

## CURRENT LITERATURE

To take due notice of the current literature of leprosy is one of the most important objectives of the JOURNAL. For the benefit of readers to whom medical libraries are not readily accessible it is intended that, so far as possible, abstracts of the more important articles shall be sufficiently full and complete to afford a clear understanding of them, rather than merely of the nature of their content.

The Contributing Editors are depended upon primarily to provide these abstracts. However, since authors' abstracts are generally to be preferred to those prepared by others, readers are invited to submit abstracts of recent papers or reports written by them which have been published elsewhere.

VIGNE, P., FOURNIER, A. ET VIDAL. Léproues de la face à forme de sarcoïde en nappe. [Lepromas of the face in the "sarcoïde en nappe" form.] *Bull. Derm. et Syph.* 39 (1932) 346.

A woman born in France, 64 years of age, presented lesions in the form of raised, reddish-brown plaques, anesthetic or hypoesthetic, having all the etiological characteristics of a sarcoïde. The presence of Hansen bacilli in the smears permitted the diagnosis of leprosy of the *sarcoïde en nappe* form (tuberculoid leprosy of Darier).

A feature of interest from the epidemiological viewpoint is that for sixteen years the patient sailed on the shipping lines to the Far East and to Madagascar, but never went ashore in these countries. Aboard ship she did not have any contact with the natives; her work as stewardess did not bring her onto the decks habitually invaded at the ports by vendors, some of whom may have been lepers. This was doubtless a case of indirect infection "by the intermediary of insects, mosquitoes or demodex."

—M. LEGER (translated).

LAQUIEZE, J. Un cas de lèpre. [A case of leprosy.] *Bull. Soc. Path. Exot.* 25 (1932) 123.

This case observed in New Caledonia was reported to draw attention to the importance that should be given to masked leprosy (*leprosy frustes*) in the propagation of the disease. The patient, a missionary, stationed for eleven years in an institution in the colony, had not had any contact with a known leper.

—M. LEGER (translated).

DELAMARE, G. ET GAONA, J. Ligne rouge et ligne blanche, réaction nulle des lépreux. [The red and white line reaction in leprosy.] *Bull. Soc. Path. Exot.* 25 (1932) 200.

In observations made in Paraguay the abolition of all the vasomotor reflexes, so frequent in ankylostomiasis, was encountered only twice in leprosy. On the

other hand there were very curious segmentary disturbances, of a more or less metameric character. —M. LEGER (translated).

LAQUIEZE, J. La lèpre aux îles de la Loyauté. [Leprosy in the Loyalty Isles.] *Bull. Soc. Path. Exot.* 25 (1932) 618.

From his study the author concludes that certain lepers improve to the point where all symptoms disappear; other evolve and become fixed in an attenuated neural form. In his opinion prophylaxis consists of the detection of new cases, the isolation of patients found bacteriologically contagious, the treatment of these cases in the leprosaria and of the suspects in dispensaries, the education of the people in elementary hygiene, and in making them understand the danger of promiscuity with lepers. —M. LEGER (translated).

FERRIER, P. Le traitement physiologique de la lèpre. [Physiological treatment of leprosy.] *Bull. Soc. Path. Exot.* 24 (1931) 852.

The author finds the so-called physiological treatment very like the recalcification treatment which he has already made known for tuberculosis. The essential feature consists of a meal preceded by the drinking of a large glass of ordinary water, not gaseous and not containing the salts of either calcium or sodium. The meal contains no milk, no cheese or other foods that could give rise to acidity, no butter or fats, vinegar, lemon, orange or any fruit whatever. The regimen consists especially of albumins.

By the success of this physiological treatment leprosy would enter the category of curable chronic diseases, and the author asks by what right the separation of lepers from the world is continued. —M. LEGER (translated).

TISSEUIL, J. Contribution à l'étude de l'allergie et de l'énergie dans la lèpre. [Allergy and energy in leprosy.] *Bull. Soc. Path. Exot.* 24 (1931) 766.

Persons with advanced leprosy do not react in the same way as do those with fever symptoms when injected subcutaneously with Hansen bacilli killed by heat. An organism invaded by leprosy is in a state of energy, even if the general condition is very good; an organism only slightly affected is in a state of allergy. One cannot, however, draw any conclusion as to prognosis from these reactions. —M. LEGER (translated).

LEGER, M. La séroflocculation au péréthynol chez les lépreux. [The perethynol reaction in leprosy.] *Bull. Soc. Path. Exot.* 25 (1932) 128.

In connection with the work of Sanjurjo, of Paraguay, with Verne's perethynol flocculation reaction in leprosy,<sup>1</sup> Leger recalled reports which he had previously made on the same subject. Leprosy serum is positively distinguished from syphilitic serum in that it does not flocculate with perethynol (Verne's syphilis reaction). It is equally distinguished from that of tuberculosis in that it does not flocculate with resorcin (Verne's second reaction for tuberculosis). These facts are of use in determining whether one with leprosy also has syphilis or tuberculosis, and is of value in treatment since antisiphilitic treatment can be given when needed, or drugs such as potassium iodide that would be injurious in tuberculosis can be avoided. —M. LEGER (translated).

<sup>1</sup> Abstracted in this JOURNAL, 1 (1933) 249.

LEPINE, P., MARKINAOS, J. ET PAPAYOANNOU, A. La valeur pratique de la réaction de Rubino pour le sérodiagnostic de la lèpre. [The practical value of the Rubino reaction in leprosy.] *Bull. Soc. Path. Exot.* 25 (1932) 843.

Among 110 cases of definite leprosy at the antileprosy center in Athens the authors have found a confirmative response with the Rubino reaction in only 50 per cent. Positive reactions are really frequent only in nodular leprosy, and even in that form about 30 per cent of the cases remain constantly negative, no matter what the degree of evolution of their infection. Further, the reaction is not precocious; in the majority of cases it does not become positive until the case had developed to a point where the clinical symptoms impose the diagnosis.

It is therefore necessary to improve the technic to make the reaction stronger without reducing its specificity, in order to make it the indispensable auxiliary which the clinical leprologist still awaits from the laboratory. It is to be noted that the authors have always found the reaction negative in non-leper cases.

—M. LEGER (translated).

LEGER, MARCEL. Procédé commode de mise en évidence des bacilles de la lèpre. [A method of demonstrating the leprosy bacillus.] *Bull. Soc. Path. Exot.* 25 (1932) 546.

With a very sharp bistoury a recent skin macule may be incised, following the two sides of an isocles triangle 5 to 8 mm. in length. The incision involves only the epidermis and the dermis, without reaching the subcutaneous cellular tissue. With fine forceps or even the point of the bistoury one may raise the point of the triangle thus detached and turn over the little shred; the third side of the triangle, which is not incised, is used as a hinge. A slide (which has been sterilized by a preliminary immersion in ether) is then pressed firmly on the surface exposed, thus obtaining an impression smear of the dermis. The skin flap is then dropped back, and the injury heals without leaving a scar.

By this method the author has confirmed the diagnosis of leprosy in cases in which the bacilli were not found in the nasal mucus or by ordinary biopsy.

—(AUTHOR'S ABSTRACT, translated).

TISSEUIL, J. Observation d'un sujet réfractaire à la lèpre mort de cancer. [A person refractory to leprosy died of cancer.] *Bull. Soc. Path. Exot.* 25 (1932) 126.

The author reports the case of an old man of New Caledonia, 69 years old, who for 18 years lived in infected surroundings. His wife and four children were lepers but he himself escaped infection. His lymph nodes were punctured repeatedly but the leprosy bacillus was never found. The man died of cancer of the larynx. The author believes that leprosy can prepare the terrain for cancer.

—M. LEGER (translated).

LAQUIEZE, J. Enquête sur la lèpre au îles de la Loyauté. [Inquiry concerning leprosy in the Loyalty Isles.] *Bull. Soc. Path. Exot.* 25 (1932) 479.

The following figures are given for the present leper population of the three islands of the Loyalty group: in Lifou, 195 cases (3.3 per cent of the population)

and 202 suspects (3.4 per cent). In Maré, 76 cases (2.4 per cent) and 107 suspects (3.4 per cent). In Ouvéa, 58 cases (2.9 per cent) and 76 suspects (3.8 per cent).  
—M. LEGER (translated).

LE FORESTIER, R. Le problème de la lèpre dans les colonies françaises et en France (Etude de médecine sociale). [The leprosy problem in the French Colonies and in France.] Thèse de doctorat en médecine, Montpellier, 1932, Marseille, 98.

There are nearly 100,000 lepers in the French colonies, according to the data collected in this thesis. There have been actually enumerated 26,000 in French West Africa and Togo, 15,000 in the Cameroons, 12,000 in Indo-China, 10,000 in Madagascar, 3,000 in French Equatorial Africa, 3,000 in Oceania, 2,000 in Guiana and the French West Indies, 1,000 in Morocco.

The colonies are classified into three groups according to the degree of prevalence: 1. *High endemicity* (1 case per 100 people or less): Oceania, Guiana, Antilles, certain regions of the Cameroons, Togoland, Guinea, the Ivory Coast and Madagascar. 2. *Medium endemicity* (1 to 5 per 1,000): French Equatorial and West Africas, Madagascar, Indo-China and Morocco. 3. *Low endemicity* (less than 1 per 1,000): North Africa, Mauritania, Somaliland, and certain regions of Morocco and of Indo-China.

In the fight against leprosy in the colonies the work of the religious missions plays a large part, in addition to that of the governments. As the author sees it, the prophylaxis of leprosy is realizable by the application of a number of measures, medical, educative, social and legislative. —M. LEGER (translated).

POTTIER, R. Note au sujet des médicaments dérivés de l'Huile de Chaulmoogra utilisés contre la lèpre. [Derivatives of chaulmoogra oil in leprosy.] *Ann. Soc. Belge Méd. Trop.* 12 (1932) 143.

Some details on the iodization of ethyl esters.

—A. DUBOIS.

VAN HEUTZ, J. B. Lepre en U.C.B.(Leprarsol). Voorlopige mededeeling. [Leprosy and leprarsol. Preliminary communication.] *Ann. Soc. Belge Méd. Trop.* 12 (1932) 385.

The author summarizes the results which he obtained with a new compound, "leprarsol", prepared by the U.C.B. (Union Chimique Belge). This drug is well tolerated after either intramuscular or intravenous injections. Rapid improvement followed treatment, and in the author's opinion it seems to surpass the results obtained with chaulmoogra preparations. He noticed an intolerance with regard to the lungs manifested by a cough, but overcame this intolerance with calcium lactate. Up to the time of the report only 18 cases had been treated, not enough to permit forming a definite opinion on the value of the preparation, but the author proposed to continue his experiments. —A. DUBOIS.

THOMAS. Contribution à l'étude du diagnostic et du traitement de la lèpre. [Contribution to the study of the diagnosis and treatment of leprosy.] *Bull. Méd. Katanga* 9 (1932) and 10 (1933).

In Haut Katanga the author observed about 100 cases of leprosy in people coming from different points of the Province. He gives several diagnostic

details. Disturbance of the thermic sensibility was looked for. The author appreciates gland puncture, and points out the importance of the palpation of the nerves.

Concerning therapeutics, the author applied especially the various chaulmoogra methods. Intravenous injections (Stevenel's method) are dangerous. The results were not very satisfactory. Of 41 cases submitted to sufficient treatment (7 cases macular, 11 nodular, 2 neural and 21 mixed) only 4 improved.

—A. DUBOIS.

DUBOIS, A. Le foyer de la lèpre de la région de Pawa-Wamba. [Leprosy in the Pawa-Wamba region.] *Bull. Inst. Royal Colon Belge* 2 (1931).

DUBOIS, A. La cuti-réaction à la tuberculine chez les lépreux. [The tuberculin skin-reaction in leprosy.] *Ann. Soc. Belge Méd. Trop.* 12 (1932) 1.

The matter of the above two articles is included in the abstract of the more general communication which appeared in the *Memoires de l'Institut Royal Colonial Belge* 1 (1932) No. 2.

—(AUTHOR'S ABSTRACT).

DOBUIS, A. La lèpre dans la région de Wamba-Pawa (Uele-Nepoko). [Leprosy in the Wamba-Pawa area (Uele-Nepoko.)] *Mémoires de l'Institut Royal Colonial Belge* 1 (1932) No. 2.

This article is based on observations and experiences recorded during some months at the "Crois-Rouge du Congo" under the auspices of the Institut Royal Colonial. The report is divided into four sections:

1. A geographical and historical introduction. Annexed is the table of the census made by the Crois-Rouge de Congo in the Abiangama Cheffery. This table shows the existence of 1,876 lepers among 16,305 inhabitants (11.5 per cent).

2. Some clinical and diagnostic details are given, including the methods used in searching for the bacillus. A preliminary study of the blood sedimentation is made. It is concluded that its prognostic value is fairly important, but its diagnostic value is rather low in view of the frequency of increased sedimentation rate in natives and the possible interference of the common auto-agglutination.

The floccule-forming reaction of Meinicke was applied to 74 patients. Positive results were given by 28, of whom 22 accused yaws or syphilitic antecedents. The same reaction was carried out in 31 non-lepers and gave 9 positive results, 6 of the patients claiming yaws or syphilitic antecedents. In 12 cases of yaws and syphilis the reaction was positive in 10 while in 2 it was negative. The author concludes that the Meinicke does not give positive results in leprosy.

Allergy to tuberculin was studied among about 500 lepers and 3,000 non-lepers, the groups having been chosen in a comparable population. The frequency of positive results is nearly identical in the two groups. No class of lepers approaches 100 per cent positive. The rate varies with different places, and is clearly lower with women. The author concludes that evidence of allergy to tuberculin in leprosy indicates infection with tuberculosis. Tuberculosis is not rare in the country, as shown by certain observations made.

An extract of leprosy nodules (lepromin) was tried but did not confirm the results of Bargehr. The cuti-reaction was as negative in those living with lepers as in lepers themselves.

3. This section deals with treatment and tries to give an idea of the results obtained with chaulmoogra ethyl esters. They seem rather deceiving.

4. Devoted to etiological remarks, which do not settle the problem of the frequency of this disease in the region. The report ends with some suggestions concerning prophylaxis.

—(AUTHOR'S ABSTRACT).

DUBOIS, A. La prophylaxie de la lèpre au Congo. [Prophylaxy of leprosy in the Congo.] *Bruzelles-Méd.* 12 (1932) 1370.

In this lecture the author shows the possibility of the prophylaxis of leprosy, especially in the Nepoko. Isolation, authorized by law, seems difficult in practice. It is suggested that infective cases (skin leprosy, nodular type) should be concentrated in the neighborhood of medical centers, where they would be isolated and treated. It is further advocated that the native chiefs should create a lepers' village in each cheffery. This system once existed under the authority of Administrateur, Mr. Libois, but has since fallen into disuse. According to the financial possibilities these native villages would be transformed into dispensary villages, where treatment could be given. A central hospital with laboratory, under the direction of a resident doctor, would control the work. In short, the plan proposed is mitigated isolation, with medical treatment.

—(AUTHOR'S ABSTRACT).

MARRAS, A. The Therapy of Leprosy and the Results Obtained with Modern Treatments.<sup>1</sup> Librairie Italienne et Etrangère, Sassari, 1929.

This interesting monograph sums up in a first chapter everything that has been tried heretofore in the therapy of leprosy, beginning from primitive means such as blood-letting, and leading up to more modern physical and pharmacological methods. Of these the author makes a minute and diligent review, giving for each method and means of treatment the results obtained by several authors and paying particular attention to those employed in the leprosarium of Cagliari. From this institution the author took the material for study which makes the object of the following chapters.

In the third chapter devoted to physical therapy, he tells of the results which can be obtained with modern and discriminating use of roentgentherapy. Especially interesting are those which are directed toward the lymphatic glands (first stopping-place and harbor of the bacillus of Hansen during the long period of incubation), and on the spinal cord to excite the numbed ulcerations and the deficient sensibilities.

Phototherapy cryotherapy, and diathermal coagulation have largely been used in the different manifestations of leprosy, and of each one it is possible for us to form an idea of its efficacy, good or insufficient. In the fourth chapter are summarized the clinical histories of fifteen cases treated with chaulmoograte and gynocardate, with which the author has had good and satisfactory results.

The most interesting chapter in this valuable work is the one devoted to vaccinothierapy, either with vaccine prepared with cultures according to the method of Serra, or with the desintegrated tissues of young nodes. Details are

<sup>1</sup> Translated from the French by Miguel B. Zialcita.

given of the technic of the culture methods used in making the vaccine. From the minute descriptions of the changes in the clinical lesions we can draw conclusions as to the value of the results. Especially in early forms, and with the autovaccine, very favorable results were obtained which, if confirmed by time, will assure us of a powerful prophylactic and curative weapon. Prudence is needed in drawing conclusions, for it is only through long observation of the results that its efficacy can be judged. The author regrets that the preponderance in the cases of inactive leprosy, especially of the frustrated anesthetic form, instead of the florid nodular form which is necessary and indispensable for the preparation of the cultures, does not permit a more extensive series of tests of the method.

The last part is devoted to prophylaxis, and to the hygiene of the leper. The author considers very useful the life in sanatoriums of the type of agricultural colonies, in which the morale of these unfortunates is improved.

On the whole, this work summarizes the efforts of the school of Cagliari, directed by one of the most tenacious and genial of modern leprologists, who has made remarkable contributions in the clinical and experimental study of leprosy.

—N. A. SERRA.

MARRAS, A. Researches on the functional alterations of the neuro-vegetative system in leprosy.<sup>1</sup> *Jour. Italien de Derm. et Syph.* 72 (1931) 411.

The author in his development of the topic points out the scope of the symptoms of the function of the vegetative system, especially the nervous, in the clinical picture of leprosy. He observes that besides the signs of an altered trophism, there are other evidences of endocrin disfunction, especially in the genital organs, and of the disturbances of function of the central and peripheral nervous system, which have functional as well as anatomical relations with the first. He points out the importance of the most complete possible study of this system, so that there may be a more exact clinical evaluation. The author seeks to accomplish this by means of all the methods employed up to the present time: basal metabolism, alkali reserve, hydrogenion concentration, glycemia and glycemie curves, cholesteremia and pharmacological tests. He devotes to each subject a separate chapter in which he includes bibliographical and scientific notes, besides the method followed and the results obtained in the 28 cases of leprosy studied, of which 5 were nodular, 7 mixed, and 14 anesthetic.

In basal metabolism—studied with the apparatus of Pacchioni, substituting, however, a special device (*compte-tours*) for direct measurement of the body surface in place of the commonly-used "height-weight" formula of Dubois; in pH determination with the colorimetric analysis of Hellige; in the alkaline reserve with the Van Styken method; in cholesterin determinations with the colorimetric method of Grigaut, and also in pharmacological tests with atropine, pilocarpine and adrenaline, he obtains values which tend prevailingly towards a diminished tone and a rare reactivity of the vegetative system which would indicate a functional alteration. Glycemia and the glycemie curve studied by the micro-method of MacLean have not shown anything interesting. The author asks himself

<sup>1</sup> Abstract submitted in the French language. Translated by Miguel B. Zialcita.

whether the alterations are only functional or anatomical besides, and the same for the other system with which the neuro-vegetative have such intimate relations. He also announces new histological researches which are being conducted in the clinic to complete this side of the question. —N. A. SERRA.

MARRAS, A. The reaction of Kahn with simple and colored antigen in syphilis and in leprosy, simultaneously with the Wassermann and Meinicke reactions.<sup>1</sup> *Urol. and Cutan. Rev.* 35 (1931) 375.

Simultaneously with a study of about a thousand sera belonging to infected individuals or suspected as such, Kahn, Wassermann and Meinicke (M.T.R.) reactions were applied in 22 cases of leprosy. These included 6 nodular cases, 10 neural, 4 mixed, and 2 initial. The results obtained were positive in two-thirds of the nodular cases. The Wassermann agreed with the Kahn reaction in the proportion of 70 per cent in the anesthetic form, 83.3 per cent in the nodular form and it agreed absolutely in the mixed and initial forms. The Meinicke (M.T.R.), on the contrary, was equally negative and in this it agreed with the Kahn in the cases of mixed and initial leprosy, whereas it was 50 per cent in the neural form and 83.3 per cent in the nodular form. The colored Kahn reaction, performed by the author with the addition of a pink indicator, gave the same results, but the reading was easier and clearer. —N. A. SERRA.

HOFFMANN, W. H. Algunas experiencias sobre la lepra. [Some experiences with leprosy.] *Bel. Soc. Def. Contra Lep.* 4 (1932) No. 36, 27.

The author has had the opportunity to check the results of the treatment in the leper home at Habana by bacteriological examinations of the patients. The best results were obtained with antileprol, new chaulmestrol, a chaulmoogra ethyl ester. It has been possible to make a preparation which can be injected intravenously in doses of 6-8 gm. every 4 to 7 days without trouble. The effect of the treatment is immediately visible in the nodular lesions, especially the open ones. The numbers of bacilli decrease rapidly and after some months they may be difficult to find. In the blood the lymphocytes, which are prevalent in the beginning, are more and more substituted by polynuclears and eosinophiles.

Everything speaks for the possibility of a practical cure, as there is a marked tendency of the disease to heal spontaneously. Because specific treatment is not yet possible it is necessary to use such medicaments as will stimulate the protective forces of the body. By applying carbon dioxide snow to the nodules the Hansen bacilli may be killed and give rise to the production of immune bodies. Good results were had with different new organic preparations of antimony, as stibenyol and stibesan, which seem to stimulate the effect of the chaulmoogra oil, this sometimes being marked by a local allergic reaction. Also, some organic gold preparations, as krysolgan, had a marked influence on certain affections; in eye affections this seemed almost specific. Good local effects on ulcerations were seen from tryptaflavine and rivanel. A general conditioning treatment is always necessary to obtain good results with any treatment. —(AUTHOR'S ABSTRACT).

<sup>1</sup> Abstract submitted in the French language. Translated by Miguel B. Zalcita.



HOFFMANN, W. H. Lepraheim Spinalonga. [Spinalonga Leper Home.] *Derm. Wochenschr.* 94 (1932) 477.

Dr. Meissel of Bucharest (Münch. Med. Wochenschr., 1931. No. 26) has recorded impressions of a visit to the leper home of Spinalonga on the island of Crete. This home apparently serves for the isolation of the lepers of the countries of the Eastern Mediterranean. They are probably all advanced cases, because they are not sent there before they have become public nuisances. The description which Meissel gives is most disappointing from the view point of modern leprology and public health. The patients are left there helpless and hopeless, with no medical assistance for the many who might be treated. It is impossible that conditions could have been worse in the darkest middle ages, and in most of the uncivilized countries they are already better today. It is a pity that Europe should have the most unmodern leprosy institution of all. It would be desirable if the great antileprosy organizations of the world would try to take steps to change this deplorable state of things.—(AUTHOR'S ABSTRACT).

BADENOCH, A. G. AND ALFRED, E. S. R. The treatment of leprosy by means of alepol tabloids. *Lep. Rev.* 3 (1932) 144.

The authors discuss a small series of cases treated by means of alepol by mouth. The results were indefinite but promising. —G. A. RYRIE.

ALFRED, E. S. R. Solganol in the treatment of leprosy. *Lep. Rev.* 4 (1933) 16.

An account of a small series of cases, mostly with ophthalmic complications, treated with solganol. —G. A. RYRIE.

BADENOCH, A. G. AND BYRON, F. E. The calcium content of the blood serum in some cases of leprosy. *Trans. Royal Soc. Trop. Med. & Hyg.* 26 (1932) 253.

A paper with a short comparative study of the serum calcium of 33 cases of lepra reaction, 21 cases of leprosy without reaction but suffering from concomitant disease and a control group who were fed on a richer calcium diet. The authors conclude from this series that the well red leper controls have a normal calcium whereas "lepra reaction is nearly always associated with a serum calcium figure that is definitely below normal." —G. A. RYRIE.

STURTON, S. D. The problem of leprosy in Hangchow. *Chinese Med. Jour.* 47 (1933) 263.

A brief history is given of the leprosy work in Hangchow since its inception in 1887, including the period 1927-28 when the leprosarium was expropriated by the provincial government. Since that time patients have increased, and buildings and methods have been improved. Enlargements are planned to allow of further subdivision of the patients. As far as possible all patients are put on active work, and it is hoped to make the colony self-contained. Tables are given showing occupations and areas from which patients have come to the hospital. Type of disease: nodular 26 per cent, neural 47 per cent, mixed 27 per cent.

Treatment is by chaulmoogra oil by mouth, and "ECCO" intramuscularly. Of 85 patients at present in hospital, 60 have been there more than a year. Of these 1 is symptom free, 11 are much improved, 29 improved, 8 unimproved and

5 worse; of the last 3 were untreated. Six are arrested cases of the burnt-out type. Deformities are common, 63 per cent of the men and 66.6 per cent of the women having them.

—J. L. MAXWELL.

HEIMBURGER, L. F. Treatment and prognosis of leprosy. *Chinese Med. Jour.* 47 (1933) 252.

The substance of this article has been noticed at length in this JOURNAL (No. 2, pp. 259-61). In this presentation the value of gold solutions by intravenous injection is stressed, though combined treatment with the oil intramuscularly is required to affect the bacteriological conditions. Of 36 cases thus treated 25 (64.8 per cent) were paroled, clinically and bacteriologically free after an average period of 7 months and 20 days, while of 73 cases treated with oil alone only 30 (39.7 per cent) were paroled after an average period of 15 months.

—J. L. MAXWELL.

REISS, D. F. Early symptoms of leprosy with notes on differential diagnosis. *Chinese Med. Jour.* 47 (1933) 248.

Difficulties in diagnosis are emphasized. The bacillus is frequently absent from early lesions and even from older ones. Subjective symptoms, always of uncertain value, include rheumatic pains of the joints. Hyperesthesia, tingling, formication, and neuralgic pains as prodromata are too vague for diagnostic purposes. Chronic coryza with repeated epistaxis is more important, but less than localized anesthesia and areas of increased or decreased sweating.

The initial eruption resembles sun-burn, appearing as it commonly does on the face or other exposed parts. This rash is of short duration, but may recur after 8 to 14 days and is followed by definite leprous macules. Sometimes an urticaria-like eruption is noticed, suspicion being roused by its persistence and the absence of itching. Early macules may be tiny or large, pink to red, hypopigmented in the colored parts, and may enlarge slowly at the periphery. Hypoesthesia or anesthesia is present, but this may be particularly in the deeper layers of the skin.

Diagnosis has to rest mainly on clinical findings, though occasionally puncture of the inguinal glands or testicles may give positive bacteriological results. The author gives points in diagnosis between leprosy and vitiligo, parapsoriasis lupus erythematosus, scleroderma, the premycotic stage of mycosis fungoides, acne rosacea, the syphilides and pemphigus vulgaris.

—J. L. MAXWELL.

HASSELMANN, C. M. Problems of segregation and care for arrested negative cases of leprosy. *Chinese Med. Jour.* 47 (1933) 270.

Basing his opinion on information obtained largely from official sources, the author states that compulsory segregation has utterly failed, so far, in noticeably reducing the incidence of leprosy in the Philippine Islands, and that in view of the high relapse rate actual cure is rather problematical, and proceeds to consider at some length the various measures that have been advocated and used by leprosy workers.

—H. W. W.

LOWE, J. A note on leprosy and sex. *Lep. in India* 4 (1932) 178.

This is a preliminary note on the sex incidence of leprosy at different age periods in India. The available data suggest that the incidence of leprosy

is two or three times as great in males as in females; that this difference is less marked in children than in adult life; that the lower incidence in females is probably due not to immunity but in India to less exposure to infection owing to the seclusion of women. When this seclusion of women is absent or broken down, for example in certain groups of industrial labourers, the incidence of leprosy among women may rise as high as or even higher than that among men. The author is preparing a more careful study of the subject.<sup>1</sup>

—(AUTHOR'S ABSTRACT).

LOWE, J. Hydnocarpus oil and its ethyl esters. How to prevent trouble with injections. *Lep. in India* 4 (1932) 188.

After a brief comparison of the cost, ease of injection, rapidity of absorption, irritation, and therapeutic effect of the oil and the esters, the writer discusses the factors which cause pain on injection. These are (a) free fatty acids, (b) volatile impurities, (c) suspended impurities. For painless injections the oil must be pure and fresh, the esters properly made, and either properly stored, or sterilized and injected. Full details are given of making undistilled esters by a simple method which is a modification of that described in the Leonard Wood Memorial Conference report, and is suitable for use in small institutions. Simple tests of the suitability of esters for injection are also described.

—(AUTHOR'S ABSTRACT).

MUIR, E. AND LOWE, J. Leprosy relief in India. *Indian Med. Gaz.* 68 (1933) 88.

This is a review of the leprosy problem in India, with a discussion of the policy of the Indian Council of the British Empire Leprosy Relief Association, and suggestions for action by provincial and local authorities. Among the various facts and opinions given, most of which long since have been made familiar, are: There are probably between one-half and one million cases in India. Though in some parts leprosy is decreasing, in other it is increasing because of industrial development and improved communication. It is most prevalent among aboriginals who have left their original seclusion but have not adopted the sanitation of civilization. The commonest form is neural, there being 2 or 3 to every cutaneous case. Nevertheless, because of the prevalence, isolation of all infectious cases in institutions is impossible. Yet treatment alone is unlikely to stamp out the disease. Work along broader lines is discussed.

—J. LOWE (condensed).

MUIR, E. AND CHATTERJI, S. P. Further notes on mercurochrome. *Lep. in India* 5 (1933) 8.

The authors confirm their previous note on the subject that short courses of mercurochrome are of value in treating secondary infections in leprosy cases and in treating lepra reaction. They find, however, that while its continued administration causes breaking down of lepromata, there is little if any beneficial effect on the extent and severity of the infection, and therefore recommend that its use be confined to the treatment of secondary infections and lepra reaction. They advise short courses of 5 or 6 weekly injections of a 1 per cent

<sup>1</sup> To appear shortly in the JOURNAL.—EDITOR.

solution, starting at 3 cc. and increasing to 10 cc., discontinuing if there is any marked fever or exacerbation of the lesions. —J. LOWE.

MUIR, E. Note on the treatment of leprosy by intradermal infiltration. *Lep. in India* 5 (1933) 20.

A description of the technique of this method. The author points out that hydnocarpus oil heated to about 45 per cent C. loses its viscosity sufficiently to be given by the intradermal method, and that such injection of oil is well tolerated and beneficial. —J. LOWE.

MUIR, E. AND SANTRA, I. Sample surveys of leprosy in India. *Indian Jour. Med. Res.* 20 (1932) 421.

This article summarises the findings of the leprosy surveys during the last few years. Cases were found in 2,536 of the 4,560 villages and towns visited—56 per cent. Among the 2,500,000 inhabitants 16,500 (0.7 per cent) showed signs of leprosy. These figures, 4.25 times the 1921 census figures, still cannot be taken as giving the entire incidence, for the surveys were very short and many cases escaped detection. In one typical area 633 neural cases, and 361 cutaneous were detected; of the latter 159 were slight and 202 marked.

Leprosy is found to be common: (a) where crops are uncertain, (b) where aboriginal people are recently opened up by improved communications, (c) in deltaic areas subject to floods, where filarial infection is common, (d) in mountainous areas where there is much privation and unsanitation and (e) in areas rapidly industrialized with labour from endemic areas.

Mixing of different stages of civilization favours the spread: villages of only one caste show little or no leprosy, those of several castes in separate quarters show more, and those with mingling of several castes show most. Tribal customs and caste rules which have previously acted as a check on the spread of disease are now frequently unobserved, with a consequent increase in leprosy. Dietary deficiencies are probably connected with the high incidence of leprosy in some areas, while in others a low incidence or absence of leprosy is possibly due partly to a fairly good diet. —J. LOWE (condensed).

GOHEEN, R. H. Sympathetic ganglionectomy for leprosy ulcers. *Lep. in India* 5 (1933) 3.

This operation was performed on two patients. The first, a woman of 45 with ulcers of both feet had periarterial sympathectomy done on one side four years previously; there was some improvement, but not healing. After bilateral lumbar ganglionectomy one ulcer healed and the other improved. The second was a girl of 17 with a chronic ulcer of the heel. Lumbar ganglionectomy was followed by healing in one month. However, in both cases recurrence followed one year later. —J. LOWE.

CHATTERJI, S. N. Three cases treated with mercurochrome 220. *Lep. in India* 5 (1933) 79.

The writer describes three cases of leprosy, one with leprotic fever, one with a secondary bowel infection, and one with severe leprosy neuritis, all markedly improved by intravenous injection of mercurochrome. —J. LOWE.

[SUDAN MEDICAL SERVICE.] (Leprosy in the Sudan.) Report on Medical and Health work in the Sudan for the year 1931.

This report shows there are some 7,800 known lepers in the Sudan. Of these, 7,000 occur south of the 6th north parallel; northern and central Sudan have a comparatively low incidence. Among the tribes occupying the higher land along the Nile-Congo divide the incidence reaches as high as 4.3 per cent of the population. These tribes live almost entirely on grain, roots and fruit. No cattle can be kept because of *Glossina morsitans* infestation.

Seventy per cent of all the known cases have been under treatment in large settlements, but during the course of the year it was considered safe and advisable to allow forty per cent of those to return to their villages as being non-infectious and non-progressive. Tables are given showing the number of new infections among relatives allowed in these settlements, family histories in relation to infections, and fertility indices among lepers. In the endemic areas dispensaries are being established, and it is intended to group leper cases around these dispensaries and so obtain the necessary supervision and treatment with the minimum dislocation of their normal tribal lives. —A. CRUICKSHANK.

CRUICKSHANK, A. Leprosy in the Southern Bahr-el-Ghazal Anglo-Egyptian Sudan. *Lcp. Rev.* 3 (1932) 3.

This article describes the leprosy survey of the entire local population and the formation and administration of a large leprosy settlement on self-supporting lines. All who are suffering from the disease in the district are now known and registered, and approximately 75 per cent of them are in settlements and under treatment and supervision. The untreated 25 per cent are in the non-infective stages of the disease. In the Yambio area 3,220 cases were found, 5.3 per cent of the population. Well over half of all those segregated are of the earliest type of leprosy, C-1 and N-1, and it is obvious that many of those have become self-arrested before any permanent damage has occurred. Though the incidence of the disease is high the virulence appears low.

The writer concludes that alepol, which has been given routinely, does not appear to exert any potent beneficial action on the type of leprosy encountered. More is to be gained, prophylactically and curatively, by treating all other diseases, improving housing conditions and raising the social standards, and above all by securing a plentiful and varied food supply. —(AUTHOR'S ABSTRACT).

URUEÑA, J. G. Leprosy proteus. *Arch. Derm. Syph.* 27 (1933) 450.

A presentation of the protean manifestations of leprosy as exemplified by eight case reports with photographs. The cases presented are classified as follows: vitiligoid leprid, psoriasiform leprid, ichthyosiform leprid, hybrid leprous and congenital ichthyosis, syphiloid lepromatous alepecia, neurodermitic lichenoid leprid.

The author states that the report is very incomplete since leprosy may resemble many other dermatoses, but that it is not possible to depict all the forms in so short a note. —N. E. WAYSON.

EMERSON, G., ANDERSON, H. H. AND LEAKE, C. D. Lipolytic activity of rat tissues in experimental leprosy. *Proc. Soc. Exper. Biol. & Med.* 30 (1932) 150.

There being a belief that the therapeutic action of chaulmoogra oil may be due to stimulation of non-specific lipolytic activity on the part of the tissues, the authors undertook a study of lipolysis in experimental rat leprosy, determining first the effect that leprosy in the body might have on the tissue-distribution of lipase. Determinations were made by Loevenhart's method on representative tissues of 8 healthy and 22 leprosy rats, the tissues being the liver, lung, heart, kidney, spleen, muscles, subcutaneous tissue and leproma.

Three outstanding facts were indicated by the results: (1) leproma tissue is significantly lower in lipolytic activity than other tissues, whether these be from infected or normal rats; (2) leprosy tissue from different animals is remarkably constant in activity as compared with other tissues of infected or normal rats; and (3) "late stage large lesions" cause significant lowering of the activity of most tissues, with the probable exception of the spleen, an effect which is indicated in some of the tissues even with earlier lesions.

—H. W. W.

(LEPROSY IN NYASALAND IN 1930.) (From the Annual Report for 1930 of the Director of Medical and Sanitary Services.)

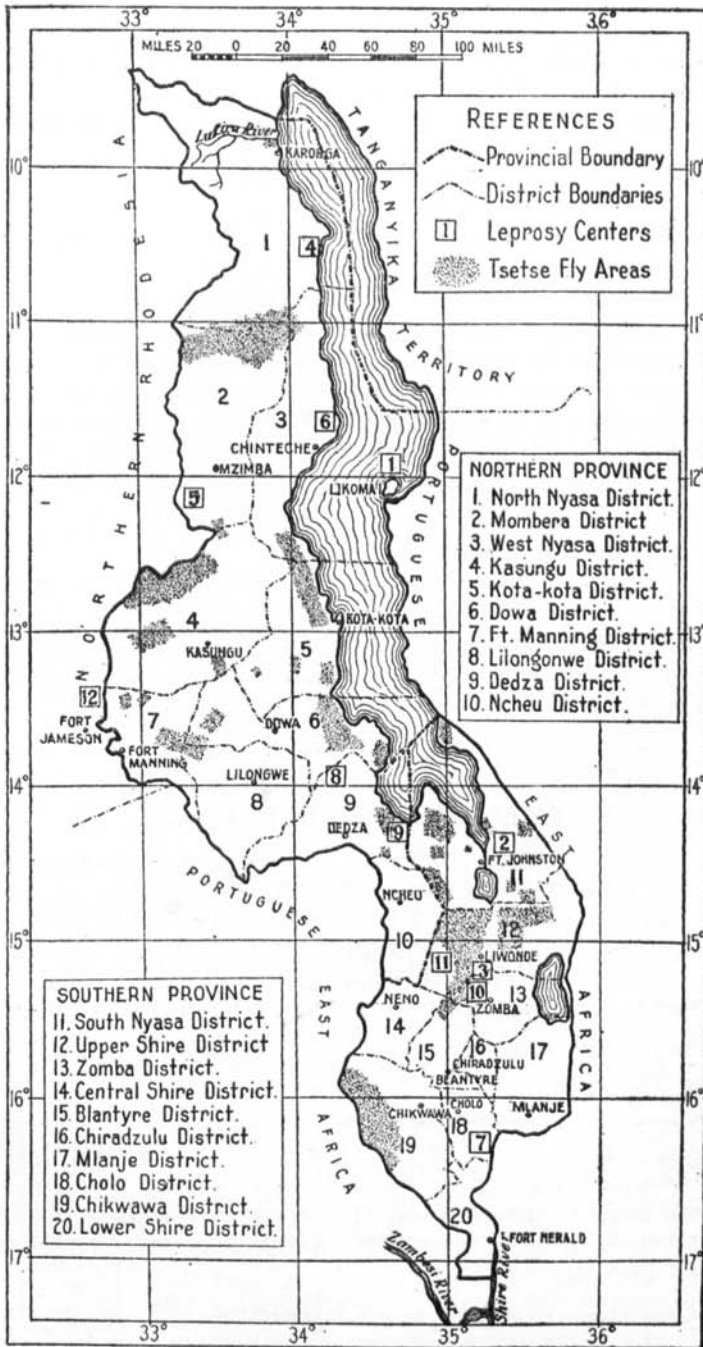
At the end of 1930 there were eleven leprosy treatment centers in Nyasaland; another is close to its border at Mwami, Northern Rhodesia, near Fort Jameson. Their locations are shown in the map reproduced herewith.

TABLE 1.—*Leprosy centers in Nyasaland.*

No. (a)	Center	Mission	In-patients			Out-patients treated
			Admitted 1930	Discharged 1930	Remaining 1930	
1.	Likoma	Universities, Mission to Central Africa	1	4	14	15
2.	Malindi	Do.	5	5	29	10
3.	Likwenu	Do.	19	7	88	25
4.	Florence Bay	Livingstonia	35	6	34	11
5.	London	Do.	7	11	12	7
6.	Bandawe	Do.	6	85	108	1
7.	Malamulo	Seventh Day Adventists'	123	17	117	41
8.	Mkhoma	Dutch Reformed Church	9	35	35	17
9.	Mua	White Fathers'	3	21	93	55
10.	Domasi	Church of Scotland	10	5	49	9
11.	Utale (b)	Marist	5	0	5	3
			123	196	15	194

a Number as shown on map reproduced herewith.

b Opened late in 1930.



Map of Nyasaland, showing locations of leprosy centers.

These treatment centers are managed by missionary societies, aided by grants from the government for up-keep. These amounted to £800 in 1930, with an additional £200 in the form of medical supplies. For 1931 these grants were increased to £1,800. The data on admissions and discharges are given in Table 1.

These figures show a total of 657 in-patients remaining in 1929 (in ten institutions) with 123 admissions and 196 discharges in 1930, leaving 584 at the end of the year.<sup>1</sup> Out-patients treated totalled 194, not including those so treated (94) at the Government hospitals. Figures for eight of the mission stations give 25 deaths.

A great majority of the patients were reported as improved under treatment. A number of those discharged insisted on leaving because they were tired of treatment; after improving to a certain point the condition often remains stationary and the patient becomes discouraged. However, a total of 23 patients were discharged as apparently cured, to be kept under observation.

<sup>1</sup>The report states that there were 618 leprosy patients in the institutions of Nyasaland at the end of 1930, though the tabular data give the above total of 584 for the institutions listed.