

CURRENT LITERATURE

It is intended that the current literature of leprosy shall be dealt with fully in this department. It is a function of the Contributing Editors to provide abstracts of all articles published in their territories, but when necessary such material from other sources is used when procurable.

BIRCH, C. LA FLEUR. Leprosy. Medical Woman's Journal 53 (1946) 25.

This article consists of a fairly extended general description of the disease based on the more recent references on the subject. Portions of the writer's description of the lesions, such as the finding of a possible *greenish* color to the border of the "ringworm-like" macules of the neural type, will seem rather startling to some leprologists. Others would perhaps like to know what was meant by the statement that the *M. leprae* produces "a mild toxemia."

The most interesting part of the article is the brief description of the blood picture changes in leprosy, based on 53 complete blood examinations (number and type of cases not mentioned) made by the author. It was found that the distribution of blood groups and types did not differ from the normal. Cold agglutinins were present in most of the acute cases. The other blood findings were similar to those ordinarily described.

J. RODRIGUEZ

DA COSTA, G. and DINIZ, O. Tratamento de leprosos pelo promin. (Treatment of leprosy with promin.) Arquivos Mineiros. de Leprologia 6 (1946) 159.

The writers give briefly the results obtained in 4 moderately advanced previously untreated lepromatous cases after two years treatment with promin. In 3 of them, there was moderate improvement clinically while one was not only very much improved clinically but was rendered bacteriologically negative as well. The other 3 cases continued to be bacteriologically positive at the end of the treatment. Admitting that there were too few cases to justify conclusions, the writers believe that the same favorable results would have been achieved with the use of chaulmoogra preparations, associated with physiotherapeutic aids. They suggest further that more benefits could probably be obtained by combining promin with local treatment with chaulmoogra.

J. RODRIGUEZ

DHARMENDRA and MUKHERJEE, N. Action of penicillin on *Mycobacterium leprae muris*. Indian J. M. Research 34 (1946) 237.

This article gives the details of well-planned experiments performed by the authors to investigate the effect of penicillin on *M. leprae muris*, both *in vitro* and *in vivo*.

The inoculating material consisted of a saline suspension made from the liver of white rats suffering from advanced experimental rat leprosy rich in bacilli. For the *in vitro* tests, six 1 cc. portions of this suspension were treated with an equal amount of freshly made penicillin solution containing 1,000 Oxford units per cc., kept at room temperature for twenty-four hours, and inoculated into 6 white rats. For control, 1 cc. portions

of untreated suspension were injected into 10 rats. One-half of the dose of the treated and untreated suspension was injected intraperitoneally and the other half was given subcutaneously into the groin.

The results in the *in vitro* experiments showed that the macroscopic and microscopic findings in the two groups of animals were similar, so that penicillin treatment of a suspension of rat-leprosy bacillus had no effect in inhibiting or retarding the generalized infection.

In the *in vivo* experiments, 24 white rats were inoculated in the same manner as above with saline suspension of infected livers and immediately treated with penicillin. Each rat received 3 injections daily of 100 units, one being given intraperitoneally and the other two intramuscularly. In animals which did not die earlier, the treatment was continued for one hundred and eighty-four days. The same control of 10 rats served for both sets of experiments.

The conclusion was that in rats so treated with penicillin, the drug failed to modify the course of the resulting generalized infection.

J. RODRIGUEZ

DO PATEO, J. D. Sobre a incubação da lepra nos casos de contágio familiar. (Concerning the incubation period of leprosy following family contagion.) Read before the Second Pan-American Leprosy Conference, Rio de Janeiro, Brazil, Oct., 1946.

The author analyzes the data available from the records of 1,905 cases of leprosy diagnosed among 72,079 house contacts registered in the Section of Contacts, Department of Prophylaxis of Leprosy, São Paulo, Brazil, for the period of 21 years from June, 1924 to December 31, 1945, with a view of determining the probable duration of the incubation period.

He discusses the well-known difficulties in securing data which may throw light on the incubation period of leprosy, principally on account of the variable period of latency elapsing from the onset of contact to the recognition of the earliest manifestations. He believes that the variability of this period depends not only on the closeness and duration of the contact, but also on the general health habits and intelligence of the leprosy patient as well as the exposed persons.

Of the 1,905 cases who developed the disease, 35 had not really lived in the same household as the source, having given a history of visiting only an infected household. These have been excluded from the study, leaving 1,870 cases that presumably have been definitely exposed to household infection before the onset of the first recognizable lesions. The duration of the period of exposure and the number of cases developing within each period are given in a table which follows:

<i>Duration of household exposure</i>	<i>Cases developing</i>	<i>Percentage</i>
Under 1 year	128	6.9
1 - 3 years	585	31.3
3 - 5 "	419	22.4
5 - 10 "	505	27.0
10 - 15 "	175	9.4
15 - 20 "	36	1.9
20 - 25 "	13	0.7
25 - 30 "	8	0.4
More than 30 years	1	0.05

A second table gives the number developing after each single year of exposure.

This data was analyzed statistically to determine the mean and variability of the distribution. The mean was found to be 5.2 years, with a standard deviation of 4.3 years. This would indicate that judging from these data the true mean incubation period would be between 0.9 years to 9.5 years 68 per cent of the time. Furthermore, it is seen that in 128 cases the period elapsing from the onset of the contact to the development of recognizable lesions was less than one year.

J. N. RODRIGUEZ

DO PATEO, J. D. Jr. Da frecuencia da lepra entre conjuges. (Frequency of leprosy among married couples.) *Read before the Second Pan-American Leprosy Conference, Rio de Janeiro, Brazil, Oct., 1946*

Of 1905 persons who were found to have leprosy among 72,079 house associates registered in the Section of Contacts, Department of Prophylaxis of Leprosy, there were 269 cases of conjugal leprosy, giving a percentage of 14.1. The husband was considered to be the source in 156 cases and the wife was believed to have given the disease to her healthy husband in 113 instances. From these figures, the writer computes that the husband contaminated the wife in 8.2 per cent of the cases, and the wife contaminated the husband in 5.9 per cent. He proceeds at great length to compare his percentage of conjugal infections with those of others, both from other countries as well as from Brazil. He notes that the figures from foreign sources range from 0 to 23.3 per cent (the validity of the last figure furnished by Moritz obtained at Molokai is said to be questioned by Rogers and Muir) and as a whole are much lower than his percentage of 14.1.

J. N. RODRIGUEZ

KOLB, M. Sympathetic paralysis in peripheral nerve leprosy. *Bull. U. S. Army Dept. 5* (1946) 482.

The writer describes the neurological findings in a moderately advanced lepromatous case in an 18 year old coolie with neural manifestations (C_2N_3) of seven years' duration. Nodules were present on the face, trunk, and legs, while both upper and lower extremities showed neural involvement accompanied by moderate atrophy of the interosseous muscles of the left hand. In testing for sensory disturbances, the usual observation was confirmed that in such cases sensibility to light touch may be preserved in an involved area in the presence of complete analgesia and loss of sensitivity to warmth and cold. Investigating the sweating function of the sympathetic nerve fibers, the writer performed the starch-iodine test (after injection of 15 milligrams of pilocarpine hydrochloride). [This method was used by Muir years ago.] He suggests that with the use of the sweating test, it should be possible to distinguish a case of neural leprosy from syringomyelia.

J. RODRIGUEZ

OTEIZA SETIEN, A., IBARRA PEREZ, R., and GONZOLEZ PRENDEZ, M. A. Censo de la lepra en Cuba. (Census of leprosy in Cuba.) *Boletin oficial, patronato para la profilaxis de la sifilis, lepra, y enfermedades cutaneas*, Havana, Cuba, June, 1946.

The first real census of leprous persons in Cuba was started in 1943 by the "Patronato para la profilaxis de la siphilis, lepra, y enfermedades cuta-

neas," a semi-independent organization under the Ministry of Health and Public Welfare, better known as the P.S.L.E.C.

The disease is known to have existed in Cuba since the sixteenth century, having been introduced probably by the traffic in slaves and by the immigration of the colonizers of that period. Documents of purchase of slaves in those days are extant, showing certain clauses which provide that should a newly bought slave develop leprosy within a period of six months after purchase, the deal was to be declared null and void and the purchaser was entitled to reimbursement of the purchase price.

The existence of the disease was in fact disregarded and no attempt was made to secure a census of these patients until 1926 when at the initiation of the government, an official list of 140 cases was prepared, a figure generally accepted to be far below the actual number of cases. There was a general desire on the part of the public to conceal leprosy, and even the official government records such as the registry of deaths did not reflect even a fraction of the actual cases.

In view of this attitude of the public, the task of conducting a real census in accordance with the recommendation of the sub-committee on epidemiology and control of the International Leprosy Congress at Cairo, Egypt, was recognized to be most difficult. A preliminary educational campaign was conducted among the practicing physicians and the public. Units of specially trained personnel consisting of medical specialists, nurses, social service workers, and minor personnel were sent to every municipal district, province by province, until the entire country had been covered. Resurveys were continued even after completion of the initial survey so that as of June, 1946, a third visit to the provinces of Las Villas, Camaguey, and Oriente had been completed and a third inspection was being done in the remaining provinces of Pinar del Rio, La Habana, and Matanzas.

The traveling units were given all the time required to secure the necessary data. The specialist in charge of the units visited the local health officers, and the registry of infectious diseases in the locality were carefully examined. Calls were also made on the local mayor, and the most prominent citizens in order to explain objects of the survey to them and to secure their cooperation.

The cases of leprosy found during the census have been classified under the following heads: (1) "ambulatory" patients; (2) hospitalized patients; (3) cases under provisional discharge; (4) house associates of leprosy patients; (5) healthy children of leprosy parents, and (6) deaths.

As of June, 1946, there were registered 2,166 "ambulatory" patients not residing in hospitals. In 16 per cent the disease was of the tuberculoïd type, in 19 per cent of the uncharacteristic form, and in the balance lepromatous. In the absence of preventoria where many of the "uncharacteristic" cases are usually found, the proportion of such cases discovered during the survey is surprisingly high, an indication of the excellent training of the specialists conducting the survey. In re-examining such cases, however, it would be well to consider whether a diagnosis of "suspicious" might fit some of these cases better than "uncharacteristic."

Among the ambulatory patients, the proportion of children (below fifteen years) ranged from 3.7 per cent of the total in Pinar del Rio to 16.0 per cent in Oriente, with an average of 5 to 6 in the other provinces. This

probably indicates only that better facilities for early diagnosis exist in Oriente than in the other provinces. Of the hospitalized patients, 311 were in the National Sanatorium "Luis de Jagna" and 325 were in the Hospital de "San Lazaro," a total of 636. The maximum capacity of both hospitals is said to be 650. Since 1943, 1346 house contacts to 375 patients have been registered and among them, 45 new cases have developed. Patients under provisional discharge were so few that no separate tables have been prepared for them; they have been temporarily grouped with the ambulatory patients. In the year 1945, only 7 such patients were given temporary discharge from the two leprosaria. The earliest records available on children born in hospitals of infected mothers date only from 1936. At present there are on record 25 such children ranging in age from one month to eight years. From 1936 to 1945, 535 deaths were registered.

Of the 6 provinces in the country, the most highly infected, based both on the prevalence per 1,000 inhabitants and density of leprosy per square kilometer of territory, appears to be Oriente, followed by La Habana. Pinar del Rio has the lowest incidence as judged by prevalence and density per sq. km.

J. RODRIGUEZ

SOUZA-CAMPOS, N. Da importancia de "lepromin-reacção" no controle das crianças recolhidas nos "preventorios." (Importance of the lepromin-reaction in the control of children isolated in preventoria.) Rev. brasil. de leprol. 14 (1946).

The following are the important observations and conclusions of a recognized authority on leprosy in children with regard to the value of the Mitsuda reaction as applied to the children of leprosy parents.

Author's Summary

The preventorium is beyond doubt the best place to acquire a perfect understanding of the evolution of the incipient lesions of leprosy.

Basing our observations of such early manifestations on clinical, bacteriological, and above all, immunological grounds, we have arrived at the conclusion that only children who are lepromin-negative and at the same time are bacteriologically positive should be removed (from the preventorium). Those with clinically recognizable uncharacteristic lesions, with negative bacteriological and even histologic findings, and at the same time Mitsuda negative should be allowed to remain in the preventorium under strict control, in view of the possibility of their subsequently becoming Mitsuda positive.

Such clinical, bacteriologic, and histologic control should be followed with all care and attention in every child with a negative lepromin-reaction, particularly among the children of lepromatous parents, since these children are the most likely to develop leprosy.

The practice of performing lepromin reactions in preventoria throws much light on the much debated and little known field of immunity in leprosy.

We have established in the first place that not all children born in leprosaria of leprosy parents show a negative reaction to the first test with lepromin. This would point to the existence of a constitutional factor which is para-specific (non-specific or apart from being specific. J. N. Rodriguez) and which conditions that positively. Furthermore, this factor is

often manifested by the repetition of the lepromin-reaction. Among 109 children removed from all contact with the disease immediately after birth, 53 became positive after variable periods of observation. This positivity of newly born infants with no possibility of contact with the disease highlights two questions with regard to immunity, both of which are important. Could there be an immunity as manifested by the lepromin-reaction produced by reinoculations with the Mitsuda antigen, or is that immunity congenital and para-specific?

The first hypothesis opens the question of conferring to the organism an immunity by means of re-inoculations of the antigen which would be of incalculable prophylactic value. On the other hand, the second hypothesis would lead us to arrive at the conclusion that there exists either a state of refractoriness or of lessened congenital resistance, which would be equivalent to saying that everyone is born either with a predisposition to or with an immunity to leprosy. This would explain, in a way, the incidence of the disease in certain families where we observe individuals exposed under identical conditions to the same source and some develop the disease while others remain free from it.

These facts would open, in turn, other fields for study of constitutional differences from the immuno-biological point of view of these two groups of individuals, with the remote possibility of conferring, hypothetically at least, on an anergic organism or individual, the elements capable of rendering it hyper-ergic following an infection with leprosy. This is the object of a present study.

On the other hand, the principal criterion for the discharge of children from preventoria should be a strongly positive lepromin reaction. Not a single child with a positive Mitsuda reaction followed up in a preventorium has become reactivated.

It is by means of the preventoria that these children can be better prepared for their struggle for existence in the world by removing from them the stigma of having grown up in a leprosarium. At the same time they are being given the necessary clinical supervision.

J. RODRIGUEZ

DE SA PANELLA, L. *La lucha contra la lepra en Portugal.* (The fight against leprosy in Portugal.) Fontilles, Jan., 1947, 455.

This article gives a good summary of the history of the spread of leprosy in this old country. The existence of leprosy had been known for a long time due to the presence of the famous "gafarias" or leprosaria in different parts of Portugal, the first of which are believed to have been established in the eleventh century. The most interesting feature of the history of the disease as it has occurred in this country is the alleged pronounced fluctuations in prevalence.

After an alarming dissemination in the 15th century, during which all classes of persons were attacked, including royalty (Don Alfonso II died of leprosy in 1220 at the age of 37 years), it became so rare as to be considered non-existent in the next century. The endemic is said to have returned during the next hundred years and gradually progressed through the 18th and 19th centuries. In 1821, a survey revealed 1,403 cases.

In the most recent census, carried out from May 1, 1934 to May 1, 1937, 1,416 cases were recorded, of whom 1,399 were living on the mainland

and the rest were located in the islands of the Azores and Madeira. The most highly infected districts were those of Aveiro, Coimbra, and Leiria, and most of the cases were found in the cities along the coast.

In 1941, the National Leprosarium of Rovisco Paes was built along the most modern and complete lines in the municipal district of Cantanhede within the largest focus of the disease. It has an initial capacity of 800-900 patients and consists of separate dormitories for unmarried male and female patients, residences for married couples, invalids' dormitories, hospital, school, central kitchen, church, laundry, residences for the personnel. Every building is completely modern. In one corner of the grounds of the leprosarium is an entirely independent creche which can accommodate 24 children up to the age of 3 years. Upon reaching this age, they are transferred to a preventorium where they will be kept under observation for 6 or 7 more years.

J. RODRIGUEZ

COSTA, O. G. and MARIANO, J. Tuberculoid leprosy of lupoid appearance. Archives of Dermat. and Syph. 55 (1947) 474.

The authors describe two types of lesions observed in a case of tuberculoid leprosy in a 22-year-old Brazilian girl of Indian blood. One of the lesions was on the right mandible, and consisted of a small group of elongated, irregularly shaped, yellowish-red nodules forming vague arches around a center of atrophic skin. The nodules looked succulent and covered with smooth, shining and slightly scaly skin. This lesion looks like *Lupus tumidus nonexedens*. Above and below the right elbow there were two contiguous patches consisting of several groups of tuberculous nodules similar in appearance and consistency to those on the jaw, although some of the nodules had undergone ulceration and were covered with adherent dark-colored scales. These lesions simulated *Lupus tumidus exedens psoriasiformis*. The characteristic clinical features of papular tuberculoid lesions are their yellowish-red color, succulence, and a certain degree of translucency.

J. RODRIGUEZ

RYRIE, G. A. Some impressions of Sungei Buloh Leper Hospital under Japanese occupation. Leprosy Review 18 (1947) 3.

The author relates the sufferings of the patients in what had been one of the best organized leprosy hospitals before World War II, and explains the effects of such sufferings on their general health and on the progress of the disease. It is to be regretted that the old records had been carried off or destroyed by the Japanese and it was apparently quite impossible to keep accurate accounts during the occupation, so that very little factual data appear in the report.

The period of the Japanese occupation of Malaya is divided by the writer into 3 phases: (1) initial confusion lasting the first few months; (2) organized robbery by the occupation forces covering over a year, and (3) reign of terror which lasted till liberation day — Sept. 16, 1945.

During the first phase, the diet was not yet seriously affected, amounting probably to about 1,500 calories a day, and there were no evidences of starvation. The health of the patients nevertheless degenerated rapidly due to the tense atmosphere of apprehension. Loss of weight became general and the death rate rose to 10 to 15 times its peace-time level.

In the second period, there was more stability but with the rigid control of food supply and organized looting on the part of the Japanese, the diet became as low as 700 calories daily and body deterioration was rapid. Malaria became wide-spread, attacking both patients and personnel. Most of the inmates received a "new esters" injection consisting of a 1-5000 solution of potassium permanganate. Under this regime, in not one patient did the lesions clear up, in comparison to about 150-200 patients discharged each year before the war. The disease got worse more rapidly. The writer believes that a great deal of the ulceration and spread of the disease could have been averted had it been possible to continue chaulmoogra oil injections.

One of the most important changes noted during this second phase was the marked diminution of the incidence of lepra reaction cases. Instead of having around 100 cases in the infirmary, there were only 2 or 3 cases monthly. The author can not account for this anomaly.

[This abnormality was not observed at the Tala and Cebu leprosaria in the Philippines where the patients were subjected to practically the same inhuman conditions, and where no marked reduction of lepra-reaction cases out of proportion to the rapidly diminishing number of remaining patients was noted.]

Finally, in the last phase of the occupation, that of the Gestapo or terrorism stage, there was observed break-down of leprotic tissue, retardation of healing of ulcers, spread of deficiency diseases (notably beri-beri and pellagra), and uncontrollable sepsis.

[It is certainly to be desired that other workers who had managed to remain with their patients under war-time conditions similar to those described by the author and had kept their records should publish their observations on the effects of malnutrition, avitaminosis, and psychical trauma on the progress of the disease. The abnormal conditions brought about by war have resulted in entirely involuntary experiments for observing the relationship between nutrition and development of leprosy, and the accumulated data should be made available for detailed study.]

J. RODRIGUEZ

THE FOLLOWING ABSTRACTS ARE OF ORIGINAL ARTICLES THAT APPEARED IN THE *Revista Brasileira de Leprologia*, FROM LATE 1941 THROUGH 1945, THAT HAVE NOT BEEN DEALT WITH IN THIS DEPARTMENT.

POSSOLO, H. O óleo de chaulmugra na farmacopeia Brasileira. [Chaulmoogra oil in the Brazilian pharmacopoeia.] *Rev. brasil. de leprol.* 9 (1941) 229-248.

In leading up to a recommendation that the article on chaulmoogra oil in the Brazilian pharmacopoeia should be revised, the author reviews in summary fashion the literature on oils of this general group, with a considerable bibliography. Of value is a detailed tabulation of the physical characteristics of the various *Hydnocarpus*, *Coloncaba*, and *Carpotroche* oils (the reduction of *Taraktogenos* to *Hydnocarpus* being accepted) reported by numerous analysts.

—H.W.W.

PECORARO, V. E. As manifestações cutaneas aguda da lepra. [The acute cutaneous manifestations of leprosy.] *Rev. brasil. de leprol.* 9 (1941) 249-260 (summary in English).

Going back to Danielssen and Boeck for an early description of the acute manifestations which came to be known as "lepra reaction" the author, from Rosario in Argentina, discusses views of recent writers—mostly his own colleagues—regarding the condition in the lepromatous form of the disease on the one hand and the tuberculoid form on the other hand. As for the "incharacteristic" form, he quotes with approval Souza Lima's experience that acute manifestations occur only when transformation to one or the other "polar" forms occurs. He asserts that the development of new lesions, distinguished morphologically and structurally from the specific ones, is observed only in the lepromatous type. They correspond clinically to the erythema multiforme syndrome and should be distinguished from the acute exacerbation of the pre-existing lesions, and to accomplish this distinction the term "lepra reaction" should be applied only to the latter phenomenon.

—H.W.W.

- VAUTRAI, R. F. Comentarios sobre a chamada "lepra lazarina" (Nota preliminar). [Comments on the so-called "Lazarine leprosy"; preliminary note.] *Rev. brasil de leprol.* 9 (1941) 263-269.

This discussion of the condition referred to was stimulated by the personal observation of cases which are not described. There is, however, a contribution in the form of a lengthy resumé of the original description of Lucio and Alvarado, published in a monograph in 1851 [1852?] that is rare. Commenting on this description and certain recent writings (Pardo-Castello and Caballero, Rodriguez, and others), the author concludes that the so-called Lazarine leprosy is a form which evolves by acute periods or exacerbations, its principal manifestations being cutaneous, with clinical characteristics similar to what is now called "lepra reaction" or "lepra fever." The cutaneous picture of the reactions of both the lepromatous and tuberculoid forms of the disease may be reconciled perfectly with the original description of "Lazarine leprosy." The monosymptomatic or precocious characters [apparently referring to recent descriptions], and the [supposedly] essential feature of bullae and ulcers, are completely at variance with the original description. The tuberculoid histology mentioned by Rodriguez pertains only to cases which, though they are in accord with the "Lazarine" picture, are of the reactional tuberculoid class. It is not justified to retain the term "Lazarine" to distinguish a special form of leprosy, since the manifestations which make up its clinical picture occur in both of the polar forms of the disease.

—H.W.W.

- NAYLOR-FOOTE, A. W. Estudos sobre a transmissão e o contágio da lepra. [Transmission and contagion in leprosy.] *Rev. brasil. de leprol.* 9 (1941) 271-282 (summary in English).

In this evidently laborious investigation many examinations were made of objects in "general" or direct contact with patients (the former such as door-knobs and lavatories, the latter such as blankets and bath-water) with surprisingly few positive results (5 of 628 times). Air-dust, epithelium from apparently healthy skin areas, and gauze masks used to filter respired air were always negative; and so were all but 3 of 403 specimens of body excretions and secretions. Of 1,066 insects of eight species collected from the bodies or the immediate neighborhood of patients, only 30 were found positive (flies, 17 of 300; bed bugs, 11 of 210; culex mosquitoes, 1 of 112).

Most unusual is a study of the resistance of leprosy bacilli to various temperatures at 65 per cent humidity, and to various degrees of humidity at 37.5°C., and also to different concentrations of alcohol and different kinds of soap. The death of the bacilli was determined by loss of acid-fastness as revealed by Kaysers' modification of Proca's staining method (prolonged methylene blue followed by brief exposure to dilute carbol fuchsin). However valid this test of viability may be, the curves shown are of some interest, especially that of the alcohol experiment; whereas 100 per cent alcohol took two hundred and forty minutes to render all bacilli in the smear "dead," and 95 per cent alcohol took eighty minutes, the effect increased rapidly to one-half minute for the 65 per cent concentration, whereafter the times increased to forty-nine minutes for 40 per cent. (The conclusions were to appear in a second report which has not been published.)

—H.W.W.

FERNANDEZ, J. M. M. Cicatriz residual da lepra tuberculoides infantil. (Residual scar of tuberculoid leprosy of childhood.) *Rev. brasil. de leprol.* 9 (1941) 337-350 (summary in English).

Regarding the opinion that children are not only highly susceptible to infection but that in them the disease is usually malignant, Souza Campos is credited with showing that, on the contrary, the early lesions are usually tuberculoid and benign, and that some of them (reactional) recede to leave a characteristic scar. The author's experience is in agreement; and he lays stress on the importance of strongly positive lepromin reactions, especially the early (48-hour) phase, in such cases. Among 196 healthy children in a general orphanage, 7 were found to give strong early as well as late reactions (a large percentage gave late reactions of moderate intensity), and all of the 7 were found to have scars characteristic of pre-existing reactional tuberculoid lesions of childhood. In one instance subcutaneous injection of lepromin caused a focal reaction in the scar. It is held that strongly positive reactions in contacts signify, if not absolute immunity, at least a favorable state of resistance.

—H.W.W.

BERTI, A. Comentários sobre resultados de biópsias de mucosa nasal praticadas em doentes de lepra candidatos a alta. [Results of biopsies of the nasal mucosa of candidates for parole.] *Rev. brasil. leprol.* 9 (1941) 353-385.

It having been found that nasal scrapings of patients who were candidates for parole were sometimes positive when the skin lesions gave negative smears, the author examined nasal biopsy specimens from 43 such candidates. Only 2 of them were quite negative; 17 showed only nonspecific chronic inflammatory infiltration, while the other 24 showed some form or degree of leprotic change, including tuberculoid foci of some size, as shown in photomicrographs. Biopsy of the nasal mucosa in neural cases awaiting parole is recommended, as well as of skin lesions and lymph nodes.

—H.W.W.

DA SILVA E OLIVEIRA, A. B. O diagnóstico das maculas de origem leprosa pela injeções intradérmicas de pilocarpina. [Diagnosis of macules of leprosy origin by intradermal injection of pilocarpine.] *Rev. brasil. leprol.* 9 (1941) 389-408.

The usual systematic method of applying the pilocarpine test to determine the presence of nonsweating areas in leprosy is cumbersome and time-consuming. In 1929 Jeanselme, Girandeau and Bureau employed a local method, rubbing a pilocarpine cream over the suspect areas. In 1938 Dubois and Degotte used the more simple method of injecting the drug intradermally. From his experience with this method, the effects of which are illustrated by four clinical photographs, the author concludes that it is a valuable aid in the diagnosis of hypochromic and achromic macules through the failure of sweating in the case of leprosy lesions. The ease and simplicity of its application makes it practicable for use in rural field work, in the houses of the patients. It is harmless and can be repeated several times on the same patient. From the lack of any general disturbance it would seem that the action is purely local. The hydrochloride and the nitrate, in doses of 0.2 cc. of a 1 per cent solution, have the same effect. It is stated that the leprous infection affects the nerve branches of the sweat apparatus earlier than those of the vasomotor apparatus. As Jeanselme believed, the more marked the sensory disturbance in the lesions the greater the disturbance of sweat secretion.

—H.W.W.

SOUZA CAMPOS, N. Considerações em torno de um caso de lepra na infância. [A case of leprosy in infancy.] *Rev. brasil leprol.* 9 (1941) 411-424.

This is a discussion of the problem of congenital immunity, based on the case of a child whose father had lepromatous leprosy and whose mother was apparently free from the disease until, thirty days after delivery, she suffered an outbreak of macules. The child was removed to the crèche when two months of age, and when three years old she presented an extensive macular eruption, strongly positive bacteriologically; the lepromin reaction was negative, though a biopsy showed tuberculoid structure. Young children exposed to long and direct contact in the family do not develop the anergy characteristic of lepromatous leprosy but, on the contrary, present the benign, highly allergic tuberculoid form of the disease. The question arises whether such infants may have a specific congenital immunity or acquire an immunity after birth because of exposure. The infrequency of leprosy before one year, even in breast-fed babies with highly contagious mothers, speaks for a congenital immunity, whether specific or not, which resists infection up to a certain age. Under these circumstances repeated contaminations probably give rise to the formation of antibodies, so that as the force of the acquired immunity falls in the first three years that of the acquired immunity increases (graph). When the disease appears in such young children it is of the tuberculoid form, indicating an organism resistant to infection. The case presented, apparently at variance with this theory, can — they hold — be perfectly explained by it. Though the mother had latent infection during the period of gestation, it was not sufficiently intense to arouse defenses of immunological nature capable of conferring to the fetus sufficient antibodies to give it a certain degree of immunity. The lack of specific congenital immunity — and here the specificity of congenital immunity of babies born of lepromatous mother is admitted — prevented the organism from reacting in the usual way, with tuberculoid lesions of the reactional tuberculoid or papuloid type. The clinical aspect was very different; there were no individualized, isolated lesions, but a generalized

exanthematous rash. The presence of bacilli and their numbers and the negativity of the Mitsuda reaction indicate that this child did not have at birth any immunity, and the contaminations received during its short time with her mother were sufficient to determine the disease in a serious form.

—H.W.W.

PECORARO, V. E. Eritema nodoso na lepra. [Erythema nodosum in leprosy.] Rev. brasil leprol. 10 (1942) 67-83 (summary in English).

A systematic, summary discussion of the subject, under seven heads and several subheads. Differentiation from erythema nodosum of other etiology is tabulated essentially as follows [the comment being ventured that some workers would not agree that reactional affections of the eyes are infrequent, especially in cases under antileprosy treatment]:

Region	<i>Erythema nodosum of leprosy</i>	<i>Erythema nodosum of other etiology</i>
Face	Ears, brows, malar regions	Usually respected
Trunk	Usually some elements, depending on severity	Respected, although some elements may be observed
Extremities	Upper: Especially the external and posterior of the arms, as well as the forearms and elbows Lower: Internal surface of the thighs especially in the lower third; may involve the legs and buttocks	Habitually involving the legs along the tibia; may occur on the thighs and buttocks
Eyes	Infrequent; some cases reported	Rare

This phenomenon is considered the most frequent acute skin manifestation of "lepra reaction," seen most frequently in advanced cases and possibly signifying improvement in prognosis.

—H.W.W.

SCHUJMAN, S. and CARBONI, E. A. Lepra tuberculoide com síndrome de Besnier Boeck Schaumann. [Tuberculoid leprosy with the Besnier Boeck Schaumann syndrome.] Rev. brasil leprol. 10 (1942) 131-154 (summary in English).

In 1936 Rabello Jr. suggested that in tuberculoid leprosy there may be visceral lesions and the B-B-S syndrome, and supported this view later with observations of such changes in lymph nodes and bones. So categorical was he that an inquiry was made by THE JOURNAL (5 (1937) 503-515, 433), in which one of the present authors (Schujman) stated that though tuberculoid leprosy can reproduce the Boeck lupoid lesions in the skin he had not observed them in lymph nodes, bones or elsewhere, then he did not deny that visceral lesions might occur. Since then he had taken special interest in the matter and, in much larger material, has made observations of much interest. Without awaiting a complete study, the authors present a case of indisputable tuberculoid leprosy, with typical sensory disturbances in the skin lesions and with positive findings for the leprosy bacillus, in which there were also visceral lesions similar to those of the B-B-S syndrome. The skin lesions were erythematous macules and small and large nodules as

described by Boeck in sarcoid, and cyanotic infiltrations similar to those in lupus pernio. Histologically epithelioid cells predominated, with few lymphocytes and no giant cells. The infiltration invaded the nerves producing an interstitial neuritis, which differentiates the condition from the non-leprous sarcoid. Axillary and inguinal lymph nodes were enlarged, and revealed typical epithelioid nests with acid-fast bacilli; a guinea pig inoculation was negative. Radiograms of the lungs showed a picture typical of Boeck's sarcoid: dense, well-defined parenchymatous nodules, with enlarged nodes in the hilum. At the wrist, knee, and ankle there was periarticular tumefaction, but without the bone changes described by Jungling. The blood count showed 14 per cent monocytes. The Mantoux reaction (0.1 mg.) was negative on 3 tests made at intervals of two months. Treatment with chaulmoogra oil esters (450 cc.) produced complete disappearance of all the symptoms in the course of five months. It is concluded that the B-B-S. syndrome can be caused by Koch's bacilli, *M. leprae*, and perhaps other germs. Three pairs of case photographs, showing the condition in its activity and afterward, one radiograph of the chest and 5 photomicrographs.

—H.W.W.

BATISTA, L. and BECHELLI, L. M. "Symposium" sobre o problema da esterilização dos doentes de lepra. ["Symposium" on the problem of sterilization of leprosy patients.] *Rev. brasil. leprol.* 10 (1942) 157-176.

After reviewing the writings of various medical and social workers and religious authorities, the authors declare strongly against sterilization of leprosy patients. There are no eugenic reasons for it, because the children are not abnormal or born infected. As a means of preventing the birth of children to leprous parents the measure is impracticable because of the difficulties of applying it, especially to outpatients who should be subjected to it; furthermore — it is stated — the index of sterility is high in couples in which the man is diseased. With regard to the economic factor, the expense of caring for the children is not regarded as a serious matter. Sterilization would lead to immorality and the dissemination of venereal diseases in the leprosaria, and by increasing reluctance to submit to segregation would hinder the prophylactic campaign. Religious and moral objections are regarded as serious.

—H.W.W.

LOUZADA, A. O problema da esterilização dos doentes de lepra. [The problem of sterilization of leprosy patients.] *Rev. brasil. leprol.* 10 (1942) 421-430.

After consideration of this problem from the usual points of view, the conclusion is reached that sterilization of leprosy patients should not be put in current practice, not only because it is contrary to important moral and religious principles, but also because, from the medical point of view, it is absolutely lacking in the eugenic, prophylactic, and social values which have been attributed to it.

—H.W.W.

NORONHA MIRANDA, R. Rubéola em doentes da lepra. [Measles among leprosy patients.] *Rev. brasil. leprol.* 10 (1942) 179-185 (resumé in French).

The author reports his observations of an outbreak of measles in a leprosarium, in which 35 patients were involved among a total of 624; 26 of

them were males, and it was that group that was studied. The condition was much more serious among them than among the 11 non-lepromatous persons involved in the same outbreak, the eruption more varied and intense and the temperature elevated (38 to 41°C.) instead of normal or subnormal; but the duration was the same in both groups and recovery occurred without complications. The cases were of the mixed form of leprosy, with cutaneous lesions predominating, and 50 per cent of them suffered lepra reaction as a result of this intercurrent infection.

—H.W.W.

- MAURANO, F. Contribuições para o estudo da cura e curabilidade da lepra. "Os lepromatosos queimados (burnt-out)." [On the cure and curability of leprosy; "burnt-out" lepromatous cases.] *Rev. brasil. leprol.* 10 (1942) 189-205 (summary in English).

In a lengthy and discursive summary dealing mostly with the problem of the criteria of cure, the author indicates the apparent importance of lepra reaction in the process. Assuming that such reactions are a "necessary step to cure," there is interest in the study of medications that induce them.

—H.W.W.

- FREITAG JULIAO, O. and VIRGILIO SAVOY, C. Eletrodiagnostico na lepra. [Electrodiagnosis in leprosy.] *Rev. brasil. leprol.* 10 (1942) 273-302.

Quoting Jeanselme as pointing out the paucity of information concerning the state of neuromuscular electric excitability in leprosy, the authors report detailed findings in 4 cases of different forms and grades of evolution of the disease. In the summary it is stated that the manifest preference which leprosy shows for the peripheral nerves (trunks and terminal branches) makes the electrical examination a means of investigation particularly indicated for recognizing of the exact topography of the motor and amyotrophic disturbances. There is as yet no accurate information on the evolution of the neuritis and its prognosis. However, perhaps certain of the characters presented by the electrical alteration, among them the *parcelado* or "ramuscular" character, and the "*troncular grave*" character, (RD cadaverous), though not pathognomic, may play an important rôle in the diagnostic elucidation of certain cases, chiefly in those without cutaneous lesions or thickening of nerve trunks.

—H.W.W.

- SOUZA LIMA, M. O teste de Mitsuda é reação alérgica? [Is the Mitsuda test an allergic reaction?] *Rev. brasil. leprol.* 10 (1942) 305-319.

As a result of considerations that are not readily summarized, the author concludes that the Mitsuda reaction is a test for phagocytosis, or of cellular activity; that the greater or lesser intensity of the Mitsuda is in relation with the allergic condition of the organism; and that, being a test for phagocytosis, the reaction is an indication for classification and prognosis.

—H.W.W.

- SOUZA CAMPOS, N. Calcificação dos nervos na lepra. [Calcification of the nerves in leprosy.] *Rev. brasil. leprol.* 10 (1942) 323-334.

Noting the few reported instances of calcification of nerve lesions, the author reports a case of tuberculoid leprosy, clinically cured, which showed a process of calcification of the musculocutaneous, ulnar, internal popliteal, and external saphenous nerves. Photographs, photomicrographs, and roentgenographs are reproduced. He believes that the calcification is a final

stage of the caseation and, as in tuberculosis, a sign of cure.—[From author's summary.]

RATH DE SOUZA, P. and ALAYON, F. L. Sobre a presença de lipídios nas lesões cutâneas de lepra. Subsidio ao diagnostico diferencial entre os diferentes tipos de lesão. [The presence of lipoids in cutaneous lesions of leprosy. Aid to the differentiation of the different types of lesions.] *Rev. brasil. leprol.* 10 (1942) 371-418 (summary in English).

To determine the presence of fatty substances in leprosy lesions of various kinds, all biopsy specimens received over a period of several months (a total of 231) were divided; one part was embedded for the usual examination while the other frozen sections were stained with sharlach R. Of 73 lepromatous lesions, 61 (84 per cent) showed fat definitely, in the typical coarse globules. Of 61 tuberculoid lesions, which reveal a high degree of local histogenic defense, none showed such fat, though in 3 specimens from reaction cases there was a sparse fatty element in a peculiar finely granular form; this, it is suggested, may permit differentiation from the lepromatous condition in difficult cases. In such reaction lesions there may be vacuolation of the cytoplasm, but that is produced by edema. Of 65 specimens showing "incharacteristic" infiltration (i.e., "simple," nontuberculoid macules), none showed fat; but of 32 specimens given the same classification but showing the presence of vacuolization all were positive. It was concluded that these represented regressive lepromatous lesions, and in that connection the basis of the fatty change is discussed. Approval is given the theory of Artom that it is impossible to stimulate individually the functions of the histiocytes; that the stimulation of the granulopexic function determined by the presence of the Hansen bacillus also causes activation of their lipopexic function and consequently the storing of fats and lipoids withdrawn from the tissues and the circulating medium. In extension of that hypothesis they suggest that the presence of the bacilli in the Virchow cells provokes a fatty degeneration which at first favors the proliferation of the germs; but later increasing degeneration causes a diminution of vitality or death of the cells which is unsuited to the life of the bacilli, which then disappear. Thus in lepromatous lesions in regression there are large amounts of fat within the cells, regressive nuclear phenomena, and few bacilli — sometimes of granular aspect — or none at all. The report is illustrated with 9 photomicrographs, and the appearance and distribution of the fatty elements is represented by 3 drawings in color.

—H.W.W.

BASOMBRI, G. Anestesia em bota e intensas lesões tróficas pseudoleprosas dos pés, devida, após larga observação e exito terapeutico, a uma radiculite baixa heredo-sifilitica e septico-neurite ascendente. [Boot anesthesia and marked pseudo-leprosy trophic lesions of the feet, due to a heredo-syphilitic radiculitis and ascending septic neuritis.] *Rev. brasil. leprol.* 11 (1943) 3-19.

Detailed report of a puzzling case the nature of which is indicated in the title. Diagrams of the distribution of anesthesia, and photographs and radiographs of the feet, especially those showing the plantar ulcers, show now readily the condition might be taken to be neural leprosy. Under anti-

syphilis treatment the ulcers healed and the anesthesia improved to a notable extent.

—H.W.W.

- MARTINS DE CASTRO, A. F. Contribuição ao estudo anátomo clínico da reação leprótica. [Contribution to the clinical anatomy of lepra reaction.] *Rev. brasil. leprol.* 11 (1943) 23-54.

A study of the histological changes in lepra reaction in 15 lepromatous cases. The condition, in which at times previously inapparent lesions are involved, is characterized by marked inflammatory infiltration. In the first phase (second to eighth days) there are marked edema, intense interfascicular and intercellular fibrinous exudation, and much diffuse neutrophile infiltration, in some cases amounting to real microabscesses with complete destruction of the leproma. The corium, the papillary body, and the subcutis are markedly edematous, with intense hyperemia, stasis, and leucocytic exudation always containing numerous eosinophiles. The number of bacilli is in reverse order to the number of leucocytes; the abscesses are free from them. In the second phase (eighth or ninth to fifteenth day) there is regression of this process and proliferation of the fixed connective tissue cells. There then results, besides the specific leprotic infiltration, a granulation tissue and, where there was suppuration and disappearance of the lepromatous infiltration, the leproma is completely replaced by a tissue rich in fibroblasts. In the third phase, that of cicatrization, where the leproma has disappeared there develops a hyalin focus with small lymphocytic infiltrations; when lepromatous infiltration persists it is quiescent, showing numerous Virchow cells without any of the acute inflammatory signs of which it had been the seat. The essential difference between the reactional phenomena of the lepromatous and tuberculoid form (as studied by Büngeler) is that in the former the process is acute, nonspecific, exudative, in an anergic state, whereas the latter appears as a highly allergic process characterized by predominance of changes in the connective tissue, which shows mucofibrinoid degeneration, foci of fibrinoid necroses, histiocytic reaction, and the formation of nodules. However, in cases of lepromatous reaction the collagenous tissue around the reactivated lepromatous infiltration appears altered, apart from the interfascicular edema, spaces, staining yellow by the Van Gieson method. The report is illustrated by 18 good photomicrographs and one colored drawing of a section stained by the Weigert method for fibrin.

—H.W.W.

- BECHELLI, L. M. and PACHECO, J. N. A simples picada com agulha como elemento subsidiário de diagnóstico das máculas lepróticas hipocrômicas e acrômicas. [Simple pin prick as a subsidiary aid in the diagnosis of hypochromic and achromic leprotic macules.] *Rev. brasil. leprol.* 11 (1943) 57-67 (summary in English).

Following up an observation of Bechelli that when an anesthetic hypochromic macule is pricked with a needle there does not follow the reflex erythematous flare that is seen in normal skin — this being the same result as with the histamine test — the authors discuss the Lewis triple reaction and the related phenomena of Bayliss and of Krogh and illustrate them by schematic diagrams. The needle test is best made with several superimposed punctures, to increase the amount of trauma. This simple test, of the same significance as the histamine test, can be applied by any clinician.

—H.W.W.

BITENCOURT PRADO, P. Algas oculares na lepra e seu tratamento pela alcoolização ciliar. [Eye pain in leprosy and its treatment by ciliary alcoholization.] *Rev. brasil. leprol.* 11 (1943) 211-218.

A report of 9 cases treated by alcohol injection of the ciliary ganglion after other methods had failed, with excellent results. The technique of Weekers and others was followed. Local anesthesia preceded the injection of alcohol, the amount of which was usually 1½ cc.; the concentration varied from 30 per cent (which failed) to as high as 75 per cent, 50 or 60 per cent being the usual one. —H.W.W.

BECELLI, L. M. and SAPUPPO, R. Exploração funcional do fígado nos doentes lepromatosos com a prova da galactose, Reação de Takata, Reação de Takata-Ucko, Reações de Hijmans V. D. Bergh e prova da santonina. [Functional investigation of the liver in lepromatous patients by the galactose test, the Takata, Takata-Ucko and Hijmans V. D. Bergh reactions, and the santonin test.] *Rev. brasil. leprol.* 11 (1943) 221-236 (summary in English).

The galactose test was positive in 2 of 10 cases; the Takata reaction was negative in 7 cases; the Ucko modification of the Takata test was applied 102 times with only 3 positive results; the van den Bergh test was consistently negative in 83 tests; the santonin test was positive in 11 of 33 patients. Considering the fact that liver lesions are to be found at autopsy in almost all lepromatous cases, the fact that the hepatic function is affected in so few is ascribed to the fact that most lesions are confined to the portal spaces, and that when hepatic cells are affected they are too few to alter the function of the organ. The report is illustrated with two clinical photographs showing marked liver enlargement and three photomicrographs.—[From author's summary.]

FREITAS JULIAO, O. Mielodisplasia e lepra nervosa. [Myelodysplasia and neural leprosy.] *Rev. brasil. leprol.* 11 (1943) 319-337.

After a general consideration of Fuchs' myelodysplasia ("status dysraphicus" of Bremer) the author relates his observations of three cases of the condition. He then compares (with a long tabulation) its clinical features with those of neural leprosy, especially with respect to the sensory and trophic disturbances. He calls particular attention to the similarity of the process of bone destruction in the feet, a progressive osteolysis without osseous reaction, which affects preferentially the phalanges and metatarsals, which are affected by a process of concentric atrophy in consequence of which they become thin and pointed. The similarity suggests an identical mechanism of production, a fact which may contribute to the study of the pathogenesis of the trophic changes of the bone in mutilating neural leprosy. Finally, he considers the elements, clinical and complementary, which permit the differential diagnosis between the two conditions. (The article is illustrated with, among other things, several radiographs.)—[From author's summary.]

SILVEIRA, L. M. Tratamento cirurgico das neurites. [Surgical treatment of neuritis.] *Rev. brasil. leprol.* 12 (1944) 3-9.

This brief article, 1 of a series of 4 which bear the earmarks of a made-to-order symposium rather than original contributions, is noteworthy because of the series of 6 photographs which illustrate clearly the proced-

ure of decapsulation and longitudinal dissociation of the fascicles of the thickened ulnar nerve. Note is also made of the proposal of Diez, of Argentina, that the nerve should be transposed anteriorly to the cubital fossa to lessen the mechanical stresses, which he had done in 2 cases with excellent results [see *THE JOURNAL* 11 (1943) 92]. The author has done this (technique described) in 2 cases in which the ordinary operation had given only partial results; for some days after the second operation they suffered much pain, but that soon disappeared completely. Too few cases have had this intervention to permit definitive evaluation of it, but it is regarded as hopeful.

—H.W.W.

- BRANCO RIBEIRO, E. Cirurgia da caseose dos nervos na lepra. [Surgery of the nerve caseation in leprosy.] *Rev. brasil. leprol.* 12 (1944) 13-27.

The author, who prefers [with ample justification] to speak of "caseation" rather than "abscess" of the nerves, presents summarized data of 29 cases upon which he has operated, with details only of the 2 in which there were bacilli. Full directions are given for the procedures in the different types of cases which he has encountered, namely: those in which the lesion has liquefied and ruptured through the skin (10 cases with nerve trunks and 8 cases with cutaneous nerves involved, these calling for variations of procedure); and those in which there is only thickening, without rupture of the epineurium (6 cases). The nerves involved were: ulnar, 9 times; internal cutaneous of the brachial, 6 times; auricular, external cutaneous of the radial, and external saphenous once each. Males were concerned 16 times, females 7 times — nothing being said of the sex ratio in the population concerned.

—H.W.W.

- LIPPELT, A. Tratamento clinico das nevrites leprosas. [Clinical treatment of leprous neuritis.] *Rev. brasil. leprol.* 12 (1944) 29-36.

Reviewing briefly the findings with many medicaments used by various other workers — mainly South Americans, though a more comprehensive bibliography of 43 items is appended — the author discusses the use of histamine by injection, which he has used for four years. Endoneural injection is extremely painful and the benefit not sufficient to justify that method. Multiple intradermal injections over the entire painful area are given except when the ulnar or sciatic nerve is involved, in which case perineural injections are made.

—H.W.W.

- ROTBURG, A. Anetodermia de Schweininger-Buzzi em caso lepromatoso. Considerações sobre as atrofia cutaneas na lepra. [Anetodermia of Schweininger-Buzzi in lepromatous case. On the cutaneous atrophies in leprosy.] *Rev. brasil. leprol.* 12 (1944) 113-130 (summary in English).

The author reports a rare case of the anetodermia of Schweininger and Buzzi, with no less than 294 lesion elements, many of them larger than usual, the second published case of this association with leprosy. Some of the older lesions had yellowish, xanthoma-like formations centrally, shown histologically to be small lepromata developed within the atrophic plaques. After a general consideration of the pathogenesis of the so-called idiopathic atrophies, a pathogenetic classification of those encountered in cases of lep-

rosy is suggested in which are considered cicatrix, cicatricial atrophy, "direct nervous" atrophy, "idiopathic" diffuse atrophy, and "idiopathic" macular atrophy or anetoderma. (The appearance of the lesions is shown in 4 photographs, one of them in color, and the nature of the lesion in 3 photomicrographs.)—[From author's abstract.]

LINHARES, H. VII. Contribuição ao estudo da lepra murina. [Contribution to the study of rat leprosy.] *Rev. brasil. leprol.* 12 (1944) 217-244 (summary in English).

This article is in the main a review, with a bibliography of 154 items, of what is known of the Stefansky bacillus as regards its morphology, virulence, viability, filtrability, and cultivation, with brief sections on the biochemistry and serology of the disease, its relation to human leprosy, and its treatment. From his own experience the author concludes that, morphologically, the Stefansky and Hansen bacilli are practically indistinguishable, that both form intracellular globi, but that the former does not show the "cigar-pack" arrangement that is peculiar to the latter or does so but rarely. Various strains obtained from wild rats in Rio de Janeiro have shown no significant variations of virulence in white rats. The bacilli in nodules kept in 40 per cent glycerine in the refrigerator remain infectious at least twenty-four months. Many attempts with numerous media to cultivate them all failed. In the biochemical field, to be pursued further, the blood glucose level in leprosy rats was found normal. It is concluded that there is no significant evidence that the Stefansky and Hansen bacilli are identical, and epidemiologically there seems to be no relation between the two diseases; nor is there proof that these bacilli are soil saprophytes which, entering through skin lesions, produce the respective diseases. A limited therapeutic experiment with penicillin showed no apparent effect. A bacillary suspension treated with penicillin showed no apparent effect. A bacillary suspension treated with penicillin caused infection in 2 of 4 rats, whereas the control suspension infected all 5 rats; but no conclusion is drawn from this limited experience. —H.W.W.

ROTBERG, A. Areas de pelo injetadas com lepromina e protegidas contra leprides tuberculóides reacionais. [Skin areas injected with lepromin, protected against reactional tuberculoid leprides.] *Rev. brasil. leprol.* 13 (1945) 69-73 (abstract in English).

Report of a case originally with pale macular lesions in which two closely-placed lepromin tests (weakly positive, 1+) left small pigmented spots 3 mm. in diameter. Later there occurred a tuberculoid reaction with red, infiltrated lesions, one of which covered the area in which the tests had been made. For some distance around each of the residual spots (diameter about 12 mm., shown in a photograph) the skin remained unaffected — "two islands of white skin contrasting neatly with the surrounding erythema." The protection thus evidenced is compared with Keller and Moro's "Aussparungen," observed when an injection of measles convalescent serum was followed by the eruption. Another injection of lepromin made into the eruptive tuberculoid lesion, in an attempt to reproduce the Schultz-Carlton phenomenon of scarlet fever, did not cause clearing of it.—[From author's abstract.]

- ALEIXO, J. and COELHO, J. T. Considerações sobre a reação de Montenegro em doentes de lepra. [The Montenegro reaction in leprosy patients.] *Rev. brasil. leprol* 13 (1945) 253-266.

Though Arantes had found the specificity of the Montenegro intradermal reaction for leishmaniasis to be high among leprosy patients, he had encountered one case with the parasites in the ulcers that gave a negative skin reaction. The authors report such a case which on the contrary gave a positive reaction, and that led to an examination which revealed the parasites. They regard the test as of high diagnostic value in cases that have leishmania americana associated with leprosy. —H.W.W.

- PEREIRA, A. C. Lepra de forma clinica inaparente. [Clinically inapparent leprosy.] *Rev. brasil. leprol* 13 (1945) 269-274.

After discussing the problem of latent leprosy the author describes a case not of that nature but which at the time of examination was without clinical evidence of the disease though bacteriologically positive. Six months previously the patient, a young male, had been referred because of suspicious skin lesions, and a nasal smear had been found positive. After a month the lesions had disappeared completely, but at the time of the last examination the nasal smear was still positive; furthermore, bacilli were obtained from the earlobe and by gland puncture. —H.W.W.

- GLORIA CALDEIRA, R. Contribuição á terapeutica da reação leprótica. [Treatment of lepra reaction.] *Rev. brasil. leprol* 13 (1945) 277-279.

Relating lepra reaction to allergy, the author recalls the views regarding the role of histamine or a histamine-like substance, and most recently of acetylcholine, in the mechanism of that process. This led to the idea that it might be useful to counteract the vasodilating effect by the use of a vasoconstrictor, so pituitrin was tried. Brief reports are given of all cases in which that substance was injected intramuscularly, 1 cc. every second day, from 1 to 7 injections being made (average 4.45). Though nothing is said of controls, the results are regarded as good and the medicament of value, with due regard to its contraindications (arterial hypertension, coronary trouble, asthma, dysmenorrhea, etc.). —H.W.W.