociación en su evolución, haciendo especial hincapié en el análisis por Comunidades Autónomas.

**Material y métodos:** El material ha sido el conjunto de anuarios del Instituto Nacional de Estadística de España, el Registro de Enfermedades de Declaración Obligatoria y el Registro Estatal de Lepra del Instituto de Salud Carlos III. Para la recogida de datos y presentación de resultados se ha utilizado el programa informático Excel y para el análisis estadístico el PSPS.

**Resultados:** Los datos han sido recogidos por provincias, comunidades autónomas y globales para España. Mostraremos los resultados correspondientes a las tasas anuales nacionales presentadas a intervalos de 5 años. La lepra se expresa como incidencia acumulada cada 5 años dado el impreciso periodo de incubación y la baja incidencia. Se ha encontrado una correlación de Pearson de 0,82. El valor de  $p$  es  $< 0,01$ .

**Discusión y Conclusiones:** La correlación encontrada entre ambas variables es significativa a más del 1%, y es de carácter inverso. Por tratarse de un es-

tudio ecológico, no podemos considerar la asociación como causal; así mismo es necesario considerar la posibilidad de sesgos y factores de confusión.

### PE 55

FATORES QUE INFLUENCIARAM A INADEQUAÇÃO DO DIAGNÓSTICO E DO ACOMPANHAMENTO DAS REAÇÕES EM PACIENTES COM HANSENIASE EM RONDÔNIA, BRASIL

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**Introdução:** Os episódios reacionais em hanseníase mantêm-se como um grande desafio para os PCH. Apesar de se conhecerem os aspectos clínicos das reações e sua relação com lesão neural, ainda persistem questões a respeito de sua epidemiologia, o que dificulta a definição de estratégias para o controle efetivo.

**Objetivo:** Caracterizar os fatores que influenciaram a inadequação do diagnóstico e acompanhamento dos pacientes com hanseníase com reações e que tiveram alteração ou não do grau de incapacidade.

**Métodos:** Estudo descritivo, operacional, baseado nos casos novos diagnosticados em 1997 em Rondônia e com alta por cura. Estudaram-se 684 casos, dados demográficos e informações sobre a evolução da doença, considerando início da PQT e alta. Realizou-se pesquisa em prontuários para avaliação da conduta e caracterização de reações. Para a entrevista foram selecionados pacientes com reações apenas após a alta e os com progressão do grau de incapacidade durante tratamento, com avaliação clínica. Foi avaliada a estrutura do PCH nos municípios selecionados.

**Resultados:** Apesar dos avanços gerais obtidos pelo PCH no Estado, mantêm-se as dificuldades da abordagem dos estados reacionais. Foram identificadas falhas em vários aspectos operacionais da conduta das reações. A caracterização desta situação no Estado reflete a predominância de casos novos classificados operacionalmente como PB. Identificou-se a centralização do PCH e a necessidade de articulação com o PACS e PSF. As entrevistas refletem a inadequação dos serviços e mostram a necessidade de trabalho articulado para o efetivo controle das reações.

**Conclusões:** Faz-se necessária a redefinição de prioridades no Estado incorporando a abordagem das reações como medida estratégica para se alcançar a atenção integral dos pacientes.

## PE 56

## GENDER ISSUES AND LEPROSY FROM THE SLUM OF DHAKA

(The effectiveness of female LCA and volunteers in increasing urban slum population)

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**Background:** Dhaka leprosy Control Project was initiated by the Leprosy Mission to improve the quality of life of the people residing in the city of Dhaka. It is a joint venture by the government of Bangladesh and the Leprosy Mission. The Leprosy Mission is working in half of the Dhaka city. This project was initiated in 1996 where 80% of the leprosy control assistants were male. Later on it was felt that the workers mainly the male workers were going under difficulty to enter into the houses as during their visits mainly the female portion of the population were in the house and the male were either working or roaming about. And we felt that female workers/volunteers should be recruited for smooth efficient and effective leprosy control activities.

**Observation:** The statistics of the years from 1996 to 2001 were observed and the following statistical reports were found regarding the achieved activities.

Description	1996	1997	1998	1999	2000	2001
Staff	15	15+6	15+6	15+8	15+7	14+8
Description	1996	1997	1998	1999	2000	2001
New patients diagnosis	209	481	809	1206	1293	1902
PB Male	57	143	322	434	510	765
PB female	93	212	324	492	493	862
MB male	37	77	91	190	188	170
MB Female	22	49	72	90	102	101
PB Child	21	55	149	221	172	304
MB Child	05	15	22	39	47	38
Disability Grade-I	15	55	37	56	75	55
Disability Grade-II	28	42	33	62	71	56
RFT	37	186	423	781	1186	1167
Case Deletion	16	34	123	179	303	192
Case Load	279	545	827	1109	964	1518
Credit Program						
Vocational training						
IGA						

**Result:** A differentiation was before and after 1997. And the results show clearly that percentage of diagnosis of new cases are quite high after 1997. This was due to the female 5-6 female volunteers, to make the balance of gender among the field workers. The increase in the per head of the new patients were some times 50-70% of the previous years. The disability rate came down from 12% to 5-6%. The involvement of the female in credit program are 70% and which has resulted much improvement in their family economy.

**Conclusion:** Inclusion of female worker in the control services of leprosy is critically important as it helps the group of workers easy access into the houses of the slum dwellers where female members of the family mainly in the houses. Involvement of

the female workers has resulted in per head diagnosis of new patients, decreased the disability rate, and increase in treatment compliance.

## PE 57

## GENDER, LEPROSY AND LEPROSY CONTROL: FOUR CASE STUDIES IN ACEH, INDONESIA; PLATEAU STATE, NIGERIA; FAR WEST AND EASTERN NEPAL; AND RIO DE JANEIRO STATE, BRAZIL

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This study was carried out in the four countries to identify to what extent *biological, sociocultural/economic* and *health service* factors played a role in gender differences in case finding of leprosy patients. The quantitative part of the study consisted of analysis of a cohort of at least 500 patients registered in 1994 and followed up till declared cured in ultimately 1998. Qualitative interviews and FGDs with patients, RFTs, relatives, community leaders and leprosy staff followed in 1998-99. The M/F ratio was 1.5 and 1.7 in Indonesia and Nepal but roughly 1 in both Nigeria and Brazil. Despite these differences, males in all four countries were more seriously affected than females with MB leprosy, deformities and reactions. Biological (hormonal) factors appear to protect women. Only in the Far Western Region of Nepal where services are rather inaccessible, both sexes were equally seriously affected. Where services had invested in decentralisation of treatment (Brazil, Indonesia) more women started reporting. Other service factors were sensitivity of staff in treating patients of opposite sex (80% F staff in Brazil; 75-80% M staff in the other countries), and adequate health education to community and patients', responding to their needs and stressing the strong points of MDT.

Mobility of men (financial and social) appeared in all four countries a positive factor in case finding, but women scored better in alertness to bodily signs. Yet, this not necessarily resulted in early case finding, because women opted sometimes for the 'wrong' healer: untrained private practitioner (Brazil), traditional healer (Nepal). In Aceh, where beliefs in traditional causes are strong, visits to *dukun* delayed men and women alike. In all four countries leprosy is a stigmatising disease at community and (less) family level, but predominantly in case of deformity and reactions. Involving well-coping, non-deformed leprosy patients in community education proved a powerful instrument in combating the stereotypes of leprosy and promoting early case finding.

**PE 58****GEOGRAPHICAL INFORMATION SYSTEMS AND LEPROSY CONTROL: USEFUL TOOL OR GIMMICK?**

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Concept and capabilities of Geographical Information Systems (GIS)

Significance in health care systems and (infectious) disease control, with special emphasis on leprosy control.

Review of the most important characteristics of some commonly used GIS software packages and GIS applications.

A GIS is a computer-based system for data input, data management, data manipulation and analysis, and display of all and any type of geo-referenced data.

Therefore, in leprosy control a GIS is a useful tool for planning and management (decision support); Epidemiology and surveillance; Education, persuasion and lobbying (advocacy); Complex analysis and research.

Software package	Strong features	Weak points	Use in leprosy
Idrisi	Raster based, Spatial analysis	Learning curve, Digitising	Analysis, Research
Ilwis	Raster based, Digitising, Modelling	Learning curve	Analysis, Research
MapInfo/ArcView	Vector based, Nice display, Easy to learn and use	Few analytical tools, little map algebra	Planning, Surveillance, Persuasion
Atlas GIS	?	?	?

GIS application	Strong features	Weak points	Use in leprosy
HealthMapper (ArcView and Access Database)	Interface Easy expansion with other programmes, Supported by WHO	Fixed set-up, Few analytical tools	Planning, Surveillance, Persuasion
PopMap/EpiMap	?	?	?

With the advent of Internet Mapping Servers (IMS) like ARCMS, it is now possible to have the data at a central server and the GIS data can be accessed, queried and printed over the internet on the local computer.

**PE 59****HANSENÍASE EM MUNICÍPIO DA GRANDE SÃO PAULO: CASOS AUTÓCTONES X CASOS IMPORTADOS**

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**Objetivo:** Demonstrar a prevalência e incidência de pacientes hansênicos num município da grande São Paulo- Itapevi - com população de 162.421 habitantes (IBGE 2000) com ênfase para os virchovianos, comparando os casos nativos (autóctones) e os “importados” e analisar sua influência sobre a população atual.

**Método:** Os autores examinaram 96 prontuários de pacientes matriculados no setor de hansenologia no município de Itapevi-SP num período de 6 anos, analisando fatores como: sexo, idade, naturalidade e procedência.

**Resultados:** Observou -se que 52 % dos casos são oriundos de outras localidades, em sua maioria de outros estados, sendo que 48 % são casos autóctones. O índice de prevalência para os autóctones no ano de 2000, quando o número total de casos era de 41, foi de 1,6: 10.000 Hab e para os “importados” 1,3: 10.000 Hab.

**Conclusões:** Considerando-se, e tendo como média de 5 anos o período de incubação para a hanseníase, traduzindo esta média talvez um período mais curto para o pólo T e mais longo para o pólo L, estamos mostrando, no município de Itapevi- SP, como a influência de imigrantes hansênicos, sobretudo os virchovianos, interfere nos coeficientes de incidência e prevalência da patologia, aumentando aqui os números absolutos e relativos e diminuindo estes na sua origem. Este fato também indica a eficácia dos nossos indicadores de detecção.

**PE 60****HANSENÍASE NA INFÂNCIA: ASPECTOS CLÍNICOS- EPIDEMIOLÓGICOS EM UMA ÁREA INDUSTRIAL**

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**Introdução:** O objetivo deste estudo é considerar de forma concisa os aspectos clínicos e epidemiológicos da hanseníase na infância na região do Grande ABC. As crianças parecem ser mais susceptíveis sendo que estas correm o risco pela presença de hanseníase pela família. Quase 60% dos adultos desenvolvem a moléstia na infância ou no início da idade adulta, portanto, relatos de longo período de incubação devem ser encarados com cautela, pois sinais físicos iniciais, podem ser discretos, além de que muitas lesões podem desaparecer espontaneamente.

**Casuística:** Foi realizado um estudo transversal retrospectivo, de casos de hanseníase na infância, abrangendo doentes de 0 a 14 anos, através da análise das notificações compulsórias e prontuários médicos arquivados no Centro de Vigilância Epidemiológica e Postos de Saúde credenciados nos municípios da região do Grande ABC, no período de janeiro de 1990 a 1999.

**Resultados e discussão:** Nesse período, foram registrados um total de 571 casos novos de hanseníase, sendo que destes, 35 correspondiam a crianças de 0 a 14 anos. Notou-se que no período de 1990 a 1997, a hanseníase infantil permaneceu com uma incidência estável e após 1997, houve um aumento significativo do número de crianças acometidas, correspondendo à perda do poderio econômico da região, caracterizando assim a correspondência de hanseníase e pobreza.

### PE 61

#### HANSENÍASE NA INFÂNCIA E ADOLESCÊNCIA

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Foram revisados 308 prontuários de comunicantes e doentes do dispensário de hansenologia de uma Unidade Básica de Saúde do município de Itapevi no período de 5 anos (1997 à 2001), constatando-se o diagnóstico de 94 casos de pacientes com Hanseníase distribuídos nas formas paucibacilares e multibacilares. Deste total, 16 eram crianças e adolescentes, constituindo elas 17% do total dos casos. Dos 214 comunicantes, 110 eram menores de 18 anos. Dos 16 menores hansenicos, 60% apresentavam pelo menos contato com um familiar portador da patologia, geralmente multibacilar. 32% destes menores receberam duas doses de BCG id e desenvolveram, mesmo assim, Hanseníase; porém sempre foram de formas paucibacilares. Conclusões: A) Hanseníase abaixo dos 18 anos é problema de saúde pública grave. Segundo nossa casuística, 17% do total de nossos pacientes estão neste grupo etário. B) Destes 16 pacientes com MH, os que receberam duas doses de BCG (5 pacientes), sempre foram paucibacilares. C) A prevalência e a incidência da patologia neste grupo etário obriga a ações mais enérgicas de controle, já que são comunicantes de comunidades "fechadas" (a família), permitindo-se, assim, maior contágio. Ressalta-se que 51% do total de comunicantes são menores de 18 anos.

### PE 62

#### HANSENÍASE NA INFÂNCIA

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De um total de 878 casos novos detectados pelo serviço no ano de 2001, 78 (8,8%) pertenciam à faixa etária de menores de 18 anos. Destes casos, 3 (0,3%) tinham 5 anos ou menos, 19 (2,1%) tinham 10 anos ou menos; e 64 (7,2%) tinham 15 anos ou menos. Quanto ao sexo, 47 (57,3%) eram masculinos; e 35 (42,7%) eram femininos. No que se refere às formas clínicas, 2 (2,4%) eram indeterminadas (I); 37 (45%) eram tuberculóides (T); 34 (41%) eram dimorfas (D); 8 (9,8%) eram virchowianas (V); e 1 (1,2%) foi não especificado. De acordo com a classificação operacional, 89 (47,6%) eram paucibacilares e 43 (52,4%) eram multibacilares, sendo 22 (26,8%) portadores de baciloscopia positiva, 58 (70,7%) portadores de baciloscopia negativa e 2 (2,4%) com baciloscopia não especificada. Quanto ao grau de incapacidade física, 67 (81,7%) tinham grau zero; 8 (9,8%) tinham grau I e 7 (8,5%) tinham grau II ao início do tratamento.

### PE 63

#### HANSENÍASE NO RIO GRANDE DO NORTE – UMA ENDEMIAS OCULTA?

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Criou-se um banco de dados com informações sobre 2.799 casos de hanseníase, notificados no Rio Grande do Norte entre 1928 e 2000. As informações dos casos registrados foram conferidas pelas suas respectivas unidades de tratamento. Ao mesmo tempo, as medidas de controle da endemia no Estado foram estudadas através de livros históricos, documentos arquivados na Secretaria Estadual de Saúde e de entrevistas com os 6 coordenadores do Programa no período de 1977 e 2000. Neste trabalho apresenta-se a série histórica da detecção de casos novos nos últimos 20 anos e comparam-se estes resultados com a detecção registrada para o país no mesmo período. O trabalho demonstrou que os coeficientes anuais de detecção registrados no Estado mantêm íntima relação com o desenvolvimento de atividades mínimas de controle da endemia. Destacam-se quatro picos importantes registrados em 1984, 1988, 1992 e 1997; nestes anos o incremento observado para este coeficiente foi respectivamente de 57%, 65%, 31% e 52% em relação aos anos anteriores; enquanto para o país o incremento no coeficiente de detecção registrado nestes anos foi de -4%, 30%, 12% e 9%. Destaca-se que no Rio Grande do Norte, após os picos observa-

dos a detecção de casos novos não cai para os níveis dos anos anteriores às intervenções, mostrando que os serviços implantados e os profissionais treinados permanecem contribuindo para o aumento da detecção nos anos posteriores. Apesar do Estado apresentar coeficientes de detecção da hanseníase ainda considerados médios pelos parâmetros do Ministério da Saúde, este trabalho aponta para uma situação preocupante com relação ao controle da doença no Rio Grande do Norte, uma vez que o rápido e contínuo aumento na detecção de casos de hanseníase, nitidamente dependentes da implantação de atividades de controle, pode apontar para a existência de um importante reservatório de casos ainda sem diagnóstico (endemia oculta).

### PE 64

#### HANSENÍASE: REAÇÃO REVERSA X FORMA CLÍNICA

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Em um total de 341 pacientes que deram entrada, como casos novos, no primeiro semestre de 2001, tivemos 77 (22,5 %) com reação reversa. Destes, 23 (29,9 %) apresentavam somente reação cutânea e 54 (70,1 %) manifestavam somente reação neural. Com relação às formas clínicas predominantes tivemos: 5 pacientes (6,4 %) da forma tuberculóide (T); 50 (65 %) da forma dimorfa (D); 19 (24,6 %) da forma virchowiana (V) e 3 casos (4 %) sem forma clínica especificada. Vale ressaltar a maior predominância de formas neurais reacionais, principalmente nos casos dimorfos, como descrito a seguir: (T) – 40 % cutâneas e 60 % neurais; (D) – 24 % cutâneas e 76 % neurais; (V) – 57 % cutâneas e 43 % neurais.

### PE 65

#### HANSENÍASE. INCAPACIDADES FÍSICAS APÓS PQT, NO PERÍODO DE 1994 A 1998 EM TERESINA – PIAUÍ

Ana Lúcia França da Costa

A hanseníase, doença crônica que acomete pele e nervos periféricos, é um dos mais antigos males da humanidade. As deformidades que causa são responsáveis por estigmas e tabus que ainda hoje persistem. A contribuição da poliquimioterapia (PQT) na diminuição da prevalência da doença no mundo é aceita por todos especialistas na área. Mas, qual a situação dos pacientes que receberam alta após tratamento com poliquimioterapia em relação às inca-

pacidades físicas? Neste estudo procurou-se investigar a prevalência e a evolução dessas incapacidades em pacientes com hanseníase, que receberam PQT, no período de 1994 a 1998, em Teresina, Piauí, Brasil. Por meio de amostragem probabilística sistemática, constituiu-se uma amostra de 617 desses pacientes. Nesta foi aplicada um inquérito de morbidade em duas etapas: teste de rastreamento e subsequentemente avaliação clínica de incapacidade. A amostra final foi de 319 pessoas, sendo 161 do sexo masculino e 158, do feminino. As idades variavam de 6 a 94 anos, com idade média de 43, 19 anos. De 135 pacientes avaliados segundo o grau de incapacidade (OMS/1988), 30,4% apresentaram incapacidade. Destes, 63,4% pacientes tinham grau 1 e 36,5%, grau 2. De 17 pacientes, que apresentavam grau 0 no momento do diagnóstico, 88,2% evoluíram: 70,5% para grau 1 e 29,5% para grau 2. De 15 pacientes que tinham grau 1 no diagnóstico, 73,3% mantiveram-se no grau 1 e 26,7% evoluíram para o grau 2. Finalmente, de 8 pacientes que apresentaram grau 2 ou 3 no diagnóstico, 25% regrediram para grau 1 e 75% mantiveram a graduação anterior. O tempo médio (em anos) de evolução desde o diagnóstico até a avaliação atual (1994 – 2001) foi de 4,32 anos, com período máximo de 9,79 e mínimo de 2,08 anos. A prevalência de incapacidades físicas em pacientes com hanseníase após tratamento com PQT, foi de 12,8%. Houve agravamento do grau de incapacidades em 28,8% dos pacientes examinados. Os idosos, os homens, e os pacientes multibacilares apresentarem maior risco para o desenvolvimento de incapacidades.

### PE 66

#### I L E P - O R G A N I S A T I O N S S H O U L D S T R I V E F O R H I G H B C G C O V E R A G E I N T H E C O M M U N I T I E S U N D E R T H E I R C A R E

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A single BCG vaccination at birth or in the 1<sup>st</sup> year of life provides partial protection against leprosy. Nine case-control studies showed a vaccine efficacy of 20% to 81%, median 60%. It is reasonable to think that these studies underestimated the true effect since in some children the BCG scar does not persist. A prospective study and 3 randomised community trials showed efficacies of 36% to 80%, median 47%. Studies from India showed 20%, 42% and 60%. The duration of this protection is at least 10 to 15 years. Some studies suggest that BCG results in a shift from lepromatous to tuberculous forms of leprosy. BCG coverage is better than 80% in most countries in Asia but lower in Africa. Coverage in local communities may be much lower than the national average.

Systematic vaccination of all newborns will reduce the child ratio but will not noticeably reduce the NCDR. Repeated vaccination and vaccination at older ages would have more impact on NCDRs but is contraindicated in persons infected with HIV and may precipitate clinical disease in those infected with *M. Leprae*. A special programme would be needed for vaccination at older ages, while BCG-vaccination at birth is a standard component of the MCH services in most countries.

Ilep organisations should monitor BCG-coverage and advocate for provision of standard MCH services in all communities in which they are involved thus reducing the risk of leprosy for children up to 10-15 years of age.

### PE 67

#### IMPLEMENTAÇÃO DA POLIQUIMIOTERAPIA NAS RESERVAS INDÍGENAS DE DOURADOS E BRASILÂNDIA-MS

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Trabalho realizado nas Aldeias Bororó e Jaguapirú, da Reserva Indígena de Dourados-MS e na Aldeia Ofaié-Xavante, no município de Brasilândia-MS.

O objetivo principal deste trabalho foi o de implementar a PQT nas Reservas Indígenas de Dourados e Brasilândia-MS. Muitos fatores contribuem para o limitado acesso das comunidades indígenas aos serviços de saúde: dificuldades causadas pela localização geográfica, problemas culturais, sociais e carência de profissionais de saúde treinados para suspeitar de casos novos de Hanseníase em seu meio. A estratégia foi a de treinar agentes de saúde indígenas, da FUNASA, professores indígenas, auxiliares de enfermagem dos programas locais, para atuarem na detecção precoce de casos novos e na administração da PQT nos casos confirmados mediante avaliação médica, realizada através de mutirões de atendimento médico. Foram treinados na Reserva Indígena de Dourados-MS: 10 Agentes Comunitários Indígenas de Saúde, 01 agente de saúde da FUNASA, 02 enfermeiras do PSF Indígena, 01 estagiária de enfermagem, 01 coordenador pedagógico da Escola Indígena Jaguapirú, 10 professores indígenas de 5 Escolas Indígenas locais. Ao todo foram 25 pessoas treinadas nesta Reserva. Na Reserva Indígena de Brasilândia foram treinados: 04 agentes de saúde da FUNASA, 03 servidores do Programa de Hanseníase

local, 01 funcionária da Secretaria Municipal de Saúde local, 02 Agentes Comunitários de Saúde, 02 lideranças indígenas da Aldeia Ofaié-Xavante, ao todo 12 pessoas treinadas. Foram detectados 1 caso da forma clínica tuberculóide na Reserva Indígena de Dourados-MS (Incidência de 1,4/10.000hab.) e 3 casos da forma clínica indeterminada na Reserva Indígena de Brasilândia-MS (Incidência de 576,9/10.000 hab.)

### PE 68

#### IMPORTANCE OF CONTACT CHECKING FOR CASE FINDING OF LEPROSY IN A LOW ENDEMIC SITUATION

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**Introduction:** Contact checking is the only active case finding method used by most of the Leprosy Control programmes. However, there is no definite guideline for how long contact survey should be continued. Damien Foundation Bangladesh follows the strategy to check the household contacts of smear positive cases once in a year for 5 years and for other cases only once. The question arose whether 5 years contact checking is necessary?

**Material and methods:** The results of the annual examination of household contacts of smear positive patients detected in 1995 in the greater Mymensingh district have been analyzed retrospectively. Out of 135 smear positive patients, the contacts of 129 cases could be examined for 5 successive years. Among these 129 cases, 86 had a Bacillary Index (BI) of 4+ or more.

**Results:** The data show that a total of 5,518 contact examinations were done in 5 years. The mean case detection rate among contacts was 87/10,000 population per year, with a maximum of 202 in 1st year and 134, 130, 21 and 54 respectively in the following years. The case detection rate was in average five times higher among the contacts of cases with a BI of 4+ or more, compared to those of smear positive cases with a BI of 3+ or less.

The case detection rate was 0.22/10,000 only in the general population in 1995.

**Conclusions:** The above data show the usefulness of the regular examination of contacts of smear positive leprosy patients. Although incidence seems to decrease over time, it remains high even 4 years after the diagnosis of the index case. Since it is not possible to extend the period of active contact examina-

tion indefinitely, it is extremely important to take benefit of these examinations to increase awareness on the early signs of leprosy among the contact population.

### PE 69

INCIDÊNCIA E PREVALÊNCIA DE HANSENÍASE NA CIDADE DE ARACAJU, NO ANO DE 1999

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Considerando a situação epidemiológica da hanseníase no mundo e considerando a inexistência de dados coletados e tratados em relação a casos novos e antigos de hanseníase no município de Aracaju-SE, este trabalho propôs conhecer o perfil de incidência e prevalência da referida patologia neste município, no ano de 1999. Para isso, adotamos os parâmetros: sexo, faixa etária e forma clínica predominante no diagnóstico. As fontes de informações foram os prontuários de pacientes cadastrados no Programa Estadual de Controle da Hanseníase e dados do Laboratório de Referência de Micobactérias do Instituto Parreiras Hortas (Lacen-SE). O método utilizado foi o quantitativo, ao qual aplicamos o teste estatístico do qui-quadrado ( $\chi^2$ ) para responder às seguintes hipóteses formuladas: A ocorrência das formas clínicas da hanseníase não está associada ao sexo; As formas clínicas de hanseníase ocorrem independentemente do local onde as pessoas moram; Não há associação entre a idade e as formas clínicas de hanseníase. Escolhemos o teste qui-quadrado ( $\chi^2$ ) pela possibilidade de verificar a significância dos afastamentos entre as frequências observadas nas amostras e as frequências esperadas se as hipóteses nulas fossem verdadeiras, e porque nos interessava verificar a proporção de indivíduos com o atributo hanseníase em uma dada população. Concluímos que não existe associação quanto a incidência e prevalência da doença em relação às formas clínicas, sexo e faixa etária na amostra analisada

### PE 70

INFLUENCE OF MULTIDRUG THERAPY ON SMEAR POSITIVE CASES IN TALUKA PANVEL

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Panvel Taluka has its unique features, such as surrounded by costal and hilly area where the residents are uneducated, in low socio-economic group of tribal and fishermen community and generally meals among them are out of homes six months in year to earn their livelihood. At the other hand there are several developed and developing big industrial packets in same Taluka, where residents around are highly educated, economically well settled but under the influence of constant influx of semi and unskilled persons.

MDT was initiated in Panvel Taluka in 1990. The comparison of newly detected cases in pre and post MDT era in centres different regional and population set up was made. During last 5 years (1988-1992), total 1597 new cases (234 MB and 1363 PB) registered by conventional methods of SET. The analysis showed that there is a no change in child rate, deformity rate and smear positive cases rate in newly detected cases in pre and post MDT era but bacterial quantum based on B.I. of smear positive cases (n=166) reduced considerably after MDT and brought to the negligible state irrespective of regional and population variation. It is further noticed that the results are more impressive in area of educated and stable population.

### PE 71

INTEGRATING DATA FROM HEALTH INFORMATION SYSTEM

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Vera Andrade – WHO

Epidemiological surveillance in leprosy is based in the evaluation and monitoring of the activities of the Brazilian program. It includes epidemiological and operational indicators constructed from data of the National System of Notifiable Diseases (SINAN) collected at the local level. Analysis of these indicators are used to the understanding of the epidemiological pattern of the endemic and also to subsidize managerial interventions in the Leprosy Control Program. The information related to the indicators by each state of the federation, which represents the foundations of the control, are analyzed from tabulations of aggregate data that are discussed in the text. In practical terms, there is not yet basic information such as the number of leprosy patients assisted by the SUS/MS, as well as the financial expenditure on these patients by the Federal Government. Taking into consideration that the Notification Form is the

only source of information existing today, it is observed some limitation regarding the type, quality and analysis of these data, making it difficult to know the concrete situation of the endemic in the country.

The aim of this study is to stress the importance of information related to medical services (SIA/SUS, SIAB, SIH/SUS and SIM) as a contribution to the epidemiological surveillance of leprosy. It is discussed also the need for updating data from health services to attain a systematic situational diagnosis, with periodical evaluation and patronization in order to reorient decisions at the local level.

### PE 72

#### INTEGRATION OF LEPROSY IN GENERAL HEALTH SYSTEM IN BIHAR

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Prevalence rate of leprosy in Bihar was 29 and 15 in June 1998 and 2000 respectively. At present 29% of caseload of India is from Bihar. National Leprosy Eradication Programme in Bihar State was carried out by vertical staff only till 1998. After detection of 2,05,569 new cases in MLEC-I during 1998 and 1,11,609 new cases from on going activities, on conclusion of State level conference of Civil Surgeons and District Leprosy Officers for strengthening NLEP, Govt. of Bihar issued instructions for one day weekly leprosy clinic at all Health facilities on Tuesday and Drug distribution by General Health staff at DDP. (5000 Population) where vertical staff is not posted to ensure treatment compliance of all leprosy cases under treatment.

Keeping in view W.B assistance till March 2004 and good number of cases detected by on going regular performance and campaigns, Govt. of Bihar decided and issued orders in August 2001 to integrate leprosy work in General Health system (defining the work of each category of General Health and NLEP workers). Leprosy patients to be examined and treated at all health facilities on all working days in OPD and follow up treatment to continue through near by HSC on fixed day every week.

So far 22 districts are having Damien Foundation India Trust Support team. Out of these 22 districts 33.48% of Health facilities and 31.12% of HSCs have been integrated for leprosy work till December 2001 and complete integration of all health facilities and HSCs is expected by 2003.

### PE 73

#### INTEGRATION OF LEPROSY SERVICES: EPIDEMIOLOGICAL IMPACT AFTER A YEAR OF ACTIVITY

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Leprosy integration into the general health services was completed in February 2001 and is already starting to bear fruit, but implementing the necessary changes has been a challenging task. Many new procedures had to be established, logistics improved, attitudes changed and health workers trained. A broad bridge between curative and preventive health services had to be built. Integration efforts were supported by an advertising campaign to inform people that leprosy, like any other illness, can be treated at all health facilities.

Contrary to the expectation that quality of service would drop following integration, more cases are now detected and an extensive network of government doctors is able to diagnose, treat and manage leprosy patients more efficiently. The new case load rate has increased from 0.89/10,000 inhabitants in 2000 (1700 new cases) to 1.2 /10,000 in 2001 (2398). The prevalence has increased from 1,158 in 2000 (0.6/10,000 inhabitants) to 1,583 (0.8 per 10,000 inhabitants). These figures have been corrected for about 5 % of re-registration. Almost every district has registered an increase of case detection, though it was more significant in low endemic areas.

A few areas still need more attention, such as integrating MDT supplies within existing systems as well as improving the flow of information. The paper will focus primarily on the epidemiological impact of integration, experience with the flow of information and future plans to further simplify the system.

Integration has definitely brought treatment closer to patients throughout the country, and is paving the way for the sustainable elimination of leprosy.

### PE 74

#### LA LEPRO EN CIUDAD DE LA HABANA, CUBA AÑO 1997-2001

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Se analiza la situación de la endemia de la lepra en Ciudad de la Habana, capital del país. Donde la detección de casos nuevos en el último lustro 1977-2001, ha ido descendiendo, como promedio se detectaron 48 casos nuevos en los primeros 5 años y 27 en los últimos cinco. La ciudad tiene una población de 2181395 hbtos, distribuidos en 15 municipios, siendo la Región Sur, (Arroyo Naranjo, 10 de Octubre y Boyeros) la de mayor detección y la Este (Cotorro) la más baja.

Finalizando 2001 con 34 enfermos y una tasa de prevalencia  $0,2 \times 10^4$  habitantes, se reduce la tasa de 1993 en 4 puntos.

Las acciones del programa de control están descentralizadas e integradas en la Atención Primaria de Salud (APS), los enfermos y población en vigilancia son atendidos por médico y enfermera de la Familia, alcanzando a examinarse el 80.1% de la población total de riesgo.

En las estrategias actuales, Post eliminación hay sostenibilidad de las acciones, dirigidas fundamentalmente a la capacitación y desarrollo de recursos humanos (APS) y fortalecimiento del componente educativo del programa para lograr incrementar el diagnóstico precoz y la interrupción de la transmisión como objetivo final.

### PE 75

#### LEPRA EN GUINEA ECUATORIAL. SITUACIÓN EPIDEMIOLÓGICA 1999-2001

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Tras tres años de trabajo colaborando con el Ministerio de Sanidad y Bienestar Social de Guinea Ecuatorial, se consigue un Censo de casos nuevos, en tratamiento y enfermos discapacitados. Se realiza una valoración por Distritos, tanto en la zona continental como en la zona insular, reflejando las características epidemiológica de los pacientes.

Se realiza una valoración comparativa con Censo de años anteriores.

Se recogen las principales características de los enfermos discapacitados, para lo cual se realiza una exploración neurológica simplificada.

### PE 76

#### LEPROSY ELIMINATION PROGRAM: EPIDEMIOLOGICAL TREND IN EAST KALIMANTAN

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**Objective:** to study the epidemiological trend of leprosy in East Kalimantan province from 1990 to 2000.

**Material and Method:** data were obtained from compilation of regular quarterly reports in line to the operational definition of WHO.

**Result:** a total of 1254 cases detected during 1990 to 2000, in which 152 cases of them were children, accounting for 12.12% of all cases. For disability grade-2 of the WHO grading system, there were 230 of cases detected (18.34). For the clinical classification, 891 were MB (71.05%) and 363 were PB (28.95%). About 56.70% of cases were found through active case finding. At the end of the year 2000, the prevalence rate was 0.86 per 10000 with case detection rate of 5.54 per 100000 populations. The peak of prevalence (3.61 per 10000 population) was occurred in 1992 then decreased annually till 0.73 per 10000 populations in 1998 and then slightly increased (1.04 per 10000 populations) in 1999. Meanwhile, the peak of detection was occurred in 1992 (9.93 per 10000 populations), then decreased till at the lowest level (2.32 per 100000 population) in 1995. In 1996, the detection tends to increase and reach the second peak at 1999 (6.88 per 100000).

**Conclusion:** this study figured out that leprosy control in East Kalimantan province WHO target of elimination by year 2000 at provincial level, but at district level, there was uneven distribution. There were 5 of 12 district did not reach the target. The special effort should be addressed to reach elimination status at every district.

### PE 77

#### LEPROSY ENDEMY CHARACTERIZATION IN UBERLÂNDIA-MINAS GERAIS, BRAZIL, 1996-2000

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Aiming to eliminate leprosy as a public health problem in Brazil until 2005, the SUS (Unique Health System) in each city, with the purpose of decentralization of leprosy's control actions, has the necessity of knowing the aggravation through operational and epidemiological indicators and prevalence estimates undetected, in order to plan new strategies and evaluate their results, respecting local and regional realities. To characterize the leprosy endemy and estimate the occult prevalence in Uberlândia, a retrospective analytic study was realized with a survey of 613 leprosy patient's records during the period from January, 1996 to December, 2000, by SINAN (Complaint's System of Information and Notification).

The results showed an occult prevalence estimative of 146 cases until 2000, increasing the official prevalence from 4,47/10.000 inhabitants to a real prevalence rate of 7,39/10.000 inhabitants. The sanitary districts with higher occult prevalence estimative also demonstrated an increase of the detection coefficient in people under 15 years old and coincided with those areas where predominated the old disease focus. With an identification of priority areas, technical and operational factors were listed as factors which prevent the leprosy control. Therefore, it's craved to touch the SUS managers in the city, in the direction of proposing a health policy which prioritizes the quality of assistance and its hierarchy by a resolute capacity consolidated in the health professional's competence and in the development of articulation and society mobilization mechanisms to eliminate leprosy until 2005.

### PE 78

LEPROSY IN CHILDREN - A RETROSPECTIVE STUDY OF CHILD CASES DETECTED IN NORTH EASTERN SUBURBS OF GREATER MUMBAI FROM 1995 - 2001

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Early detection of large number of child leprosy cases is one of the significant indicators of the continued presence of leprosy infection in a given geographical region. This study is based on the data of child leprosy cases detected over a five year period (1995 to 2001) at ALERT-INDIA's urban leprosy control projects in North Eastern suburbs of Mumbai.

The cases were studied from the epidemiological and clinical aspects as well. Case detection was initially done through School Surveys and Mass Surveys. As high as 36% were child leprosy cases. Follow-up ex-

amination of the family contacts of these children revealed that sizeable number of them were members of multiple leprosy case families.

Critical analysis of the data confirms the persistence of the chain of transmission as a primary factor leading to the appearance of new cases in the community.

### PE 79

LEPROSY SITUATION IN ENDEMIC STATES OF INDIA AT THE THRESHOLD OF ELIMINATION

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Although there is no reduction of NCDR in India, there is a significant reduction observed in two endemic states of Andhra Pradesh and Tamil Nadu. The ratio of PR and NCDR is declining and reveals at the elimination could be reached even when NCDR is at the higher level i.e. 4 to 5 per 10000 population with SSL proportion among new cases above 50%.

The significant number of cases detected in Bihar and Orissa during MLEC reveals that the lacunae in operational activities of new detection would result in a large number of undetected cases in the community. The voluntary reporting hovering about one – third only. This underscores the need for relying on active case detection for breaking the transmission, so has to achieve sustained elimination of leprosy.

The influence of socio-economic factor on continued occurrence of leprosy could not be ruled out. One of the reasons for the failure of models that projected the decline of leprosy by 2000 A.D. could be due to exclusion of economic status and health care seeking status as contributory factors.

The operation efficiency should be ensured by complementing NLEP with Health Management Information System (HMIS) at State/National level (Macro) and at selected district level (Micro) to gain in-depth knowledge of leprosy parameters especially on double entry / recycling of case.

In view of this situation, NLEP should adopt a more realistic approach for declaring the attainment of elimination level.

### PE 80

NEMATÓIDES INTESTINAIS: AUMENTO DO RISCO PARA HANSENÍASE MULTIBACILAR?

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**Introdução:** Os nematóides intestinais induzem uma imunomodulação no hospedeiro caracterizada por predomínio da ativação de células Th2 e redução de algumas atividades das células Th1, o que pode interferir no curso de outras doenças, como na hanseníase, que para evolução benigna depende do estímulo da resposta Th1.

**Objetivos:** Estudo caso-controle para verificar a presença de nematóides intestinais em pacientes portadores de hanseníase atendidos em um centro de saúde.

**Pacientes e métodos:** Revisão de prontuários de 477 pacientes portadores de hanseníase com anotação de um resultado de exame parasitológico de fezes. Como controles: prontuários de 470 pacientes atendidos no mesmo posto, período e faixa etária, sem hanseníase, e com um resultado de exame parasitológico de fezes.

**Resultados:** A frequência de nematóides intestinais foi maior nos pacientes com hanseníase do que nos controles, porém a diferença estatisticamente significativa foi quando comparamos as formas multibacilares com as paucibacilares e os controles.

**Conclusões:** Os resultados sugerem uma associação significativa entre a presença de nematóides intestinais e as formas multibacilares da hanseníase, talvez possibilitando uma imunomodulação exercida pelos parasitas intestinais, favorecendo a progressão da hanseníase para as formas multibacilares.

### PE 81

NON-CONDITIONAL LOGISTIC REGRESSION ANALYSIS OF RISK FACTORS ON DISABILITIES OF LEPROSY

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**Objective** Analysis of factors impacting on the disability of leprosy and provide the scientific basis for formulating the preventive strategies.

**Methods** Based upon the individual records of the living leprosy cases were collected by local leprosy workers of Liaoning, using non-conditional logistic regression analysis model to analysis effective factors on disability of leprosy.

**Results** the results of single factor non-conditional logistic regression analysis are: leprosy type, marriage, education, native place, standard of living, the reaction. The results of multiple factor non-

conditional logistic regression analysis are: native place, standard of living, the reaction, leprosy type.

**Conclusion** the reaction, leprosy type, native place, standard of living, can significantly effect the disability of leprosy. It is very effective to prevent the disability of leprosy through controlling the reaction, treating the patient in time, made their life rich and increasing the standard of living to made economical rehabilitation.

**[Key words]** Leprosy Disability non-conditional logistic regression analysis

### PE 82

PERFIL DA HANSENÍASE EM ALFENAS (MG)

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Os autores apresentam um estudo retrospectivo de 100 pacientes ingressos no Serviço de Hanseníase da S.M.S. de Alfenas (MG) no período de outubro de 1997 a maio de 2001. Tal estudo mostra a característica da hanseníase nesta região do estado de Minas Gerais, tais como incidência de homens 58% sobre 42% de mulheres e adultos 96% sobre 4% de crianças menores de 15 anos de idade. Nosso estudo mostra também outros dados epidemiológicos como a média baciloscópica, exames complementares, esquemas terapêuticos empregados e reações como eritema nodoso e neurite.

**Motivo da Apresentação:** Demonstração de que pequenos serviços públicos, com grandes esforços, estão fazendo para a eliminação da hanseníase em Minas Gerais.

### PE 83

PERFIL DO DOENTE DE HANSENÍASE NO MUNICÍPIO DE JOÃO PESSOA - PB

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O presente trabalho descreve um estudo exploratório descritivo com abordagem quantitativa, realizado em João Pessoa, entre Abril e Maio de 2000, com o objetivo de traçar o perfil do doente de Hanseníase no município estudado. A amostra foi coletada a partir de 101 prontuários de caso notificados em pacientes no ano 1999, no Hospital Clementino Fraga. O estudo evidenciou que no município estudado os homens adoecem mais de Hanseníase do que as mulheres, com uma percentagem de 54% e 46% respectivamente,

atingindo mais os casados com 54% e em seguida os solteiros com 41%; já os viúvos com 5%. Considerando o parâmetro grau de instrução, verificou-se que 50% dos pacientes da amostra estudada, possuíam o nível fundamental, bem como, com relação a faixa etária, os resultados revelam um índice altíssimo na população entre 25 e 60 anos com mais de 60% dos casos. Quanto aos bairros mais atingidos, a relação com a doença pesquisada é equitativa, a exceção dos bairros do Cristo Redentor, Mangabeira e Centro.

### PE 84

#### PERFIL EPIDEMIOLÓGICO DA HANSENÍASE

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Em um total de 878 casos novos detectados pelo serviço em 2001, 82 (8,8 %) tinham menos de 18 anos; 305 (34,7 %) tinham entre 18 e 38 anos; 377 (42,9 %) tinham entre 39 e 65 anos; e 114 (13,6 %) tinham mais de 65 anos de idade. Quanto à forma clínica, 41 (4,6 %) eram indeterminadas (I); 234 (26,6 %) eram tuberculóides (T); 452 (51,4 %) eram dimorfás (D); 148 (16,8 %) eram virchowianas (V); e 3 (0,3 %) não especificadas. Quanto ao grau de incapacidade, 452 (51,5 %) tinham grau zero; 151 (17,2%) tinham grau I; 47 (5,4 %) tinham grau II; e 228 (26 %) tinham grau de incapacidade física não-avaliado. Quanto à baciloscopia, 345 (39,3 %) foram positivos; 500 (57 %) foram negativos; e 33 (3,7 %) foram não especificados

### PE 85

#### PERFIL EPIDEMIOLÓGICO DA HANSENÍASE NO MUNICÍPIO DE TAUBATÉ – SP NO ANO DE 1999

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O Brasil ocupa o segundo lugar do mundo em número absoluto de casos de Hanseníase. Em reunião promovida pela O.M.S., em 1999, o Brasil assumiu novo compromisso de reduzir os coeficientes de prevalência a níveis inferiores a um paciente em cada 10000 habitantes até o final de 2005.

Avaliou-se, retrospectivamente, a situação epidemiológica e operacional do controle da Hanseníase no Município de Taubaté – SP no ano de 1999.

Detectou-se coeficiente médio de prevalência (3,24 / 10000 habitantes) e alto coeficiente de detecção anual de casos novos para o ano de 1999 (1,27 / 10000 habitantes). Cerca de 83,50% eram formas multibacilares e o esquema terapêutico predominante foi o da Poliquimioterapia em 80,03% dos pacientes. Dos que receberam alta por cura e foram avaliados quanto à incapacidade, 20,83% apresentaram graus II e III da mesma.

É proposto o atendimento pelas U.B.S., por estarem mais próximas da comunidade, oferecendo oportunidade de diagnóstico precoce e tratamento para todos os doentes. Encaminhamento a serviços de nível secundário e terciário seria feito para detecção diagnóstica mais apurada e na ocorrência de complicações.

### PE 86

#### PRELIMINARY STUDY OF LEPROSY AMONG BRAZILIAN JAPANESE ORIGIN PEOPLE, IN SÃO PAULO, PARANA (BRASIL) AND LEPROSY RESEARCH CENTER (NIID) – JAPAN

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In the 90's decade, the emigration of Brazilian of Japanese origin people to Japan, in order to work, has been in large number, netting 250,000 persons in the year 2000. It is a question of some concern, considering that Brazil is a leprosy high endemic country and Japan is considered a residual endemic country of leprosy. According to the Leprosy Research Center data, 56 new cases were diagnosed in Japan among Japanese people since 1993 up to 2000, including Okinawa Islands. In the same period of time, 75 new cases were detected among foreign persons and among them 33 were Brazilians. In Japan the notification is made without case identification, so it is impossible to find out if these cases are also in Brazilian Files. In order to measure the actual magnitude of the leprosy among the Brazilian people of Japanese origin in Brazil, a search was performed in São Paulo and Paraná States. These two states probably have the most of Japanese origin people living and may provide the most of emigrants to Japan, also. In the São Paulo State Surveillance System, three different files were searched, to cover the period since 1982 up to 2000 (19 years). Those informations are not easily accessible and it demanded a lot of manual work. After all, 578 notified cases were founded and 533 of them were new cases. An annual notified average of 28.05 new cases. The clinical

classification was: 118 indeterminate, 147 tuberculoid, 68 borderline, 140 lepromatous and 60 none classified. The information of Paraná State was accessed using the SINAN –DOS data file, which has 202 cases recorded since 1954 up to 2000. The clinical classification was: 38 indeterminate, 65 tuberculoid, 26 borderline, 71 lepromatous and 2 non classified. The coefficients were not calculated because the data about the number of Japanese descendents is not reliable. More details of this study will be presented during the Congress. The authors intend to continue with the search in order to know more about the transmission among these people in spite of the low number of cases (less than 1% of the total files researched). The problem exists and it seems to be worthy of more studies.

[**Key words**] – leprosy, surveillance system

### PE 87

#### PREVALÊNCIA OCULTA DA HANSENÍASE NA DIRETORIA DE SAÚDE DE BELO HORIZONTE

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Esta investigação teve como objetivo analisar a prevalência da hanseníase na Diretoria Regional de Saúde de Belo Horizonte (DRS-BH), no período de 1995 a 1999. Trata-se de estudo epidemiológico, descritivo, que utilizou dados das fichas de notificação dos casos residentes na DRS-BH. As taxas de prevalência e detecção tem sofrido queda nos últimos anos, o que poderia significar uma tendência declinante da doença; entretanto, deve-se analisar se não se trata de problemas operacionais na detecção de casos novos, já que observamos que há uma prevalência oculta da hanseníase nos municípios da DRS-BH, sendo significativa em Belo Horizonte, Betim, Contagem e Santa Luzia; com estimativa, nos últimos 5 anos, de 247, 105, 82 e 58 casos, respectivamente. Os 492 casos que deixaram de ser diagnosticados são responsáveis por 82% da prevalência oculta da DRS-BH. O alto percentual de casos notificados com grau de incapacidade confirma que há prevalência oculta na região e que o diagnóstico está sendo tardio, podendo comprometer as metas de eliminação da hanseníase como problema de saúde pública, sendo necessário, intensificar as ações de controle, especialmente, exame de contatos.

### PE 88

#### PROGRESS ON FIELD TREATMENT OF REACTION IN NORTHEASTERN STATES OF NIGERIA

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Efforts of the National Tuberculosis and Leprosy Control Programme in Nigeria (NTBLCP) and the Non-Governmental Organization (NGO) have resulted in a dramatic reduction in the registered prevalence 0.8 per 10,000 in 2001. Despite this achievement, leprosy remains a public health problem due to the back load of disabled ex-patients and stable Case Detection Rate (CDR) 0.7 per 10,000 over the last five years. Disability grade 2 among new patients is more than 10%.

Complications of leprosy (reactions and nerve damage) remain the most important causes of impairment and disability in Nigeria. It was the policy that all patients with reactions be referred to the referral hospital. Due to distance and other personal reasons, most patients when referred do not arrive at the hospital. It is well documented that about 15 – 30% of leprosy registered for MDT treatment develop reactions leading to nerve impairment or disability. No study has been carried out to ascertain the level of reactions in the field in 13 Northern states of Nigeria. It is also well documented that majority of patients who develop nerve function impairment after registration do so in the first year (about 80% reported in Indonesia and 67 – 91% in Bangladesh). As a result of the problems encounter by the patients and the field programme, the policy of treating reaction patients only in the hospitals was changed and field treatment of patients with steroid was started in 1998. This is aimed at making steroid treatment more accessible to patients.

The objective of this paper is, to access the actual magnitude of reactions in the field, to determine the actual number of patients who started steroid treatment and completed according to the standard guideline, to identify problems encounter with implementation of the field treatment with steroids, to make recommendations on ways of improving field treatment with steroids.

The method used in the study was the evaluation of reports received from the field, quarterly reports sent to the office by the programme officers, interviews with some leprosy control staff and Primary Health Care staff on their experiences.

In the period under study (1998 –2000), 13,148 new patients were treated with MDT out of which 581 patients were treated in the field with steroids. Of the total patients reported, 62% were males and 38% were females. Out of the 581 patients that were treated with steroids, treatment results were obtained for only for 499 patients showing 459 (91%) had their condition improved with steroids (reactions subsided or disability reversed) while 40 (9%) had their condition remain the same or had their condition deteriorated. Those who deteriorated were referred to the referral hospital for further management

by the Medical Officer. Out of the results analysed, 201 (40%) were females and 298 (60%) were males. Treatment completion and improvement in condition was better with the females (95%) than the males (83.9%).

### PE 89

#### PROGRESS TOWARDS SUB-NATIONAL LEP-ROSY ELIMINATION, BANGLADESH

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Bangladesh has made considerable progress in achieving the goal towards elimination of leprosy at National level. At the end of December 1998, the registered prevalence of the country for the first time fall below 1/10,000 population and become 0.87 and further declined to 0.66 at the end of December 2001. Virtually Bangladesh have achieved the goal of elimination of leprosy at National level two years ahead of WHO target date. One of the major indicators of efficiency of case finding, the visible deformity/disability rate declined from 21.40% in 1993, 7% at the end of December 2001.

Eight NGOs are assisting the Government in MDT implementation in 29 districts (231 upazilas) of the country and has created an exemplary partnership record, where the resources from the Government and NGOs are pooled and optimally utilized. The NGO collaborative areas are endemic and contribute over 80% of the country caseload at any point of time. From 1985 to December 2001 a total of 130555 cases have completed MDT and declared cured. As of end of December 2001, 8540 cases are under treatment and the estimated prevalence of leprosy is about 12,000. The gap between the estimated and registered cases has reduced and is expected to reduce further each year.

Leprosy is not evenly distributed in Bangladesh in conformity with world pattern. The leprosy endemicity varies widely within the country. Eight (8) northern districts of Rajshahi division, two metros - Dhaka and Chittagong and 2 (two) district of Chittagong division - total 12 (twelve) areas contributing over 70% of the total cases and still having prevalence >1/10,000 population. After achieving the elimination goal at National level the major attention of NLEP is to achieve elimination at sub-national level. More details including strategic plan 2002 - 2003 will be presented

### PE 90

#### "REACHING THE UN-REACHED" IN RANDOMLY SELECTED URBAN AREAS OF ORISSA - A STRATEGIC INTERVENTION BASED COMMUNITY PARTNERSHIP

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**Introduction:** Orissa is situated along the east coast of India with a population of 36.7 million with 13% urban population. Leprosy elimination looks nearly achieved in Orissa. But if we analyze leprosy elimination parameters for the urban segments, it seems highly improbable to achieve this. This is because the PR in urban areas is roughly double (13.7/10000) the over all PR of the state (6.9/10000); This could be due to inadequate health infrastructure at grass root level to address the health issues in rapidly growing urban and peri-urban slums; lack of coordination between available service providers and systems. This needs timely interventions.

#### **Objective:**

- To reach the un-reached population involving decision makers, health providers and community leaders and other allied players working in developmental sectors to facilitate leprosy elimination process.

#### **Strategy:**

- Team (consensus) building of all players and partners to gain their commitment and enhance level of motivation.
- Capacity building of all health providers.
- Sensitization of key players.
- Door to door search with community participation.
- Strengthening the institutional capacity of health facilities to promote voluntary reporting and integrated MIS.
- Follow for six months.

#### **Activities and Process:**

- Identification and interaction with all the major stakeholders have been done in five urban areas.
- Team building workshops have been conducted in three urban areas and other activities are in progress in remaining areas.

#### **Conclusion:**

- Preliminary results show very good participation from decision makers, health providers and other players including community leaders.

- This approach will definitely help us to reach the under privileged sections of the community.
- Replication will be possible after impact assessment.

### PE 91

RECIDIVAS NO CENTRO DE REFERÊNCIA DE ESPECIALIDADES METROPOLITANO NO PERÍODO DE JAN/99 A FEV/02 – CURITIBA/PR

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A recidiva nos pacientes de hanseníase é motivo de preocupação entre as equipes de saúde, especialmente quando corresponde a 10% dos casos cadastrados no período. O objetivo deste levantamento é fazer o diagnóstico dos casos de recidiva a partir de janeiro de 1999 até fevereiro de 2002 através da revisão dos prontuários, tendo sido compiladas as informações sobre tempo decorrido entre a alta e o 2º cadastro, tratamento prévio, grau de incapacidade e situação dos comunicantes. Não houve diferença quanto a sexo, o tempo médio decorrido entre a alta e o novo cadastro foi de 5 anos, o grau de incapacidade avaliado como II e III correspondeu a 21,87% no 1º tratamento e 18,75% no 2º, a média de comunicantes por paciente foi de 3,06, dos quais 69,38% foram examinados. Dos 11 casos que receberam PQB PB previamente, 9 foram classificados erroneamente 1 recebeu ROM e foi insuficiente e 1 foi indevido.

Das 21 formas MB, 19 apresentaram IB em um sítio = ou > 2 e/ou atividade clínica

e/ou EM ou EM persistentes, 2 não tinham justificativa para o tratamento A conclusão demonstra diagnóstico tardio, com GI alto no 1º cadastro e evolução para médio no 2º e que num universo de 309 casos novos cadastrados 32 foram por recidiva e dos quais somente 3 não se encaixariam nos critérios preconizados.

### PE 92

REDIRECIONANDO ESTRATÉGIAS: META - A ELIMINAÇÃO DA HANSENÍASE NO MUNICÍPIO DE PIMENTA BUENO – RO

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**Introdução** – O município de Pimenta Bueno está localizado ao longo da rodovia Br 364, estado de

Rondônia sendo considerado hiperendêmico para hanseníase, segundo critérios da OMS, com prevalência de 38,18/10000 hab. e 44,42/1000 hab.de detecção no ano de 1996, quando houve então priorização pelo gestor local com ações específicas para a sua eliminação.

**Objetivo:** Este trabalho tem como objetivo a reflexão da importância do envolvimento do gestor municipal para a Eliminação da Hanseníase, realizando ações simples.

**Materiais e Métodos:** Estudo dos indicadores epidemiológicos dos anos de 1996 a 2000, relacionando-os as ações desencadeadas pela equipe municipal durante o mesmo período, as fontes são dados da Coordenação Estadual, Secretaria Municipal de Saúde Gerência Municipal do Programa.

**Discussão:** Durante o período de 1996 a 2000, o município de Pimenta Bueno desencadeou ações estratégicas como treinamentos para guardas de enfermias, profissionais de saúde de vários setores, líderes comunitários, agentes do PACS/PSF, agentes de saúde escolar, agentes de saúde rurais e outros, tendo como meta a eliminação da hanseníase.

**Resultados:** Contribuir com a experiência, despertando gestores e gerentes municipais para implementação de ações viáveis em nível Municipal, redirecionando serviços e estratégias para atingir a eliminação da hanseníase.

**Conclusão:** A determinação política do gestor municipal em eliminar a hanseníase é fator essencial, pois buscando estratégias baseadas na realidade local, reduzimos a prevalência para 12,63/10000 hab. a detecção para 11,69/1000 hab. no ano de 2000, ainda muito longe do almejado mas visualizando um caminho a ser trilhado, juntos, dirigentes e população.

### PE 93

RESEARCH OF LEPROSY SPREADING AND CONTROL IN CHINESE WHITE-TROUSERS YAO NATIONALITY

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The White-trousers Yao Nationality is one of the branches of the Yao nationality in South China. They mainly live in Lihu, Baxu of Nandan County and in Bagong of Hechi, Guangxi province and also in Yao Mountains of Libo County, Guizhou province. This

nationality has its own original language, habits and customs. They never marry out and completely keep the features of its tribal history.

Leprosy has been so popular in the White-trousers Yao nationality that it has made Nandan the third most popular county in leprosy in Guangxi province. In order to make a research on the spreading law of leprosy and the characteristics of its prophylaxes and cure in this nationality, we have had the research data of leprosy epidemiology in the White-trousers Yao nationality counted and analyzed. As a result, we found 364 cases of leprosy among the 290 thousand total White-trousers population, and the case rate of accumulation was 13.25%. That's 8 times higher than other nationalities in the same areas.

The incidence of this disease in the most serious years (1952-1956) was 129.15 cases in 100 thousand people. The disease was distributed over a large area. There were lepers in 130 villages of the White-trousers Yao nationality (its total villages were 268) and the rate in other national villages was 48.51%. But the rate in other national villages was 9.56%. The incidence of the disease of families was very high, coming to 5.77%. While other national villages was 0.59%. There were 61 families which had more than two lepers, which made up 22.34% of the total leper families, while other national families 11.25%. The female sex suffered from the disease more often than the male sex and the rate was ten to one (other nationality was three to zero point two). We have also found that the period of illness was long, on an average of 6.24 years, while the Zhuang nationality was 4.49 years. Therefore it had evident national spreading traits. Analyzing through the grey-model relation finds that the related degree is the highest in the consanguineous marriages and it is believed that a closed marriage of the same clan probably leads to the increase of the leprosy susceptible gene. Besides the housing conditions of the White-trousers Yao nationality, their life, economy, culture and sanitation are poor. So it is very hard to reach the prevention and cure of leprosy and result in this disease spreading quickly, far and wide. Although we have taken active measures to prevent and treat it, the result is still not satisfied and even the spreading tendency of the disease is upward again and again. The clothing customs of white-trousers Yao nationality make their skin exposed outside too much and this makes it easier to be infected by the disease and it will also increase the rate of the female's suffering from the disease. According to the dynamic calculation through the grey model instrument, it will take about 40 years to reach the aim of wiping out leprosy in the White-trousers Yao nationality.

**[Key words]** the White-trousers Yao Nationality, Leprosy Spreading and Control

## PE 94

RESULTS AND LONG -TERM IMPACT OF LEC – HODEIDAH (YEMEN)

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Leprosy elimination Campaign (LEC) was implemented from 15<sup>th</sup> Nov'97 to 3<sup>rd</sup> May'98, in 22 districts of Hodeidah province in Yemen, which is an endemic governorate in Yemen which is known as a low endemic country. The Campaign was concentrated on the Health Education, Intensive Community Mobilization and training the local health personnel to detect hidden Leprosy cases. During the period of 11 weeks, 276 cases of leprosy were detected and placed on MDT. 192 (70 %) of new cases detected and they confirmed as Leprosy cases classified as MB and the remaining 84 were PB. 69 cases (25%) suffered by visible deformities and 22 patients (8%) were children.

Follow up made in December'99 the patients, who were placed on MDT revealed (93% and 92%) cure rates for both MB and PB cases respectively.

## PE 95

REVERSAL REACTIONS – PARAMETERS CLINICAL AND EPIDEMIOLOGICAL ASSOCIATED TO ITS OCCURRENCE

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**Background:** the study discusses the clinical and epidemiological parameters associated to the occurrence of reversal reactions in patients undergoing multibacillary therapy. **Subject and Methods:** the authors present forty-two patients with multibacillary disease treated with twenty-four doses of PQT-WHO at the Souza Araújo Outpatient Unit of FIOCRUZ from January of 1986 to January of 1991. They had clinical, dermatological, neurological and histopathological examination, bacillary index (BI) and lepromin skin testing. All of them had no prior treatment and were classified as primary cases.

**Results:** there were thirty-two male patients (76%) and ten females (24%), a sex ratio was approximately 3:1. Seventy-four percent were between sec-

ond and sixth decades. Twenty five patients (60%) were classified as borderline-borderline (BB), fourteen patients (33%) as borderline-lepromatous (BL) and three patients (7%) as lepromatous-lepromatous form (LL). Thirty-three percent had BI under 3+ while twenty-six percent had BI up to 3+. Clinically, in twenty-eight patients (67%) there were multiple lesions at the diagnostic time. In seventy-two percent of patients the reversal reactions started until the first six months of specific treatment. Forty-two percent of patients presented several episodes. Approximately fifty percent of newly diagnosed patients had no chronic disability. Commentaries: the reversal reaction is an important medical problem due to the risk of permanent damage, which impose a health and economic burden particularly in developing countries like Brazil. For this reason is of fundamental importance to dermatologists to know the clinical and epidemiological parameters, the immunopathogenic mechanisms and the correct medical management of these cases.

### PE 96

#### SELF-ERADICATION OF LEPROSY?

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The study investigates epidemiological prerequisites for the 'endemic fading-out' of a contagious disease and applies these findings to the particular features of leprosy. It identifies the 'basic reproductive rate' of an infection, the duration of latency and infectiousness, the life expectation and the size of the host population as factors determining the number of both latent and infectious infections in this population. It intends to demonstrate that once one single index case is given, leprosy can survive in an isolated population of approximately 30 persons only. It is concluded that the 'endemic fading-out' of a contagious disease does not depend on its prevalence, but either on the basic reproductive rate or on the host population size. If the reproductive rate is smaller than 1 (e.g. due to the decreasing susceptibility of the host population), or if a minimum population size for continuous transmission is not given, the disease will eventually 'fade out'. As long as this rate is above the value of 1, leprosy can – due to its lasting infectiousness – survive in extremely small host populations.

### PE 97

#### SENSITIVITY AND SPECIFICITY OF THE W.H.O OPERATIONAL CLASSIFICATION BASED ON NUMBER OF SKIN LESIONS

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The WHO Study Group on Chemotherapy of Leprosy Committee in 1993 concluded that approaches based on clinical classification may be required where reliable facilities for the bacteriological examination of skin smears are not available or reliable. The Committee recommended that leprosy patients be classified according to the number of skin lesions, into pauci-bacillary leprosy (2-5 skin lesions) and multi-bacillary (more than 5 skin lesions). However, the sensitivity and specificity of classification based solely on the number of skin lesions, using skin smear positive patients as a gold standard has not been reported.

The Schieffelin Leprosy Research and Training Center has been carrying out leprosy control activities in Gudiyatham Taluk since 1962 as part of the NLEP. Using data from the control area, the sensitivity and specificity of operational classification based on number of patches was studied, using skin smear as the gold standard. The sensitivity of classifying five and above lesions as multi-bacillary leprosy is 97.0 % while the specificity is 52.2 %. The positive predictive value is 32.3 % and the negative predictive value is 98.6 %. The ROC curve shows that a cut-off of five lesions is the best option. The WHO criterion for operational classification of leprosy based on number of patches seems vindicated. The effect of including additional clinical signs such as size of the largest lesion or nerve trunk involvement on the sensitivity and specificity of the operational classification will be reported.

### PE 98

#### SERO-PREVALENCE RATES OF ANTIBODIES TO PHENOLIC GLYCOLIPID-I BY ELISA AMONG WILD NINE BANDED ARMADILLOS (*Dasypus novemcinctus*) IN ESPIRITO SANTO STATE – BRAZIL

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**Introduction and purpose:** The human being has, for a long time, been considered the only reservoir of *Micobacterium leprae*. However, the armadillo infection, *Dasypus novemcinctus* species, was first reported in 1975 and natural transmission among armadillos in the southern parts of the United States has been described by Walsh and co-workers. Truman and co-workers found IgM antibodies to the PGL-I antigens of *M. leprae* in 16% of the armadillos from Louisiana and Texas. In the Brazil, natural infection of *M. leprae* in armadillos wasn't reported.

The enzyme-linked immunosorbent assay (ELISA) test detect PGL-I antibodies is a useful tool confirm the diagnosis of leprosy. We analysed the natural infection with *M. leprae* in wild nine-banded armadillos, *Dasyurus novemcinctus*, from hyperendemic leprosy area of Brazil, Espirito Santo State.

**Methods:** We analysed forty-seven armadillos captured from wild by hunter. Those animals were anesthetized and collected the blood by intracardiac puncture. The ELISA was performed for IgM antibodies to PGL-I antigen of *M. leprae*. The pre-coated plates and the others reagents were given from Royal Tropical Institute in Amsterdam. The cut-off value for positivity was an OD of 0.200.

**Results:** Were captured armadillos from country area of 6 cities of Espirito Santo State. The weight ranged between 350-5200g. The armadillo's sex, 24 were male and 23 were female. In 47 animals, antibodies anti PGL-I were detected in 5 (10,6%) animals by ELISA method.

**Conclusion:** It is known now that about 10,6% of the armadillos from Espirito Santo State were *M. leprae* carrier. The discovery of *M. leprae* in the wild armadillo has not only raised many question about the transmission and host range of leprosy, but identified a possible public health risk.

### PE 99

#### SERUM ZINC LEVEL AND ZINC INTAKE IN NON-REACTIONAL LEPROSY PATIENTS

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A case control study was performed on 56 leprosy patients and 56 controls, aged 15-59 years, during January until August 1999. The objectives were to describe variability of serum zinc level and dietary zinc intake in nonreactional leprosy patients compared with the controls, and to find out whether there was a correlation between serum zinc level and dietary zinc intake by nonreactional leprosy patients.

Serum zinc level was estimated by *Atomic Absorption Spectrophotometry* and dietary zinc intake was estimated by *Food Frequency Questionnaire*. The mean of zinc serum level in nonreactional leprosy patients was significantly lower than the controls and the mean of zinc serum level in multibacillary leprosy patients was also lower than paucibacillary which was statistically significant. Dietary zinc intake of nonreactional leprosy patients appeared lower than their controls ( $p = 0.008$ ). There was no correlation between zinc serum level and dietary zinc intake on nonreactional leprosy patients.

### PE 100

#### SITUAÇÃO DA CICATRIZ VACINAL DE BCG-ID EM PACIENTES DE HANSENÍASE

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No período 2000-2001 a Gerência do Programa de Controle de Hanseníase da Secretaria Municipal de Saúde do Rio de Janeiro implantou na ficha de investigação de casos novos a inclusão do dado: presença/ausência de cicatriz vacinal BCG-ID.

Foram analisadas as notificações de 2001 em relação ao registro de presença ou ausência de cicatriz vacinal considerando faixas etárias e formas paucibacilares (PB) e multibacilares (MB).

Registros de presença de cicatriz vacinal foram detectados em 213 casos PB e em 114 casos MB e registros de ausência de cicatriz em 222 casos PB e 251 casos MB. Efeito protetor da vacinação contra formas multibacilares foi evidenciada na análise multivariada: OR= 2,11(IC:1,56-2,86).

### PE 101

#### SITUAÇÃO DE CONTROLE DA HANSENÍASE EM ÁREA URBANA DE DESCENTRALIZAÇÃO DAS ATIVIDADES DE CONTROLE

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São avaliados resultados de intervenção na Área de Planejamento 5.3 do município do Rio de Janeiro, a partir do final de 1995, realizadas com o objetivo de melhorar o acesso da população ao diagnóstico e tratamento da hanseníase. Com população estimada de 313 390 habitantes em 2001, o nível sócio-econômico da população situa-se entre os mais baixos do município. Até 1995, apenas uma das 14 UBS realizava o Programa. Registra-se como principais investimentos, o aumento da oferta de consultas, a descentralização das atividades de diagnóstico e tratamento, alcançando 9 UBS em 2001, capacitação continuada de profissionais, inquérito sobre mancha na pele aos que demandam as UBS, e divulgação periódica de informação sobre hanseníase para a população. O déficit e a rotatividade de pessoal representam sérios obstáculos à expansão das atividades de controle.

Comparando-se os períodos de 1990 a 1995, anterior à intervenção, com o período de 1996 a 2001, observou-se um aumento do total de novos casos detectados, com variação proporcional relativa de 89,5%; a razão H/M variou de 1,12 a 0,82; a proporção de casos MB, de 53 a 46%, sem redução significativa entre os homens; a média dos coeficientes de detecção e em menores de 15 anos variou de 2,63 a 4,73 /10 000 habitantes, e de 0,84 a 1,94/10 000 habitantes, respectivamente; a proporção de novos casos sem incapacidades físicas permaneceu praticamente inalterada, variando de 88,7 a 88,3%, enquanto a proporção de deformidades físicas caiu de 5,2 para 3,5%. Entre os homens, esta proporção caiu de 8,3 para 5,6% e entre as mulheres, de 1,9 para 1,8%. Os coeficientes de prevalência mostraram queda progressiva, alcançando 3,66/ 10 000 habitantes em 2000; neste ano o abandono na prevalência do período foi de 6,4%.

Conclui-se que é necessário intensificar investimentos na área, ressaltando-se a importância de se aplicar estratégias visando ao aumento da oportunidade diagnóstica para os homens.

### PE 102

SITUAÇÃO EPIDEMIOLÓGICA E CLÍNICA DA HANSENÍASE EM MENORES DE 15 ANOS EM TRÊS MUNICÍPIOS DE MINAS GERAIS - BRASIL DE 1996 A 2000

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**Introdução:** Foram estudados os aspectos epidemiológicos e clínicos dos casos de Hanseníase menores de 15 anos diagnosticados de 1996 a 2000, em 3 municípios hiperendêmicos, de diferentes portes em Minas Gerais. Foram identificados os casos de Governador Valadares (231.875 Hab.), Paracatu (74.637 Hab.) e Itamogi (10.238 Hab.) e levantados aspectos relacionados a sexo, idade, forma clínica, grau de incapacidade, reações e/ou neurites durante o tratamento e vigilância de contatos.

**Resultados:** Foram estudados 174 casos de Hanseníase < 15 anos, 56% do sexo feminino, a menor idade foi 2 anos, 68% entre 9 e 14 anos e, 54% Paucibacilares. Moravam com os pais 99% das crianças; 90% estudavam e 2 crianças trabalhavam fora. O Grau de incapacidade foi avaliado no diagnóstico em 99% dos casos (92% grau 0) e na alta em 94% (89% grau 0). Reações e/ou neurites durante o tratamento foram observadas em 12 crianças (7%) e a ocorrência pós-alta em 6 (3%). Exame de Contato foi o principal modo de descoberta (43%). A fonte provável de Contágio foi identificada em apenas 53%.

**Conclusão:** Um caso de Hanseníase em criança deve ser considerado um evento sentinela capaz de desencadear ações efetivas de investigação da fonte de contágio, como também ações educativas intensivas incluindo as escolas, como veículo de informação para os familiares.

### PE 103

SITUAÇÃO EPIDEMIOLÓGICA E ESTIMATIVA DA PREVALÊNCIA OCULTA DE HANSENÍASE NO DISTRITO FEDERAL EM 2000

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Durante os anos de 1996 a 2000 foram desenvolvidas várias atividades de capacitação em ações básicas de controle da hanseníase e sensibilizações com o objetivo de atingir a taxa de prevalência de 1 caso por 10.000 habitantes em 2002.

Em 2001 realizou-se um estudo retrospectivo comparativo de 1996 a 2000 para avaliar a situação epidemiológica do DF. Neste estudo foi observado um índice de detecção de 323 casos novos e uma prevalência oculta de 119 casos.

Concluindo, foi proposto uma intensificação das ações de educação e sensibilização com o objetivo de aproximar ao máximo da taxa de prevalência estabelecida para 2002.

### PE 104

SITUACIÓN EPIDEMIOLÓGICA LEPRO 2 MUNICIPIOS DE NICARAGUA

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Se recoge la situación epidemiológica de esta enfermedad en 2 municipios de Nicaragua, San Francisco Libre y Chinandenga. Observamos la muy alta caústica entre niños menores de 14 años y la muy alta frecuencia de Formas Paucibacilares.

Destacamos el importante trabajo para el control y prevención de discapacidades de los promotores de salud.

**PE 105**

## STRATEGIES OF LEPROSY CONTROL USED IN LOW ENDEMIC SITUATIONS IN GUANGDONG PROVINCE

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The number of the total registered leprosy patients in Guangdong province is 94,667. It ranks the first in china. The highest annual prevalence rate is 1.14%. Guangdong was once the high endemic area FCR leprosy. In 1999, there were only 370 active patients; the prevalence rate decreased to 0.005%. Guangdong has become a low endemic area for this past five years. However, there are still about 130 active patients appeared every year and the number decreased slowly. The following measures are taken under the low endemic situations to maintain the achievement of leprosy control: to lay stress on the key points and provide different directions to different areas; to implement special action programmers in the high endemic areas; to strengthen the surveillance for the floating population and the management of leprosy patients; to establish a system of rewards for the early case-finding and the use of MDT; to strengthen the training of paramedical workers of the leprosy prevention nets; to widely launch leprosy knowledge propaganda and health education. We have gained much experience in the work and the achievements of leprosy control are solidified.

**PE 106**

## STUDIES ON EPIDEMIOLOGY OF LEPROSY FOR 50 YEARS IN GANSU PROVINCE

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**Objective:** To study epidemiological trends of leprosy for 50 years in Gansu Province.

**Methods:** Epidemiological indicators and their trends were analyzed.

**Results:** By the end of 1998, a total of 4773 leprosy cases had been detected in Gansu province, of which 77.76% distributed in 24 counties in Longnan, Gannan and Linxia prefectures, and 3507 cases were cured and other dropped out or died. Type ratio of MB to PB was more than 60% during the period. Since the mass surveys and comprehensive control were implemented in the 1960s, prevalence and detection rates had decreased continuously and the number of endemic counties reduced from 84.88% in 1986 to 24.14% in 1998. There were 42 active cases at the end of 1998 with a prevalence rate of 0.0017 per 1000.

**Conclusion:** Through the efforts for 50 year running, leprosy has been successfully controlled in Gansu Province.

**[Key words]** Leprosy Prevalence Incidence

**PE 107**

## STUDY ON CASE-FINDING IN A LOW EPIDEMIC SITUATION OF LEPROSY

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**Objective:** To study the epidemiological feature and the strategies of leprosy control.

**Methods:** The new leprosy cases detected in Guangxi Autonomous Region in the last 10 years were analyzed retrospectively.

**Results:** 745 new leprosy cases were detected in the last 10 years. The average detection rate of this period was 0.43/100 000. The mean age at onset of the disease increased. The unknown infection source cases and MB cases increased, the period of the disease was shortened and the grade II disability rate decreased.

**Conclusions:** Developing health education, improving people's idea of self care, speeding up early diagnosis at country level are important.

**[Key words]** detection of leprosy cases; epidemiological analysis

**PE 108**

## STUDY ON THE OTHER HEALTH SERVICES UTILIZED BY MULTI BACILLARY CASES

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Though effective Multi Drug Treatment services are provided to leprosy patients, they are likely to get other ailments too. No doubt they need medical attention for these ailments also.

In the context of integration in Tamil Nadu, it was found necessary to find out where these leprosy patients went for medical treatment for these ailments. Since integration efforts were already on as early as 1996 in Tamil Nadu, this study was carried out in 1996-97, to find out the health seeking behaviour of leprosy patients for other ailments to incorporate the findings in deciding integration strategies.

Only Multi Bacillary (MB) cases selected to get valid and reliable information.

**Objectives:**

1. To find out the morbidity pattern of MB cases other than leprosy.
2. To study the pattern of other health services utilized by them if any.
3. To study the relationship between demographic and socio economic characteristics of MB cases and the type of other health services utilized by them.

**Methodology:** It is an exploratory study conducted in Salem district in Tamil Nadu, India. Salem had a population of 4.3 million as per projection of 1996. As of October 1995, 4694 MB cases were there in Salem who formed the universe for the sample.

By scientific sampling procedures, MB cases were selected for the study. Pre tested schedules were used for data collection and the data were collected from 204 respondents by trained investigators. They were analysed, interpreted and reported.

**Highlights of the study:**

- Data were collected in a systematic way on the type of other healthy services utilized by MB patients who are under treatment and cured.
- Pattern of relationship between demographic and socio-economic characteristics of MB patients and the type of other health services used by them was studied.
- Suggestions and recommendations in the context of integration of leprosy with General Health Care services in Tamil Nadu were given.

**PE 109****SURVEY OF NEWLY DIAGNOSED LEPROSY PATIENTS IN JAPAN FROM 1981 TO 2000**

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We analyzed the medical and social problems of newly registered leprosy patients in the past 20 years from 1981 to 2000 in a low endemic country, Japan. There were 385 registered Japanese patients (males, 333; females, 152), and 111 registered foreign patients (males, 80; females, 31). The number of Japanese patients in each 5-year period was 187 ('81-'85), 119 ('86-'90), 48 ('91-'95), and 31 ('96-2000), and has been decreasing steadily. But the number of foreign patients in each 5-year period was 7, 10, 45, and 49, respectively, and has been increasing. The number of foreign patients was greater than that of Japanese patients in the latter half, 1991-2000. The

male/female ratio was 333/152 in Japanese patients, and 80/31 in foreign patients. Male/female ratio has decreased among the Japanese but increased among foreigners.

**PE 110****TEMPO DE DEMORA PARA O INÍCIO DO TRATAMENTO DE HANSENÍASE NO MUNICÍPIO DE BETIM – MG**

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Secretaria de Saúde de Betim, Rua Prof. Osvaldo Franco, 55 – Betim – MG – Brasil

Sabe-se que a demora para o início do tratamento de hanseníase é um dos fatores de risco para o desenvolvimento de incapacidades. Realizou-se um levantamento com os pacientes em PQT no município de Betim (N=50) para determinar o tempo decorrido entre a percepção dos primeiros sintomas e o início do tratamento com PQT. Foram excluídos do estudo pacientes que já haviam feito tratamento anterior. Procurou-se determinar, separadamente, o tempo decorrido até a busca por atendimento em um serviço de saúde e o tempo decorrido dentro de serviços de saúde até o diagnóstico e início do tratamento efetivo. Buscou-se identificar razões que levam um indivíduo a finalmente buscar um serviço de saúde e fatores, dentro dos serviços, que dificultam ou aumentam o tempo de demora. Essa informação poderá ser utilizada no desenvolvimento de campanhas e ações educativas, bem como no planejamento e adequação da rede de saúde para favorecer o diagnóstico precoce da hanseníase

**PE 111****THE ANALYSIS AND PROGRESS FOR LEPROSY REHABILITATION SITUATION OF HUNAN PROVINCE**

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By the end of 2000, the accumulated number of leprosy cases mounted to 16234 and healed leprosy cases mounted to 13845. There are 10000 leprosy alive cases and 4808 cases which need rehabilitation.

In the past, we had developed rehabilitation surgeon in 5 or 6 counties, however, the number of patients who receive rehabilitation is few because of funds' lacking. In march 2000, assisted by the Netherlands Leprosy Relief, we developed Hunan Leprosy Rehabilitation project in Len Shui Tan and Dao county. An approximate of 261 patients receive the rehabili-

tation. The result is satisfactory. But there are only two pilot project counties and because of funds' shortage, a lot of cases who need the rehabilitation immediately can't get access.

This article impresses us about drawing more governmental attention, support and financial input, making connection with foreign organizations, establishing the province leprosy rehabilitation center, improving skill training. As a result, the leprosy rehabilitation work in Hunan province will develop in an actual and all-round way.

### PE 112

#### THE ANALYSIS ABOUT THE EPIDEMIOLOGY OF LEPROSY OF GUANGFENG COUNTRY, JIANGXI, CHINA

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Analyze the Leprosy epidemic trend and evaluate the effect of leprosy control this county from the station being set up in 1961, taking in leper to the end of 2001. We analyzed according to the material of epidemiology and found the lepers and cured effectly by varied ways. The prevalence rate and detection rate has come down. In 1997, We passed the checking and being accepted by Jiangxi public health department and reached the standard of eliminating basically leprosy.

[Key words] Leprosy Incidence rate Detection rate Prevalence rate Infection control

### PE 113

#### THE ANALYSIS OF DEATH FOR 343 LEPROSY CASES IN MOUNTAINOUS AREA OF ZHUSHAN, CHINA

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The inquiry of death causes of 343 lepers in the mountain areas showed that 13.7% deaths were mainly caused by malpractices and suicides. Of all the deaths, 45.48% were the result of diseases hard to cure and the problems which are caused by aging. 21.28% were caused by illnesses that we have no idea. Another 7.87% were caused by cardiovascular diseases, urinary organs diseases, urinary organs diseases, digestive diseases, and malignant tumors. They are of the following respective statistics; 7.87%, 3.20%, 3.49%, 2.62%. From the data above, we should insist on propagating the scientific knowledge about the leprosy, strengthen the education of

the safety measures, improve the consciousness of self protection, the whole professional skills of the medical workers gradually, instruments and the conditions of medical apparatus order to reduce the death rate and avoid artificial accidents.

### PE 114

#### THE ANALYSIS OF LEPROSY ENDEMIC IN HEBEI PROVINCE

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**Objective:** To analysis of Hebei province leprosy endemic for providing the bases how to conduct the leprosy control working and full of eradication of leprosy in the future.

**Methods:** According to the data of leprosy control in the province past years.

**Results** Hebei province was in low endemic area of leprosy, until to 1999 a total of cases detected was 1289. The distribution of leprosy was big different in various places. The leprosy control working was stared at begging of 1950s actively. A lot of leprosy cases had been cured in 50 years by hard working, so that the endemic indicators of prevalence, detection rates and incidence rates have been reduced under 0.5/100 000. Last decade, child cases were not found and the area of leprosy endemic was reduced.

**Conclusion** The leprosy endemic trends indicated continuity reduced, leprosy control represented markedly effect and but the achievement needs to do the best of continue our working.

[Key words] Leprosy control.

### PE 115

#### THE ANALYSIS OF LEPROSY EPIDEMIOLOGY FOR 1950-1999 IN HUBEI PROVINCE, CHINA

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**Objective:** To explore the leprosy epidemic trends and evaluate the effect of leprosy control by epidemiological indicators from 1950 to 1999 in Hubei Province.

**Methods:** To use the retrospective study method for the analysis.

**Results:** By the end of 1999, 13992 of cumulated

cases were detected, total of 13862 had removed which included cases cured and other causes. There are 130 active cases in Hubei. The incidence and prevalence rates had been significantly reduced, the epidemic areas had been shortened a lot and the leprosy relapsed rate kept a low level by comprehensive control strategies in last 50 years.

**Conclusion:** The leprosy epidemic trends represented continuous reducing and leprosy control have taken a big achievement in Hubei Province.

### PE 116

#### THE ANALYSIS OF LEPROSY INCIDENCE RATE FOR POPULATION EXPOSED CLOSELY TO LEPROSY DISEASE

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Leprosy is a chronic contagion while will be latent for a long time. After MDT, a lot of leprosy-patients will be cured. The incidence will decrease to a certain standard. But the epidemiological factors still exist. There will be new patients and the recurred patients. The article is about 8 patients with leprosy. Among their families 12 were confirmed as patients with leprosy. The incidence of family member is 38.5%. Therefore; the new patients are the person who are close to the patients, especially the family members.

[**Key words**] Leprosy epidemiology Crowd

### PE 117

#### THE ANALYSIS OF THERAPEUTIC EFFECT ON 174 LEPROSY PATIENTS BY MDT

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**Objectives:** The analysis of therapeutic effect on 174 leprosy patients cured by MDT.

**Methods:** WHO recommend leprosy of MDT.

**Results:** 149 leprosy patients cured by MDT. Among them, 108 leprosy cured belonged to MB and 41 leprosy patients cured belonged to PB. The bacteria in skin smears were turned to negative short in 6 month and long in 48 month, the average of 17.54 month.

**Conclusions:** The advantaged of MDT included high effect, relative short therapy course and control relapse, etc.

[**Key words**] leprosy MDT Therapeutic effect analysis

### PE 118

#### THE COMPARISON OF HISTOPATHOLOGICAL PICTURES ON MULTI-BACILLARY LEPROSY PATIENTS AFTER 24 DOSES AND 12 DOSES OF MB-(WHO)-MDT REGIMENS

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In 1982 WHO recommended that MB patients should be treated with 24 doses of MB-(WHO)-MDT Regimen, but in 1997, was reduced this to 12 doses. According to WHO, the new regimen had the same effectiveness as the old one.

A cross-sectional study was conducted between December 2000 until May 2001. The subjects were 60 MB leprosy patients who had completed either the 24 or 12 doses MB-(WHO)-MDT Regimen and already more than 3 months released from treatment (RFT). Most of the patients in the group was 25-44 years old (42,5%), male: female ratio was 3: 1. Out of 80 patients there were 29 patients with still active histopathological picture. There was a significant difference of histopathological picture between 24 doses and 12 doses ( $p = 0,020$ ). No significant difference, on the result of histopathological picture between leprosy type or length of RFT

Based on the result of histopathological examination, epithelioid granuloma was more common in 12 doses regimen than 24 doses. The leprosy type and length of RFT in patient with 24 and 12 doses MB-(WHO)-MDT Regimens did not show any significant difference in level of histopathological activity.

### PE 119

#### THE CONSEQUENCE OF NATION LEPROSY ELIMINATION PROGRAMME (NLEP) IN GUANGDONG PROVINCE FROM 1991 TO 2000

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Guangdong province is situated in south of China covering 170,000sq.km with 73 million population (2000 year). A total of 94763 cases were registered from 1950 to 2000. There were the highest prevalence rate of 114 per 100,000 population in 1961.

After leprosy control programme (1981 to 1990) was carried out, the prevalence rate of leprosy has dropped from 13.9 to 2.7 per 100,000 population. The nation leprosy elimination programme (1991 to

2000) began conducted in the province in 1991. According to the Chinese criteria of leprosy elimination defined as prevalence rate of less than 10 per 100,000 population in terms of county/city, there were still 17 counties/cities where the criteria have not been achieved in 1990. The approach of reaching NLEP goal was done during 1991 to 2000 involving extensive leprosy health education in the community, leprosy training of primary health workers, implementation of clue survey and household contacts etc. Effective operation of MDT result in increasing the covering rate and regularity rate of therapy more than 98% and 95% respectively in last decade.

Significant consequence of NLEP was shown by the end of 2000. The overall prevalence rate declined from 2.7 to 0.48 per 1000.000 population. Of 100 counties/cities 97 achieved elimination criteria of nation. There were 11 of zero prevalence rate in 2000.

This study reveals that though there is a markedly decline in leprosy prevalence in last 10 years, the incidence of leprosy is remaining almost static which indicates that the transmission of the disease is still continuing in some counties. It means that the goal of final eradication leprosy need a long time. This study also reveals that some problem should not be neglected in the province. Example, local government reduce concern for leprosy works as low leprosy prevalence. The numbers of skilled leprosy doctor go down obviously leading to more and more misdiagnosis and delaying diagnosis of leprosy case.

### PE 120

#### THE CORRELATION BETWEEN BCG VACCINATION AND THE PREVALENCE OF SUBCLINICAL LEPROSY ON CONTACT-CHILDREN OF LEPROMATOUS PATIENTS

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Lepromatous patients are considered to be the main source of infection, and children living in the same house are considered more susceptible for subclinical leprosy infection. The MLPA test is a practical serodiagnostic procedure for the screening of subclinical leprosy patients. BCG vaccination is considered to protect against *M. leprae* infection.

A cross-sectional study was done in August 2000 until Desember 2000. The subjects were 100 children (aged between 2-10 years) living in the same house with a lepromatous patient. MLPA was tested and BCG scar identification was conducted in all subjects.

There were no significant differences in distribution of age, sex, nutritional status, parents/ guardian's ed-

ucational level, and BCG vaccination status. There was no statistically difference between the result of MLPA tests and the status of BCG vaccination ( $p=0,385$ ).

### PE 121

#### THE EFFECT AND CONTROL COUNTERMEASURE FOR BASICLY ELIMINATION IN PUNING CITY

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The purpose is to observe the prevention way and the effect of the treatments for the disease, leprosy that has been basically eliminated in puning city. Methods: Using the targets of the incidence of the disease, the suffering rate of the disease, the incidence of the disease among children, the prevalence areas which have been changing during the 41 years of prevention and cure of it to compare and analyze.

**Results:** In the recent 41 years in puning city 2576 people found suffer the leprosy, 1849 people (71.78%) were cured of it (including those who recovered from it by themselves), 684 people (26.55%) died of it. In 1990 the suffering rate of the disease was 0.0098/1000 and the incidence of the disease was 0.075/100,000; but in the following few years these two numbers kept falling down. In 1956 there were 14 high prevalence areas, 9 middle prevalence areas, and 6 low prevalence areas. Up to the end of 1996, the prevalence areas has been reduced to 6 low prevalence areas only. Conclusion: In the work of prevention and cure of the leprosy, carry out the policy of prevention mainly and the principle of positive cure to control the source of infection, take effective and synthetical prevention and cure measures to suit the local conditions flexibly, we'll get twice the result with half the effort and produce a marked effect, achieve the elimination of the leprosy basically and even thoroughly

### PE 122

#### THE EPIDEMIOLOGICAL CHARACTERISTIC OF NEW INFECTION AND THE CONTROL MEASURE AFTER ELIMINATING BASICALLY LEPROSY

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**Aim:** Analysis the epidemiological characteristic of new infection after eliminating basically leprosy and reaching the standard to direct the leprosy control.

Way: according to new infection registration of 12 counties of Shangrao in recent years after reaching the standard. We analysis the epidemiological characteristic of new infection after eliminating basically leprosy.

**Result:** Some new changes have taken place in the epidemiological characteristic after eliminating basically leprosy and reaching the standard. There are more new infections in recent years after reaching the standard. Most of the infections are adult. The proportion of PB cases go up. The family infection and regular infection go up. The new epidemic disease area increases.

**Conclusion:** We should take the relevant control measures according to the epidemiological characteristic after eliminating basically leprosy and reaching the standard in the low epidemic with leprosy and provide the specific measures of eliminating entirely leprosy.

**[Key words]** Leprosy Epidemiology control Measures

### PE 123

THE EVALUATION OF LEPROSY ELIMINATION PROGRAM IN THE EASTERN PART OF THAILAND 1994-2000

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The objective of this program was to evaluate the outcome of Leprosy Elimination, to examine the epidemiological situation and to assess the operational standard. Three districts in Rayong province with high incident rate, high 2<sup>o</sup> deformed new cases and high prevalence rate were chosen. The data was collected from all new cases found during 1994-2000 and interview was conducted with administrative staff, health workers, health volunteers and the patients in that area.

During 1994-2000 seventy-five new cases of leprosy were registered with 10 cases still under treatment. Prevalence rate has declined from 0.86 per 10,000 population in the 1994 to 0.23 per 10,000 population in the 2000. Only two new cases were detected during the period. Seventy-seven percents were self-reported, ten percent were from rapid survey and four percents were contact tracing. Nine percents of children under 15 years was found in new case registered. Completion rate in MB and PB was 76% (MB = 61%, PB = 90%). Average deformity rate in new cases was 24%. Only 50% had deformity surveillance and assessment done

Although prevalence rate of leprosy decreases but

new case finding, contact tracing, early treatment, prevention of disability should receive their due attention. Leprosy is not an individual but a social problem, requiring monitoring, evaluation and databases.

### PE 124

THE EVALUATION ON SCL—90 BEFORE AND AFTER INTERVENTION OF PSYCHOLOGY FOR LEPROSY CASES

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**Objective:** To product a case-control study of psychology intervention for leprosy cases which have mental handicap and evaluate the results.

**Methods:** According to the order of clinical patients, the cases were divided into case-group(11) and intervention group (9). Intervention group had been treated by training education on psychology. We used the SCL—90 form to evaluate the leprosy cases before and after treatment.

**Results:** The SCL—90 point of intervention group was significant reduced: from  $165.3 \pm 39.64$  to  $44.22 \pm 13.21$ , the difference points was  $1.26 \pm 0.43$  ( $t=8.750$ ,  $P<0.01$ ) and the factors points of compulsion, sensitivity, blahs, angst, animus, terror, deliria had been changed a lot, but case group was not changed (the difference points:  $0.08 \pm 0.51$  ( $T=0.516$   $CP>0.05$ )).

**Conclusion:** The leprosy cases in the intervention group have changed the cognizing idea, improving the badness emotion and maladjustment, and promoting the mentality health level.

### PE 125

THE IMPACT OF MULTI DRUG THERAPY ON LEPROSY IN SURINAME

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Leprosy is caused by *Mycobacterium Leprae*. This chronic infectious disease is still endemic in the tropical and subtropical countries. Due to the introduction of chemotherapy, initially Dapsone (DDS) as mono therapy and from 1980 on Multi Drug Therapy (MDT), the prevalence of leprosy is strongly reduced. At present, the estimated total number of leprosy cases in the world is 800.000.

The period of mono therapy ended when the WHO introduced MDT in 1980. In 1982 MDT was available in Suriname. Because of the global application

of MDT it is possible to start the elimination of leprosy.

Leprosy in Suriname, situated in tropical South America, is also endemic. In 1980 the incidence was 4 per 10.000 inhabitants. After 1982 there was a gradual decline of the incidence. In 2000 the incidence was 0.98 per 10.000 inhabitants. These results are mainly due to the use of MDT. In Suriname there are 3 centers which provide MDT to the patients. The services they provide, according to the Suriname Leprosy Program, include: screening of patients and contacts for leprosy, therapy for leprosy patients, health education of patients and public, medical -, rehabilitation -, and social services for leprosy patients and teaching of health workers. Patients visit the centers on their own or are referred by the primary health doctors or medical assistants.

The Dermatology Services in Paramaribo coordinates the Suriname Leprosy Program. This institute is a working arm of the Ministry of Health in Suriname. The Suriname Leprosy Program is financially supported by the Dutch Leprosy Relief Fund.

### PE 126

#### THE LEPROSY INFORMATION SYSTEM IN BRAZIL-SINAN

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Paulo Chagastelles Sabroza – ENSP/FIOCRUZ

Gerson Fernando Mendes Pereira – ATDS/Ministry of Health

The aim of this study is to analyze the potential and the present situation of the System of Information of Notifiable Diseases-SINAN-leprosy used to the accompanying and evaluation of the progress towards elimination of leprosy after the decentralization of the program activities in the municipal level. A particular analysis of the notification of new cases in the state and municipal level was conducted in the period from 1996 to 1999. The coverage of SINAN: – the areas that send notification to the national level was calculated by the comparison of the number of notified cases at SINAN and the number of cases informed by the Technical Area of Sanitary Dermatology/ATDS-MS, which is annually provided by the states. Endemic states with running programs, such as Amazonas, Amapá, Acre and Mato Grosso do Sul did not send any notification to SINAN. Furthermore, Minas Gerais, Bahia e Rio Grande do Norte have send junta not significant number. In the last 4 years, only 10 out of the 27 federated states send to SINAN a proportion of data greater than 20% of the total of new cases officially informed by the ATDS/MS. Until 1998 the leprosy cases notified to SINAN have never surpassed 43% of the new cases informed by ATDS/MS in the historical series from 1996 to 1999, showing not more than 35% of the no-

tified cases. Detection rates for 1999 are not coincident even in the states that allegedly regularly transfer data to SINAN. The coverage of municipalities that assist leprosy cases in 1999 did not exceed 25% and the notification came from, in the same year, only 35% of the municipalities in the whole country. These results shows that, until 1999, SINAN registers a limited proportion of the cases of leprosy and that the coverage of the SINAN notification on leprosy is not sufficient to a reliable analysis of the morbidity of leprosy even at the national level. In the present phase of implantation and implementation, the surveillance and accompaniment of activities and the evaluation of the objectives of the leprosy program of the Ministry of Health cannot solely be based in the SINAN. Additional support in capacitating human resources of the local level on quality of data entry and in the utilization of other software for the analysis of the profile of the disease at the municipal level can turn SINAN in a reliable and useful data bank.

### PE 127

#### THE RELATION BETWEEN THE PREVALENCE OF ANTIBODIES TO PGL-I AMONG SCHOOL CHILDREN AND LEPROSY ENDEMICITY IN BRAZIL

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Leprosy control programs would highly benefit from an easy method to estimate the prevalence of leprosy and to assess the effect of leprosy control measures on the prevalence of leprosy. Recently, it was shown in a leprosy endemic area in Indonesia that the determination of the seroprevalence of antibodies to PGL-I through school children surveys might be a useful indicator of the leprosy prevalence at the district level.

To investigate whether seropositivity rates could be related to leprosy detection rates and whether seropositivity could be used as a proximal indicator to predict the leprosy incidence in other areas, 7073 school children in three different leprosy endemic states in Brazil were tested using the ML Dipstick and the ELISA.

Our results show a widely varying distribution of seropositivity in the communities independent of the number of leprosy cases detected. We also found that at private schools the seroprevalence was lower. No differences in the patterns of seropositivity between ELISA and dipstick were observed. No correlation between leprosy detection rate and seropositivity rates could be established.

**PE 128**

## THE RESULTS OF PREVENTION OF LEPROSY BY RFP

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In order to probe into a way of protecting high-risk group people of leprosy, Nandan County began to carry out a research of oral-taking rifampin(REF) by the family members of persons affected by multi-bacteria leprosy in 1991. The research targets were divided into three groups at random, i.e. REF, DDS and the group of non-taking drugs. **REF group:** The dosage for people under fifteen years old took 15mg daily per kilogram of weight. People above 16 years old took adult dose, i.e. 600mg/day, for four continuous days. **DDS group:** This group took half of treatment dose for six continuous months. The observation period was every five years to exam the skin of people by professional doctors. To summarize it after 10 years of research and find that 13 persons out of the targets groups were affected by leprosy in the first five years, in which 8 cases from the group of non-taking drugs, 1 case from DDS group and no case from REF group. In the second five years, 2 cases (total 10 cases) from non-taking drug group, 2 cases (total 2 cases) from REF group and no case (total 1 case) from DDS group. The incidence of drug-taking group was lower. The difference among groups was obvious. 3 cases, under fifteen years old, from non-taking drug were diagnosed with leprosy. No case was diagnosed in drug-taking groups. It was found during research that the cured interval times between new case and existing case in the family was longer. Four cases took 5-8 years to cure and 9 cases took more than 10 years. In which, 3 out of 9 cases were from drug-taking group.

**Conclusion:**

- a. REF and DDS have certain protection for the family members (high risk group) of leprosy people, especially during the five years of period.
- b. The disadvantages of using DDS to prevent leprosy are considerable due to the increase of anti-drug bacteria and long time taking. REF has strong disinfection on leprosy bacteria and has the advantages of easy-taking, economy and strong feasibility. But the times and ways of taking are still worthy of discussion and improvement.
- c. The effect of using drug-prevention of leprosy for people under 15 years old is obvious.
- d. Chemical drug prevention is effective for infected individual (sub-clinic infector). But it cannot prevent re-infection in future.
- e. The coming on interval times of disease is longer in the family members of leprosy people, which show that leprosy has a lasting prevalent power. It

shall take at least 10 years for preventing supervision.

**PE 129**

## THE SITUATION AND PROGRESS OF LEPROSY CONTROL IN HAINING CITY

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There is 642000 population in Haining, Zhejiang, up to 1997 there were 767 registered cases of leprosy. Since 1975 it has started to control leprosy, 535 persons were cured by DDS or DDS plus RFP and 10 relapsed (1.86%), after 1987 WHO-MDT was adopted, there was no relapse. Among them 224 had visible disability (29.2%) and 309 died, of which 162 before cured and 147 after that. The detection rate decreased from 5.14/100,000 (before 1975) to 0.043/100,000 (1993) and after 1994 no new cases was seen. Among 309 dead person, 48(6.26%) died of cancers, 37(4.82%) died of cor pulmonale, 32(4.17%) died of angiocardopathy, 19(2.84%) died of apoplexy, 17(2.22%) died of pneumonia or TB, 16(2.09%) died of accident and 11(1.43%) died of suicide. But the average age – span of the person cured of leprosy was 73.95 years old, near to the normal residents. In 1997, there were 405 persons alive who were cured of leprosy.

**PE 130**

## THE STRATEGIES AFTER “BASIC ERADICATION OF LEPROSY”

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In 1991 at the 44th WHO Chinese government passed a resolution that by 2000 leprosy should be eliminated as a problem to public health. Under the guide of the party and the government, all the doctors have worked for nearly 40 years and controlled it in a given standard. But we shouldn't ignore the leprosy work. We should keep on: 1. provoking the leaders attention, not dismissing the leading group, not reducing the expenditure; 2. gathering the lepers, setting up hospitals in separate areas; 3. going on with the recovery work. Only doing like these can we eliminate the leprosy completely.

**PE 131**

TRABALHO DE PLANEJAMENTO PARA A IMPLEMENTAÇÃO DE ATIVIDADES DE CONTROLE DE HANSENÍASE NO MUNICÍPIO DE SÃO PAULO

atura que a perda da sensibilidade consiste no principal fator fisiopatogênico das deficiências físicas nos membros superiores dos pacientes hansenianos. Os monofilamentos de Semmes-Weinstein são instrumentos confiáveis para detectar e monitorar as lesões dos nervos periféricos, sendo considerado um método subjetivo e padronizado que quantificam os diferentes limiares de tato e pressão. Substituem os

demaís testes com grande vantagem, por ser de fácil aplicação, custo acessível e por poupar tempo do examinador e reduzir a fadiga do paciente. Recomenda-se o uso dos monofilamentos de Semmes-Weinstein como rotina na prática clínica e no auxílio do diagnóstico precoce do dano neural. É um teste essencial, porém não deve ser realizado de maneira isolada durante o exame físico.

## HEALTH EDUCATION

### PHE 1

#### A ELIMINAÇÃO DA HANSENÍASE ATÉ 2005: FATO OU MERA UTOPIA?

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A hanseníase é endêmica nos países subdesenvolvidos e em desenvolvimento, sendo que as Américas têm 219.000 pacientes dos quais o Brasil possui 173.500, ocupando o 2º lugar no mundo em número absoluto de casos, sendo superado apenas pela Índia. No Brasil, o coeficiente de prevalência da hanseníase, em 1997, era de 5,43 casos por 10.000 habitantes, com 86.741 casos em registro ativo. Vale ressaltar que a meta estabelecida pela Organização Mundial de Saúde (OMS) é eliminar a hanseníase como problema de saúde pública até o ano 2000, atingindo uma prevalência de menos de 1 caso por 10.000 habitantes. Significativos progressos foram alcançados desde a resolução da Assembléia Mundial da Saúde (1991), a prevalência diminuiu em 85%, alcançando taxa de 1,4 por 10.000 habitantes (OPS, 1995). Com o objetivo de avaliar o conhecimento da população acerca da hanseníase, seus sinais e sintomas e respectivo tratamento, realizou-se um trabalho quantitativo, utilizando um questionário estruturado, o qual foi aplicado aleatoriamente à população do município de São José do Rio Preto-SP, no segundo semestre de 2001. A amostra foi composta de 630 pessoas, sendo que os resultados revelaram que 45,4% não conhecem a doença; 53,2% do total não reconhecem seus sinais e sintomas e 51,3% não sabem se existe tratamento. Tal perfil revela que as ações implementadas não estão sendo efetivas a ponto de atingir a meta proposta para a erradicação desta doença, exigindo a adoção de novas estratégias de controle como processos educativos a serem realizados junto às unidades de atenção primária à saúde, a fim de que a erradicação seja alcançada em 2005.

### PHE 2

#### A ENDEMIAS OCULTAS E O KIT EDUCATIVO

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**Objetivos:** Melhorar a detecção de casos de Hanseníase usando o Kit Educativo (LRA).

**Materiais e Métodos:** Foi escolhida uma população com a maior prevalência de Hanseníase em anos anteriores e foi aplicado o Kit educativo da LRA (Leprosy Relief Association) que é composto de folder para população, cartilha para Agentes Comunitários de Saúde, cartazes para serem distribuídos em pontos de maior visualização nas comunidades e treinamento de Equipes de Saúde da Família, Agentes Comunitários de Saúde, das lideranças comunitárias e professores, além de pesquisa junto a estas pessoas, de sua percepção sobre a doença antes e após o período de 06 meses de trabalho com os conteúdos da doença.

**Resultados:** Com o treinamento das equipes de saúde da família, Agentes Comunitários de Saúde, lideranças comunitárias e professores e a organização do fluxo de pacientes para a unidade de confirmação diagnóstica durante o ano de 2001, teve um incremento de 50% no número de casos, saindo da média de 25 casos nos últimos 03 anos para 39 em 2001, o que reflete o sucesso da estratégia utilizada.

### PHE 3

#### A INTEGRAÇÃO DE SERVIÇOS DE HANSENÍASE COM SERVIÇOS GERAIS DE SAÚDE

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**Introdução:** A nível regional o programa de MH sempre foi centralizado no município de Paranavaí.

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Este trabalho descreve o processo de elaboração de um plano de implementação das atividades de controle de hanseníase em um município de grande porte, com uma população de 10 milhões de habitantes, considerado o maior da América Latina, a partir de um treinamento realizado para profissionais das Unidades de atendimento de pacientes com hanseníase e dos grupos responsáveis pela Vigilância Epidemiológica nas diversas regiões do município. Foram utilizados, como instrumentos didáticos, a Apostila de Treinamento Básico de Vigilância Epidemiológica – Módulo Hanseníase, elaborada pela Divisão de Hanseníase do Centro de Vigilância Epidemiológica da Secretaria de Estado da Saúde e o “Guia para Implantar/ Implementar as Atividades de Controle de Hanseníase nos Planos Estaduais e Municipais de Saúde” elaborado por grupo de trabalho coordenado pelo Departamento de Gestão de Políticas Estratégicas da Secretaria de Políticas de Saúde do Ministério de Saúde.

Este processo se torna interessante a medida que propicia aos participantes, responsáveis pela execução das ações de controle da doença, a apropriação dos instrumentos de planejamento para a elaboração das propostas visando o alcance da meta da Eliminação da Hanseníase no município, e tem como resultado o envolvimento maior desses profissionais no desenvolvimento das diversas atividades, e uma melhoria na qualidade do atendimento.

### PE 132

TRANSMISSÃO E CONTROLE DA HANSENÍASE EM GOVERNADOR VALADARES / MINAS GERAIS - PERÍODO DE 1990 A 2000

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**Introdução:** Este estudo tem como objeto a transmissão e o controle da hanseníase em Governador Valadares, tendo em vista formular estratégias para a eliminação da hanseníase como problema de saúde pública.

**Objetivos:** Analisar indicadores epidemiológicos e operacionais, delimitar áreas de risco e definir estratégias de controle.

**Metodologia:** Estudo epidemiológico de natureza descritiva, de tipo operacional.

**Resultados:** Governador Valadares situa-se na categoria de município hiperendêmico (prevalência de 16,2/10.000 hab e detecção de 10,22/10.000 hab em 2000). O aumento da detecção em menores de 15 anos contraria a descendência da detecção geral verificada no período. Dos casos novos, 14% foram detectados com alguma incapacidade, indicando diagnóstico tardio e prevalência oculta. A implantação do Programa de Saúde da Família (PSF), a partir de 1998, não alterou o quadro endêmico da doença.

**Conclusão:** A endemia está em expansão no município. Sugerimos a intensificação das estratégias de controle através de Plano de Eliminação baseado em diretrizes políticas e epidemiológicas, tais como: construção de sustentabilidade econômica, política e social para a eliminação; descentralização das ações de controle de hanseníase através do PSF; busca ativa de casos; e investigação de eventos-sentinelas para hanseníase em “áreas silenciosas”.

### PE 133

UTILIZAÇÃO DOS MONOFILAMENTOS DE SEMMES-WEINSTEIN NA AVALIAÇÃO DE SENSIBILIDADE DOS MEMBROS SUPERIORES DE PACIENTES HANSENIANOS ATENDIDOS NO DISTRITO FEDERAL

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O presente trabalho trata-se de um estudo descritivo de delineamento transversal cujo objetivo foi identificar a incidência de alterações de sensibilidade nos membros superiores de pacientes hansenianos inscritos no Programa de Controle da Hanseníase do Distrito Federal. A amostra constou de 80 pacientes e o instrumento utilizado na coleta de dados foram os monofilamentos de Semmes-Weinstein, também conhecidos como Estesiômetro (modelo de bolso – “Sensikit”). Os resultados foram trabalhados através de análise estatística descritiva, que mostrou um predomínio das formas Virchowianas (67,5%) seguidos dos Tuberculóides (16,2%) e Dimorfos (13,8%). De uma maneira geral os pacientes concentraram-se nas faixas etárias de maior produtividade laborativa e de trabalho. A maior parte dos pacientes apresentaram grau 0 de incapacidade nos membros superiores, mostrando que o Programa Nacional de Controle e Eliminação da Hanseníase está atuando satisfatoriamente na detecção precoce e no controle das incapacidades dos pacientes. Entre os pacientes que apresentaram algum comprometimento, verificou-se o predomínio do grau 1, que se mostrou superior aos graus 2 e 3 somados. Conclui e concorda com a liter-