

Literatura Corrente

Current Literature

CLÍNICA - CLINICS

ANTUNES, S.L.G. et al. Dermal extracellular matrix in cutaneous leprosy lesions. *Int. J Leprosy*, v.67, n. 1, p.24-35, March, 1999.

Thirty-eight biopsies of cutaneous lesions from leprosy patients [borderline tuberculoid (BT) 14, borderline lepromatous (BL) 18, lepromatous (LL) 61] were processed for staining of some extracellular matrix (ECM) components (collagen, proteoglycans, elastic fibers and fibronectin). Specific histological staining and the indirect immunofluorescence method with antibodies to collagen and fibronectin were utilized. The ECM of the normal dermis was strikingly modified in the inflammatory infiltrate. By Gomori's reticulin and anti-fibronectin immunostaining, replacement of the dense interlaced collagen fibers with a reticular mesh was observed in the infiltrate. The immunoreactivity obtained with anti-type I and anti-type III collagens showed positive fibrils and a lumpy pattern in the lepromatous and tuberculoid lesions with a higher amount in the lepromatous lesions. The lack of clear-cut boundaries between the normal dermis and the inflammatory infiltrate in the lepromatous (BL, LL) lesions was correlated with the blurred limits of the clinical lesions of this pole of the leprosy spectrum. Absence of elastic fibers in the infiltrate was a constant finding, and fuchsin-positive microfibrils were found in some infiltrates. The clear zone of lepromatous lesions was devoid of oxytalan fibers. Elaunin fiber rings around sweat gland acini were present even when the leprosy infiltrate was seen enveloping them. The original ECM is replaced by a newly assembled one, which is suited for the dynamic nature of the inflammatory process. The tropic

effects of the ECM upon the cutaneous epithelial structures are modified so that atrophy and late degeneration ensues. These ECM modifications contribute, therefore, to the biological alterations of the skin functions in leprosy.

BORATTO, L.M., ORÉFICE, E, WERNER, L.P., ANTUNES, C.M.F. Dacryocystographic examination does not identify early seventh nerve failure in leprosy patients. *Indian J. Leprosy*, v.70, n.3, p.287-289, July Sept., 1998.

Dacryocystographic examination was performed in two groups of patients: patients having leprosy and those not having leprosy, in order to look for early failure of the facial nerve. The results of this study show that this kind of examination does not improve diagnosis of leprosy.

CAMPOS, W.B., et al. Conjunctival biopsy in patients with leprosy. *Indian J. Leprosy*, v.70, n.3, p.291-294, July - Setp., 1998.

The authors examined the eyes of 120 leprosy patients comprising of 30 cases each of tuberculoid indeterminate, borderline and lepromatous leprosy. The investigation included biopsy of the bulbar conjunctiva on the upper temporal quadrant of the right eye. The study, patients included both who were untreated, those that were being treated and those who were in observation after the end of treatment. The aim of the study was to identify the presence of *M. leprae* in the conjunctiva. Four such cases were found: one borderline patient with no treatment and three lepromatous patients who were being treated with MDT.

CROFT, R. et al. Sensitivity and specificity of methods of classification of leprosy without use of skin-smear examination. *Int. J. Leprosy*, v.66, n.4, p.445-450, December, 1998.

A 12-month cohort of 2664 new leprosy cases in Bangladesh has been analyzed to provide information about the sensitivity and specificity of two different methods of classifying leprosy into paucibacillary (PB) and multibacillary (MB), if the results of skin-smear examination are not taken into account. The two methods are: 1) a procedure based on counting skin lesions recommended by the World Health Organization (WHO) (<6 skin lesions = PB, >=6 skin lesions = MB); and 2) the "Bangladesh method" (<10 skin and nerve lesions = PB, >=10 skin and nerve lesions = MB). In the latter system, any degree of nerve enlargement is taken to be a nerve lesion.

The WHO method was found to be 89% sensitive and 88% specific at detecting smear-positive MB cases from among the cohort; the Bangladesh system, 92% sensitive and 88.6% specific. The WHO method did not detect 18 smear-positive cases as MN; the Bangladesh method left 13 smear-positive cases unclassified as MB. Several of these "missed" (false-negative) cases had a high bacterial index.

The WHO system of classifying leprosy cases as MB is simple to apply and has a reasonable balance between sensitivity and specificity. However, it must be recognized that the system will lead to a small but significant number of skin-smear-positive MB cases being treated with a PB treatment regimen.

FREIRE, B.F.A. et al. Anti-neutrophil cytoplasmic antibodies (ANCA) in the clinical forms of leprosy. *Int. J. Leprosy*, v.66, n.4, p.475-482, December, 1998.

Anti-neutrophil cytoplasmic antibodies

(ANCA) are autoantibodies against enzymes present in primary granules of neutrophils and lysosomes of monocytes detected in systemic vasculitis and in other diseases, including infections. ANCA are markers of active Wegener granulomatosis, which presents some anatomic-pathologic and immune response features similar to those of leprosy. Thus, we raised the hypothesis that ANCA may be present in leprosy as markers specifically linked to the presence of vasculitis. The aim of this study was to determine the presence of ANCA in leprosy and its correlation with the clinical forms of the disease. Sera from 60 normal individuals and from 59 patients with different clinical forms of leprosy were studied. The patients were also allocated into reactional and nonreactional groups. By indirect immunofluorescence, ANCA were positive, an atypical pattern (A-ANCA), in 28.8% of the patient sera. A-ANCA predominated, although not significantly ($p > 0.05$), in the reactional groups 37.9% vs 20.0%), and in those at the lepromatous pole (41.6% vs 20.0%). There was no correlation between ANCA positivity and either disease duration, disease activity, or therapeutic regimen ($p > 0.05$). An interesting finding was the correlation between ANCA and gender: 94.1% of ANCA-positive patients were males ($p < 0.01$), a feature that so far has not been reported in ANCA-related diseases and for which there is no explanation at the moment. By ELISA, the sera of the lepromatous leprosy patients did not show activity against either PR3, MPO, HLE, the most common ANCA antigens.

Because A-ANCA are nonspecific, this finding requires further investigation for the determination of the responsible antigen(s).

In conclusion, A-ANCA are present in 28.8% of leprosy patients but are not related to vasculitis in the erythema nodosum leprosum reaction and are not a marker of a specific clinical form.

LIMA, MA., RODRIGUES JUNIOR, V, SILVA-VERGARA, M.L., NOMEINI, M.B., PAIM, N., SANTOS, T.A.M., SANTOS, V.M.. Hanseníase virchowiana em cardiopata chagásico: relato de necropsia/ Generalized hanseniasis in chagas myocardiopathy: necropsy study Rev. Soc. Bras. Med. Trop., v.31, n.4, p.385-90, jul-ago., 1998.

Relata-se caso de hanseníase virchowiana diagnosticada à necropsia, com alterações cardíacas causadas diretamente por micobactérias, em homem de 34 anos portador de miocardiopatia crônica chagásica. Enfatiza-se o possível papel de mediadores inflamatórios na gênese da disfunção miocárdica; bem como a possibilidade de que fatores associados à insuficiência cardíaca, como esplenomegalia congestiva e infartos esplênicos, possam causar imunodepressão, predispondo à infecção generalizada (AU).

LOCKWOOD, D.N.J., SINHA, H.H. Pregnancy and leprosy: a comprehensive literature review. Int. J. Leprosy, v.67, n. 1, p.6-i2, March, 1999.

The interaction between pregnancy, leprosy and leprosy reactions was examined in a systematic literature review. Several retrospective case series and one retrospective cohort study but only one prospective cohort study were identified in the English literature. Type 1 (reversal) reactions were particularly likely to occur during the post partum. This temporal association was also present for both overt and silent neuritis.

Type 2 (erythema nodosum leprosum) reactions occur throughout pregnancy and during lactation, and may be severe and recurrent. No prospective, controlled studies were found that documented the complications of pregnancy in women treated with multidrug therapy regimens. Our study highlights the need for such studies, with appropriate controls, on women throughout pregnancy and lactation so that risk factors for reaction and neuritis during pregnancy can be identified and quantified.

MACLEAN, S. et al. Serum markers of treatment success in leprosy. *Int. J. Leprosy*, v67, n. 1, p.i9-23, March, 1999.

Intercellular adhesion molecule - 1 (ICAM-1) and E-selectin and other variables were evaluated as possible markers of the success of multidrug therapy (MDT) in leprosy. Multibacillary (MB, N = 45) and paucibacillary (PB, N = 29) leprosy patients were examined during MDT, which typically lasted 12 months for MB and 6 months for PB patients. Serum values for total protein, albumin, immunoglobulin gama (IgG), ICAM-1, and Eselectin (selectin) were recorded, as were lesion type, number, and distribution. Response at the end of therapy was assessed as good, fair, or poor. The bacterial index (BI) of lesions was measured at the beginning and end of therapy. The earlier reported findings of this investigation are herein re-examined. Results: age and lowered serum albumin correlated with the poorer condition of the patients, as did elevated selectin. Albumin was inversely correlated with the BI ($p = 0.008$) in MB patients, and IgG was positively correlated ($p = 0.009$). ICAM and Eselectin alone were not useful markers of individual patient condition. A regression combining serum albumin under 4i g/l, age and E-selectin was able to identify 85% of the patients in poorer condition. Conclusion: serum albumin was a useful nonspecific marker of both patient condition and infection. Age is an important negative factor in patient response. Albumin and IgG correlate with the BI and with each other ($p = 0.011$) in MB patients, but not in PB patients.

NERY, J.A.C., VIEIRA, L.M.M., MATOS, H.J., GALLO, M.E.N., SARNO, E.N.. Reactional states in multibacillary Hansen disease patients during multidrug therapy. Rev. Inst. Med. Trop. Sao Paulo, v.40, n.6, p.363-70, nov-dec., 1998.

Reações são ocorrências comuns no curso da hanseníase e são responsáveis pelo agravamento das lesões neurais. Uma coorte de

162 pacientes recém - diagnosticados, baciloscopicamente positivos, em acompanhamento no Ambulatório de Hanseníase da Fundação Oswaldo Cruz (FIOCRUZ) foi selecionada para estudo. Observou-se que 46 por cento dos pacientes multibacilares submetidos a 24 doses fixas de poliquimioterapia (PQT) apresentaram reações durante o tratamento; todos multibacilares eram suscetíveis e cuidados e atenção constantes eram necessários. Quatorze por cento foram classificados como BB, 52 por cento como BL e 33 por cento foram classificados como LL. Nenhuma das variáveis em estudo, tais como: sexo, idade, forma clínica, tempo de doença, extensão das lesões dermatológicas, índice baciloscópico (IB), ou grau de incapacidade associaram-se a reação entre os pacientes estudados... (AU).

OLIVEIRA, M.H.P., ROMANELLI, G.. Os efeitos da hanseníase em homens e mulheres: um estudo de gênero / The effects of leprosy on men and women: a gender study. *Cad. saúde pública*, v.i4, n.1, p.5160, jan-mar., 1998.

Detectou-se diferentes experiências de viver a hanseníase no contexto familiar e individual de uma população constituída por 202 hansenianos (132 homens e 70 mulheres), inscritos no programa de controle e tratamento dos serviços de saúde de Ribeirão Preto. Duas etapas para coletas de informações foram realizadas. Na primeira, os hansenianos responderam a um questionário com perguntas estruturadas; na segunda, foram ouvidos relatos de situações vividas no cotidiano de dez homens e mulheres. Os dados revelaram que a doença mobilizou representações diferentes entre os homens e mulheres nos diferentes grupos sociais. A hanseníase representou um desequilíbrio entre os gêneros, acentuando as desigualdades já existentes no campo sócio- cultural e criando novos problemas responsáveis pelos prejuízos bio-psico-sociais e econômicos, além dos estigmas que pesam sobre os indivíduos. Tais resultados devem reorientar os

programas de controle e tratamento, visando à recuperação social dos hansenianos, e também servir de paradigma a novas investigações.(AU).

PREMKUMAR, R. et al. Quantitative assessment of facial sensation in leprosy. *Int. J. Leprosy*, v.66, n.3, p.348-355, September, 1998.

The trigeminal and great auricular nerves which supply sensation to the face are affected in leprosy. No objective sensory testing methods have been devised for testing sensation in the face. Testing for corneal sensation to ascertain trigeminal nerve or visualization and palpation of the great au Modifications to commonly used sensory assessment charts are suggested. One is the Sensory impairment record as suggested by Lienhardt, et al. (14) which could be modified as shown in Figure 2. This can be used as the basic record for detailed assessment.

We suggest the use of the same three filaments used in this study for the face, Second is the field-based "Disability Continuation Record" as suggested by Watson (19) which has been adopted in several centers (Figure 3 illustrates a modification of this).

In a field situation there is probably no need for the routine examination of facial sensation. Therefore, we recommend that in this disability record the face be assessed less frequently in comparison to the hands and feet, using a single filament (0.05-0.07-g force) for the face.

REA, T.H., SIELING, P.A. Delayed-type hypersensitivity reactions followed by erythema nodosum leprosum. *Int. J Leprosy*, v.66, n.3 p.316-327, September, 1998.

Reported herein are 13 borderline lepromatous (BL) or subpolar lepromatous (LLS) patients who presented with or developed delayed-type hypersensitivity (DTH) reactions after initiation of antibacterial therapy, but who subsequently developed erythema nodosum leprosum (ENL), the DTH to ENL group. During the same time, three LLS patients had ENL

followed by relapse-associated DTH, a significant ($p < 0.05$) difference in sequence of the two conditions. The DTH to ENL group had statistically significant higher biopsy indexes at the time of diagnosis of the DTH reaction compared with two DTH control groups, 7 multibacillary patients presenting with DTH reactions and 5 BL or LLS who developed DTH reactions after starting treatment but had no ENL. DTH-associated histologic changes were less well developed in the DTH to ENL group than in either of the two control groups. In the DTH to ENL group, 77% required prednisone in addition to thalidomide to achieve a complete remission in contrast to only 0% of 21 ENL clinical controls. In the DTH to ENL group, the classical histologic ENL pattern was present in only 31% of these patients, in contrast to 88% of 33 ENL histologic controls. In 9 of 9 of the DTH to ENL patients studied, after ENL remitted, Mycobacterium leprae sonicate stimulated lymphocyte transformation tests gave stimulation indexes within the range of our tuberculoid (TT) and borderline tuberculoid (BT) patients, in contrast absent responses in 6 ordinary, longterm-treated patients who had had ENL.

ROCHE, P.W. et al. Contribution of type 1 reactions to sensory and motor function loss in borderline leprosy patients and the efficacy of treatment with prednisone. *Int. J. Leprosy*, v.66, n.3, p.340-347, September, 1998.

The changes in nerve function tests in 297 new leprosy patients over an average period of 30 months were measured. The impact of type 1 reactions (T1 R) on sensory and voluntary muscle function was measured by standard tests. Sensory function was improved in patients with single episodes of cutaneous T1 R, but not improved in patients with neural T1 R or with multiple episodes of either kind of T1 R. Patients over 40 years of age improved less than younger patients, and patients admitted for treatment of T1 R improved more than those treated as outpatients. These data point to a need to find better regimens for the treatment of nerve damage in T1R.

SCHON, T. et al. Increased levels of nitric oxide metabolites in urine from leprosy patients in reversal reaction. *Leprosy Rev.*, v.70, n. 1, p. 52-55, March, 1999.

We measured the metabolites of NO [nitrite (NO⁻) and nitrate (NO⁺) in urine from Ethiopian patients suffering from leprosy. The urinary level of NO⁻/NO⁺ in a group of healthy Ethiopians was 1020 ± 471 M ($n = 22$). Leprosy patients in reversal reaction had significantly higher levels of NO⁻/NO⁺ (1817 ± 492 M, $p < 0.001$, $n = 12$) than both the control group and leprosy patients who were not in reversal reaction (1079 ± 446 M, $n = 12$). We conclude that the reversal reaction in leprosy is associated with increased urinary levels of nitric oxide metabolites.

STEFANI, MA. et al. Assessment of anti-PGL-I as a prognostic marker of leprosy reaction. *Int. J. Leprosy*, v.66, n.3, p.356-364, September, 1998.

The anti-phenolic glycolipid-I (PGL-I) assay as currently applied for leprosy is conceived as an early marker of asymptomatic infection, early disease diagnosis and cure monitoring. Its use as a prognostic marker of reaction is still a matter of controversy. We conducted a case-control study to investigate whether IgM and IgG anti-PGL-I antibodies could discriminate patients at increased risk of developing reactions. Eligible cases were untreated leprosy patients at the onset of type 1 and type 2 reactions recruited from among 600 concurrent, newly detected, untreated leprosy patients attending an outpatient clinic in central Brazil. For the patients with reaction, approximately the same number of leprosy cases without reaction matched as to bacterial index (BI), age and gender were randomly selected. Individuals without clinical leprosy were evaluated as healthy controls.

Sera from type 1 reaction ($N = 43$) and type 2 reaction ($N = 26$) patients were tested by an ELISA using PGL-I synthetic disaccharide-BSA antigen and 1:300 sera dilution (cut-off point

≥ 0.2 OD). Antibody profiles were evaluated by exploratory data analysis and reverse cumulative distribution curves.

The IgG anti-PGL-I response did not have a defined pattern, being detected only at low levels. Our results indicate that leprosy patients, independently of their reactional status, produce high levels of IgM anti-PGL-I, demonstrating a strong correlation between the magnitude of antibody response and the BI. Patients with a higher BI were at least 3.4 times more prone to produce an antibody response compared to healthy controls.

SUNEETHA, S. et al. Histological studies in primary neuritic leprosy: changes in the apparently normal skin. *Leprosy Rev.*, v.69, n.4, p.351-357, December, 1998.

The visually normal skin of 196 patients diagnosed clinically to have primary neuritic leprosy was studied histologically to determine whether there were any specific changes due to the disease in this site. Histological changes due to leprosy were seen in 32.1% of the patients, and included, indeterminate leprosy in 19.4%, borderline tuberculoid leprosy in 6.6% and borderline lepromatous leprosy in 6.1%. The remaining biopsies showed mild non-specific dermal inflammation, mild nerve changes or no significant lesion. The nerve inflammation and/or granulomas were mostly in the deep dermal nerves or neurovascular complexes. This study shows that there is a cutaneous component to primary neuritic leprosy and the disease is not totally confined to nerves. The absence of visible hypopigmented patches in these patients is probably related to the deep location of the dermal inflammation.

SUNEETHA, S. et al. Histological studies in primary neuritic leprosy: changes in the nasal mucosa. *Leprosy Rev.*, v.69, n.4, p.358-366, December, 1988.

The nasal mucosae of 39 cases of primary neuritic leprosy (PNL) registered at Karigiri were studied histologically to determine

nasal mucosal involvement in PNL and its relevance to the pathogenesis of the disease. Specific changes of leprosy were seen in 20 (51%) biopsies, ranging from macrophage granulomas with acid fast bacilli, to epithelioid granulomas and nerve inflammation.

The remaining biopsies revealed chronic inflammatory changes of the mucosa or mild non-specific nerve changes. These findings show that there are widespread effects of the disease even in PNL patients in whom the disease is believed to be confined to the peripheral nerves. The findings also show that early leprosy involvement can be found in the nasal mucosa even before lesions become apparent in the skin or other parts of the body. The nasal mucosa could be one of the sites for the primary lesion in leprosy.

Clinical and histological examination of the nasal mucosa may be useful and important in the early diagnosis of leprosy and especially in contacts.

TERENCIO DE LAS AGUAS, J., CHOFRE, C., CONTRERAS, F. Ineficacia terapêutica en un caso de lepra dimorfa. *Fontilles - Rev. Leprol.*, v. 21, n.5, p.593-601, Mayo-Agosto, 1998.

A case of a paucibacillary Leprosy patient (Dimorphus type) with persistence and appearance of new skin lesions after 10 years of treatment with 6 different drugs is presented. An immunotherapeutical treatment is recommended.

Key words: Dimorphous Leprosy. Inefficient treatment.

THOMAS, M.M. et al. Role of S-i00 staining in differentiating leprosy from other granulomatous diseases of the skin. *Int. J. Leprosy*, v.67, n, 1, p,1-5, March, 1999.

Since *Mycobacterium Ieprae* are rarely demonstrable in the tuberculoid spectrum of leprosy, a confirmatory diagnosis of leprosy can be made on the basis of finding active destruction of cutaneous nerves by

granulomatous inflammation in a skin biopsy. Immunoperoxidase staining for S-100 protein, which is a marker for Schwann cells, was used to delineate nerves in lesional skin biopsies of 25 patients with tuberculoid and borderline tuberculoid leprosy as well as 15 controls with nonleprosy granulomatous inflammation. Four different patterns of nerve damage were observed: infiltrated, fragmented, absent, and intact. All of the nonleprosy granulomatous dermatoses showed only intact nerves, either inside or outside the granuloma, and so S-100 staining can be used to rule out leprosy.

EPIDEMIOLOGIA E CONTROLE EPIDEMIOLOGY AND CONTROL

ANDRADE, V. et al. Monitoring the elimination of leprosy in Brazil. *Int. J. Leprosy*, v.66, n.4, p.457-463, December, 1998.

A decreasing trend in the prevalence rate of leprosy was reached in Brazil only after the introduction of the World Health Organization multidrug therapy (WHO/MDT) program in 1990. This paper analyzes leprosy morbidity indicators and the prevalence rate, and their utilization in monitoring the progress of leprosy elimination in Brazil. Since these indicators are modified by changes in health service procedures, comparing prevalence rates from different endemic countries or current prevalence rates with old ones from the same endemic region needs careful attention. The current official prevalence rate of 6.72/10,000 inhabitants in Brazil could be considered high when compared with rates from other countries, but it is important to remember that defaulters and patients being treated with old regimens are kept on the active registers in Brazil, while in most other endemic countries they are not.

BAINSON, K.A., VAN DER BORNE, B. Dimensions and process of stigmatization in leprosy. *Leprosy Rev.*, v. 69, n.4, 341-350, December, 1998.

Leprosy is a disease which has struck fear into human beings for thousands of years. This is

partly because it causes considerable deformities and disabilities. In 1991, the 44th World Health Assembly adopted a resolution to eliminate the disease as a public health problem by the year 2000. However, one of the major obstacles to achieving this objective is the stigma associated with the disease. Stigma against leprosy patients affects all aspects of leprosy control. This paper describes a model of the stigmatization process in leprosy. The process of stigmatization can be divided into two stages. The first stage describes how certain cognitive dimensions of leprosy lead to a variety of affective responses towards the disease. The second stage involves how these affective responses contribute to social devaluation of the leprosy patient and, consequently, the adoption of negative behaviours towards them.

CROFT, RJR, CROFT, R.A. Knowledge, attitude and practice regarding leprosy and tuberculosis in Bangladesh. *Leprosy Rev.*, v.70, n. 1, p.34-42, March, 1999.

A small survey was carried out in two areas of northern Bangladesh to assess and compare the level of knowledge, attitude and practice towards leprosy and tuberculosis (TB) among two communities that differed widely in the amount of health education received about these diseases. The results indicate that without a health education programme, levels of knowledge about the cause and treatability of the diseases are poor, worse for leprosy than TB, with correspondingly negative attitudes. Only 16% of the respondents in the 'uninformed' area mentioned 'skin patch' in a question about what they knew about leprosy: and only 44% mentioned 'cough' as a symptom of TB. In the area that had received health education, 90% mentioned, respectively, 'skin patch' and 'cough'. Seventy-eight percent of the respondents would not buy goods from a shopkeeper known to have leprosy, 76% if he had TB in the uninformed area; but in the community who had received health education the proportions were reversed, with three-quarters agreeing to purchase from a diseased

shopkeeper. The implications of these findings for the DBLM and National Health Education programmes are discussed.

EBENSO, B.E. Results of 1 year Special Action Project for the Elimination of Leprosy (SAPEL) in poorly accessible areas of Akwa Ibom State, Nigeria. *Leprosy Rev.*, v.70, n. I, p.56-62, March, 1999.

This article reports the outcome of a Special Action Project for the Elimination of Leprosy (SAPEL), including the implementation of multidrug therapy (MDT) in difficult situations in Akwa Ibom State in Nigeria. Twenty-two fishing villages and five communities in areas of gully erosion participated in the project from August 1996 to September 1997. Seven new cases were detected and treated with MDT. Twenty-one out of 22 defaulters examined resided in the mainland part of the project area and not in the fishing villages. Considerable difficulties were encountered with regard to the exorbitant cost of transport, physical attacks on the teams and the lack of reliable information on population figures for the project area.

The discussion includes attention to the cost-effectiveness of the SAPEL approach under the conditions described and the need to develop better monitoring of treatment and community participation in poorly accessible areas.

OLIVEIRA, M.H.P., ROMANELLI, G. Os efeitos da hanseníase em homens e mulheres: um estudo de gênero / The effects of leprosy on men and women: a gender study. *Cad. saúde pública*, v.14, n.1, p.51-60, jan-mar., 1998.

Detectou-se diferentes experiências de viver a hanseníase no contexto familiar e individual de uma população constituída por 202 hansenianos (132 homens e 70 mulheres), inscritos no programa de controle e tratamento dos serviços de saúde de Ribeirão Preto. Duas

etapas para coletas de informações foram realizadas. Na primeira, os hansenianos responderam a um questionário com perguntas estruturadas; na segunda, foram ouvidos relatos de situações vividas no cotidiano de dez homens e mulheres. Os dados revelaram que a doença mobilizou representações diferentes entre os homens e mulheres nos diferentes grupos sociais. A hanseníase representou um desequilíbrio entre os gêneros, acentuando as desigualdades já existentes no campo sócio-cultural e criando novos problemas responsáveis pelos prejuízos bio-psico-sociais e econômicos, além dos estigmas que pesam sobre os indivíduos. Tais resultados devem reorientar os programas de controle e tratamento, visando à recuperação social dos hansenianos, e também servir de paradigma a novas investigações.(AU).

ONG, A.,K.Y. et al. Cluster of leprosy cases in Kona, Hawaii; Impact of the compact of free association. *Int. J. Leprosy*, v.67, n. 1, p.13-18, March, 1999.

International travel and migration will continue to contribute to the changing patterns of Hansen's disease (HD) in the United States. The majority of cases will be immigrants and refugees entering the country from leprosy- endemic regions. The Compact of Free Association, through its provision of free travel between the Freely Associated States and the United States without need for health screening, has created new public health issues. This cluster of HD cases in Kona, Hawaii, U.S.A., highlights the difficulties in detecting and monitoring the spread of disease in immigrant populations. This is a growing problem only likely to worsen in the coming years.

In groups with cultural, language or other socioeconomic barriers, special and creative methods may be needed to tackle the problems of detection, treatment and education. Clinicians must remain mindful of the diagnosis of HD in high-risk groups.

RAJARATNAM, J., ABEL, R., ARUMAI, M. Is knowledge of leprosy adequate among teachers? A comparative study. *Leprosy Rev.*, v. 70 n, I, p.28-33, March, 1999.

A cross-sectional comparative study on the levels of knowledge and attitude on leprosy among teachers and students was carried out in a rural area of Vellore district in Tamil Nadu, India. A total of 30 teachers and 120 students participated in the study. It was found that knowledge about leprosy among teachers was inadequate. Only 23.4% of teachers stated that germs caused leprosy, while 23.4% mentioned immoral conduct, 20.0% marrying a leprosy patient, 6.6% insects and 26.6% did not know the causes of leprosy. While 80.0% of teachers knew that anaesthetic hypopigmented patches were a sign of leprosy, enlarged painful nerves were not mentioned by a single teacher, although this sign was identified by 17.5% of students. Teachers had a more positive attitude towards leprosy than students and this was statistically significant ($p < 0.001$). This paper discusses the need for continuous education, especially for teachers and through them the students, using different media so as to ensure sustained knowledge for behavioural change in the community.

SELVASEKAR, A. et al. Childhood leprosy in an endemic area. *Leprosy Rev.*, v.70, n, I, p.21-27, March, 1999.

A study was done on 794 new cases of leprosy among children (aged 0-14 years) detected and treated with MDT during 1990-1995 in Gudiyatham Taluk, South India. Incidence rates of leprosy and proportion of multibacillary cases increased with age, while bacillary + tuberculoid was most common. Over 80% had a single patch and most children were detected through surveys. Nearly 30% had history of household contacts with leprosy, mostly parents or grandparents. Reactions and relapses were not uncommon. The findings emphasize the need for more careful surveys for

case detection and better follow-up in case management.

HISTÓRIA - HISTORY

TERENCIO DE LAS AGUAS, J. Historia de la lepra. Fontilles - *Rev. Leprol.*, v.22, n. 1, p.19-76, Enero-Abril, 1999.

The history of the disease is analyzed from ancient and medieval times in Spain and America. Also from the point of view of literature and art up to the scientific interval of the XIX century and in the Valencian Community, finishing with a summary of the scientific and historical events of the XIX and XX centuries.

Key Words: Leprosy. History. World.

IMUNOLOGIA - IMMUNOLOGY

CARDONA-CASTRO, N., ORTEGA-RODRIGUEZ, G., AGUDELO-FLOREZ, P. Evaluation of three *Mycobacterium leprae* monoclonal antibodies in mucus and lymph samples from Ziehl-Neelson stain negative leprosy patients and their household contacts in an Indian community. *Mem. Inst. Oswaldo Cruz*, v.93, n.4, p.487-90, July-Aug. 1998.

Mucus and lymph smears collected from leprosy patients (9) and their household contacts (44) in the Carlo Mochuelo Indian Reservation, Casanare, Colombia, were examined with monoclonal antibodies (MoAb) against *Mycobacterium leprae*. The individuals studied were: 5 borderline leprosy (BB) patients, 4 with a lepromatous leprosy (LL), all of whom were undergoing epidemiological surveillance after treatment and 44 household contacts: 21 of the LL and 23 contacts of the BB patients. The MoAb were reactive with the following *M. leprae* antigens: 65 kd heat shock protein, A6; soluble antigen G7 and complete antigen, Eii. All the samples were tested each of the MoAb using the avidin-biotin-peroxidase technique

and 3,3 diaminobenzidine as chromogen. The patients and household contacts studied were all recorded as Ziehl-Neelson stain negative. The MoAb which showed optimal reaction was G7, this MoAb permitted good visualization of the bacilli. Five patients with BB diagnosis and one with LL were positive for G7; of the BB patients household contacts, 9 were positive for G7; 7 of the LL patients household contacts were positive for the same MoAb. MoAb G7 allowed the detection of bacillar *Mycobacterium spp.* compatible structures in both patients and household contacts. G7 permitted the visualization of the complete bacillus and could be used for early diagnosis and follow-up of the disease in patients. (AU).

CARRAZZA, M.Z.N.. A metemoglobinemia e a dapsonemia como indicadores na intoxicação aguda por dapsona. The methemoglobinemia and the dapsonemia like parameters in the acute dapsona intoxication. São Paulo, 1998. 81 p. Tese (Doutorado). Apresentada a Universidade de São Paulo. Faculdade de Ciências Farmacêuticas.

Com o objetivo de fornecer uma contribuição clínico-laboratorial, que permitisse avaliar a gravidade da intoxicação por dapsona (DDS), foram estudadas as análises toxicológicas e os dados de 274 pacientes, dos quais 60 por cento mulheres. As análises toxicológicas laboratoriais foram efetuadas no Laboratório do Centro de Controle de Intoxicações, da Prefeitura do Município de São Paulo, no período de janeiro de 1985 a dezembro de 1995. As idades dos pacientes variaram de 1 mês a 50 anos, razão pela qual foram distribuídos em 4 grupos etários: o grupo 1 constituído por 147 crianças menores de 5 anos de idade (55,2 por cento), o grupo 2 por 33 crianças de 5 a 12 anos (12,4 por cento), o grupo 3 por 39 adolescentes de 13 a 18 anos (14,7 por cento) e o grupo 4 por 47 adultos de 19 a 50 anos (17,7 por cento). As principais manifestações clínicas observadas foram: cianose intensa em 188 pacientes, taquicardia

em 52, dispnéia em 26, vômitos em 21. Apenas 10 evidenciaram confusão mental e 2 convulsão. Todos os pacientes que ingeriram mais de 25 comprimidos (2,5 g de DDS) tiveram cianose intensa, 35 por cento apresentaram taquicardia e 53 por cento dispnéia...(AU).

CASTELLS RODELLAS, A., VALERO GELI, G., TERENCEIO DE LAS AGUAS, J. Inmunologia de la lepra, 1997. *Fontilles - Rev. Leprol.*, v. 21, n.5, p.507-580, Mayo-Agosto, 1998.

The macrophage immune response, humoral and cellular immunity against *Mycobacterium leprae* and its different antigens is studied.

Total and partial defects of the cellular immunity existe with disturbed secretion patterns of cytokines while the immediate immunity is unaltered.

The secretion of various cytokines under the effect of *M. leprae* can alte the immune function originating important deficiencies.

The immunodeficiency isn't satisfactorially explained.

Key words: Immunology of leprosy. Macrophages. Humoral immunity. Cellular immunity. .

FIALLO, P. et al. B -Glycoprotein I-dependence of anticardiolipin antibodies in multibacillary leprosy patients. *Leprosy Rev.*, v.69, n.4, p.375-381, December, 1998.

This study was undertaken to investigate the influence of P -glycoprotein I (GPI) on anticardiolipin antibody (aCL) titration in leprosy. The study group consisted of 140 sera from patients with multibacillary leprosy (46 borderline, 94 lepromatous). The group included newly diagnosed, previously untreated patients, patients under treatment and patients released from treatment. GPI addition enhanced significantly the aCL titres in sera from lepromatous leprosy but not in those from borderline leprosy. Moreover, when the patients

were classified according to their bacteriological status, aCL titres were found to be significantly higher in skin smear positive patients compared to bacteriologically negative patients. Thus, the present study demonstrates that aCL in multibacillary leprosy patients are mainly of the GPI-dependent type and emphasizes the importance of GPI addition for aCL titration in leprosy.

FOKKENS, W.J. et al. The nose in leprosy: immunohistology of the nasal mucosa. *Int. J. Leprosy*, v.66, n.3, p.328-339, September, 1998.

A detailed study of the nose was undertaken in 40 leprosy patients with different classifications of leprosy and different durations of disease at two hospitals in Brazil.

This manuscript describes the immunohistochemical data on cellular infiltrates in the nasal biopsies of those patients. It was surprising that the damage to the whole depth of the nasal mucosa, epithelium and lamina propria was considerable, as was the case in the nasal mucosa which looked relatively normal during clinical inspection. The epithelium showed large holes which looked like very extended goblet cells. Very obvious was the lack of vasoconstriction after cocaine application, and the vessels also showed a lack of staining with factor VIII, possibly indicating a disruption of the endothelium. The number of neurofilaments was extensively reduced in all leprosy groups compared to normal controls. As in the skin, an increased number of CD68+ cells was found in the lamina propria of the nasal mucosa of the lepromatous patients. Contrary to findings in the skin, in the nasal mucosa of the borderline/lepromatous patients the number of CD4+ cells was increased and the number of CD8+ cells was decreased compared to normal controls. The number of CD8+ cells tended to be more reduced when the history of leprosy was longer. It is not clear as yet whether the reduced numbers of CD8+ cells are acquired during infection or whether persons with a low number of CD8+ cells in the

nose might have a higher risk of acquiring leprosy.

SAMPAIO, E. P, SARNO, E. N. Expression and cytokine secretion in the states of immune eactivation in leprosy. *Braz. j. med. biol. res.*, v.31, n.1, p.69-76, jan., 1998. Conferência: Apresentado em: International Meeting on Cytokines, Angra dos Reis, Nov. 24-28 1996.

Leprosy is a chronic inflammatory disease caused by *Mycobacterium leprae*. The human response to this pathogen exhibits intriguing aspects which are up to now not well understood. The present study discusses the probable mechanisms involved in T cell-specific unresponsiveness observed in lepromatous patients. Analysis of the cytokine profile either in blood leukocytes or in skin specimens taken from leprosy lesions indicates that some parameters of Thi immune response are present in lepromatous patients under reactional states. (AU).

TORRELLA, A., SOLIS, R.L., PEREZ, E., MEDINA, Y., KERQUELEN, C., OLAYA, P. Anti M. *leprae* IgM antibody determination by ultramicroimmunoenzymatic (UMELISA HANSEN) for the diagnosis and monitoring leprosy. *Rev. Inst. Med. Trop. São Paulo*, v.40, n.3, p.177-81, may-jun., 1998.

Se analizo la relacion entre la carga antigenica y la respuesta de anticuerpos IgM, el comportamiento de Bicha respuesta y la utilidad de su deteccion para el diagnostico y seguimiento de la lepra. Se obtuvo un 82 por cento de coincidencia entre los resultados del UMELISA HANSEN y los de la baciloscopia. Este valor se vio afectado fundamentalmente por i6 pacientes con respuesta positiva a IgM y baciloscopia negativa. En estos pacientes de acuerdo a lo reportado, la respuesta IgM puede indicar la reaparicion de bacilos, precediendo a su deteccion en la piei. En uno de estos pacientes se demonstro la presencia de bacilos, dos meses despues de resultar positivo por el

UNELISA HANSEN. Entre los pacientes coincidentes en 1gM baciloscopia positivas con tratamiento quimioterápico... (AU).

VALLISHAYEE, R. S., ANANTHARAMAN, D. S., GUPTA. Tuberculin sensitivity and skin lesions in children after vaccination with two batches of BCG vaccine. *Indian J. Leprosy*, v.70, n.3, p.277-286, July - Sept., 1998.

BCG is one of the vaccines used as control arm in an ongoing large scale comparative leprosy vaccine trial in South India. The objective of the present study was to examine, in the local population, the sensitizing ability, as measured by skin test reactions to tuberculin, and reactogenicity, in terms of skin lesions at the site of vaccination, for the two batches of BCG vaccine used in the above trial. The study was undertaken in 816 tuberculin-negative, previously not vaccinated school children aged five to 14 years. Each child received one of the two batches of BCG vaccine or normal saline (control), by random allocation. At 12 weeks from vaccination, character and size of local response, at the vaccination site, were recorded. At the same time, the children were retested with tuberculin and post-vaccination reactions to the test were measured after 72 hours. At three years after vaccination all available children were re-examined for the presence and size of BCG scar at the site of vaccination. It was found that healing of vaccination lesions was uneventful, with both batches of BCG. The mean size of the lesion was similar for the two batches, the overall mean being 6.3 mm. The mean size of post-vaccination tuberculin sensitivity increased with age, and it was 14.5 mm and 15.6 mm. The sensitizing effect attributable to the vaccine was 11 mm and 12 mm, for the two batches of BCG respectively.

This study showed that the two batches of BCG, in a dose of 0.1 mg, used in the ongoing leprosy vaccine trial were acceptable in terms of vaccination lesion and were highly satisfactory in terms of development of hypersensitivity.

ZODPEY, S.P. et al. Effectiveness of bacillus calmette-guerin (BCG) vaccination in the prevention of leprosy; a case-finding control study in Nagpur, India. *Int. J. Leprosy*, v. 66, n.3, p.309-315, September, 1998.

A hospital-based, pair-matched, case-control study was carried out at Government Medical College Hospital in Nagpur in central India to estimate the effectiveness of BCG vaccination in the prevention of leprosy. The study included 314 incidence cases of leprosy [diagnosed by World Health Organization (WHO) criteria] below the age of 32 years. Each case was pair-matched with one control for age, sex and socioeconomic status. Controls were selected from subjects attending this hospital for conditions other than tuberculosis and leprosy. A significant protective association between BCG and leprosy was observed (OR 0.29, 95% CI 0.21-0.41). The vaccine effectiveness (VE) was estimated to be 71% (95% CI 59-79). The BCG effectiveness against multibacillary and paucibacillary leprosy was 79% (95% CI 60-89) and 67% (95% CI 45-78), respectively. It was more effective during the first decade of life (VE 74%; 95% CI 38-90), among females (VE 82%; 95% CI 64-90), and in the lower socioeconomic strata (VE 75%; 95% CI 32-92). The prevented fraction was calculated to be 51% (95% CI 38-62). In conclusion, this study has identified a beneficial role of BCG vaccination in the prevention of leprosy in central India.

MICROBIOLOGIA MICROBIOLOGY

ROJAS-ESPINOSA, O. et al. *Mycobacterium lepraemurium*, a well-adapted parasite of macrophages: I. Oxygen metabolites. *Int. J. Leprosy*, v.66, n.3, p.365-373, September, 1998.

We measured the release of reactive oxygen intermediaries [ROI (hydrogen peroxide and superoxide anion)] by murine peritoneal macrophages challenged in vitro with *Mycobacterium lepraemurium* (MLM),

complement-opsonized yeast, *M. bovis* BCG, *M. phlei*, or phorbol myristate acetate (PMA). We found that except for MLM, all of the other materials provoked the release of significant amounts of hydrogen peroxide and superoxide. MLM entered the macrophages without triggering their oxidative metabolism. Pre-infection of macrophages with MLM did not alter these cells' capacity to release the normal amounts of ROI in response to other microorganisms or PMA. Killing of MLM did not revert the macrophages' failure to release ROI upon ingestion of the microorganism, nor were macrophages able to produce these toxic metabolites when pre-incubated in the presence of murine gamma interferon (IFN- γ). MLM has several attributes that allow it to survive within macrophages: a) it is a nontoxigenic microorganism (it does not harm its host), b) it resists the harsh conditions of the intraphagolysosomal milieu (a property perhaps dependent on its thick lipidic envelope), and c) it penetrates the macrophages without triggering their oxidative response (thus avoiding the generation of the toxic intermediaries of oxygen). For these attributes (and others discussed in this paper), we recognize MLM as a highly evolved, well-adapted parasite of macrophages. In addition, the results of the present study prompted the analysis of the biochemical pathways used by MLM and *M. bovis* BCG to penetrate into their cellular hosts, a subject now under investigation in our laboratory.

ROJAS-ESPINOSA, O. et al. Susceptibility of "et," the spontaneously mutating CDi-derived nude mouse, to infection of *M. lepraemurium*. *Int. J. Leprosy*, v.67, n, I, p.46-51, March, 1999.

We have studied the susceptibility to infection by *Mycobacterium lepraemurium* (MLM) of a nude, hypothyroid, CDi-derived, spontaneous mouse mutant called "et" because of its extraterrestrial appearance. We found that

despite their hypothyroidism, et/et mice were not more susceptible to infection by MLM than their euthymic et/+ counterparts. Infection of both et/et and et/+ mice with 50 x 10 bacilli by the intraperitoneal route led only to a mild infection with low levels of antimycobacterial antibodies and a small number of lesions. These lesions were indicative of reactive hepatitis and hyaline perisplenitis with lymphoid hyperplasia. Some small bacilliferous granulomas were also observed at the end of the experiment (5 months of infection). CD1 mice behave in a rather "resistant" manner to the infection by MLM. It is clear that the *nu* gene is not necessarily linked to the thymus defect, and it is also clear that the hypothyroidism of et/et mice does not obviously affect their general cell-mediated immune competence.

SAKAI, T., MATSUO, E., WAKIZAKA, A.. Complete DNA sequence analysis for *i6s* ribosomal RNA gene of the leproma-derived, cultivable and nerve-invading mycobacterium HI-75. *Int. J. Leprosy*, v.67, n, I, p. 52-59, March, 1999.

The complete 1493 nucleotide sequence of the *i6s*rRNA gene of the leproma-derived and cultivable mycobacterium HI-75 strain was analyzed to elucidate the taxonomic characteristics by direct sequencing of the polymerase chain reaction (PCR) products. The results revealed that the sequence of mycobacterium HI-75 was mostly similar to that of *Mycobacterium scrofulaceum* with 5 bases differences in the sequenced 1493 bases (0.35%) of the *i6s*rRNA gene. *M. leprae* differed from the strain with 47 bases (3.3%). Sasaki and Hamit reported the nerve-invasive activity of the inoculated mycobacterium HI-75 in nude mice or the 1311-treated immunocompromised Swiss mice. The results indicate that mycobacterium HI-75 could be a mutant of *M. scrofulaceum* possessing the ability to invade the peripheral nerve in addition to developing leproma-like lesions.

SHIMIZU, T., MAW, WW, TOMIOKA, H.
Roles of tumor necrosis factor- α and transforming growth factor-B in regulating intercellular adhesion molecule-1 expression on murine peritoneal macrophages infected with *M. leprae*. *Int. J. Leprosy*, v.67, n. I, p.36-45, March, 1999.

Profiles of intercellular adhesion molecule-i (ICAM-i) expression on murine peritoneal macrophages (M ϕ s) infected with *Mycobacterium leprae* during cultivation were examined with special reference to the regulatory effects of tumor necrosis factor- α (TNF- α) and transforming growth factor- β (TGF- β). When M ϕ s were infected with *M. leprae* or stimulated with heat-killed *M. leprae* at day 0, their ICAM-1 expression, measured in terms of the ratio of M ϕ s positively stained with anti-ICAM-1 antibody (Ab), rapidly increased, peaking during days 1 to 3 and thereafter fell, returning to the normal level by day 7. The addition of TNF- α or antiTGF- β Ab inhibited the middle phase (day 7) downregulation of MO ICAM-1 expression, although the late-phase (day 14) downregulation of ICAM-1 was not prevented by them. *M. leprae*-infected MDs released small amounts of TNF- α and significant amounts of TGF- β into the culture medium. This may indicate that *M. leprae* infected M ϕ s produced the majority of TNF- α in a membrane-bound form. Alternatively, endogenous TNF- α might upregulate M ICAM-i expression even at very low concentrations. In any case, these findings indicate the central roles of TNF and TGF- β in the early phase upregulation and the middle-to-late phase downregulation, respectively, of ICAM-1 expression by *M. leprae*-infected M ϕ s.

YOGI, Y. et al. Susceptibility to *Mycobacterium leprae* of ALY (Alymphoplasia) mice and IFN- γ induction in the culture supernatant of spleen cells. *Int. J. Leprosy*, v.66, n.4, p.464-474, December, 1998.

The alylaly (alyymphoplasia) mice from a

mutation of a colony of the C57BL/6J mouse strain, which has a systemic absence of lymph nodes and Peyer's patches, are deficient in both T- and B-cell-mediated immune functions. We have undertaken a comparison of susceptibility to *Mycobacterium leprae* of ALY (alylaly, alyl/+) mice with C57BL/6J mice. The alylaly mouse was found to have an excellent high susceptibility to *M. leprae* with no distinction between female and male. The alylaly/+ mouse also was more susceptible to *M. leprae* at an earlier stage than the C57BL/6J mouse. Therefore, we examined and compared the cytokine gene expression and gamma interferon (IFN- γ) induction in the splenocytes of ALY mice. The expression of interleukin 4 (IL-4), IL-10 and IL-12 mRNA was weakly stimulated with MLlysate in inoculated alylaly mice but IL-2, IL-6, IGIF/IL18 and IFN- γ mRNA were not observed. None of the cytokine genes used appeared, except the mRNA for IL-1- α , when uninfected cultured spleen cells were stimulated with MLlysate. Also, IFN- γ production was not induced. However, the appearance of these cytokine genes was observed when stimulated with concanavalin A (ConA), and IFN- γ production was also induced in the culture supernatant by alyl/+ and even alylaly mice stimulated with ConA. To examine the reason why IFN- γ cannot be produced by splenocytes of ALY mice inoculated with *M. leprae*, we detected cytokine gene expression and IFN- γ induction in the presence of recombinant murine IL-12 or IGIF/IL-18. IL-2 mRNA expression was detected in all of the mice tested in the presence of IL-12 but not in alylaly mice under IGIF/IL-18, and iNOS mRNA expression was not observed in alylaly mice under IL-12 or IGIF/IL-18. IL-4 and IL-10 mRNA were detected by alylaly mice only by exposure to IGIF/IL-18. In culture, the supernatant with ML antigens of the alylaly mice did not produce IFN- γ in spite of the presence of IL-12 and IGIF/IL-18, while IFN- γ was weakly induced in alyl/+ mice stimulated with ML-lysate and in the presence of IGIF/IL-18. Nevertheless, IFN- γ production was observed in splenocytes of the alylaly mice stimulated with ConA and also with IGIF/IL-18 plus anti-CD3

antibody. Our results suggest that ALY mice might be showing a high susceptibility to *M. leprae* because of deficient priming for activation of T cells with the leprosy bacilli infection.

Moreover, it is possible that the phagocytic activities of the macrophages of ALY mice are also impaired.

NEUROLOGIA - NEUROLOGY

FREITAS, M.R.G., NASCIMENTO, O.J.M., DRAGO, M., FREITAS, A.R., HAHN, M.D. Paralisia do nervo ulnar na lepra sem alterações cutâneas: biópsia do ramo superficial do nervo ulnar na mão / Ulnar nerve palsy in leprosy without skin changes: biopsy of the surface branch of the ulnar nerve in hand. *Arq. Neuropsiquiatr.*, v.56, n.3B, p.585-94, set., 1998.

A lepra constitui causa freqüente de acometimento de nervos periféricos, em nosso meio. O sistema nervoso periférico é acometido por vezes sem que haja alterações cutâneas: é a chamada forma neurítica pura. Nessa variante, o nervo mais afetado é o ulnar. Nos casos de acometimento isolado de nervos periféricos somente a feitura de biópsia de nervo conduzirá ao diagnóstico. Assim, resolvemos realizar biópsia do ramo sensitivo superficial do nervo ulnar na mão em 17 pacientes com paresia ou paralisia desse nervo e espessamento do mesmo na altura do cotovelo. Os principais achados foram: redução do número de fibras mielínicas em 14 casos, infiltrado inflamatório em 13, fibrose em 12, desmielinização e remielinização em 9, presença de granuloma em 6 e visualização do *Mycobacterium leprae* em 5. Concluímos que a biópsia do ramo sensitivo superficial do nervo ulnar na mão é um bom meio diagnóstico de lepra em pacientes com acometimento desse nervo. (AU).

OFTALMOLOGIA OPHTHALMOLOGY

MARADEI, J., SANTOS, PM., SANTOS, R.C.R., OLIVALVES, S.M.R., ABREU, M.T.. Complicações oculares como causa de incapacidade visual na Hanseníase / Ocular complications in leprosy. *Arq. bras. Oftalmol.*, v.61, n.1, p.11-4, jan.-fev., 1998.

Foram estudadas as complicações oculares como causa de deficiência visual em 300 pacientes (600 olhos) portadores de diferentes formas clínicas de hanseníase. Foram observados 14 por cento de deficiência visual unilaterais e 75 por cento bilaterais. As complicações oculares mais freqüentes foram: atrofia de íris (21 olhos, 3,5 por cento), lagoftalmo associado e leucoma de córnea (19 olhos, 3,2 por cento), catarata e catarata associada a atrofia de íris (18 olhos, 3,0 por cento), causa indeterminada e corneoescleral roll associado a leucoma de córnea (12 olhos, 3,0 por cento), atrofia do bulbo ocular (10 olhos, 1,7 por cento), maculopatia (8 olhos, 1,3 por cento), rarefação do epitélio pigmentar da retina e úlcera de córnea (3 olhos, 0,5 por cento). Também foram observados leucoma vascularizado de córnea e luxação do cristalino (2 olhos, 0,3 por cento) (AU).

REABILITAÇÃO - REHABILITATION

JIANG, J. et al. A field trial of detection and treatment of nerve function impairment in leprosy - Report from national POD pilot project. *Leprosy Rev.*, v. 69, n.4, p.367-375, December, 1998.

As part of a collaborative project between the Ministry of Health of China (MOH) and The Leprosy Mission International (TLMI) on leprosy rehabilitation and prevention of disability (POD), a total of 407 patients was monitored for possible nerve function impairment (NFI) through standardized clinical nerve function assessment between May 1995 and February 1998. Of these, 191 patients were

found to have NFI and were put on a fixed regimen of prednisolone. In this study, 36.7% of NFI occurred before diagnosis of leprosy, 35.6% developed during MDT and 25.7% after their release from MDT. Overall, 7.5% (105 out of 1407) of all patients, or 55.9% of patients with NFI, suffered from silent neuropathy. Of the affected nerves, 62.6% had silent neuropathy. Sensory impairment responded to prednisolone satisfactorily, giving a recovery rate of 73.8%, 76.5% and 81.0% in ulnar, median and posterior tibial nerve, respectively. Sensibility in patients even with a NFI duration longer than 6 months made significant improvement ($p < 0.05$). Motor function improvement was less satisfactory, especially in ulnar and c. popliteal nerve. The possible reasons are analysed. Our findings with regard to sensibility changes confirm that once it becomes clinically detectable, NFI is no longer at the 'early' stage. More sensitive tests are necessary to detect real 'early' sensory impairment in the field. Our study also indicates that with well-trained field staff and proper equipment for nerve function assessment, early detection and treatment of NFI can be practical and effective.

TERAPÊUTICA THERAPEUTIC

HARI, L. et al. An assessment of the value of midfinger smears in multibacillary leprosy patients. *Leprosy Rev.*, v.70, n. 1, p.47-51, March, 1999.

In view of the different opinions on fingers as sites for persisting bacilli in multibacillary leprosy patients, it was decided to examine the midfingers for the presence of acid-fast bacilli (AFB) and establish its usefulness. Sixty-nine multibacillary leprosy patients, [lepromatous (LL) and borderline lepromatous (BL)] treated with multidrug therapy for fixed duration (2 years) were analysed. The bacillary load in the midfinger sites was lower when compared to that in the 'compulsory' (both earlobes) and 'optional' (four active lesions) sites. The midfinger bacterial index (BI) was higher among LL patients when compared to BL

patients ($p < 0.001$). However, the difference in mean BI in 'optional' and 'compulsory sites' was not significant. The overall fall in BI was gradual and on expected lines for all sites, including midfingers, during treatment and follow-up period. Except in one case, at no time were the smears from midfinger sites positive when all other sites were negative, and their inclusion did not contribute to the early detection of relapse.

Furthermore, the collection of blood-free smears from this site is technically difficult and often painful for the patient. The inclusion of midfinger smears in this study in patients in South India did not contribute useful information to that which is routinely available from smears of earlobes and other active sites.

JOHN, S.S. Fixed drug eruption due to rifampin. *Leprosy Rev.*, v.69, n.4, p.397-399, December, 1998.

In northern Nigeria 60 leprosy patients, 49 outpatients and 11 in-patients, were interviewed about their help-seeking behaviour and explanatory models before their first contact with the leprosy services. Most patients showed a delay of more than 1 year. After leprosy was provisionally diagnosed by lay persons, 27% of patients found their way to the leprosy services within 3 months. Chemists (popular sector) and the professional sector frequently missed the diagnosis. If early case finding is to be improved, it is important to involve them in case finding activities and to train them in adequate diagnostic skills.

No significant correlations were found between total delay and sex, age, religion or leprosy classification, except with visible deformity at the time of the interview and illiteracy. Consultation of folk healers was the major reason for delay. Most patients consulted folk healers, who, although they claimed to have a positive attitude towards modern medicine in the case of leprosy, never referred patients to the leprosy services.

While many patients held a variety of causes responsible for leprosy, most patients explained the disease in traditional terms (58%),

while only a minority used modern concepts (20%). This emphasizes the need for continuous attention for health education of diagnosed patients and their families. No significant difference was found between male and female patients concerning their concept of leprosy.

Denial of the leprosy diagnosis was rare.

KUMAR, R.H., KUMAR, M.V., THAPPA, D.M. Dapsone syndrome - A five year retrospective analysis. *Indian J. Leprosy*, v. 70, n. 3, p.271-276, July- Sept., 1998.

Seventeen cases of dapsone syndrome were seen in five years from 1992 onwards. Their mean age was 27.8 years (range 11 to 60 years). Male to female ratio was 1.1:1. Of these cases, seven had confirmed leprosy, nine were cases of suspected leprosy and one case had lichen planus. On an average, they developed the symptoms 27 days after the intake of dapsone. The cutaneous lesions were in the form of erythematous papules and plaques (13 cases), eczematous lesions (four cases) and associated bullous lesions (two cases). The other manifestations were: fever (16 cases), pruritus (15 cases), lymphadenopathy (14 cases), hepatomegaly (10 cases), icterus and oral erosions (five cases each), photosensitivity (four cases) and splenomegaly (two cases). Previous drug allergy was present in four cases. Elevated ESR and liver enzyme levels were invariable findings. Raised bilirubin levels and hemolytic anaemia were seen in eight cases. Apart from one case with hepatic encephalopathy, all other cases had a favourable outcome either on conservative management (eight cases) or on oral corticosteroids (eight cases). Oral provocation test was done in two cases with positive response while intradermal test was not very reliable.

SAMANT, G. et al. Clinical and electrophysiological evaluation of nerve function impairment following cessation of multidrug therapy in leprosy. *Leprosy Rev.*, v.70, n. I, p.10-20, March, 1999.

Seventeen multibacillary (MB) and 15

paucibacillary (PB) cases of leprosy who had had regular and adequate multidrug therapy (MDT) were examined clinically and electrophysiologically at periodic intervals for 1 year following cessation of MDT. All the major nerves were assessed for nerve function impairment (NFI). Overall, two MB (13.3%) and three PB (20%) cases showed signs of deterioration clinically and/or electrophysiologically. The nerve conduction (NC) follow-up studies revealed no significant improvement in the sensory conduction in both the MB and PB groups of nerves, whilst motor conduction showed a significant improvement at the first 6-monthly follow-up among the MB group of nerves. At the study onset, sensory impairment (MB = 62%, PB = 25%) predominated over motor in terms of both severity and frequency. The lower extremity was more frequently and severely affected than the upper in both groups of patients. As an individual test, NC measurement proved to be more sensitive in detecting NFI, but the combination of physical palpation for nerve thickening and graded nylon test (GNT) was closely comparable to measurement of nerve conduction.

SOLOMON, S. et al. Incidence of nerve damage in leprosy patients treated with MDT. *Int. J. Leprosy*, v.66, n.4, p.451-456, December, 1998.

The incidence rates of sensory and motor impairments during and after multidrug therapy (MDT) are reported for a prospective cohort of patients who had no nerve damage at registration (N = 1621). Sensory and motor loss increased with age and both were high among multibacillary patients as compared with paucibacillary patients. The lateral popliteal (common peroneal) and posterior tibial nerves seem to be most affected for sensory loss; whereas the posterior tibial and ulnar nerves are mainly responsible for motor loss. No significant difference by gender was found. Implications for prevention of disability (POD) activities are discussed and