

## RESUMOS/ABSTRACTS

### ASPECTOS SOCIAIS

**AWOFESO, N.** Stigma and socio-economic reintegration of leprosy sufferers in Nigeria. *Acta Leprol*, v 10, n.2, p.89-91, 1996.

Leprosy is the commonest cause of peripheral neuropathy in the world. This feature causes gross deformities of the face and limbs of infected individuals as well as crippling disabilities involving sight, touch and manual dexterity. Such stigmata intensified the social and economic isolation of patients.

Although concerted efforts by national governments and international organizations have made leprosy cease to be a medical problem in most parts of the world, leprosy still remains a "human problem": about 30% of past or present leprosy sufferers in Nigeria are disabled and/or handicapped as a result of the disease.

This paper reviews the various factors contributing to leprosy stigma in Nigeria and proposes ways of minimising it.

**Keywords:** Leprosy - Reintegration - Nigeria.

**RAO, S., GAROLE, V., WALAWALKAR, S., KNOT, S., KARANDIKAR, N.** Gender differentials in the social impact of leprosy. *Leprosy Rev.*, v.67, n.3, p.190-199, September, 1996.

Prevalence rates of leprosy have reduced considerably in many states where multidrug therapy is in operation. However, reduction in prevalence alone is not sufficient as the social consequences of the diseases on the life of the patient are often severe and persist even after its cure. The present paper, therefore, investigates social impact with special reference to gender differentials. Data obtained from structured questionnaires (n = 606) is analysed for this pur

pose. It was observed that the initial delay in identifying the skin changes as the symptoms of the disease were higher for females (29 months) than males (24 months). Even after identifying the symptoms, women were observed to depend exclusively on nonmedical treatment for a longer period (10 months) than males (6 months). Upon starting the medical treatment females were observed to be more compliant than males, but the benefits of regularity appeared to be outweighed by the initial delay in starting medical treatment. The social impact on daily life was more severe for females than males as revealed by the isolation from daily activities, such as, restrictions on participation in familial functions, restrictions on touching children. The paper highlights implications of gender bias on detection and treatment, and suggests modifications for control programmes.

### CLÍNICA

**CHAUHAN, S.L., GIRDHAR, A., MISHRA, B., MALAVIYA, G.N., VENKATESAN, K., GIRDHAR, B.K.** Calcification of peripheral nerves in leprosy. *Acta Leprol*, v.10, n.1, p.51-56, 1996.

A study conducted in 74 TT/TB patients, with gross thickening of nerves together with nerve abscess, showed calcification in 8 patients. Calcification was most common in the ulnar nerve followed by the lateral popliteal nerve. All eight patients were males with significantly longer duration of illness before start of treatment. Patients with late onset of nerve abscess were found to be more prone to calcium deposition in the nerves. Gaseous pus of the abscess had high lipid content with raised cholesterol and cholesterol ester ratio to total lipids suggesting a dystrophic nature of calcification.

**Keywords:** Leprosy - Tuberculoid leprosy - Nerve

abscess - Caseous pus - Dystrophic calcification - Nerve calcification.

**FAYE, O., MAHÉ, A., JAMET, P., HUERRE, M., BOBIN, P.** Etude anatomopathologique de 5 cas de lèpre chez des sujets séropositifs pour le virus de l'immunodéficience humaine (VIH). *Acta Leprol*, v.10, n.2, p.93-99, 1996.

Depuis la description du premier cas de lèpre chez un sujet séropositif pour le VIH en 1987, aucune interaction n'a été prouvée entre *Mycobacterium leprae* (*M. leprae*) et ce virus malgré les nombreuses études épidémiologiques, clinique et ou anatomo-pathologique. On continue toujours à se demander si le VIH modifie la réponse immunitaire d'un sujet vis-à-vis de *M. leprae*, et quelle est la fréquence des états réactionnels ou le risque de rechute chez les lépreux séropositifs. Devant l'absence de témoin séronégatif comparatif dans les études anatomopathologiques rapportées, l'augmentation croissante du nombre des malades séropositifs, il nous a paru intéressant d'essayer de savoir si le VIH modifie l'image histologique d'une lèpre. L'objectif de ce travail est de décrire les lésions anatomo-pathologiques cutanées chez les lépreux séropositifs en comparaison avec celles de lépreux séronégatifs appariés.

**Mots clés:** Lèpre Histopathologie cutanée - Virus d'immunodéficience humaine acquise (VIH).

**GRAUWIN, M.Y., MANE, I., CARTEL, J.L.** Proliférations tumorales développées sur maux perforants plantaires: quelle attitude thérapeutique? *Acta Leprol*, v.10, n.2, p.101- 104, 1996.

Entre 1983 et 1994, 66 Sénégalais, anciens malades de la lèpre, ont été vus pour des proliférations bourgeonnantes sur mal perforant plantaire (deux malades présentaient chacun 2 tumeurs). 68 biopsies ont été réalisées pour examen anatomopathologique: dans 39 cas il s'agissait de carcinomes spinocellulaires et dans les 29 autres d'hyperplasies pseudo-épithéliomateuses. La fréquence annuelle moyenne des

proliférations tumorales a été de 0,45 pour 100 MPP. La proportion des carcinomes parmi ces tumeurs était de 57%. Des 38 malades porteurs de carcinome, 5 ont refusé l'amputation: tous sont morts. Les 33 autres ont été amputés et 8 sont morts directement des suites de leur carcinome (24%). Pour les 28 malades porteurs d'hyperplasie, on a procédé à 18 amputations et à 10 excisions. Dans les mois qui ont suivi l'intervention on a observé 8 récurrences chez les 10 malades excisés; ces récurrences ont été traitées par amputation, ce qui donne un total de 93% d'amputations dans les hyperplasies. Ces données amènent à conclure que, au moins dans les pays où le recours à l'examen anatomo-pathologique pour diagnostic de certitude n'est pas possible, l'amputation au-dessous du genou est la conduite à tenir raisonnable devant une prolifération tumorale développée sur un MPP.

**Mots clés:** Lèpre - Carcinome - Hyperplasie pseudo-épithéliomateuse - Mal perforant plantaire - Amputation.

**GRAUWIN, M.Y., MANE, I., CARTEL, J.L.**

Pseudoepitheliomatous hyperplasia in trophic ulcers in leprosy patients. A 28-case study. *Leprosy Rev.*, v.67, n.3, p.203-207, September, 1996.

Between 1984 and 1993, pseudo-epitheliomatous hyperplasia developing in chronic ulcers were observed in 28 former Senegalese leprosy patients, which amounts to an annual frequency of 1-9 per 1000 ulcers. Correct diagnosis could only be made by histopathological examination of specimens taken from the depth of the lesion. Amputation was carried out on 17 patients and local excision on the order 10. Recurrence of growth was observed in 8 of the 10 patients treated by excision: in all of these 8 cases below knee amputation had to be subsequently performed. From our experience, it may be assumed that local excision should be carried out only in the case of small tumours. Since the aim of surgical procedure is to allow the patient to have physical autonomy, below knee amputation, followed by adaptation of prosthesis, should be the procedure chosen in the other cases.

**KUMAR, G.R., RAMANA, P.V., VASUNDHARA, N., REDDY, M.K.** Two unusual nerve abscesses-lepromatous leprosy and pure neural leprosy: case reports. *Leprosy Rev.*, v.67, n.3, p.217-221, September, 1996.

We report two cases of nerve abscesses, one suffering from lepromatous leprosy (LL) and the other from tuberculoid neural leprosy. Neither had any signs of reactions. Both were untreated cases. Surgical nerve decompression and systemic prednisolone had resolved the nerve abscess in the first case, whereas the second one responded only to surgical nerve decompression. The unusual nature of clinical presentation of nerve abscess has been outlined.

**LAGRANGE, P.H., ABEL, L.** Susceptibilité génétique à la lèpre chez l'homme. *Acta Leprol.*, v.10, n.1, p.11-27, 1996.

La capacité de certains individus de résister à certaines maladies, dont la lèpre, a été depuis longtemps envisagée comme pouvant être influencée par des facteurs génétiques. Le spectre clinico-pathologique de la lèpre, l'hétérogénéité épidémiologique, à la fois géographique et ethnique, dans la prévalence des formes polaires pourrait s'expliquer par des différences génétiques de la résistance de l'hôte. Alors que les gènes spécifiques impliqués n'ont pas été identifiés, des études récentes suggèrent qu'une base génétique résiderait dans la capacité différente des macrophages de l'hôte à réduire la multiplication bactérienne. Des modèles expérimentaux ayant analysé les réactions de défense antimycobactériennes ont mis en évidence que les différences existent dans la résistance ou la fragilité à l'infection (*M. bovis*, BCG, *M. lepraemurium*, *M. tuberculosis*) étaient sous le contrôle de l'expression d'un gène dominant qui existe sous deux formes alléliques, *bcgr* et *bcgs*. L'allèle *bcgr* confère la résistance et est dominant vis-à-vis de l'allèle *bcgs* qui représente une fragilité plus grande à l'infection. Le gène candidat murin pour le gène *bcg* a été nommé NRAMP (pour Natural Resistance-associated Macrophage Protein). Même si la fonction précise de NRAMP n'est pas actuelle-

ment connue avec exactitude, il a été montré que ce gène est exprimé préférentiellement dans les macrophages, qu'il entraîne une capacité bactériostatique plus élevée de ces cellules. NRAMP possède des homologies structurales avec la famille des protéines membranaires ayant une fonction de transport liant l'ATP. NRAMP est similaire au système bactérien membranaire de transport des nitrites. La protéine NRAMP est aussi impliquée dans une fonction de signal de transduction au cours de l'activation des macrophages. Il est ainsi possible de concevoir à ce locus un polymorphisme génétique intervenant dans les réponses immunitaires non spécifiques et spécifiques à l'infection. À côté de ce polymorphisme potentiel, intervenant lors de la phase initiale de l'infection, les études immunogénétiques suggèrent que le polymorphisme des molécules HLA de classe II pourraient intervenir dans l'évolution de la réponse immunitaire secondaire vis-à-vis de *M. leprae*. Sachant que les molécules HLA sont exprimées de façon codominante, et devant l'extraordinaire polymorphisme allélique à ce locus, il pourrait exister un très vaste éventail de réponses immunitaires aux antigènes de *M. leprae* chez des sujets HLA discordants et entre des populations avec des profils génétiques différents. Généralement, il est admis que les isotypes HLA-DR sont associés avec une réponse de protection, alors que les isotypes HLA-DQ seraient associés aux formes disséminées lépromateuses. Le rôle cardinal des systèmes HLA contrôlant l'immunité à médiation cellulaire fait qu'il est probable que des différences dans les haplotypes HLA puissent contribuer au vaste spectre des réponses immunitaires observées dans la lèpre. Les déterminants génétiques de la résistance à la lèpre ne peuvent pas être simplement décrits par une approche classique, car la complexité des mécanismes de résistance, non encore élucidée, pour lesquels au moins deux loci seraient contributifs, devraient être réévalués comme un complexe multigénique multifactoriel, dans lesquels interviennent des événements environnementaux propres à la transmission de *M. leprae*, sa durée, son intensité, et des facteurs de l'hôte pouvant varier avec le temps. La dissection de chacun des éléments et une meilleure compréhension des mécanismes

physiopathologiques de l'infection et de la maladie sont nécessaires afin de mieux préciser l'influence de facteurs génétiques sur chacun d'entre eux. Mots **clés: Lépre** - Système immunitaire - Régulation - HLA - Analyse de ségrégation - Analyse de liaisons.

**PORICHHA, D., BRAHME, H.G., MAHAPATRA, D.C., REDDY, B.N.** Cellularity of macrophage granuloma and morphological index. *Indian J. Leprosy*, v.68, n.3, p.217-222, July-Sep., 1996.

In the present study, morphological index (MI) and average macrophage count per microscopic field in skin sections of 94 lepromatous (LL) patients is correlated. The subjects included 14 cases with some histoid features. The MI in the lepromatous cases varied from less than one to 40 and the corresponding macrophage counts ranged from 40 of 156. In cases with histoid changes the MI varied from 30 to 60 and the cell count ranged from 215 to 360. The histoid cases showed a higher MI and cell count compared to the other lepromatous cases. There was a positive correlation between MI and macrophage count and the hypercellular state appears to depend on living and multiplying bacteria.

**SALAFIA, A., CHAUHAN, G.** Nerve abscess in children and adults leprosy patients: analysis of 145 cases and review of the literature. *Acta Leprol.*, v.10. n.1. p.45-50. 1996.

The authors report on their experience of nerve abscess in leprosy. They have found that in the last 5 years there is a significant increase in this type of pathology, at a time when the total number of patients has decreased in adults. Nerve abscesses are, recently, noticed in a large number of children and teenagers. This was not the case 7-9 years ago. Abscesses were excised from one hundred forty-five nerves in one hundred and sixteen patients between May 1985 and May 1994, out of which, 14 patients (12.6%) were operated during the period May 1985 to December 1989 and 102 (87.93%) in the period January 1990 to

May 1994. Children and teenagers account to 47% of all cases of nerve abscess in this series. The incidence of abscess in multiple nerves is high too in these groups. Abscess of cutaneous nerves is very common too (35% of cases) though rarely reported in the literature. There is a higher incidence of nerve abscess in male adults as compared to females. The authors believe that this sudden increase in neural pathology can be attributed, in part, to the extension of multidrug therapy (MDT) programmes without adequate infrastructure to detect and treat early neuritis.

**STURN, A.W., JAMIL, B., McADAM, K.P.W.J., KHAN, K.Z., PARVEEN, S., CHIANG, T., HUSSAIN, R.** Microbial colonizers in leprosy skin ulcers and intensity of inflammation. *Int. J. Leprosy*, v.64, n.3. p.274-281, September, 1996.

The microflora of 55 patients with leprosy skin ulcers was studied and related to a weighted inflammatory score (IS). The control group consisted of 18 ulcers with different underlying pathology. Leprosy ulcers were characterized by the exclusive presence of two types of branching gram-positive rods; a particular interesting proposal is that "*Mycobacterium leprae* share common antigens with these unusual leprosy ulcer associated" organisms and group G beta-hemolytic streptococci. In the leprosy group, corynebacteria and branching rods accounted for 97% of gram-positive bacilli and *Bacillus* species constituted only 3%. In the control group, *B.* species formed 50% of gram-positive rods; the rest were corynebacteria ( $p = 0.03$ ). In the leprosy group, one third of the gram-positive bacteria were branching rods; none of them was acid fast. Ten of them were identified as *Arcanobacterium haemolyticum*, and the remaining 7 could not be identified. The IS of leprosy patients was lower than in the control group. The presence of more than two species of facultative or aerobic gram-negative rods or single species of pyogenic gram-positive cocci correlated with a high IS. The presence of two or more different pyogenic cocci resulted in a lower IS. Further studies into the nature of leprosy-unique organisms as well as the inflam-

mation inhibition factors in mixed infections are warranted. It is recommended that management of ulcers should consist of the application of local disinfection and early treatment of episodes of inflammation with a combination of fluoroquinolone and penicillin.

**THAPPA, D.M., RAO, M.V., GARG, B.R., RATNAKAR, C.** Bullous pemphigoid in lepromatous leprosy. *Indian J. Leprosy*, v.68, n.3, p.251-254, July-Sep., 1996.

Occurrence of bullae in leprosy is a rare phenomenon. They can appear in the purpuric, painful, red patches of Lucio phenomenon and in the erythema nodosum leprosum (ENL) lesions occurring during type 2 lepra reaction (Pfaltzgraff & Bryceson 1985). Generalized bullous drug eruptions due to rifampicin and DDS have also been reported in leprosy (Nigam et al 1979, Dutta 1980). Sometimes, bullous reactions may be localized to pre-existing leprosy lesions of borderline leprosy (Pfaltzgraff & Bryceson 1985, Periaswamy & Rao 1985, Singh 1987). Interestingly, Rodriguez and Wade (1945) and Job (1960) have recorded them in tuberculoid leprosy and lepromatous leprosy respectively. We report here a 60 year-old male suffering from lepromatous leprosy and bullous pemphigoid. This association seems fascinating for no such report thus far is available in the literature.

## CONTROLE

**JESUDASAN, K., VIJAYAKUMARAN, P., MANIMOZHI, N., RAJA SAMUEL BUSHANAM, J.D., KANAGARAJAN, S., SUNDAR RAO, P.S.S.** Origen of new leprosy cases during general surveys in relation to previous survey findings. *Leprosy Rev.*, v.67, n.3, p.183-189, September, 1996.

As part of the leprosy control activities in the area of Gudiyatham Thaluk, general surveys are done once every three to five years. The

percentage of examination is about 90%. An analysis of all new cases registered for treatment between 1990-94 was done to study whether these cases had been examined in the previous general survey. Of the new cases detected and registered, 556 cases (32.6%) were not examined during the previous survey. The significance of these findings in relationship to cost-effectiveness of general surveys, case-detection methodology and possible continuing of transmission of leprosy are discussed.

**SEBOKA, G., SUNDERSON, P.** Cost-effective footwear for leprosy control programmes: a study in rural Ethiopia. *Leprosy Rev.*, v.67, n.3, p.208-216, September, 1996.

A randomized, controlled trial of commercially available canvas shoes was carried out in a rural area of Ethiopia. Subjects with deformed and anaesthetic feet, most with ulceration, were given either canvas shoes or plastazote moulded shoes and followed up for one year. Seventy-five percent of subjects with ulcers who used canvas shoes had no ulcer at the end of the study, while no significant change was noted in the plastazote group. The durability and acceptability of the shoes were also examined. Clients in remote areas who have no access to an orthopaedic workshop, but who have anaesthetic feet, with or without deformity, should have access to canvas shoes with an MCR insole. Two pairs are needed per year at a cost of US\$ 6.7 per pair.

**GRODOS, D., FRANÇOIS, I., TONGLET, R.** Health information systems for leprosy control programmes: a case for quality assessment. *Leprosy Rev.*, v.67, n.3, p.171-182, September, 1996.

A qualitative study was carried out aimed at checking the level of understanding and the actual use of the indicators recommended in leprosy control programmes by either the World Health Organization or the International Federation of Anti-Leprosy Associations. Two successive questionnaires were sent to 268 leprosy control

programme managers. The first one concerned information about the main characteristics of the programme, the information system in operation, and the data regarded as indispensable or useful for programme monitoring. The respondents to the first questionnaire (n = 64) proposed extraordinarily wide range of indicators, mainly ill-defined. The respondents to the second questionnaire (n = 37) to whom a limited list of precisely defined indicators was submitted did not succeed in reaching a complete agreement on any of these indicators. Although the question of programme monitoring has been dealt with at an international level for years, there is an urgent need for a real agreement of international agencies and managers of leprosy control programmes on the indicators to be used. Programme managers in the field are obviously open to the idea of greater intervention by international organizations to improve data collection and to encourage standardization of computerized information systems.

## DIAGNÓSTICO

**EBENEZER, G.J., SUNEETHA, S., MOHANDAS, R., ARUNTHATHI, S.** Multibacillary nerve histology in clinically diagnosed borderline leprosy patients. *Int. J. Leprosy*, v.64, n.3, p.311-315, September, 1996.

The classification of leprosy into multibacillary (MB) and paucibacillary (PB) patients in almost all clinics is entirely dependent on clinical examination. In a study of 21 patients clinically classified as borderline tuberculoid (BT) and, therefore, belonging to the PB group, skin smears and skin and nerve biopsies were examined. Four patients did not have any histopathological evidence of leprosy. Skin smears showed that 1 patient was positive for acid-fast bacilli (AFB), 2 skin biopsies belonged to the borderline lepromatous (BL) category and showed AFB in their lesions, and AFB were present in 10 nerve biopsies classified as BL. It is possible that reported relapses among PB patients may be in those patients with demonstrable AFB in the lesions, including nerves. A careful follow-up study

of this particular group of patients after PB multidrug therapy is suggested to resolve this question.

**MAHÉ, A.** Le diagnostic différentiel de la lèpre en 1996. *Acta Leprol*, v.10, n.2, p.69-77, 1996.

Du fait de la diminution de prévalence de la lèpre, le chapitre de son diagnostic différentiel prend une importance grandissante. La recherche d'un diagnostic précoce de la lèpre, avant l'installation de lésions nerveuses, l'apparition (ou la meilleure définition) de certaines maladies, (l'expansion des migrations intercontinentales, sont autant de facteurs qui sont venus modifier les conditions du diagnostic de la lèpre. Les diagnostics différentiels les plus fréquents et les plus délicats de la lèpre sont passés en revue: affections hypochromiantes, maladies infectieuses tropicales, maladies systémiques, affections déformantes, hémato-dermies, SIDA. Les difficultés posées par les lésions révélées par des manifestations réactionnelles sont soulignées. Aujourd'hui comme autrefois, le diagnostic positif et différentiel de la lèpre repose sur les pratiques simples que sont: l'étude de la sensibilité des lésions, la bacilloscopie, et l'examen du système nerveux périphérique. L'histologie cutanée constitue l'examen complémentaire de référence.

**Mots clés:** Lèpre - Réaction lépreuse - Peau noire - Diagnostic.

## EDUCAÇÃO E SAÚDE

**TIENDRÉBÉOGO, A., BLANC, L, SYLLA, P.M., BOBIN, P.** La formation du personnel de santé par l'Institut Marchoux de Bamako de 1979 à 1995. *Acta Leprol.*, v.10, n.1, p.3743, 1996.

L'Institut Marchoux, centre de recherche sur la lèpre de l'O.C.C.G.E., a assuré la formation de plus d'un millier de personnel de santé entre 1979 et 1995. Au début, cette formation était

assurée entièrement à l'Institut Marchoux. Elle était destinée à des infirmiers chargés de la lutte antilépreuse par la monothérapie à la dapsone, dans le cadre de programmes verticaux. Avec l'introduction des schémas de traitement par la polychimiothérapie, la lutte antilépreuse a été intégrée dans les services de santé polyvalents. Ce changement de stratégie a décuplé les besoins de formation et exigeait une adaptation de la formation dispensée par l'Institut Marchoux. A partir de 1990, la formation à l'Institut Marchoux a donc retenu pour cible des médecins formateurs et des infirmiers superviseurs et l'accroissement du nombre d'agents à former a suscité l'organisation de sessions de formation courte dans les Etats avec la participation de facilitateurs de l'Institut Marchoux.

**Mot clés:** Lèpre - Formation - Institut Marchoux.

## EPIDEMIOLOGIA

**CABALLERO, N.** La lepra en Nicaragua: aparición de nuevos focos en el municipio de San Francisco Libre (Marzo de 1994 - Marzo de 1995). Fontilles - Rev. Leprol, v.20, n.4, p.937-940, Enero-Abril, 1996.

During the interval between March 1994 to March 1995, in 5 communities of San Francisco Libre - Managua 48 patients of Hansen's disease have been detected, clinically confirmed and administered WHO multidrugtherapy under the supervision of The Institute Association for the development of the people (ONG).

**MEKHLAFI, G.A., AI-QUBATI, Y.** Retrospective analysis of 194 leprosy cases in the Republic of Yemen. *Indian J. Leprosy*, v.68, n.3, p.227-234, July-Sep., 1996.

A review of the case files of 194 leprosy patients registered at a representative skin and venereal diseases out-patient clinic was done to assess the epidemiological and clinical patterns of the disease in Yemen. Almost all patients came from the poorer social groups and there was clus-

tering of patients around some families. About 55% of the patients were aged 20 to 39 years and about 35% were aged over 40 years at the time of detection. Males were affected about three times as females; in males MB cases occurred about twice as often as PB cases and 12% of the cases presented as pure neuritic leprosy. Reactions were noticed in 39 cases (20%), six having type 1 and 27 having type 2 reaction. Bacterial index (BI) among 123 positive cases ranged from 0.1 to 6, about 70% of these cases showing mean BI of more than 2.0. Patients' response to treatment (MDT) was very good and BI decreased by about 1.55 ( $\pm 0.05$ ) logs per year. About 50% of the patients had some disability (14% grade 1), and the disability rate among PB bases was about 70%. Our findings indicate the need for earlier diagnosis and better disability preventive measures.

**THAPPA, D.M., GARG, B.R., RAO, M.V., GHARAMI, R.** Impact of HIV infection on leprosy. *Indian J. Leprosy*, v.68, n.3, p.255-256, July-Sep., 1996.

India appears to be on the rising curve of an HIV epidemic potentially as significant as that in Africa. As India has the largest number of known cases of leprosy in the world, any interaction between the two infections could be important (Lucas 1993). Herewith, we describe the clinical progress of leprosy in an HIV infected patient, with associated latent syphilis and condyloma acuminata.

**VAZQUEZ, F.A., VARELA, N.N., ANTOLA, M.C., WAND-DEL-REY, M.L., LEGUIZAMÓN, O.R.** Enfermedad de Hansen en el Mercosur. *Acta Leprol*, v.10, n.2, p.79-84, 1996.

En el contexto de las importantes transformaciones de orden político, económico, social y sanitario a las cuales se ven abocados los países de Argentina, Brasil, Paraguay y Uruguay, en el marco del compromiso asumido oportunamente para la instrumentación del

Mercado Comum del Sur (MERCOSUR), se analiza la importancia que la enfermedad de Hansen adquiere para la salud pública de esta nueva region. En este contexto se exponen los motivos y antecedentes que condujeron a la creación del Comité de Cooperación Técnica en Hanseniasis del MERCOSUR integrado por los Jefes de los Programas Nacionales de Control de Lepra de los países involucrados, con la finalidad de llevar a cabo el Protocolo de intención firmado oportunamente por los representantes de los Ministerios de los países miembros, con el objetivo de establecer las políticas de cooperación técnica en las actividades de control de esta enfermedad, con vistas a alcanzar la meta propuesta por la OMS, de eliminación de la lepra como un problema de salud pública al año 2000. Según los datos aportados por los diferentes programas, se expone la situación epidemiológica existente a diciembre de 1995 en dicha region, analizándose algunas variables epidemiológicas, demográficas y operativas, destacándose que el MERCOSUR posee: una tasa de prevalencia de 6.03 por 10.000 habitantes, una de las más elevadas en comparación a otras regiones de la OMS; posee un elevado porcentaje de casos perdidos (o abandonos); así como una baja cobertura de poli-quioterapia. Se detectaron en esta region un total de 33.654 casos nuevos, durante 1995, correspondiéndole a las formas PB más del 50%, observándose en menores de 15 años casi el 10% de los casos detectados. Se enuncian también las acciones conjuntas (levadas a cabo entre los cuatro países, los logros alcanzados, así como aquellos a alcanzar a corto plazo.

**Palabras claves:** Hanseniasis - MERCOSUR - Comité de cooperación - Logros.

**VIJAYAKUMARAN, P., MANIMOZHI, N., RAVIKUMAR, R.N., JESUDASAN, K., RAO, P.S.S.S.** Leprosy among inmates of a prison. *Indian J. Leprosy*, v.68, n.3, p.247-250, July-Sep., 1996.

A leprosy survey carried out in a district prison revealed a gross prevalence of 20 cases per 1000, and active prevalence of 10 cases per

1000 whereas, prevalence of leprosy in the state was 1.12 per 1000. Such prisons thus form hyper-endemic pockets. The inmates are a closed community and there is a risk of cases among inmates spreading infection to others inside the prison during their sojourn there and to the community when they are released from the prison. Special efforts are required to identify and eliminate all identifiable sources of infection, especially at this point of time when we are aiming at elimination of leprosy as a public health problem.

## IMUNOLOGIA

**LUNA-HERRERA, J., ROJAS-ESPINOSA, O., ESTRADA-PARRA, S.** Recognition of lipid antigens by sera of mice infected with *Mycobacterium lepraemurium*. *Int. J. Leprosy*, v.64, n.3, p.299-305, September, 1996.

Lipids extracted from mouse tissues infected with *Mycobacterium lepraemurium* (MLM) were analyzed by thin-layer chromatography. Although the extracted lipids were heterogeneous in polarity, the lipids of intermediate polarity were the ones that predominated. All of the lipids of intermediate polarity were glycosylated species. There were also lipids of low and high polarity, the latter being glycolipids. Compared to lipids extracted from normal tissue (mostly lipids of high and low polarity), all of the additional lipids extracted from the infected tissue corresponded to lipids present in the purified bacteria. Enzyme-linked immunoassays (ELISAs) were then performed with the whole lipids extracted from purified bacilli, the lipids of high, intermediate and low polarity, and the sera from 20 normal and 20 MLM-infected mice. Lipids of intermediate polarity were specifically recognized by MLM-infected mice. Neither sera (diluted 1:500) from normal mice nor infected mice reacted with the lipids of high or low polarity, but a higher concentration (sera diluted 1:100) of some sera from mice in both groups reacted significantly with these lipids. In the ELISAs the whole-lipid extract and the lipids of intermediate polarity were similarly recognized by the sera of the infected mice. Thus, as ob-



served in human leprosy, the mycobacterial disease in the mouse (murine leprosy) is also accompanied by the development of antibodies to the glycolipids of the infecting microorganism.

**MUSTAFA, A.S.** Restoration of proliferative response to *M. leprae* antigens in lepromatous T cells against candidate antileprosy vaccines. *Int. J. Leprosy*, v.64, n.3, p.257-267, September, 1996.

Several studies conducted in the last decade suggest that *Mycobacterium leprae* - reactive T cells exist in lepromatous patients, but their number may be too few to yield a detectable response in cell-mediated immunity (CMI) assays. Immunizations with candidate antileprosy vaccines and stimulation of T cells with *M. leprae* + interleukin-2 restore the *M. leprae*-induced CMI response in lepromatous leprosy patients. These immunizations and stimulation may enrich the preexisting *M. leprae*-responsive T cells in lepromatous patients and, thereby, induce a detectable CMI response to *M. leprae* antigens upon repeat testing. To verify this proposition, we carried out a study in a group of 10 lepromatous leprosy patients. Peripheral blood mononuclear cells (PBMC) obtained from these patients were anergic to *M. leprae* antigens in proliferative assays, but they responded to the antigens of candidate antileprosy vaccines, i.e., *M. bovis* BCG, *M. bovis* BCG + *M. leprae*, and *Mycobacterium w*. The enrichment of *M. leprae*-responsive T cells was performed by establishing T-cell lines from the PBMC after in vitro stimulation with *M. leprae*, *M. bovis* BCG, *M. bovis* BCG + *M. leprae*, and *Mycobacterium w*. When tested for their proliferative responses, 1/10, 3/10, 6/10 and 2/10 T-cell lines established against *M. leprae*, *M. bovis* BCG, *M. bovis* BCG + *M. leprae*, and *Mycobacterium w*, respectively, responded to *M. leprae*. These results suggest that enrichment of pre-existing *M. leprae*-responsive T cells may contribute to the restoration of the T-cell response to *M. leprae* in some lepromatous patients. Four of the 10 *M. leprae*-induced T-cell lines proliferated in response to the 65 kDa, 36 kDa, 28 kDa, and 12 kDa recombinant antigens of *M. leprae*, suggesting

that the nonresponsiveness of T cells in some lepromatous patients may be overcome by using recombinant antigens of *M. leprae*.

## PSICOLOGIA

**GALA LEON, F.J., MARTINEZ NIETO, J.M., LUPIANI GIMÉNEZ, M., BAS SARMIENTO, P., DIAZ RODRIGUES, M., PAUBLETE HERRERA, M.C., CANO VALERO, M., GUILLÉN GESTOSO, C.** La lepra y sus estereotipos: un estudio de sus connotaciones samánticas a la luz de un diferencial semántico (D.S.). *Fontilles- Rev. Leprol.*, v.20, n.4, p.957-971, Enero-Abril, 1996.

The meaning of our language covers two fundamental aspects: denotation (symbols with a comparative and specific meaning) and connotation (derived from the associations - rather affective than cognitive - we usually make when using or hearing words).

To measure this connotative-attitudinal profile, a semantic differential is used. This semantic differential is formed by a list, in a bipolar continuum, of seven intervals, of opposed adjectives grouped in radicals (evaluation, potency, and activity. We have added effectivity). This technique has been applied to the concept of leprosy to measure and contrast the connotations of the term, given that it is more difficult to deal with prejudices and stereotypes than the illness itself.

## REABILITAÇÃO

**BARI, M.M., ISLAM, A.K.M.S., HAOUÉ, A.K.M.A.** Surgical reconstruction of leprotic foot-drop. *Leprosy Rev.*, v.67, n.3, p.200-202, September, 1996.

We have operated on 25 patients for correction of foot-drop due to leprosy from March 1992 to July 1994. The method used was circumtibial transfer of the tibialis posterior to the

tendons of extensor hallucis longus and the extensor digitorum longus in the foot together with lengthening of the Achilles tendon. The results were satisfactory in 20 of these cases as judged by adequate restoration of heel-toe gait and of active dorsiflexion. The follow-up period ranged from 6 months to 2 years. Inadequate post-operative physiotherapy was the reason for unsatisfactory results in five cases.

**EBENEZER, M., ANDREWS, P., SOLOMON, S.**

Comparative trial of steroids and surgical intervention in the management of ulnar neuritis. *Int. J. Leprosy*, v.64, n.3, p.282-286, September, 1996.

Fifty-seven ulnar nerves in 39 patients with early neuritis were studied to assess the benefits offered by medial epicondylectomy and external decompression in addition to steroid therapy. The patients were randomly allocated to the surgical or medical group. In those cases where there was bilateral involvement, surgery was carried out on only one side. All cases were assessed prior to treatment and after the first and second years following treatment. The improvement in motor and sensory functions attained at the end of the first year was sustained into the second year. The improvement sustained in both groups was similar even in the second year, and medial epicondylectomy with external decompression seems to have no added benefit as compared to steroid therapy alone in the early treatment of ulnar neuritis. Early diagnosis and treatment, especially in borderline lepromatous cases, seem to offer some hope of nerve function recovery.

## TERAPEUTICA

**Dela CRUZ, E., CELLONA, R.V., BALAGON, M.V.F., VILLAHERMOSA, L.G., FAJARDO Jr., T.T., ABALOS, R.M., TAN, E.V., WALSH, G.P.** Primary dapsone resistance in Cebu, the Philippines, cause for concern. *Int. J. Leprosy*, v.64, n.3, p.253-256, September, 1996.

At a time when primary dapsone resistance was prevalent in many leprosy-endemic areas, Cebu in The Philippines reported only 3.6% in the period 1975-1978 and later 8.1% in the period 1979-1982. In our current study of patients in the period 1988-1992, the number increased dramatically to 52.7%. In addition, 7.9% of the isolates are highly resistant to dapsone, a level of resistance not seen in earlier studies

This finding could have severe ramifications to the World Health Organization's multidrug therapy (WHO-MDT) mode of treatment, where dapsone is one of the principal drugs. Moreover, the increase in primary dapsone resistance may be a contributing factor in the recent finding that there has been no decline in the number of new cases found in Cebu, even after the implementation of WHO-MDT in 1985. There is a need for new drugs that could be included in the multidrug treatment for multibacillary and paucibacillary leprosy.

**GALLO, M., ALVIM, M.F.S., NERY, J.A.C., ALBUQUERQUE, E.C.A., SARNO, E.N.** Two multidrug fixed-dosage treatment regimens with multibacillary leprosy patients. *Indian J. Leprosy*, v.68, n.3, p.235-245, July-Sep., 1996.

This study compares the clinical, bacilloscopic, and histopathological evolution of 140 patients classified as having multibacillary leprosy with no previous specific treatment who were submitted to two multidrug treatment regimens with a fixed dose. Regimen I - Group I: 70 cases received 600 mg rifampicin (RMP) + 100 mg dapsone (DDS) daily for three consecutive months followed by 100 mg DDS daily, self-administered doses for 21 months. Regimen II - Group II: 70 cases received 600 mg RMP + 300 mg clofazimine (CLO) once a month under supervision plus self-administered doses of 50 mg CLO + 100 mg DDS daily for 24 months.

The bacilloscopic, histopathological and neuromotor evaluation parameters showed no statistically meaningful differences ( $P > 0.05$ ) between the two groups except for reaction frequency ( $P < 0.05$ ) in that group II patients pre-

sented the least number of reactional episodes during the treatment and in the dermatological examination at discharge.

Follow-up after treatment was carried out for a consecutive four year period. During routine clinical examination one case submitted to regimen I developed nodular skin lesion over the right arm. Skin biopsy was done for histopathological examination and mouse foot-pad experiment by Shepard technique. The drug susceptibility test with DDS and RPM showed that *M. leprae* strain isolated was susceptible to both the drugs.

**PATNAIK, P.K.B., McDOUGALL, A.C.** The contribution of cure by dapsone monotherapy' to the reduction of prevalence of leprosy in the State of Orissa, India, 1983-1993. *Indian J. Leprosy*, v.68. n.3, p.223-226, July- Sep., 1996.

The implementation of multiple drug therapy (MDT) in the State of Orissa, Indian, started in early 1983 and was extended in a phased manner to nine out of the then total of 13 districts by 1993. As part of a programme to bring the remaining four districts under MDT, an intensive screening of the registers was carried out in early 1993. From a total of 28,855 cases registered in these districts, 26,113 (90.5%) were examined and 18,008 (69.9%) deleted. The deleted included patients who had died, emigrated, double (or occasionally treble) entries for the same patient and those in whom careful re-assessment suggested that the original diagnosis of leprosy had been wrong. In addition, however, 8,260 (45.8%) of the 18,008 cases deleted were considered to have been cured by dapsone monotherapy. This figure, from districts with a relatively poor development of services for leprosy control, prompted a retrospective examination of data from the other (more privileged) nine districts. This revealed that from a total of 264,000 patients screened, prior to the implementation of MDT from 1983 onwards, 75,590 (28.6%) were removed from the registers, and that of these, 63,562 (84.0%) were considered to have been cured by dapsone monotherapy. Thus from a total of 93,598 patients removed from registers in this

State since 1983, 71,822 (76.7%) have been assessed as cured by dapsone monotherapy. The significance of this finding and its apparently considerable contribution to the overall reduction in the prevalence of leprosy in Orissa, 1983-1993, is discussed.

**SAMPAIO, E.P., MALTA, A.M., SARNO, E.N., KAPLAN, G.** Effect of rhIFN-g treatment in multibacillary leprosy patients. *Int. J. Leprosy*, v.64, n.3, p.268-273, September, 1996.

Previous studies have shown that when multibacillary leprosy patients were treated with recombinant human interferon gamma (rhIFN-g) for 6-10 months there was an accelerated reduction in the number of acid-fast bacilli in the skin at the site of injection as well as an accelerated bacillary reduction at distal sites. However, this favorable outcome of IFN-g treatment was associated with the development of erythema nodosum leprosum (ENL). The present study was undertaken to investigate whether rhIFN-g-induced bacillary clearance could be disassociated from the induction of ENL.

rhIFN-g was administered together with thalidomide and conventional multidrug chemotherapy to newly diagnosed leprosy patients. During treatment with this combination of drugs, the mean reduction in bacterial load was the same as the reduction observed with chemotherapy alone. Moreover, the inclusion of thalidomide in the treatment regimen was associated with a low frequency of ENL episodes. A second group of leprosy patients, who had already completed 2 years of chemotherapy, were treated with rhIFN-g only. In those patients who were skin bacilli negative, ENL did not occur during rhIFN-g treatment. In contrast, in bacilli-positive patients the frequency of ENL during rhIFN-g treatment was higher, as was the occurrence of local erythema and induration. However, rhIFN-g treatment without concomitant chemotherapy did not result in a reduction in the bacterial load in the skin of bacilli-positive patients. These findings, taken together, indicate that rhIFN-g does not, by itself, accelerate bacterial clearance, but requires concomitant chemotherapy to achieve the accelerated reduc-

tion in bacillary load. Thalidomide reduces the frequency of IFN-g-induced ENL, but also eliminates the IFN-g-induced bacillary clearance.

**THOMPSON, K., JOB, C.K.** Silent iritis in treated bacillary negative leprosy. *Int. J. Leprosy*, v.64, n.3, p.306-310, September, 1996.

Iridectomy specimens from 59 leprosy patients who had adequate medical records of whom 33 belong to the lepromatous (LL) leprosy variety and 16 normal controls were studied histopathologically. All patients were bacteriologically negative and had received dapsons followed by multidrug therapy (MDT), or MDT only, or only

dapsons for varying periods. It was found that leprosy, particularly lepromatous disease, did not significantly decrease the age of formation of cataract. Of the 33 LL patients studied 60.6% had silent iritis. The duration of treatment had no obvious influence on the persistence of iritis. Treatment with only 2 years of MDT for LL patients did not significantly increase the prevalence of persistent silent iritis compared to those who received other types of antileprosy therapy for long periods. It is pointed out that chronic iritis is a serious complication that continues even after the patient is declared clinically and bacteriologically cured, especially in patients who had a history of chronic iritis clinically.