

HANSENÍASE: RESUMOS

HANSENIASIS ABSTRACTS

BACTERIOLOGIA, IMUNOLOGIA

BACTERIOLOGY, IMMUNOLOGY

ANDERSON, R.; GATNER, E.M.S.; VAN RENSBURG, C.E.; GRABOW, G.; IMKAMP, F.M.G.H.; KOK, S.B.; VAN RENSBURG, A.J. *In vitro* and *in vivo* effects of dapsone on neutrophil and lymphocyte functions in normal individuals and patients with lepromatous leprosy. *Antimicrob. Agents Chemother.* 19(4):495-503, 1981.

The effects of dapsone on polymorphonuclear leukocyte functions and lymphocyte mitogen-induced transformation were assessed *in vitro* and *in vivo* in normal individuals and in newly diagnosed untreated patients with lepromatous leprosy. The effects of dapsone on the cell-free generation of superoxide by the xanthine: xanthine oxidase system and iodination of bovine serum albumin by horseradish peroxidase were also investigated. In normal individuals dapsone mediated stimulation of polymorphonuclear leukocyte migration *in vitro* and *in vivo*. Dapsone had no effects on postphagocytic hexose monophosphate shunt activity or superoxide generation *in vitro*, but caused slight inhibition of peroxidase-mediated protein iodination *in vitro* and *in vivo* and hexose monophosphate shunt activity *in vivo*. Similar effects were found in patients with lepromatous leprosy. Dapsone also decreased the inhibitory activity of serum from patients with lepromatous leprosy on normal polymorphonuclear leukocyte migration *in vitro*. Progressive loss of serum-mediated inhibition of migration was observed after ingestion of dapsone by the patients. Further experiments showed that stimulation

of polymorphonuclear leukocyte motility was related to inhibition of the peroxidase-H₂O halide system *in vitro*. The drug caused inhibition of lymphocyte transformation at high concentrations *in vitro*, but had slight stimulatory activity on phytohemagglutinin-induced transformation in controls and patients *in vivo*. — Authors' abstract

DUBEY, G.K.; JOGLEKAR, V.K.; HARDAS, U.D.; CHAUBEY, B.S. A study of cell mediated immunity in leprosy. *Leprosy in India*, 53(2):197-203, 1981.

This paper presents a review of 123 cases of leprosy of different clinical types as regards to their status of cellular immunity. These 123 cases included 41 fresh cases, 18 cases of reaction and 64 cases of leprosy taking antileprosy treatment. Out of 41 untreated cases only 11 turned up for follow up and their lymphoblastic transformation was repeated 4 to 6 months after initiating the treatment. It was observed that cell mediated immunity as expressed in terms of percentage of blast cells is definitely depressed in leprosy, most in LL and least in TT. There is a definite increase in the percentage of blast cells after taking antileprosy treatment. The rise in percentage of blast cells and hence cellular immunity is relatively more in patients treated with Lamprane as compared to those treated with DDS. Reactions also have impact over immunity in leprosy. Thus, most of the patients with ENL show higher values for blast percentage as compared to those with

lepra reaction. It appears that serial lymphocyte cultures if done in all cases of leprosy undergoing treatment will help in assessment of individual progress. — Authors' abstract

GATNER, E.M.S.; ANDERSON, R.; VAN RENSBURG, C.E.; IMKAMP, F.M.J.H. The in vitro and in vivo effects of clofazimine on the motility of neutrophils and transformation of lymphocytes from normal individuals. *Lepr. Rev.*, 58(2):85-90, 1982.

The effects of clofazimine on neutrophil motility to endotoxin-inactivated serum and mitogen-induced lymphocyte transformation of leucocytes from normal individuals *in vitro*, and after ingestion of clofazimine by normal adult volunteers have been assessed. Clofazimine caused a progressive dose-dependent inhibition of neutrophil motility and of lymphocyte transformation *in vitro*. Ingestion of the drug by normal volunteers was accompanied by decreased neutrophil motility and lymphocyte transformation to mitogens. These findings suggest that the anti-inflammatory properties of clofazimine are related to inhibition of these cellular immune functions. — Authors' summary

KANO, K.; ARANZAZU, N.; NISHIMAKI, T.; CONVIT, J.; ALBINI, B.; MILGROM, F. Serological and immunohistological studies on lepromatous leprosy. *Int. Arch. Allergy Appl. Immun.*, 64: 19-24, 1981.

Sera of patients with lepromatous leprosy were studied for the presence of a variety of antibodies and immune complexes (IC). The frequencies of heterophile, Hanganutziu-Deicher and Forssman antibodies were 61 and 43%, respectively, which were significantly higher than those in other diseases. The frequency of antibodies to cardiolipin was 89% and the frequency of rheumatoid factor was 34%. Circulating IC were demonstrated in 64% of the patients' sera by Raji-cell test and in 43% by anti-antibody inhibition test. Analyses of immunoglobulin classes of IC revealed that IgG was predominant in IC of patients with lepra reaction (LR) and IgM in patients without LR. Immune deposits were found in and between cells of dermis in skin biopsy specimens of patients with LR. Authors' abstract

KATOCH, V.M. A report on the biochemical analysis of *Mycobacterium W. Leprosy in India*, 53(3):385-389, 1981.

A mycobacterial strain known as *Mycobacterial strain W* was analysed for its growth characteristics and biochemical traits. This strain was found to be a rapid grower, with luxuriant growth on Lowenstein-Jensen medium, Dubos agar, Middlebrook's agar and Sauton's medium. Colonies were smooth, convex and nonpigmented. Some of the colonies which appeared rough were similar to smooth colonies at least in biochemical characteristics. This organism was tolerant to wide range of temperatures and to chemical substances like thiophene-carboxylic acid hydrazide, isoniazid, sodium chloride but not to bile salts.

It was negative for niacin production, for various amidases, urease production, 3 day arylsulfatase test and also for Tween 80 hydrolysis. On the other hand this strain was found to be positive for semiquantitative catalase, heat resistant catalase, nitrate reduction, sodium salicylate degradation, tellurite reduction, 14 day arylsulfatase test and fermentation of fructose. This organism could utilize sodium nitrate and sodium nitrite as sources of nitrogen but didn't exhibit any utilization of fructose, arabinose as only sources of carbon. Significance of these findings is discussed.

LAKSHMANA RAO, S.S. & RAO, P.R. Immunological status of maculoanaesthetic leprosy: leucocyte migration inhibition test as a measure of cell mediated immune response. *Leprosy in India*, 53(3): 340-349, 1981.

M. leprae-specific cell-mediated immune responses were studied in 36 Maculoanaesthetic (MA) leprosy patients using Leucocyte Migration Inhibition Test (LMIT) 21 tuberculoid, 13 indeterminate, 16 borderline, 13 lepromatous and 20 healthy controls were also studied for comparison. Highly significant differences ($p < 0.001$) in the mean Migratory Indices (M.I.) were found between MA leprosy type and each of the other leprosy type or control group. The results support the concept that MA type forms a distinct form of leprosy from tuberculoid type or any other type of leprosy. — Authors' abstract

PATOLOGIA, FISIOPATOLOGIA, BIOQUÍMICA

PATHOLOGY, PHYSIOPATHOLOGY, BIOCHEMISTRY

BAJAJ, A.K.; GUPTA, S.G.; SINHA, S.N.; GOVIL, D.C.; GAUR, U.C. Sequential renal functions in leprosy. *Leprosy in India*, 51(2):185-189, 1981.

Sequential renal functions have been studied in eight patients of lepromatous leprosy during and after subsidence of erythema nodosum leprosum. The renal functions which were impaired during reaction were observed to improve during quiescent phase unless there were associated complications like amyloidosis. The possible mechanisms for altered renal functions during reactive phase of the disease have been discussed. — Author's abstract

CHOPRA, J.S.; KAUR, S.; MURTHY, J.M.H.; KUMAR, B.; RADHAKRISHNAN, K.; SURI, S.; SAWHNEY; B.B. Vascular changes in leprosy and its role in the pathogenesis of leprosy neuritis. *Leprosy in India*, 53(3):443-453, 1981.

The arteriographic pattern of left hand vessels was studied in 20 patients in leprosy by percutaneous brachial arteriography. Arteriographic abnormalities noted consisted of occlusion, narrowing, tortuosity, dilatation, irregularity and incomplete filling of the lumen by contrast medium. Such abnormal findings were seen in all the arteriograms studied and more than one vessel involvement was noted in over 50 percent cases. This study clearly demonstrated that arterial involvement in leprosy was frequent. No correlation was found between motor weakness and vascular abnormalities. There was no difference in arterial lesions between the patients with and without trophic changes. There was also no correlation between the severity of vascular changes and decline in motor nerve conduction. Degree of histopathological abnormalities in the sural nerve biopsy from these patients showed no features of micro angiopathic neuropathy. It is concluded that the observed vascular abnormalities do not contribute significantly in the genesis of neurological deficit in leprosy. — Authors' abstract

GHARPURAY, S.M.; GHARPURAY, M.B.; KELKAR, S.S. Liver lesions in reactional states in leprosy. *Leprosy in India*, 53(3):413-416, 1981.

Liver biopsy was done in 21 adult patients of leprosy in acute reaction. They included

10 of lepromatous leprosy, seven of tuberculoid leprosy and four of dimorphic leprosy. Except for a single case of tuberculoid leprosy all showed granulomatous lesions of varying sizes and frequency, in the liver the lesions appeared to be unique for reaction and immunologically-based. The sequence of events appeared to be: (1) Immunologically-mediated alteration of Kupffer cells with adhesion of lymphocytes and polymorphonuclear leucocytes. (2) Small granulomas of proliferating Kupffer cells, lymphocytes and polymorphs. (3) In some cases, formation of larger granulomas with breaking down of reticulin and liver cell necrosis. — Authors' abstract

GUPTA, S.C.; BAJAJ, A.K.; GOVIL, D.C.; SINHA, S.N.; KUMAR, R. A study of percutaneous renal biopsy in lepromatous leprosy. *Leprosy in India*, 51(2):179-184, 1981.

Twenty one patients of lepromatous leprosy were investigated for evidence of renal disease. Histological lesions were observed in 76 percent cases. Sixty two percent of the cases showed a proliferative type of glomerulonephritis. Amyloidosis was present in 14 percent. The remaining 24 percent had either nonspecific changes confined to renal tubules or were normal. — Authors' abstract

HARDAS, U. & LELE, V. Evaluation of fluorescent microscopy for detection of *Mycobacterium leprae*. *Leprosy in India*, 53(2):273-277, 1981.

117 smears and 69 biopsies have been studied for evaluating the routine staining methods and fluorescent stain for detection of lepra bacilli. It is seen that in spite of the speed and ease to detect bacilli, the Ziehl-Neelsen's method and Fite's method are better stains to detect all morphological forms of bacilli. -- Authors' abstract

PETER, K.S.; VIJAYAKUMAR, T.; VASUDEVAN, D.M.; DEVI, K.R.L.; MATHIEW, M.T.; GOPINATH, T. Renal involvement in leprosy. *Leprosy in India*, 53(2):163-178, 1981.

Renal involvement in 13 non-lepromatous and 17 lepromatous leprosy patients were assessed by routine urinalysis, detailed biochemical analysis of blood and urine and by

renal histopathological studies and compared with 10 normal healthy controls. The presence of RBC and pus cells were detected in the urinary deposit of only one lepromatous leprosy patient in reactional phase. A reversal of albumin/globulin ratio was observed in 17.6% of non-lepromatous and 15.3% of lepromatous patients. 24 hours urinary excretion of sodium, potassium, chloride and aminonitrogen of the patients were within the normal range. Forty seven percent of the non-lepromatous and 46% of the lepromatous patients had proteinuria. Even though the mean serum creatinine values of the patients showed no difference from that of the normals, the creatinine clearance was low in 823% of the non-lepromatous and in all of the lepromatous patients. Serum phosphorus, serum uric acid, urinary phosphate excretion and the renal tubular reabsorption of phosphorus of the patients were normal. Twenty one percutaneous renal biopsy specimens showed non-specific pathological changes such as nephritis of various varieties in 71.4% of the specimens. Among the lepromatous group renal involvement was observed in 5 out of 9 cases (55.6%) and in the non-lepromatous group 10 out of 12 cases (83.3%). No acid fast bacilli, amyloid and granuloma were seen in any of the renal tissues studied. There was no definite correlation between the type of renal pathology and biochemical changes. None of the patient showed any clinical evidence of renal involvement. — Authors' abstract

SINGHAL, A.L.; PARVEZ, M.; CHADDA, V.S.; MISRA, S.N. A study of estimation of serum alpha-1 antitrypsin in various forms of leprosy. *Leprosy in India*, 53 (3) :417-424, 1981.

Study of serum alpha-1 antitrypsin by agar gel electrophoresis was carried out in 25 patients of various forms of leprosy including 9 cases of Erythema nodosum leprosum, and was compared with findings in 26 healthy controls. The level of serum alpha-1 antitrypsin in healthy subjects ranged from 211 mg% to 602 mg% with a mean level of 290.92 mg% ± 86.82 mg, have p value 0.1, while in leprosy patients of various types ranged from 129 mg% to 702 mg% with mean level of 406.84 mg% ± 162.70. Nine patients of lepromatous leprosy with ENL had marked elevation of serum alpha-1 antitrypsin and level was 376 to 720 mg% with a mean level of 562.65% ± 106.62, statistically significant. — Authors' abstract

SRITHARAN, V.; VENKATESAN, K.; BHARADWAJ, V.P.; GIRDHAR, B.K. Renal functions in lepromatous leprosy patients. *Leprosy in India*, 53(3) :437-442, 1981.

While leprosy does not primarily affect the kidneys, secondary involvement of kidneys has been reported in lepromatous leprosy and especially in lepra-reaction. In the present study the authors have investigated the functional status of the kidneys of lepromatous leprosy patients by focussing attention to parameters like acidification of urine, glomerular filtration rate and excretion of a foreign dye administered intramuscularly. This study revealed a decreased ability to acidify urine and to excrete the dye as well as a drop in glomerular filtration rate in untreated LL patients. The said disturbances were more pronounced in lepra reaction. — Authors' abstract

GENÉTICA

GENETICS

GŪHA, P.H.; SINGN, G.; KAUR, P. Genetic diathesis for leprosy. *Leprosy in India*, 53(3):432-436, 1981.

Innate incapacity to elaborate a protective cellular immunity has been thought to underlie the evolution of the disease process of lepromatous leprosy. Although both family and twin studies were suggestive of the involvement of some genetic factors, they have so

far not been evaluated fully. Keeping this in view, the present study, conducted at the family level, was designed to evaluate the role of genetic factors in determining the type of leprosy in a patient. Distribution pattern of the disease types detected in contacts, in relation to that in the index cases, has been analysed in the light of genetic diathesis. — Authors' abstract

HANSENÍASE EXPERIMENTAL, LEPROA ANIMAL

EXPERIMENTAL HANSENIAISIS, ANIMAL LEPROSY

GIDOH, M. & TSUTSUMI, S. On the immunodepressive effect of rifampicin (RFP) on cell-mediated immunity of guinea pigs, examined by rabbit red blood cell rosette formation method. *Jap. J. Lepr.*, 50(2): 55-61, 1981.

The immunodepressive effect of RFP was examined by a method of rosette formation between guinea pig lymphocyte (GPL) and rabbit red blood cells (RRBC) The oral dose of 30 mg/kg of RFP once every day for 12 days brought a serious immunodepression to the guinea pigs whose CMI was recovered during the term of above 2 months after thymectomy (named recovered guinea pigs) whereas it could not be detected in the guinea pigs whose CMI was still depressed due to the insufficient term after thymectomy (named immunodepressed ones). However, the depressive effect by the dose of 10 mg/kg of RFP could not be detected. On the other hand, the influence by the dose of 30 mg/kg of Sulfadimethoxine (SD) could not be detected either by the use of recovered guinea pigs or by immunodepressed ones. Since the dosage of DDS (20 mg/kg) examined in the preceding report about its immunodepressive effect on normal and recovered guinea pigs was too high to consider the effect on patients under DDS therapy, the influence of mg/kg of DDS on recovered guinea pigs was examined. However, in spite of positive result by Ghei *et al.* who noticed the immunodepression in volunteers by lymphocyte transformation method, the influence of DDS at the dosage of 5 mg/kg could not be clearly noticed by this method. Along with these results, the discussions were made reference of the usage of this method, the attention to RFP and DDS therapies and the difference between DDS and SD. — Authors' summary

HIROOKAS, Y., OHSHAWA & SAITO N. The strain difference of immune responses in mice infected with *Mycobacterium lepraemurium*. *Jap. J. Lepr.*, 50(3):144-153, 1981.

One of the most susceptible strains, C3H mice and the most resistant strain, C57BL/6 mice were inoculated with 5×10^9 bacilli of *Mycobacteriu lepraemurium* subcutaneously

and lymphocyte transformation test of spleen cells to the specific antigen and polyclonal mitogens was performed and DTH to PPD and unrelated antigen, SRBC and HGG was also tested at various stages during the course of infection. In LTT to the specific antigen, MLM, C3H mice showed almost low response until 24 weeks after infection, though C57BL/6 mice showed high response at 7 th, 8 th and 13 week significantly. In contrast, in LTT to T-cell mitogens, PHA and ConA, C3H mice developed the blastogenic response as high as seen in C57BL/6 mice even at 24 th week after infection, though C3H mice were heavily loaded with bacilli at this stage. Response to B-cell mitogen, LPS was rather high in C3H mice than in C57BL/6 mice. Delayed type hypersensitivity response to MLM and PPD measured on footpad was high in C57BL/6 mice at 7 th week after MLM infection. C3H mice also developed response to PPD in spite of low responsiveness to the specific antigen, MLM. DTH response to unrelated antigen, SRBC and HGG were tested in MLM infected C3H mice. DTH to SRBC at 13 th and 17 th week was not different between MLM infected and uninfected control mice. DTH to HGG at 17 th week was also the same as that of control mice. These results showed that MLM infected C3H mice were not able to respond to the specific antigen, MLM, but general depression of cell mediated immunity was not observed in these mice until 24 th week after infection. As the facts above mentioned are similar to our early observations on human leprosy, the suppression of specific immune response is discussed in relation to antileprous immunity in human and experimental murine leprosy. — Authors' summary

KAÜR, S.; GANGULY, N.R.; KUMAR, B.; SHARMA, S.; KAUR, M.; CHAKRAVARTI, R.K.; MITRA, S.K. *Myco. leprae* infection in normal, thymectomised irradiated and thymus transplanted mice. *Leprosy in India*, 53(3):425-431, 181.

Normal mice and thymectomised, X-irradiated and thymic transplanted groups of mice were challenged with 10^3 *Myco. leprae* in the foot pad. Course of infection was studied for a period of seven months by sacrificing animals every month and counting the bacilli from the pooled tissues. In the thymectomised

irradiated group the counts showed a plateau from 5th month onwards, whereas in control and thymus implant group the counts rose in 6th and 7th months. — Authors' abstract

LOVIK, M. & CLOSS, O. Repeated delayed-type hypersensitivity reactions against *Mycobacterium lepraemurium* antigens at the infection site do not affect bacillary multiplication in C3H mice. *Infect. Immun.*, 36(2):768-774, 1982.

Delayed-type hypersensitivity was induced in cyclophosphamide-pretreated C3H/TifBom mice by subcutaneous immunization in the thorax with ultrasonicated *Mycobacterium lepraemurium* bacilli in Freund incomplete adjuvant. Seven weeks after immunization, 2.5×10^7 acid-fast *M. lepraemurium* bacilli suspended in diluted sonicate were injected into one hind footpad, and during the next 6 weeks three additional injections of sonicate were given at intervals into the infected footpad. After each injection a strong local reaction developed, which after the first three injections peaked at 24 h. The kinetics of the reaction was accelerated after the repeat injections. Each time the reaction subsided within 1 week. From 2 days to 11 weeks after the inoculation of bacilli there was a 10-fold increase in bacillary numbers in the footpad and a 3,000-fold increase in the draining popliteal lymph node. The degree of bacillary multiplication was the same in animals which had experienced repeated local reactions and in control animals. Thus, repeated strong delayed-type hypersensitivity reactions to *M. lepraemurium* antigens apparently were without any measurable effect on the bacillary multiplication. This observation provides further evidence for a dissociation in C3H/TifBom mice between delayed-type hypersensitivity to soluble mycobacterial antigens and protective immunity against mycobacteria. Possible explanations for our findings are discussed. — Authors' abstract

MESTER DE PARAJD, L. & BALAKRISHNAN, S. Desoxyfructo-serotonin: first human metabolite with antileprosy activity. *Acta Leprol.*, 88:21-26, 1981.

La desoxyfructo-sérotinine (DFS) est un produit de synthèse, qui a été retrouvé également *in vivo*, comme une métabolite humaine. Elle inhibe l'incorporation du H-DOPA par *M. leprae in vitro*. Il a été suggéré que

le DOPA était une métabolite essentielle et la viabilité de ces mycobactéries. On pouvait donc espérer que la desoxyfructo-sérotinine inhiberait également la multiplication de *M. leprae in vivo*. Ceci a été confirmé par administration journalière par voie buccale de 20 mg de DFS par kg de poids vivant aux souris, dont le coussinet plantaire a été inoculé par 10^4 bacilli de *M. leprae*, provenant de la biopsie des malades LL avec BI 2 -1- et MI = 1%. Deux séries d'expériences ont été entamées. Dans la première série, les souris ont été traitées et la desoxyfructo-sérotinine pendant des durées différentes à partir de l'inoculation par *M. leprae*. Dans le Ier groupe (Cant/tie) nous trouvons les valeurs de multiplication de *M. leprae* sur le coussinet plantaire des souris non-traitées à la DFS. Dans le IIème groupe nous voyons les résultats observés pour les souris dont le traitement a été limité pour le premier après inoculation. Trois mois plus tard la multiplication de *M. leprae* est négative, mais à la fin du 5ème mois elle devient normale. Dans le IIIème groupe, après un traitement de 3 mois, on voit se prolonger l'effet inhibiteur du produit pendant le 4ème et le 5ème mois, sans traitement. Dans le IVème groupe on peut constater, au cours d'un traitement continu, l'inhibition totale de la multiplication de *M. leprae*. Ces derniers résultats ont été confirmés par une deuxième série d'expérience, menées pendant 14 mois, au cours de laquelle, de nouveau, un traitement continu a été pratiqué. Dans cette série également, à partir du 4ème mois les résultats sont totalement négatifs. Dans la première série il s'agissait d'une souche de *M. leprae* résistante aux sulfones, dans la deuxième série la souche était sensible aux sulfones. C'est la première fois, par ces expériences, que l'inhibition de la multiplication de *M. leprae in vivo* par une métabolite humaine a été mise en évidence. Cette observation pourrait avoir un intérêt thérapeutique. — Résumé des auteurs

MiyACHI, Y. & Ozaki, M. Thalidomide does not affect polymorphonuclear leucocyte (PMN) chemotaxis. *Jap. J. Lepr.*, 50(2):62-64, 1981.

Effects of thalidomide on PMN chemotactic activity were investigated in guinea pigs. Thalidomide, 12.5 and 25 mg/kg, was injected intraperitoneally for two days, and *in vitro* chemotaxis of cardiac blood PMNs to LPS-treated serum and casein sodium was evaluated using Boyden chamber techniques. Thalidomide revealed no significant suppression of locomotion of PMNs. It is suggested that the

effect of thalidomide on *erythema nodosum leprosum*, an Arthus type reaction, is not caused by the reduced PMN chemotaxis in peripheral blood. — Authors' abstract

PRABHAKARAN, K.; HARRIS, E.B.; KIRCHHEIMER, W.F. Permeability of *Mycobacterium leprae* to dapsone: alteration by purification procedures. *Leprosy in India*, 53(2):160-162, 1981.

Permeability of *Mycobacterium leprae* to dapsone in *vitro* was determined by the ability of the drug to inhibit o-diphenoloxidase of the bacilli. Dapsone showed little effect on the enzyme activity of the intact organisms. When the *M. leprae* preparations were washed with trypsin, NaOH, or acetone and ether, DDS penetrated the bacillus to inhibit its o-diphenoloxidase. The method might be useful in studying the utilization of added metabolites by purified *M. leprae* suspensions. — Authors' abstract

PRABHAKARAN, K.; HARRIS, E.B.; KIRCHHEIMER, W.F. A possible method for improving the efficacy of dapsone. *Leprosy in India*, 59(3):454-457, 1981.

The antileprosy drug dapsone is unable to penetrate intact *Mycobacterium leprae* in *vitro*, as determined by its effect on o-diphenoloxidase in the bacilli. When combined with the peptidic polysine, the sulfone drug passes through the bacterial cell membranes and penetrates the enzyme protein, resulting in a 100% inhibition of its activity. — Authors' abstract

SUSHIDA, K.; NAKANO, H.; WAKAI, M. Difference in infectivity of *Mycobacterium leprae* from patients in immunosuppressed mice. *Jap. J. Lepr.*, 50(1):1-7, 1981.

Leprosy bacilli obtained from twenty lepromatous leprosy patients were inoculated in the testis of different immunosuppressed mice. These detailed results were reported before. The various immunosuppressed mice were: Na¹³¹ I 100 µci injected mice (I-P), and their offsprings (I-F) ; ⁶⁰Co 300R irradiated mice (R-P), and their offsprings (R-F); Na¹³¹ I 100 µci injected and also ⁶⁰Co 300R irradiated mice during their fetus term

(IR-F) ; anti-lymphocytic serum injected mice (ALS); and nude mice (BALB/c-nu/nu). Acid-fast bacilli (globi, +G) were observed in the stamp-smear samples of the inoculated site about ten months after injection. Two of the 20 strains of leprosy bacilli from the patients showed infective activity in both the immunosuppressed and non-immunosuppressed mice. These two strains (LL28 & LL44) were put together in a group designated "A". But the percentage of infectivity in the immunosuppressed mice was greater than that in the non-immunosuppressed mice. Ten strains showing multiplication of *M. leprae* in the immunosuppressed mice alone were put together in a group designated "B". The remaining eight strains which were negative in both the immunosuppressed and non-immunosuppressed mice were put together in a group designated "C". There was no relationship between the above mentioned immunosuppressed mice and the bacilli of Group A, B and C. One strain, LL⁴⁴ of Group A; two strains, LL49 and LL51 of Group B; and one strain, LL45 of Group C were pathogenic for the nude mice, but the virulence of Group C leprosy bacilli was less than that of Group A and B. — Authors' abstract

TANEMURA, M. Susceptibility to *Mycobacterium avium* of various inbred strains of mice. 1) On the cases with intraperitoneal infection. *Jap. J. Lepr.*, 50(2):74-90, 1981.

Comparative observations were made of the susceptibility of various inbred mouse strains (C311, C57BL/6, DDD, BALB/c and KK) to intraperitoneal infection with avian tubercle bacilli, strain Kirchberg, concerning development of their visceral lesions, multiplication of the bacilli in the visceral organs and mean survival time of the infected mice. Following intraperitoneal infection, the visceral lesions developed early in the KK strain and became so severe as to cause the ultimate death of the host, while in the C3H strain, the visceral lesions developed more slowly and remained still slight at the late stage of infection. The development of visceral lesions in the other strains was intermediate to that observed in these two, but much closer to the KK strain. These mouse strain differences in the susceptibility are assumed to be mainly due to multiplication rate of the bacilli in the host. — Authors' abstract

CLINICA, DIAGNOSTICO CLINICAL ASPECTS, DIAGNOSIS

FARNARIER, G.; MOULY, A.; MORRIS-VIDAL, D. Les lésions cornéennes de la lèpre: à propos d'un cas de lèpre autochtone. *Med. Trop.*, 41(5):515-518, 1981.

The patient was affected by a lepromatous leprosy and had a unilateral oedema of the posterior layers of the cornea with a conjunctival hyperemia. The authors review the various aspects of corneal changes in leprosy: — paralytic and non specific changes in trigeminal paralysis; — direct and specific changes: opacification of corneal nerves; a vascular keratitis; corneal leproma; disorders of the vascularisation either by pannus or by interstitial vascularisation. The epidemiological problems are briefly considered. — Authors' summary

FEKETE, E.; SAROJINI, P.A.; MOCK, B. Borderline-tuberculoid leprosy in reaction presenting as photodermatitis: a case report. *Lepr. Rev.*, 54(2):115-117, 1982.

A 30-year-old female patient with BT leprosy in reaction presented as a case of photodermatitis. The diagnosis was confirmed by the skin biopsy and demonstration of AFB in the biopsy section. — Authors' summary

SAIKAWA, K.; SAITO, T.; HAZAMA, S.; HARADA, N.; SANADA, IC; ABE, M.; OZAKI, M. Borderline leprosy: study on new borderline cases in Japan. Cooperative research team for borderline leprosy. *Jap. J. Lepr.*, 50(1):22-38, 1981.

This report results of the clinical, bacteriological, immunological and histological studies on 18 new borderline cases in Japan. These cases were clinically classified as BT (6 cases), BT/BB (2), BB (1), BB/BL (1), BL (7) and B (1). The maximum score of B. I. in these cases fell into two main groups, i. e., a group of B. I. 0 and that of B. I. 5-6. Results of the late lepromin reaction test were weak positive in 8 cases, doubtful in 4 and negative in 5. In 3 cases, lepromin test was done on both the inside and outside of their annular skin lesion, and there was no significant difference between them in all cases tested. The test by FLA-ABS method revealed significantly higher titers in BL group than in BT and BT/BB groups. Among 7 cases clinically diagnosed as BL, 5 cases were histologically classified as LL. Another

ease showed different features in biopsy specimens of two different lesions. Epithelioid cell granuloma in the foamy cell infiltration was observed in 6 cases. The granuloma varied from BT to BL with varying degrees of lymphocytic infiltration and appearance of giant cells. These changes were interpreted as those resulted from some acquired delayed hypersensitivity against *Mycobac. leprae* antigens which developed after lepromatous lesions were established. These findings are unusual in the new patient, and the changes observed were tentatively termed in this report as "reaction from L" because Ridley and Jopling's classification was not applicable in these cases. While "Madrid" classification has officially been adopted in Japan since 1979, several propositions on the classification in Japan are made in an attempt to prevent confusion in clinical and statistical studies on this disease. — Authors' abstract

STROBEL, M.; ARNOLD, J.; HUSSER, J.A. La forme maculaire indéterminée de la lèpre. *Acta Leprol.*, 83:1-10, 1981.

A propos de 49 cas suspects de lèpre indéterminée observés en clinique dermatologique, ou cette forme initiale de la maladie apparaît beaucoup plus fréquente qu'ailleurs, les principaux aspects cliniques, histologiques et évolutifs sont passés en revue. L'accent est mis sur la valeur de l'examen histopathologique et les problèmes de diagnostic différentiel. Il se confirme que la lèpre indéterminée est, de toutes les formes de lèpre, celle pour laquelle la concordance histo-clinique est la plus faible et celle dont le diagnostic est le plus difficile. — Résumé des auteurs

STROBEL, M.; NDIAYE, B.; MARCHAND, J.P.; STACH, J.L.; FOUMOUX, F.; ARNOLD, J. Les réactions lépreuses: problèmes de diagnostic (A propos de deux observations). *Acta Leprol.*, 83:11-19, 1981.

Two cases of reactional leprosy leading to wrong diagnosis are reported. The first one concerns a reversal reaction predominantly neuritic, initially taken for polyarthritides. The second one concerns an erythema nodosum leprosum with extensive cutaneous necrosis (Lucio's phenomenon or ulcerative leprosy). Main aspects and mechanisms of

leprosy reactional states are reviewed. It is emphasized that errors or delays in diagnosis are often caused by failing to recognize cutaneous or neuritic symptoms. — Authors' summary

REDDY, S.C.; SUBRAHMANYAM, V.V.; PADMAVATHI, L. Ocular lesions in leprosy. *India J. Dermatol. Venereol. Lepr.*, 47(4) :220-225, 1981.

Out of 100 cases of leprosy studied for ocular complications, 46 were suffering from lepromatous leprosy and 54 from non-lepromatous leprosy; 72 were males and 28 females. The patients were in the age group of 13-70

years, with the maximum incidence (45%) in fifth decade of life. The mean duration of leprosy was 11.8 years, with a range between 4 and 36 years. Single or multiple ocular lesions were found in 84% of patients. Impaired or absent corneal sensation (70%) was the most frequently seen ocular lesion in this study, followed by madarosis of eyebrows and eyelids (56%), anterior uveitis (21%), lagophthalmos (19%), ectropion of lower lid (8%), and sclera] lesions (4%) etc. Uniocular blindness was observed in 8% of patients. Periodical check up of all leprosy patients for any ocular involvement is essential in order to detect and treat the eye complications in early stages. — Authors' summary

TERAPÉUTICA THERAPY

ANAND, L.C.; TIWARI, V.D.; RATHORE, B.S.; ONKAR SINGH. Clinical trial with Ciba 1906 in lepromatous leprosy. *Leprosy in India*, 53(2):278-284, 1981.

Drug trial with Ciba 1906 was conducted in 50 cases of lepromatous leprosy who were intolerant to dapsone therapy. Drug was tolerated well and lepra reactions were infrequent and mild. Clinical improvement was seen in 72% cases whereas no appreciable change was detected in 28% cases. An average reduction of 0.4 in BI was detected in 62% cases, while remaining cases did not show any reduction in BI. No significant side effects were encountered during the study. Antibacterial activity of Ciba 1906 was not found superior to dapsone. — Authors' abstract

préoccupante peut expliquer la relative stabilité de l'incidence de la lèpre en Afrique francophone. Il est donc nécessaire de contrôler bactériologiquement chaque année cette population-cible de lépreux pour pouvoir réorienter la conduite thérapeutique en campagne de masse. En prônant l'utilisation rationnelle d'antibiotiques majeurs bactériolytiques, la généralisation rapide de la résistance secondaire ou primaire aux sulfones pourra être retardée. Il sera possible d'utiliser encore longtemps ce médicament de deuxième ligne encore efficace, peu toxique et de loin le moins cher. De plus, la chaîne épidémiologique de la lèpre pourrait être en interrompue. Le moment est donc venu pour les services de santé publique de décider d'appliquer une nouvelle politique de traitement pour lutter avec efficacité contre la pérennité de l'endémie lépreuse en Afrique. — Conclusion des auteurs

BAQUILLON, G.; FERRACCI, C.; RIDEL, P.R.; SAINT-ANDRÉ, P.; PATTYN, S.R. Résultats de la bacilloscopie pratiquée sur 360 malades lépromateux traités depuis plus de cinq ans par monothérapie sulfonée et investigués à Bamako (Mali). *Acta Leprol.*, (85) :25-39, 1981.

Une grande partie des populations de lépromateux traités cinq années et parfois beaucoup plus par monothérapie sulfonée peut être considérée comme un réservoir humain de *Mycobacterium leprae* permanent et toujours actif. Cette situation épidémiologique

BAQUILLON, G.; FERRACCI, C.; DIALLO, J.; SAINT-ANDRÉ, P.; PATTYN, S.R. Aspects cliniques et paracliniques de la chimiorésistance secondaire à la 4-4' diaminodiphénylsulfone dans une population de malades lépromateux à Bamako, République du Mali. *Acta Leprol.*, (85) :40-52, 1981.

Devant toute aggravation de l'état clinique et bactériologique d'un malade lépromateux traité par monothérapie sulfonée, évoquer la chimiorésistance à la 4-4' diaminodiphénylsulfone devient maintenant un réflexe en

Afrique de l'Ouest. Prouvée sa survenue entraîne de fait l'arrêt définitif de cette médication et en conséquence la prescription d'une autre thérapeutique plus onéreuse. — Conclusion des auteurs

BOUCHER, P.; SAINT-ANDRE, P.; FERRACCI, C.; BAQUILLON, G.; RIDEL, P. Rôle favorable d'une thérapeutique locale (Dextranoméromé ou "Debrisan") sur la préparation des maux perforants plantaires lépreux à l'acte chirurgical. *Acta Leprol.* (85) :99-104, 1981.

Vingt-quatre patients porteurs de maux perforants plantaires essentiellement lépreux ont été traités avec le Débrisan. Le traitement appliqué pendant un mois en général, transforme un ulcère plantaire suintant en une lésion bien détergée, asséchée, propre avec formation d'un tissu de granulation sans entraîner toutefois sa cicatrisation. L'association du produit à la neurolyse du nerf tibial postérieur et à la greffe cutanée amène une cicatrisation constante et rapide qui diminue sensiblement les délais d'hospitalisation de ce type de maladie. — Résumé des auteurs

GUPTA, P.N. Antileprotic action of an extract from 'Anantamul' (*Heimidesmus Indicus* R. Br.) *Leprosy in India*, 53(3): 354-359, 1981.

Evaluation of antileprotic activity of indigenous drugs has of late become important. With this idea, 'Anantamul', an indigenous drug, was for the first time tested on mice infected with *M. leprae*. The results are interesting and encouraging. There seems to be a definite evidence in support of the drug causing a delay in multiplication of organisms in the mouse foot-pads. — Authors' abstract

KUNDU, S.K.; GHOSH, S.; HAZRA, S.; CHAUDHURY, S. Multiple drug therapy — A comparative study with 2 tier and 3 tier combination of rifampicin, clofazimine, DDS, INAH and thiacetazone in lepromatous cases. *Leprosy in India*, 53(2) :248-258, 1981.

A comparative study with 2 tier and 3 tier combination of rifampicin, clofazimine, DDS, INAH and thiacetazone was conducted on fifty lepromatous leprosy cases for varying periods. Assessment showed that 2 tier combination of clofazimine and DDS produced good results but the cost stood in the way;

whereas 3 tier combination of DDS, thiacetazone and INAH also yielded good results with much less expenses to be incurred by the patients. Whether therapy with this 3 tier combination could be continued for a longer period with sustained improvement is yet to be assessed by further studies for a considerable period. — Authors' abstract

LAL, S.; GARG, B.R.; HAMEEDULLA, A. Gastrointestinal side effects of clofazimine. *Leprosy in India*, 53(2) :285-288, 1981.

Three out of 30 patients of leprosy getting clofazimine therapy developed severe gastrointestinal side effects following the therapy in the dose of 100 mg after one month, eight months and five weeks respectively. One of the patients died due to the side effects. Indian patients appear to be more prone to severe gastrointestinal side effects of clofazimine and may develop the same after shorter duration of therapy with smaller doses of the drug. — Authors' abstract

LE, KINH DUE; NGUYEN, NGUYEN; NGUYEN, VAN MAN. Contribution à l'étude de l'efficacité de la dapsonne quotidienne contre la résistance des *M. leprae*, mais encore une amélioration clinique rapide et un area de contagion après six mois en moyenne de traitement. C'est probablement une méthode simple, peu coûteuse mais efficace qui favoriserait et justifierait le traitement à domicile des malades lépromateux bacilifères. — Conclusion des auteurs

L'association d'une dose unique de rifampicine à la dapsonne administrée quotidiennement permettrait non seulement une prévention contre la résistance des *M. leprae*, mais encore une amélioration clinique rapide et un area de contagion après six mois en moyenne de traitement. C'est probablement une méthode simple, peu coûteuse mais efficace qui favoriserait et justifierait le traitement à domicile des malades lépromateux bacilifères. — Conclusion des auteurs

RAMU, G.; SREEVATSA; SENGUPTA, U.; DESIKAN, K.V. Evaluation of multiple regimens in leprosy. *Leprosy in India*, 53(2):190-196, 1981.

Assessment of bacteraemia has been made at weekly intervals in 36 lepromatous leprosy patients who were put on different antileprosy drug under four regimens, viz., DDS alone, DDS in combination with rifampicin (DDS+RIF), clofazimine (DDS+CLF) and thiacetazone (DDS + TCT). In general, with the

continuation of treatment the bacillary load in the blood decreased considerably while bacteriological index (BI) of the skin remained constant during the study. No significant difference was noted in *M. leprae* clearance from blood between the groups treated with DDS alone and groups treated in combination with CLF and TCT. However, DDS+RIF treatment was most efficient in clearing acid-fast bacilli (AFB) from blood as compared to those noted with other drug regimens. — Authors' abstract

RAZACK, E.M.A. & ZAHRA, A. Multi-drug treatment for reactions in leprosy. *Leprosy in India*, 53(2):204-212, 1981.

Thirty three leprosy patients in reaction were treated with a combination of metronidazole — dichyl carbamazine citrate — chloroquin which was reinforced either with prednisolone and/or ciprofloxacin in some, depending on the clinical state. The results were quite encouraging as to recommend the combination alone to be the first choice while encountering leprosy patients in reaction early during the maiden spell-at no time in any case was dapsone withdrawn. — Authors' abstract

SAINT-ANDRÉ, P.; FERRACCI, C.; BAQUILLON, G.; RIDEL, P.R. Le traitement des lèpres tuberculoides et borderlines par désensibilisation progressive spécifique à la lépromine. Comparaison entre la méthode classique des dilutions progressives et l'utilisation de la lépromine retard dans l'hydroxyde d'alumine. *Acta Leprol.*, (85):69-74, 1981.

Dans tous ces cas TT et BT BB (12 cas), la désensibilisation spécifique par lépromine retard a été efficace et bien tolérée. Elle n'a déclenché aucune réaction reverse névritique. Elle a permis, dans un délai de six à quinze mois, l'introduction de rifampicine 900 mg hebdomadaire plus DDS 100 mg par jour et même DDS seule sans aggravation névritique ultérieure. La série de malades traités par lépromine en posologie progressive a comporté une réaction reverse désagréable qui a régressé après arrêt de la progression par traitement par la rifampicine plus corticothérapie; la reprise de la désensibilisation s'est faite avec la lépromine retard sans incidents ultérieurs. On retrouve là la supériorité des alipagènes Pasteur à l'hydroxyde d'alumine qui nous évitent désormais les réactions graves auxquelles

nous nous heurtons parfois dans les désensibilisations classiques en particulier avec les pollens de graminées. Cette séquence thérapeutique débutant par la lépromine retard est logique car elle s'attaque en priorité au grave problème de la névrite. L'antibiothérapie est introduite seulement après stabilisation de la névrite et vise à obtenir la guérison définitive par élimination de rates *M. leprae* provocateurs de la réaction immunoallergique cutanée reverse. Nous proposons désormais le traitement logique ci-après: traitement par lépromine retard visant à régler le fond du problème. Ce traitement doit être associé au traitement antiinflammatoire par corticothérapie avec de la rifampicine qui a l'avantage de détruire les bacilles et d'éviter leur prolifération que faciliterait la corticothérapie. D'autres thérapeutiques à visée antiinflammatoire sont à essayer. Un essai actuel en cours nous donne satisfaction. Dans une situation d'urgence comme celle du nerf inflammatoire, tout produit même moyennement actif, doit entrer en jeu dans le but de sauver le nerf. La neurolyse, dont c'est là la Vindication majeure, doit faire partie de cette panoplie. — Conclusion des auteurs

SREEVATSA; GIRDHAR, B.K.; DESIKAN, K.V. Persistence *M. leprae* after introductory rifampicin followed by dapsone therapy. *Leprosy in India*, 55(3):350-353, 1981.

Lepromatous patients of 'Introductory Rifampicin therapy' (*Leprosy in India*, 50:1978) who received 300 mg rifampicin daily for 3 months followed by 50-100 mg DDS daily for another 21 months are investigated for persistence in the skin. Mouse foot pad results revealed that at the end of 2 years of treatment viable *M. leprae* are still persisting in 3 out of 6 patients. — Authors' abstract

YAWALKAR, S.J.; LANGUILLON, J.; HAJRA, S.K.; McDOUGALL, A.C.; GHOSH, S.; OPROMOLLA, D.V.A.; TONELLO, C.J.S. Once-monthly rifampicin plus daily dapsone in initial treatment of lepromatous leprosy. *Lancet*, 1(82-83):1199-1202, 1982.

In an international multicentre controlled single-blind trial of 93 previously untreated lepromatous leprosy patients the therapeutic effects of adding rifampicin, 450 mg/day orally or 1200 mg once monthly in a single oral dose, to dapsone (50 mg/day orally) for the first 6 months of treatment were compared.

Clinical and histopathological improvements and bacteriological regression, indicated by the decreases in the bacterial and morphological indices of the skin and nose-blow smears, were satisfactory and practically identical after 6 months' treatment. The once-monthly rifampicin schedule was better tolerated than the daily one. In view of the good therapeutic efficacy and tolerability, the much lower cost of treatment (about one-tenth of that of the daily rifampicin regimen) and the possibility

of administration under supervision, once-monthly rifampicin given in a single oral 1200 mg dose should be recommended, along with a standard dapsone regimen, for large-scale, initial, and intensive combination treatment of patients with lepromatous and borderline-lepromatous leprosy, to help prevent an increase in dapsone resistance. A third antileprosy drug (e.g., clofazimine) may be added to this initial dual-treatment regimen. — Authors' summary.

CIRURGIA, FISIOTERAPIA, REABILITAÇÃO FÍSICA SURGERY, PHYSIOTHERAPY, PHYSICAL REHABILITATION

MALAVIYA, G.N. Surgery of foot drop in leprosy by tibialis posterior transfer. *Leprosy in India*, 53(3):360-368, 1981.

In the surgery of foot drop the common method of correction is by transfer of tibialis posterior muscle, either to the joint capsule in the middle of the foot (Selvapandian's method) or a double transfer to the toe extensor tendons (Srinivasan's method). A retrospective study was done to compare the results of surgery done by those two methods at the Sacred Heart Leprosy Centre, Kumbakonam with a follow-up ranging from one to nine years where 78 feet had tibialis posterior transfer by Srinivasan's method and 20 by Selvapandian-Brand method. Restoration of the normal heel-toe gait was the criteria taken to evaluate the results. Good results were obtained by either method in nearly 70% of cases. The post operative findings and the causes of failure are analysed in detail. The pre and post-operative physiotherapy methods which mainly contribute a successful result are described and stressed. — Author's abstract

PALANDE, D.D. & GILBIE, S.G. The deformity of thumb in ulnar paralysis. *Leprosy in India*, 53(2):152-159, 1981.

The flexion/extension angles at the metacarpophalangeal and interphalangeal joints of the thumb in position of rest and pinch were studied in 68 thumbs of ulnar paralysis. In two thumbs the flexor pollicis brevis was not paralysed. Twenty five normal thumbs

were used as controls for comparison. During the resting position the metacarpophalangeal joints showed less flexion and interphalangeal joints more flexion than normal. During the pinch position metacarpophalangeal hyperextension and interphalangeal flexion — the Z deformity was seen in about 60% while marked interphalangeal flexion was seen in all thumbs of ulnar paralysis. It is suggested that this muscular imbalance is likely to affect thumb joints in time because of abnormal stresses due to altered forces and this can be prevented by restoring the muscle balance by surgery. — Authors' abstract

VERAN, J.; FARRUGGIA, R.; PARET, B. Traitement chirurgical du pied lépreux paralytique. A propos de huit cas traités en Nouvelle-Calédonie. *Acta Leprol.*, (85):93-97, 1981.

La maladie de Hansen, rare, mais non exceptionnelle en Nouvelle-Calédonie, laisse des séquelles neurologiques fréquentes. Nous avons seulement voulu, à propos de cette courte série de paralysies du sciatique poplité externe, d'origine hansénienne, traitées de façon uniforme par l'intervention de Carayon, montrer la fiabilité de cette technique dans des conditions de travail qui ne sont pas celles des grands centres spécialisés. Dans six cas sur huit la dorsi-flexion, rendue active et stable, au voisinage de 90°, a permis la reprise d'une marche sans gêne notable. Et la marche est encore le mode de déplacement le plus usuel dans les Iles calédoniennes. — Conclusion des auteurs

EPIDEMIOLOGIA, PREVENÇÃO EPIDEMIOLOGY, CONTROL

BAQUILLON, G.; BERNARD, L.; SOW, S.; CISSÉ, M.; SAINT-ANDRE, P. Evolution de la campagne contre la lèpre dans les pays francophones d'Afrique occidentale dépendent de l'O.C.C.G.E. Premiers résultats dans la zone pilote de Bougoni (Mali) *Acta Leprol.*, (85) :57-68, 1981.

GIRDHAR, A.; GIRDHAR, B.K.; RAMU, G.; DESIKAN, K.V. Discharge of *M. leprae* in milk of leprosy patients. *Leprosy in India*, 53(3) :390-394, 1981.

A quantitative estimation of discharge of *M. leprae* in the milk of 39 leprosy female patients has been made. Twelve of the 39 patients (10 LL/BL and 1 each of T/BT and BB) showed bacilli in their milk. Only one of these patients was on treatment. AFB count in 10 ml of milk was found to range from 4.3×10^4 to 4.3×10^5 . Significance of discharge of such a large number of bacilli in breast milk is discussed. — Authors' abstract

JULVEZ, J. & TROUSSIER, T. Aspects épidémiologiques actuels de la lèpre dans l'île de la Réunion (Océan Indien). *Acta Leprol.*, 83:27-40, 1981.

In the view of a coast/effectiveness study of the anti-leprosy organisation in French Reunion island, an epidemiological evaluation had been realised from all existing records. 324 cards had been collected but only 62% of known patients are followed under surveillance. The clinical spectrum is particularized by a greater part of lepromatous or borderline types by the mere fact of male forms. The prevalence is 0.5 per 1000 and the average incidence is 0.02 per 1000. Nevertheless, the patients show few disabilities. This low endemic level, the positive growing old of leprosy population, the high frequency of relationship amongst patients, induce the idea that the disease is under extinction with a low intra-familial contamination. But the main goal will be a better surveillance of known patients. — Authors' summary

REVANKAR, C.R.; DUDHALKAR, B.; RAJU, G.D.; GANAPATI, R. Leprosy surveys in urban slums. Possibilities for epidemiological investigations. *Leprosy Rev.*, 53(2):99-104, 1982.

Rapid industrialization and a population explosion in urban areas like Bombay have

promoted the growth of a large number of slums where some 40% of the city's population is living in an overcrowded, unhygienic environment. This has led to many acute and chronic public health problems, one of the gravest of which is leprosy. Intensive surveys of 8 slums, in which 31,950 subjects were screened for leprosy, revealed a range of prevalence between 5.9 and 22.8/1,000 with an average rate of 11.9/1,000, thus indicating slums as hyperendemic foci. The average smear-positive case prevalence rate was 1.1/1,000 and this shows a high quantum of infection in the slum communities. Contrary to general belief, these urban slums are stable in nature, housing a population coming from different parts of India. Various epidemiological investigations relating to leprosy under urban conditions therefore seem to be possible if our experience is indicative. — Authors' summary

SAIKAWA, K. The epidemiological phenomenon on decreasing tendency of leprosy disease. *Jap. J. Leprosy*, 50(3) :99-104, 1981.

The study on leprosy epidemiological phenomenon on the decreasing leprosy prevalence rate has been done by many leprologists before. A pilot study has been done in the field in Okinawa Island to observe some epidemiological phenomena on the tendency of the decreasing leprosy incidence rate. Okinawa was the most severe leprosy endemic area in Japan and in 1967 leprosy incidence rate was 0.181%, but recently the situation has been very much improved and the incidence rate became 0.017% in 1980. Moreover, in Okinawa, leprosy out-patient treatment has been put into operation since 1961 and it has been easy to collect the data on newly-detected patients. The following results were obtained in the stage when leprosy incidence rate showed decreasing tendency. 1. Leprosy incidence rate, lepromatous incidence rate, child incidence rate and child ratio (under 14 years old) showed decreasing tendency altogether, especially child incidence rate and child ratio were decreasing at a faster pace than leprosy incidence rate. 2. Lepromatous ratio and aged ratio (over 65 years old) were increasing in this stage on the contrary. 3. At this stage the difference between male ratio and female ratio were reducing, especially the difference between both ratio of child patients were

reducing at a faster rate than in case of adults. 4. The cross phenomenon in the curve of child ratio and aged ratio was a remarkable sign and the phenomenon previously suggests the decrease of leprosy incidence rate. 5. In this stage the peak of the onset age curve moved from the younger group to the older group. — Author's abstract

SOENDJOJO, A.; ILIAS, M.I.; HUDIONO, H. Leprosy control in Surabaya. *Lepr. Rev.*, 53(2):91-97, 1982.

The number of registered leprosy cases in Surabaya, which has 2.5 million inhabitants, in December 1978 was 3,118, but it has been estimated that the total leprosy patients

is probably around 5,000. The prevalence of leprosy in this city is at least 1.25 per 1,000 inhabitants. The Department of Dermato-Venerology of the Dr. Sutomo Hospital in Surabaya, which is a general as well as a teaching clinic, is involved in many leprosy control activities. The latter covers among other aspects: epidemiological studies; passive and active case detection; free medical care for more than 75% of the registered leprosy cases in Surabaya; rehabilitation; health education to the patients and their relatives, to other medical staff members and the community; teaching activities; research work; and cooperation with the Netherlands Leprosy Relief Association to combat leprosy in and around Surabaya. — Authors' summary

PSICOLOGIA, EDUCAÇÃO, REABILITAÇÃO SOCIAL PSYCOLOGY, EDUCATION, SOCIAL REHABILITATION

BEHERE, P.B. Psychological reactions to leprosy. *Leprosy in India*, 53(2):266-272, 1981.

The study was conducted to find out the psychological reactions to leprosy, to correlate psychological symptomatology with duration of leprosy and to find out suicidal attempts among leprosy patients. 24 patients were randomly selected from "Kashi Kusth Swasth Shala and Punarvas Mandir". They were administered the Hindi adaptation of Middlesex Hospital Questionnaire. 14 patients verbalised suicidal ideas and 2 have had suicidal attempts. Psychological symptomatology was less reported by those whose duration of illness was longer and more symptoms were reported by those whose illness was of shorter duration. The various findings are discussed in length. — Author's abstract

CHAUHAN, N.S. & DHAR, U. The psychodynamic side of leprosy. A children's apperception test (CAT) study. *Leprosy in India*, 53(3):379-384, 1981.

The present investigation attempts to study the personality characteristics of children suffering from leprosy. A group of eleven children was selected from the Central Jalma Institute for Leprosy and Kusht Seva Sadan at Tajganj, Agra. Indian adaptation

of Leopold Bellak's Children's Apperception Test (CAT) was employed for collecting the data. The most salient features which were charted out are that they have a general craving for sociogenic needs like love and affection, security, affiliation, cooperation etc. Their anxiety level tends to be high due to certain conflicts. The obvious fact has been that leprosy appears as a somatic devastation in the presence of highly active psychogenic starvation of personality. — Authors' abstract

RAJ, V.; GARG, B.R.; LAL, S. Knowledge about leprosy among leprosy patients. *Leprosy in India*, 53(2):226-230, 1981.

A study on "Knowledge of Leprosy in Leprosy patients" was conducted in the Dermatology outpatient department of JIPMER. The study has shown that a good percentage of leprosy patients possess proper knowledge of leprosy in respect of its awareness, nature of treatment, consequences of lack of treatment and prevention of disease. Knowledge regarding the cause and mode of spread of disease and duration of treatment was lacking in majority of patients. These areas should be given more concentration in educating the leprosy patients. It was found that literate patients possessed better knowledge than illiterate patients. — Authors' abstract