CURRENT LITERATURE

It is intended that the current literature shall be dealt with 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.


This issue of La Leprosy is devoted to the transactions of the 31st annual meeting of the J.L.A., held in Matsumoto, May 20-23, 1958. In this instance nothing is in English except the list of presentations. There were 2 “special discourses,” one by T. OGATA on Some Pathological Investigations of Leprosy, Particularly on the Classification of Leprosy; and one by K. TANIOKU on Pharmacological Studies on Anti-lepromin Drugs. Particularly on the Metabolism. There were also 3 “special speeches,” one by M. ISHIKAWA and Y. YAMAMOTO on Metabolic Pattern of Promin and Sodium N-Sulfathiazole Glucoside Sulfonate, one by O. TAMEMASA on Application of the Metabolic Studies of Mycobacterium to the Fundamental Problems of Leprosy Chemotherapy, and one by Y. SATAKE, On 4-4′-dimethyldiphenylsulfone. Eighty-two regular papers are listed, covering a very wide range of subjects from epidemiology to surgery. The special presentations are published, apparently in full, and there are abstracts of all 82 other papers.—H. W. W.

L. A. F. Arcelia contra la lepra. [Action against leprosy.] Dermatologia (Mexico) 1 (1956) 73-77.

The larger sources of leprosy in Mexico are estimated to have 50,000 cases. The dermatologists and the general practitioners with training in dermatology are the most successful in diagnosing cases. In the dermatology clinics cases of leprosy are more frequent than those of tuberculosis or syphilis. In the first era of the fight against leprosy the methods used were primitive, or even barbaric in that sometimes the patients were even killed. Then came the era of compulsory segregation in leprosaria, which gave no good results but on the contrary increased the spread of the disease. The work accomplished in Mexico with the help of private initiative is discussed. The Asociación Mexicana de Arcelia contra la Leprosa was founded in 1948 with the following purposes: to give better medical care, and attention to the social problems of the patients; to give protection to the children, patients and contacts; to teach leprology to students and physicians; and, lastly, to publish the journal Dermatologia, to serve as the organ of information to dermatologists and leprologists.—M. MACABIA


The purpose of this article is to make better known in Argentina the nature and features of tuberculoid leprosy, which are discussed briefly but thoroughly. This form of the disease is not well known by the general practitioners, or distinguished from the grave form. One reason is that it is not recognized in the leprosy law, which was promulgated before there was knowledge of it. Although the patients are noncontagious and are easily cured, they are made to suffer all the consequences of the antiquated concept of leprosy. They often lose their jobs, and—what is absurd—they are refused
admission to hospitals when hospitalization is needed for complications or intermittent conditions. There is not only the possibility, but also a pressing need, of admitting them to dermatology clinics. — G. R. W. Price


During a six months period in 1957 and 1958 the author conducted a general survey of leprosy in American Samoa, populated by 20,000 Polynesians. The known prevalence was found to be 5.3 per 1,000, which included 81 patients in residence in the territory and 26 who have left the islands. Of the 81 resident patients, 40 were of the lepromatous type, 34 were tuberculoid, and 7 indeterminate. Of 24 old lepromatous cases which had been released from the leperarium, 4 still harbored bacilli demonstrable in skin scrapings, and 6 others were clinically and histologically frankly reactivated as well. By contrast, of 20 old tuberculoid cases subjected to skin biopsy, only 2 evidenced histologic activity. It was concluded that lepromatous leprosy exhibits a strong tendency to relapse when suppressive sulfone chemotherapy has been discontinued, even if the patient had previously received as much as 5 years of treatment and had once been considered free of the disease. Tuberculoid leprosy, on the contrary, tends to undergo arrest of activity even when chemotherapy has been of brief duration and long since discontinued. Neglect of the follow-up of patients results in rapid deterioration of leprosy control.—Author's abstract


At present there is no focus of leprosy in Canada, but an odd case occurs from time to time in immigrants from endemic countries. A review of the history of the disease in this country from 1841 onwards shows that the largest focus developed in New Brunswick, where there were 298 cases. Before the passage of the Leprosy Act in 1906, the care of persons with leprosy was a provincial responsibility. Special hospitals were established at Tracadie, N.B., in 1844; at Davy Island, B.C., in 1892; and finally at Bentinck Island, B.C., in 1923. A case of acute lepromatous leprosy is reported.—[From authors' summary copied in Leprosy Briefs 10 (1959) 40.]


—Hólmveinísk úf Islandi frá aðalmaðinn. [Epidemiology of leprosy in Iceland since the beginning of this century.] Ibid. 78-80.

The prevalence of leprosy has decreased in Iceland. In 1901 there were 160 cases; in 1920 there were 67; in 1940 there were 22; and in 1958 there were 8. A new case was reported in 1957 in a 66-year-old woman. From the ages of 6 to 18 years the patient had lived with her aunt who had leprosy, but since then she had not been in contact with any person known to be suffering from the disease.—[From Foreign Letters, J. American Med. Assoc. 170 (1959) 353, supplied by Sr. Hilary Rees.]


A patient who had lived in Mexico and had been married to a Mexican woman for 12 years was found, after his return to Germany, to have tuberculoid leprosy. After he had been isolated in Hamburg for a time, isolation and professional ban were lifted by the Ministry of Health. This action is remarkable since he had, although few, bacilli in his nasal mucus, and always numerous bacilli in his tissue fluid. When, 9 years later, the patient was to be admitted to the hospital (because of the return of his wife and
children to Mexico and because of increasing crippling of his hands) he committed suicide. It is recommended that the regulations for general completeness isolation of leprosy patients in Germany, which date back to 1906, be abolished.—E. KIEL.


The writer expresses the opinion that definite and concrete proof is necessary before the infectivity of ‘closed’ cases of leprosy can be accepted. The usual arguments in favor of infectivity of such cases are critically examined. Infectivity of closed cases is usually presumed, from absence of a history of contact with an ‘open’ case, i.e., absence of an open case and presence of a closed one in the household or neighborhood. The fallacies in this assumption are that contact with an open case might have been forgotten, or that such an open case might not have been known to be suffering from the disease, or that contact with such a case might have taken place outside the family or neighborhood. Although a few bacilli may be found in closed cases on meticulous examination, the chances of these bacilli being thrown out and conveyed to a healthy person coming in contact with him are remote. Study of the spread of leprosy in families in different countries reveals that the chances of infection from a closed case in a family are not significantly greater than from the population in general.— N. MUKHERJEE.

BHATTACHARYA, T. N. N. Infectivity of non-lepromatous leprosy. Leprosy in India 29 (1957) 20-43.

The author is of the opinion that the so-called ‘closed’ (nonlepromatous) cases of leprosy should also be considered as infective on the following grounds. The presence of leprosy bacilli can be demonstrated in such cases, and also in apparently healthy contacts, by special methods of examination. Infection of healthy persons from such cases may not be determined solely by the number of bacilli entering their body, but by other factors such as age and resistance of the contact person, and duration and nature of contact. The author has observed during field work that secondary cases are found even in the presence of a lepromatous case in a household or neighborhood, and in the presence of a nonlepromatous case in such situations, and he concludes that infection might have been transmitted by the latter type of cases. He holds that all active cases of leprosy, irrespective of the type of the disease, should be considered as infectious and that necessary precautions should be taken in this regard.— N. MUKHERJEE.

RODRIGUEZ, O. Manifestaciones tempranas de la lepra. [Early manifestations of leprosy.] Dermatología (Mexico) 3 (1956) 169-172.

The early manifestations may be cutaneous or neurologic. Mention is made of hypechromic and erythematous or erythromelalgic spots of the face, neck, and extremities which have to be differentiated from other dermatoses; they are distinguished by sensory disturbances. Among the neurologic manifestations are changes in one or more of the superficial nerve trunks (e.g., facial, auricular, ulnar and personal), which are thickened. There are sensory disorders in the territory of these nerves, and amyotrophies of the face and hands. There are also vascular disturbances (cyanosis or ecchymosis), temporary or permanent, and changes of the temperature of the fingers, especially the little finger. Trophic and certain other changes are mentioned.—M. MALACARA.

The article is based on information obtained from different leprosaria in the USSR. The 2,032 patients with initial symptoms investigated consisted of 1,420 nodular cases, 290 tuberculoid, and 402 nondifferentiated. The presence of hypochromic spots is most characteristic in the nondifferentiated form of leprosy (80%). In some cases of the nodular type, macules are observed in only 37%; while in the tuberculoid type macules are seen in 70%, tuberculoid elements in 23%, and an eruptive type of polymorphous erythema in 15%. Simultaneously with the skin eruptions, some of the patients show affection of the general condition and other disturbances (increase of temperature, anhidrosis in the area of macules, neuritis, impairment of sensation, etc.).—[From abstract in Excerpta Medica 12 (1958) 372.]


The author's observation showed that the most frequent early clinical symptoms of leprosy are changes in the color of the surface of a skin area (hyper- or hyper-pigmentation, erosions, erythema, nodules) and impairment of sensation. Other variations are also possible (increase in the number of macules, their confluence). The article gives methods of the clinical diagnosis of early symptoms of leprosy (study of dermatoglyphism, pilo-motor reflex, sweat evaporation, etc.).—[Abstract from Excerpta Medica 12 (1958) 372.]


In the early diagnosis of leprosy the authors used the functional tests with histamine, morphine, nicotinic acid, mustard plaster, Minor's test and the leprosain test. Bacteriological and histological investigations were also carried out; 70 patients were investigated. It was established that the earliest and most reliable signs of leprosy are spots with loss of sensation in the area. In many cases histological examination showed, at the beginning of the disease, an undifferentiated (or) tuberculoid structure of the infiltrate. Functional tests in cases with suspected leprosy do not always give distinct results.—[Abstract from Excerpta Medica 12 (1958) 372.]


The effect of nicotinic acid upon 50 persons who were in contact with leprosy patients was studied. Five of them showed a deviation from the usual reaction to nicotinic acid; in 4 of them the test allowed leprosy to be diagnosed with certainty, as confirmed by functional investigations, clinical data, bacteriological and histological investigations and subsequent observation.—[From abstract in Excerpta Medica 12 (1958) 371.]


The diffuse lepromatosis described by Lucio and Alvarado (1852) is a special clinical form of lepromatous leprosy, representing the highest degree of nonresistance of the organism to the infection. The "Lucio phenomenon" is the individual cutaneous lesion of lepro reaction in this form of the disease. The multiple necrotising angiitis, the anatomic substratum of the Lucio phenomenon, is produced by a microbial synergy of the Sanarelli-Shwartzman type. The "Lucio leprosy" should be studied more thoroughly in all its aspects.—[From author's conclusions.]
and a gain in 1955. In the meantime they had received sulfone treatment for periods varying from 1 to 6 years. Of the nonlepromatous group, 10 had normal eyelashes and lashes at both examinations; of the 4 with hair loss at first, 2 showed regrowth to the normal condition. Lid movement had been normal in 9 cases, and had remained so. The remaining 5 had shown various degrees of lagophthalmos, and, of these, 2 showed some slight improvement in lid movement; but the cornea had remained normal in only 1 case while the other 4 showed the development of exposure keratitis or the exacerbation of previous ulceration or scarring. In 4 of the 11 lepromatous cases, in which there was considerable bacteriologic improvement, decrease in corneal infiltration and disappearance of slight pannus was noted in 1; in another there was no change; and in the other 2 no involvement of the globe had developed. In the remaining 7 cases the general condition as well as the eye condition had deteriorated. One case developed slight bilateral lagophthalmos, and 2 developed superficial punctate keratitis. No less than 5 cases had developed lepromatous iritis during treatment. Of these, 4 were bilateral; and 3 showed typical “pearls” of lepromatous iritis. One also developed chorioretinitis.—N. MEKESHEE

SOMERSET, E. J. and SED, N. R. Prognosis of the ocular lesions of leprosy. Leprosy in India 29 (1957) 142-147.

The eyes of 14 nonlepromatous and 11 lepromatous patients were examined in 1946 and again in 1955. In the meantime they had received sulfone treatment for periods varying from 1 to 6 years. Of the nonlepromatous group, 10 had normal eyelashes and lashes at both examinations; of the 4 with hair loss at first, 2 showed regrowth to the normal condition. Lid movement had been normal in 9 cases, and had remained so. The remaining 5 had shown various degrees of lagophthalmos, and, of these, 2 showed some slight improvement in lid movement; but the cornea had remained normal in only 1 case while the other 4 showed the development of exposure keratitis or the exacerbation of previous ulceration or scarring. In 4 of the 11 lepromatous cases, in which there was considerable bacteriologic improvement, decrease in corneal infiltration and disappearance of slight pannus was noted in 1; in another there was no change; and in the other 2 no involvement of the globe had developed. In the remaining 7 cases the general condition as well as the eye condition had deteriorated. One case developed slight bilateral lagophthalmos, and 2 developed superficial punctate keratitis. No less than 5 cases had developed lepromatous iritis during treatment. Of these, 4 were bilateral; and 3 showed typical “pearls” of lepromatous iritis. One also developed chorioretinitis.—N. MEKESHEE


This is the report of findings from the point of view of the otorhinolaryngologic specialist in 57 leprosy cases seen in the Yemen, spoken of as one of the oldest foes in the Middle East. A point of interest in mass psychology is that in the Yemen the severe mutilations of leprosy do not give rise to the horror with which they are so often regarded elsewhere, even in neighboring countries. The nose was affected in no less than 50 of the 57 patients. One of the earliest manifestations was a bacillus-positive mucopurulent rhinitis, but a very early lesion was also found in the Valsalva area as a plaque-like, grayish, infiltrated area often surrounded by a crescent of dilated vessels. In many cases, it is said, the cause of death is ingestion pneumonitis due to pharyngolaryngeal anasthesia following lepromatous infiltration. In 2 cases the ear was affected, there being a purulent otitis positive for bacilli.—[From abstract in Trop. Dis. Bull. 55 (1958) 1020.]


Report of a case of tuberculoid leprosy with destruction of the nose. The patient developed a massege over the nose and the surrounding region of the face. Six years later an ulcer developed in the nose which progressed in spite of treatment, resulting in its ultimate destruction, with local anesthesia and analgesia. Evidence of syphilitic infection was absent.—N. MEKESHEE


Because renal phenomena may include swelling of lesions on the hands and feet and edema of the eyelids, the authors tested the renal function with phenol red during the reaction phase and compared the results with those obtained during the quiescent stage of the disease. The study was made on 8 patients with lepromatous and 19 with tuberculoid leprosy, and 3 normal persons were included as controls. Phenol red excretion values below 28% in the first 15 minutes were taken as abnormal. They were found to be low in 14 of the 18 patients in the reaction phase, but the other 4 gave normal values. In 5 patients the excretion rate increased during the quiescent phase. In 7 of
those studied during the reaction, the values in the first 15 minutes did not differ materially from those obtained in the second 15 minutes. The values obtained in the patients studied in the second stage were definitely higher than those obtained during the reaction. Thus there was some impairment of kidney function during the reaction phase. The urea, sodium, and potassium values were found to be normal or slightly elevated. The degree of albuminuria had no relation to the degree of impairment in renal function. The blood pressure was within the normal range in all patients.

The idem that appears in some patients in the reaction may thus be due to impaired renal function. —[From Foreign Letters, J.A.M.A. 168 (1958) 1705-1706.]

The authors report a case in which BCG vaccination precipitated the appearance of leprosy skin lesions. A child 13 years of age, tuberculin negative, was vaccinated intradermally in May, and a month later showed numerous skin lesions disseminated on the limbs and trunk. The diagnosis of tuberculoid leprosy was made in November, when neural changes were found in the right arm and hand—changes which, it was then learned, had had their beginning before the vaccination. Evidently the vaccination had caused the abrupt explosion of cutaneous lesions, a "tuberculoid reaction" (not a "tuberculoid reaction"). The authors recall (with references) that BCG was once used for the treatment of leprosy, and promptly abandoned because of reactions evoked. —H. W. W.

De Campos, E. G. Mutação da forma indiferenciada para tuberculidade sob a ação provocada do BCG, em um doente de lepra. [Change from the indefinite reaction form to tuberculoid under the probable action of BCG in a leprosy patient.] Arch. microrres Leprol., 16 (1958) 248-252.

The patient presented bacillus-negative anesthetic areas, sections of which revealed only a simple inflammatory infiltration, without bacilli. Sulfone therapy was begun and, at the same time, oral BCG vaccination. Tuberculoid lesions of reactional nature soon appeared in the anesthetic areas; and the lepromin reaction, previously negative, was then 2+ positive. —H. W. W.


A post-mortem study was carried out in a 63-year-old man who had died from leprosy. Under the influence of treatment with chalconexon, oil, cautels and streptomycin, the leproma lesions had regressed. An epithelium occupied the dorsal aspect of the left hand, which had been localized on an old leproma lesion and had given regional metastases in the axill and in the pectoral region. —[Abstract from Excerpta Medica 12 (1958) 499.]


An analysis of 499 autopsies on leprosy patients. There were 38 cases with malignant tumors (7.6%). This rather high incidence is explained by the present therapeutic results in leprosy patients, and thus by their increasing age. —[Abstract from Excerpta Medica 12 (1958) 438.]

The results are given of treatment with Streptophyrazid, 5.6 gm. weekly, for periods ranging from 10 to 40 months. Of the 47 patients treated, 28 were given intramuscular injections of 3 cc. of 50% Sulphone, twice weekly, for part of the time. There was much improvement in 16% of the patients on Streptophyrazid alone, and in 33% of those with Sulphone added. The combined treatment is recommended for “rapid clearing of nodn and based lesions, and for those cases which show intolerance to sulphone therapy.” When there is much intolerance, Streptophyrazid may be given alone for the first year after which Sulphone can be added. Further trials are planned to determine whether the combined treatment clears up cases more rapidly than DDS or Sulphone alone.

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Because of favorable reports on its use in connection with tuberculosis, Vadrine [the p-aminosalicylate of 2-pyridyl-(4)-1,3,4-oxadiazolone (5)] was given a trial in 7 consecutively-admitted cases of leprosy, of which 5 had had no previous treatment. Treatment began with 1 tablet (260 mg.) daily and increased by 1 tablet every 6 days up to a maximum of 48 mg./kg. of body weight; duration of treatment was 12 months in 5 cases and 9 months in 2 cases. The clinical results were better in some and worse in others than those expected from DDS treatment. The biopsy index of bacilli (Riley’s method) had a mean fall during the year of 26%, compared with 25% with sulfones. On the whole, results so far seem to be very similar to those with sulfones, but a longer period of trial is necessary. Apart from anemia in 1 patient, side-effects were absent.

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Fifteen patients with lepromatous leprosy were treated with oxyprocaine penicillin (adults 400,000 U., children 200,000 U., once daily for 3 to 4 months). Nine became permanently negative for bacilli; in the other 6 their numbers decreased markedly. Definite clinical improvement was achieved in 15 out of the 15 patients. Lepromin subided as early as after 8 weeks of treatment. No reactivation occurred during the 2 years of follow-up observation. In 3 patients reactions occurred during treatment, but treatment could be continued when the reaction had subsided. In 4 out of 5 other patients with tuberculoid leprosy the infiltrations subsided 6 to 8 weeks after the start of treatment. Parallel with the bacteriologic and histologic improvement, electrophoresis, Rihman’s test and the Middlebrook-Dobos hemagglutination test showed a steady return toward normal. Oxyprocaine penicillin treatment of leprosy equals sulfone treatment but acts more rapidly, and no side effects were observed even in children.—E. Keil


Of 129 lepromatous cases [in Rumania] treated with DDS for 4½ years, 29 were clinically cured and 4 others were symptom-free but still had isolated bacilli in their lymph nodes. As early as 6 months after the start of treatment, 116 of 115 patients no longer had leprosy bacilli in their nasal mucus; after 3 years of treatment more than one-third were negative in the skin; and after 4½ years bacilli were no longer found in the lymph nodes of 4 out of 25 patients. In the second month of treatment resolution of lepromatous infiltrations in the subcutaneous tissue was observable, and later (begun...
ning after 6-8 months) their replacement by connective tissue. During the reparative phase there was an increase of fibrocytes, lymphocytes, giant cells and collagen fibers. The number of bacilli decreased. Granulated forms took their place, and these under- went decomposition after 21/2 to 3 years of treatment. The disappearance of all decom- position forms of leprosy bacilli is regarded as the most reliable test of cure.—R. Kuhl.


In all cases the immediate results of prednisone treatment of leprosy reaction were very good, and sometimes spectacular, with disappearance of the fever and somewhat less rapid subsidence of reactivational skin lesions, bone and joint pains, adenitis and neuritis. When treatment was suspended early (after 8-10 days), relapses were frequent but in no case with increased severity. No relapses occurred under long-term maintenance dosage of 1 to 2 tablets daily. Maximum daily dosage, 6 tablets; maximum total dose, over 200 tablets (1,000 mg) in 5 months. In 2 cases simultaneous oral administration of DCG in 200 mg. weekly doses gave very good results, although 6 months previously 1 of them (who had had successive reactions for about 2 years) had been given BCG in increased doses without appreciable benefit. In almost all of the cases it was possible to resume specific treatment, continuing the prednisone for a time, whereas previously without prednisone resumption of treatment had immediately precipitated further reactions. No signs of intolerance or side effects attributable to the medication were seen. Because of the ease of handling as compared with cortisone and hydrocortisone, strict supervision of the patients is not necessary.—[From authors' conclusions, supplied by G. Basombrio.]


This study was a comparison of DDS and PAS as additives to be given with INH for the purpose of preventing the emergence of isoniazid resistance on the part of the causative tubercle bacilli. DDS was found to be ineffective in that respect. Despite that bacteriologic failures, however, the DDS-INH combination was clinically only slightly inferior to the PAS-INH combination.—H. W. W.


Ultracentrifuge determinations of serum lipoproteins were carried out in 16 subjects, 13 uncomplicated leprosy cases and 3 normals. After increasing the density of the serum to 1.063 with sodium chloride, it was spun at 40,000 rpm in a Hitachi preparatory ultracentrifuge at —5°C, and 1 cc. of the top fraction ( flotation layer) was removed. Paper electrophoresis showed that this fraction consisted of a large amount of α lipoprotein and a small amount of α₂ lipoprotein. Next, 0.3 cc. of the fraction was diluted four-fold for analytic ultracentrifugation at a rotor speed of 50,529-50,540 rpm in a Spinco Model E ultracentrifuge. The serum of the mongoloesche case tested showed y lipoprotein of the Sr 11.4 class, (1 Sr = 1 Svedberg unit of flotation = 10⁻¹³ cm²/sec./
dyne/g) and a molecular weight of about 395,000. No significant difference was found between the serum lipoprotein of the mongoloesche patient and that of the healthy subjects. The serum lipoprotein 8₅ of minor tuberculous leprosy (5 cases) was in the 9.2-11.1 class, with a mean of 10.3 and a calculated molecular weight of about 330,000. Differing from these findings were those of serum of nodular lepromatous leprosy (7 cases), the lipoprotein of which was made up of several flotation classes showing a wide variation of

The total lipid, cholesterol and phospholipid contents of the upper leg muscles, cervical lymph node, and sciotic nerve of leprosy cases have been measured, the values being compared with those of normal controls (accidental deaths). The levels in the serum of leprosy patients were also measured. The serum cholesterol in leprosy is lower than in the normal individual, but there are no differences in the total lipid and phospholipid levels. The cholesterol/total lipid, phosphatid/total lipid and cholesterol/phosphatid ratio, however, are lower than normal. The former two, moreover, are not altered by long-term administration of liver-protecting agents and can be assumed to be due to leprosy itself, whereas the latter shows a rise on recovery of normal liver function showing that it is a secondary phenomenon. These findings suggest that a general metabolic disturbance takes place in leprosy. (The marked changes in lipid content of the tissues and organs in murine leprosy have previously been reported.)—[From abstract.]


Histochimical studies of the fat content of lesions of the skin, nerves and lymph nodes in leprosy led to the following results. The fat in lepra cells is chiefly phospholipid (lecithin) and fatty acids, and this coincides with the fat contained in leprosy bacilli. Foam cells contain a small amount of neutral fat (glycerol) besides the fatty acids, and at times sterol is found, but this can be interpreted as a process of cell degeneration. Although the lesions in the skin and nerves may be absorbed and disappear, the fat deposition in the lymph nodes remains. The fat in old lesions in the lymph nodes contains considerable quantities of glycerol and cholesterol (ester form), besides a large amount of phospholipid (lecithin) and fatty acid. At times cholesterol is not found. Chaulmoogra oil reacts to Nile red and shows a phytosterin reaction, which coincides with the properties characteristic of the fats of old lymph nodes. If chaulmoogra has been used therapeutically, it is present in the fat deposition in the lymph nodes besides the so-called lipid substances mentioned. The lymphatic reticulosis arising from invasion by leprosy bacilli appears to aid deposition of fat transported from the periphery. The giant vacuoles observed in the lymph nodes of chaulmoogra-treated neural cases is believed to arise from saponification of the oil. (Findings in the pathologic fat in xanthoma and suppurative lipid pneumonia, and in the myelin sheath of peripheral nerves, are also given.)—[From abstract.]


Histochemical studies were carried out on biopsy specimens from patients with typical lepromatous or tuberculoid leprosy, in order to determine the various enzymes present, i.e., nonspecific esterase, acid and alkaline phosphatase, sulfatase, and lipase. The most important finding was that much more acid phosphatase is present in lepromatous than in tuberculosis leprosy. Since more acid phosphatase was found in Virchow's cells than in epithelioid and giant cells, this enzyme may perhaps be of some importance in connection with lipid metabolism in the leprosy bacillus, as is the case with the tubercle bacillus. Nonspecific esterase was traced in all three types of cells, whereas alkaline phosphatase was found only in the epithelial walls. Sulfatase was present in the inclusions in both forms of leprosy. Neutral fat was encountered in Virchow's cells in every case of lepromatous leprosy, as well as in a few epithelioid cells of
tuberculoid cases. No phospholipids were ever found.—[From abstract in Lit. Rev. (Col.) 4 (1958) 11.]


Using a microhemolitic method, the author compared the amount of histamine in 78 nonleprosy subjects and in 68 leprosy patients (21 lepromatous, 30 tuberculoid, and 17 of other types). The means, in micrograms per 100 cc. of blood, were 4.84 for the nonleprosy subjects and 7.61 for the leprosy patients. In lepromatous patients it averaged 6.94, and in tuberculoid patients it was 7.09, a figure which is highly significant. The question is raised as to whether there may be some connection between this high content of histamine in tuberculoid leprosy and the leprinemia positivity which is characteristic of the tuberculoid type.—[From abstract in Trop. Dis. Bull. 55 (1958) 1232.]

Bredel, M. Comportamiento histopatológico del granuloma lepromatoso y de la grasa amarilla frente al azul de metileno. [Histochernical behavior of the lepromatous granuloma and yellow fat with methylene blue.] Leprologia (Buenos Aires) 3 (1958) 21-25.

Methylene blue stains strongly, in vitro and in vivo, the lepromatous and yellow-fat tissues, but not other normal ones. An explanation of these facts is offered.—[From author's summary, supplied by G. Bascondello.]


The so-called "Unna's band" of subepithelial connective tissue in lepromatous leprosy is principally a result of a phenomenon of histologic adaptation. The diffuse character of the infiltrate and the condition of energy of the termite contribute principally to the formarion of this band. In 15 to 18 per cent of tuberculoid cases there is an analogous disposition of the subepithelial connective tissue, which is considered a "pattern of the Unna band." When, in tuberculoid leprosy the infiltration is clearly confluent or tends to confluence, the appearance of the band, or the pattern of the band, becomes more likely. In some "dimorphic" cases can be seen a transition of the subepithelial tissue between the two poles, which in its pathomorphologic aspect may be accompanied by the phenomenon of histologic adaptation. The superficial elastic network in tuberculoid leprosy, contrary to what is seen in the deeper levels of the dermis, shows no evident changes. In the various forms of leprosy the subepithelial reticulum of Mall is sparse in some cases or has disappeared in others. This can be explained by a probable induction action which rapidly transforms the preolgen into collagen during the development of the histologic adaptation. The subepithelial mucopoly-saccharride layer behaves similarly in both forms of leprosy, appearing either normal, or fragmented, or diffuse and vague. The phenomena of rapid and reversible polymerization and depolymerization explain the frequency with which is seen the relative integrity of this mucopoly-saccharide layer at the level of the subepithelial infiltrates. The mucopoly-saccharide layer and the so-called "diffusion factors" deserve more detailed study. In summary, there are marked analogies between the so-called "band of Unna" of lepromatous leprosy and the pattern of certain structures of the subepithelial connection tissue in the tuberculoid form. The picture of Unna's band is only an expression of a histologic adaptation or accommodation, the absence of which in most cases of other forms than lepromatous can be explained by the difference of the antigen-antibody reaction of the damaged tissue.—[From authors' conclusions. Six small photomicrographs in color.]

Skin specimens from 20 tuberculoid and 58 lepromatous cases, and also 8 normal individuals, were examined for nerves by a slightly modified Gomori technique for the detection of acid phosphatase. The location of the bacilli in the affected nerves was studied by superstaining the sections by the Ziehl-Neelsen method. The frequency of finding cutaneous nerves in the specimens from the leprosy cases depended on the type, duration, and thickness of the lesion. Pathologic nerve changes in tuberculoid lesions probably start with perineurial infiltration in the fine nerves near the epidermis. The compact perineurial infiltration penetrates into the thickest nerve and brings about fragmentation of fibers, which leads to Wallerian degeneration. In lepromatous lesions the changes possibly start with loose perineurial infiltration of the thicker nerves in the deeper zone of the dermis. This infiltration does not penetrate into the nerve, and there is no fragmentation of fibers. The degeneration of fibers that was encountered in such cases appeared to be of parenchymatous nature and possibly of toxic origin. Bacilli were located mainly in the interfiber spaces, but in the lepromatous lesions they were occasionally encountered in the different parts of a nerve fiber, such as the myelin sheath, Schwann sheath, Schwann cell, and faintly stained rods.—Authors' Abstract


Involvement of peripheral nerves and ganglion cells of somatic and autonomic origin appears to be the most consistent feature of leprosy as revealed by histologic studies. The causative organisms exhibiting a particular disposition to migrate towards the sensory and sympathetic nerve fibers. To explore this phenomenon the authors set up a series of tissue cultures and studied the in vitro response of human fetal spinal ganglia and skeletal muscle to M. leprae, with adequate controls. The human fetal tissue, 10-20 weeks of age, was grown in solid plasma-cloth cultures in association with fragments of fresh lepromatous tissue. The cultures were stained for bacilli 72-86 hours after explantation of the lepromatous tissue. Of the spinal ganglion cultures, 78% showed fibrocytes containing acid-fast material in some form, but only 7% of the cultures of skeletal muscle showed such material in the fibrocytes in 7% showed faint acid-fast granules. Thus human lepra bacilli were attracted towards the spinal ganglion cultures and were then taken up by the fibrocytes. The nature of the granules in the control spinal ganglion cultures could not be determined. The spinal ganglion fibrocytes displayed strong phagocytic activity for the bacilli which was not observed in the fibrocytes of skeletal muscle.—[From Foreign Letters, J. American Med. Assoc. 149 (1959) 273.]


In a patient with the dimorphous (borderline) type of leprosy a rare histopathologic feature was the presence of Mycobacterium leprae within intact and desquamating epidermal cells. It is suggested that this type of "open case," even without cutaneous or mucous membrane ulceration, may be an unsuspected source of dissemination of bacilli.—[From author's summary.]


Normal school children 6-8 years of age, with negative lepromin and tuberculin reactions, were inoculated with dried BCG vaccine by the intracutaneous method or by scarification and the reactions were tested after 8-11 weeks and 1 year. Regardless of the method of inoculation, the lepromin reaction was 71-73% positive and the tuberculin reaction 83-84% positive after 1 year. A considerably high correlation was maintained
between the size of the erythema induced by both tests at all stages following inoculation of BCG. After injection of 0.1% lactic solution as a placebo instead of BCG, there were obtained 47% positive reactions to lepromin and 51% to tuberculin after 1 year. It is suggested that it is due to the fact that both the reactions to both lepromin and tuberculin are allergy reactions.—[From abstract.] [There are indications that the Diarnandez antigen was used in this work, and it is evident that the reaction read was the early one.—Korves.]


In one phase of the work here reported it was found that, whereas viable BCG dilutions injected intravenously in mice conveyed some degree of immunity demonstrable by the normal infection test used, it was found that heat-killed BCG similarly injected did not do so. Perhaps the production of immunity by living vaccine organisms depends upon the cellular changes in the host to which they give rise, for the heat-killed BCG caused no host reactions. [Food for thought in connection with the question of whether or not the lepromin positivity induced in children by the intradermal injection of lepromin signifies also the relative immunity to leprosy infection which BCG vaccination is supposed to convey. However, the intradermal injection of heat-killed leprosy bacilli does cause a host reaction]—H. W. W.


The authors compare the frequencies of the reactions of hypersensitivity (Fernandez) and of resistance (Mitsuda) to lepromin in contacts of lepromatous and of tuberculoid cases. The frequencies of both reactions increase progressively with age. Of 756 contacts (total), 41% showed the early reaction; of 368 contacts (total), 76% showed the late reaction. Comparing the results in three age groups (0-4, 5-8, and 10-14 years), there were appreciable differences with reference to the type of case with which they were in contact (lepromatous or tuberculoid) in the percentages of early reactions, but not of late reactions. In any event there is a marked predominance of individuals giving the late reaction. It is concluded that in contacts the Fernandez reaction is of significant value, and that it is more accurate in proving hypersensitization than is the Mitsuda reaction in proving resistance (resistance which has been provoked by the infective factor).—[From authors' summary, supplied by G. Baenisch.]


Positive late (Mitsuda) "lepromin" reactions were obtained with suspensions of normal skin and liver particles in patients with tuberculoid leprosy, but not in lepromatous patients. These reactions to preparations of normal tissue are similar to those obtained with lepromin containing leprosy bacilli. Filtrates of lepromin and of normal tissue preparations do not evoke the positive reaction in tuberculoid cases. There is evidence that in the Mitsuda reaction we are dealing with a sarcoid (tuberculoid) type of foreign-body reaction or an immunologic phenomenon. The Kearin antigen does not contain a specific substance, and the reaction produced is similar to that of a saline tissue extract. Positive reactions were obtained in tuberculoid leprosy cases with the Kearin antigens. It is concluded that the Mitsuda and Kearin reactions are of similar nature. The Kearin reaction is an expression of a sarcoid type of reaction in certain individuals, and the disease sarcoidosis is a syndrome which can be evoked by many agents.——From authors' summary.]
In some of the experiments reported, suspensions of particles from normal liver made by the Dharmendra method were used. Neither in this article nor in the authors' previous one in The Journal 24 (1956) 171-181 is there any explanation of the nature of those particles, or of how tissue particles are obtained by the Dharmendra method. In preparing Dharmendra's antigen chloroform is used to extract the lepromatous bacilli from the tissue elements of the leprosy cases which are discarded. The final ether preparation, before centrifuging, is supposed to contain only bacilli suspended in the ether solution of the lipids left after evaporation of the chloroform. [Herow.]

DAVEY, T. F. and DEWEY, S. E. Lepromin-like activity of normal skin tissue. Leprosy Rev. 27 (1956) 197-203.

The material used in this investigation of the reported lepromin-like activity of antigens prepared from normal skin (Kooij and Gerritsen) was prepared according to Wade's modification of the Mitsuda method. The 50 patients tested were 30 lepromatous, 10 borderline, 10 major tuberculoid, 17 minor tuberculoid, and 3 indeterminate. For the control injections both standard and refined lepromin (Lowes's modification of the Dharmendra antigens) were employed, with carbol salicylic acid as an extra control. Each patient was injected simultaneously with all 4 preparations, and the early and late reactions were read. The normal skin preparation did not induce the early reaction, but in tuberculoid leprosy—not in lepromatous leprosy—it induced Mitsuda reactions indistinguishable from those produced by the ordinary lepromin although they were smaller in degree, and slightly smaller than those produced by the refined antigen. It is concluded that, with respect to the Mitsuda reaction, it is questionable whether the refined lepromin has any advantage over the normal skin preparation. It remains to be seen if these results may be due to contamination with unsuspected antigens. Kooij and Gerritsen's findings are at least partly confirmed, but more experiments with the skin preparation used are required, including histologic controls. [From abstract in Trop. Dis. Bull. 14 (1958) 456.]

The following data are taken from a table in the original article pertaining to the late reactions. The "3 mm." column includes all reactions of that size or larger; the "7 mm." column is of reactions larger than that size.

<table>
<thead>
<tr>
<th>Type</th>
<th>Lepromin Preparation</th>
<th>Lepromin Reaction</th>
<th>Skin Preparation</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>3 mm.</td>
<td>7 mm.</td>
<td>3 mm.</td>
</tr>
<tr>
<td>Lepromatous (18)</td>
<td></td>
<td></td>
<td>0</td>
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<tr>
<td>Indeterminate (3)</td>
<td>3</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Borderline (10)</td>
<td>10</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Minor T (17)</td>
<td>17</td>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>Major T (10)</td>
<td>10</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

Thus, in the 27 tuberculoid cases the standard lepromin gave positive results in all, and strong reactions in all but one (a minor case), while the two other antigens were both negative in 4 cases (all minor); but, with the former, 8 cases (5 of them minor) gave strong reactions, against only 3 (all major) for the latter. The average sizes of the reaction lesions in the 27 tuberculoid cases were: with the standard lepromin, 14.4 mm.; with the Lowes antigens, only 6.6 mm.; and with the skin preparation, 5.0 mm. With all antigens the reaction lesions in the major tuberculoid group averaged larger than in the minor tuberculoid group, a comparison which is of considerable interest.
[It is to be noted that all subjects were leprosy patients, with no normal healthy control group, and that all subjects received the full battery of injections, none the normal skin preparation alone.—Edtrn.]

Osuna Castero, N. and Arcuri, P. B. Los resultados de la inyección de suspensión de piel ana en sensibilizados por lepromin integral. [Results of injection with healthy skin suspension in persons sensitized by integral lepromin.] Leprología (Buenos Aires) 1 (1958) 20-29.

A group of 19 healthy male adults, supposedly without contact with leprosy, were sensitized by 2 injections of the Mitsuda-Hayashi integral lepromin. Subsequently they gave negative reactions 48 hours after the intradermal injection of protein extracts of normal skin, and the results were also negative 48 hours and 21 days after the injection of a suspension of a tissue extract of normal skin. It is concluded that the Wade phenomenon is of specific nature, and that it is provoked by the leprosy bacillus.—[From authors' summary, supplied by G. Basombrio.]


A young native employee, although tuberculin positive, gave negative results to lepromin tests made in February and July, and he was thenceupon vaccinated intradermally with BCG. Two weeks later the site of the second lepromin injection (made 46 days previously) showed a 6 mm. Mitsuda reaction, proving that the vaccination had not established a state of paraimmunity which the previous tuberculin infection had been insufficient to do. The author tells of his practice of vaccinating with BCG, contacts of leprosy patients who are tuberculin positive if they are nonreactive to lepromin, and he says that such vaccinations are without noteworthy incidents. [Signifying, presumably, lack of reactions of the Koe type. Nothing is said of the dose of tuberculin used to elicit sensitivity, which information might indicate whether it was of specific or nonspecific nature. It has been said that persons with the nonspecific reactivity do not give Koch reactions when injected intradermally with BCG.—H. W. W.]


Comparing the brownish-red spot at the 14th day after injection of lepromin with the infiltration [nodulation] currently used in reading reactions, there was coincidence in almost all of some 3,000 lepromatous cases but divergencies in both directions in certain proportions of 349 nodulopromatous cases. However, using the 7-mm. criterion which the same authors had previously recommended, the results of the spot method could be applied in classification as well as those of the infiltration method.—[From authors' summary.]


The value of the brownish-red spot appearing together with the nodular infiltration at the site of injection in the late lepromin reactions, using the Mitsuda or the Dhar-menon antigens, with respect to the problem of the time for reading has been summarized. The so-called spot and infiltration methods were compared in 185 leprosy cases. In the lepromatous cases the sizes of both changes coalesced quite well, whereas in the non-lepromatous cases the spot was usually larger than the infiltration. The results confirm
our criterion of more than 7 mm for positivity as appropriate for type classification. Also in nontuberculous subjects (25 adults, 1,227 schoolchildren) the spot was larger than the infiltration in many cases, notably in tuberculosis positives and especially in cases of pulmonary tuberculosis. The histology of the spot lesion in the nontuberculous cases was similar to that of the nodular infiltration, with minute foci of tuberculoid structure. The findings were similar in the positive reaction sites of leprosy patients. The spot method seems to be better than the infiltration method because of high objectivity of the spot for accurate measurement. The early reactions using both antigens can undoubtedly be employed for classification, with the criteria of more than 10 mm after 48 hours for positivity. The maximum size of the infiltration was most commonly seen on the 22nd and 29th days after injection, and of the spot method on the 8th and 15th days. However, running the infiltration at any time between the 15th and 28th days, and the spot between the 8th and 29th days, is appropriate for type classification. [Further details].—[From abstract.] [The article contains eight tables and data of which are as they would be in an English-language publication.—Erector,]


Three serologic tests for syphilis were performed on the sera of 108 leprosy patients, namely, the Kahn standard test using the lipoidal antigen, the VDRL slide flocculation test, and the complement-fixation test of the New York State Department of Health. The sera from 4 cases were reactive to the complement-fixation test; 57 cases with the Kahn test, and 29 cases with the VDRL test. All sera reactive with the complement-fixation test were likewise reactive with the Kahn and VDRL tests. The low incidence of reactivity with the complement-fixation test, together with the close agreement of these results with TP1 test, showed the high specificity of this serologic test for syphilis among leprosy patients, in contrast with high percentages of false positive reactions with the Kahn and VDRL tests.—[From authors’ summary.]

Brusa, G. and Milacana, M. Estudios serológicos en enfermos de lepra. [Serologic studies in leprosy patients.] Dermatologica (Mexico) 2 (1958) 56-60.

The sera of 82 leprosy patients were tested with four standard syphilis tests (Wassermann, Kahn, VDRL in serum, and Wassermann, Kahn, VDRL in plaque), and with the complement-fixation reaction with the Reiter protein. The results obtained showed that positivity for R.S.S. is a frequent phenomenon which is equal in both sexes, greatest in but not exclusive to lepromatous leprosy, of less intensity than in syphilis, and different in degree in each serologic technique. The percentage of positivity has no connection with the duration of the disease, but is directly related to the acceleration of erythrocyte sedimentation. Sulfone treatment has no well-defined effect on positivity, but suggestively it seems that it increases with time.—

Authors’ Abstract


The results of the Wassermann, Kahn and Meinicke tests on sera of patients with various forms of leprosy are compared with the results with the so-called leprosy complement-fixation test with a tuberculosis antigen [The Journal 34 (1954) 91]. The sera of lepromatous cases tended to give more positive syphilis reactions than those of tuberculoid cases; also, active lepromatous cases more than quiescent or arrested cases. In general, the sera which gave positive results with the leprosy complement-fixation test were also positive with the syphilis tests, and vice versa. Nevertheless, the positive leprosy and syphilis tests are independent of each other; antibodies to leprosy are formed independently of the activity of the pathological process, whereas antibodies which react
in occluded vein, passively
Excerpting leprosy bacilli were later. The leukocytes of the peritoneal cavity 2 days after the injection

These authors carried out complement-fixation tests with a tuberculosis antigen on 372 sera from leprosy patients of various types, contacts, nursing staff, normal persons and tuberculosis patients. The study was of the differences in parallel tests done at 37° and 4° C. In the cold test the titers tended to be higher in the sera (29%) from lepromatous cases, 14% of which were negative at 4° C, as against none at 37° C. The greatest differences in titers were in the contacts group (24), in which titers of 1/160 were obtained at 4° C, compared with 1/5 at 37° C. Sera from normal persons (59) showed little difference at the two temperatures. This suggests that there may be a special significance to be attached to the two forms of the test.—[From abstract in Trop. Dis. Bull. 55 (1958) 1336.]


Suspensions of the H37Rv tubercle bacilli were exposed to various detergents until they lost their resistance to decolorization (or for 48 hours if resistance was not lost). Two different staining methods were used, the Ziehl-Neelsen and a cyanin one. Resistance in the former method was lost much sooner than in the latter, and it is concluded that resistance depends on different factors in these two methods—myodic acid in Ziehl-Neelsen, and other lipids in the other after the myodic acid has been extracted. A study was made of restoration of the "decolorization factor" by exposing the extracted bacilli to myodic acid. This was found to be possible provided the extraction treatment had not removed all of the lipids, in which case they could not fix the myodic acid. [The dye used in the cyanin method, being insoluble in water, were used 5% in dioxane. A question arises whether or not dioxane has a "restorative" effect on lipid-extracted bacilli,—H. W. W.


In order to detect leprosy bacilli in the circulating blood the authors prepared a "large drop" of the patient's blood diluted with distilled water and stained by Pauman's method, without previous fixation. The preparations were stained with carbol fuchsin and counterstained with methylene blue. In addition blood smears were made from a vein, and also as a control smears from the tisue juice of the skin in the shank flexure; single bacilli were observed in the former, but not in the latter. By the large drop method bacilli were detected in 135 out of 228 specimens prepared from the blood of 29 patients with lepromatous (nodular) leprosy (59.8%). These results are regarded as testifying to the presence of bacteremia in leprosy patients.—[From abstract in Encephal. Med. 12 (1958) 371.]


Lymphocytes from rats infected with murine leprosy have been found capable of passively transferring hypersensitivity to normal guinea pigs. The donor rats were inoculated intraperitoneally 6 hours after birth, and again, subscantaneously, 1 month later. The lymphocytes were obtained from the peritoneal cavity 2 days after the injection.
of light mineral oil, and were transferred to normal guinea-pigs either by intradermal or intramuscular injection. The test antigens were 1:5 OT, a 1/2% homogenate of purified lepromas from mice (MLM), and a suspension of normal mouse (peritoneal) tissue (NMT). These antigens were injected along with the leukocytes when the cells were injected intradermally, and separately when they were injected intramuscularly. Splen homogenates of the donor mice were also transferred to guinea-pigs, intraperitoneally, but in this case the testing with the antigen was delayed for 24 hours. The reactions were read after 24 and 48 hours. Following the intradermal injection of the cells, reactions were produced only by the MLM antigen; these reactions were, however, small, being only about 5 mm. Injection of the antigen with the cells did not, however, increase the size of the reaction, whereas the reactions from the cells of lepromatous rats were much larger when they were injected with OT and NMT antigens; the sizes of these reactions ranged from 79 to 254 mm, and they differed from those observed after systemic injection, for those from OT tended to exceed those from MLM. Heating the cells for 20 minutes at 50°C abolished their specific reactivity.—[From abstract in Trop. Dis. Bull. 56 (1959) 306.]

SUSUMA, K. and YAMADA, N. Immunological studies on murine leprosy. II. Relation between resistance to infection of mice immunized with killed murine leprosy bacilli and the serum protein fraction pattern. La Lepros 27 (1958) 263-270 (in Japanese; English abstract).

Heat-killed murine leprosy bacilli vaccines were prepared with olive oil or liquid paraffin, and mice were immunized with these vaccines, and also with a vaccine containing no adjuvant. The resistance to murine leprosy infection was tested, and the serum-protein and glycoprotein fractions of the sera were examined by paper electrophoresis. The results showed that the olive-oil vaccine has a fairly strong preventive effect, and that the liquid-paraffin vaccine also has an inhibitory effect. The vaccine without adjuvant showed a slight suppression compared with unvaccinated controls. All three vaccines caused increases in α-globulin and β-globulin, the increase being highest after the olive-oil vaccine, which had the greatest preventive effect, followed by the liquid-paraffin vaccine; the findings after the simple vaccine were close to those in normal mice. No significant changes were found in the serum glycoprotein fractions after any of the vaccines. The α-globulin and β-globulin showed a tendency to increase after the challenge with murine leprosy bacilli.—[From abstract.]


This report deals with the effects of the five antibiotics listed in the title on murine leprosy of the mouse, using the writer's technique of three-month chemotherapeutic assay with intraperitoneally-infected mice. A three-week chemotherapeutic assay was also employed. Standards used were streptomycin,isoniazid and DDS. Treatment was commenced on the day after the inoculation. Kanamycin, streptomycin and paromomycin possessed suppressive activity in both the three-week and three-month experiments. Novobiocin and rifostin showed no activity.—Sr. Hilary Ross


Three groups of 15 rats each were injected intrathecally with a suspension of living rat leprosy bacilli, and another group of 15 with a suspension of heat-treated bacilli. One group of each lot received food with 0.2% DDS added, beginning 21 days after the inoculation. With another group 15 Vadrine was similarly added. The third group served as controls. The efficiency of the tested substance was judged after 1 year.
Colloque

There was no significant difference between the treated and control groups as far as the number of bacilli present in the lungs, liver, and spleen by the size of the testis and spleen, and by the bacterial index of tissue suspension of lung, liver, and spleen.

No. of bacilli per cc. testis homogenate control group

No. of bacilli per cc. testis homogenate test groups

Of the control group of rats, infected with living bacilli but untreated, as zero, the ratio of the DDS-treated group was 695 and that of the Vadrine-treated group was 980, showing that the bacilli in the DDS-treated group were more efficient than DDS. The test results obtained in animals infected with bacilli treated with heat gave a ratio of 578, this giving rise to the suspicion that the technique for heat treatment (5 min. at 100°C) was incorrect or insufficient.—[From abstract in Trop. Dis. Bull. 15 (1958) 1237.]


It having been found that 3-amino-4-hydroxybenzoic acid hydrazide (ABH) and 4-amino-ureidomycin acid have some effects on the tubercle bacilli and are effective in experimental tuberculosis in mice, the effects of these agents in the prevention of murine leprosy have been investigated. It was found that ABH has some infection-suppressing action. Application of this agent in human leprosy is being studied.—[From abstract.]


Mice inoculated with the murine leprosy bacilli were treated with a light-sensitive dye, Neocymen 12. Short-term treatment showed a suppressive effect on lepromin development, but long-term treatment had an enhancing effect, as shown by excision and accurate measurement of the lepromas. Histologic examination of the lepromas by fluorescence microscopy showed that the form of many of the bacilli in the treated group was altered, and that disrupted forms increased parallel with treatment. This shows that there was no relationship between the therapeutic progress and appearance of abnormal forms. There was no significant difference between the treated and control groups in the numbers of bacilli present in the lepromas.—[From abstract.]

REVIEW


Prof. A. Dubois presided over this colloquium, and the other participants were Drs. Ch. Driol, S. O. Broca, M. Leclat, J. Cap, and A. Thys. The principal types and groups of leprosy were studied historically and discussed. At the end, Prof. Dubois summed up as follows:

The colloquium led to the conclusion that clinical and bacteriologic examinations usually suffice for the diagnosis of leprosy and its type, and that the histological examination can only assist in a very small degree if these other examinations are well done. Because of the great numbers of cases, the histologic examination should not be demanded as a matter of routine, but reserved for (1) cases in which the diagnosis remains in doubt even after the full resources of clinical and bacteriologic methods have been employed, (2) for cases in which classification is of particular interest, when the clinical and bacteriologic examinations do not afford a clear answer, (3) in special circumstances, in the control of cure of bacillus-positive lepromatous or dimorphous types, for occasion-