

ABSTRACTS

Lupus Vulgaris

[In view of the resemblances between lupus vulgaris and leprosy, particularly the tuberculoid type, the following summary from the *Lancet* (Oct. 20th, 1956, p. 813) of results of treatment with isoniazid are of interest.]

Results obtained with isoniazid in 111 cases of lupus vulgaris are reported after four years' experience with the drug.

Improvement took place in all the 103 patients who completed the course of treatment, and in 99 of them the lesions were clinically cleared. In 3 of the others they have since cleared with other treatment, while the 4th has refused local treatments.

The 99 patients whose lesions cleared have been followed up for six to twenty-four months after the completion of their courses. Relapses (with solitary or grouped nodules) have occurred in 11, in whom the average length of treatment was thirty-two weeks and the average total dosage of isoniazid was 79.5 g. In the 88 patients who have not relapsed, the average length of treatment was forty-six weeks and the average total dosage was 108.5 g. Nine of the relapsed cases have cleared again with various treatments and 2 are improving on a second course of isoniazid.

For adults, it is advisable to give isoniazid in a dose of 300 mg. a day for a period extending up to at least three months after clinical clearance. This usually entails treatment for a year with a total dosage of about 110 g. but in selected cases a total of 150 g. may be thought necessary. A daily dose of 400 mg. has not brought about earlier clinical clearance.

The incidence of new cases of lupus vulgaris at the London Hospital has fallen remarkably in the last few decades. This is attributable to cleaner milk, earlier recognition and improved treatment of pulmonary tuberculosis, and better nutrition and housing.

Kaoru Urabe, et al., write on *Studies on the in vivo Cultivation of Murine Leprosy Bacilli* in *La Lepro* (Jan. 1956).

The following is an abstract:—

Cultivation of murine leprosy bacilli *in vitro* has not proven entirely satisfactory. Studies were conducted on *in vivo* cultivation as an indirect aid to clarifying the mode of propagation of the bacilli. In order to avoid the partial observations resulting from *in vivo* methods used heretofore, phase contrast microscopy and the slide culture method *in vivo* were utilized. The following results were obtained.

(1) Murine leprosy bacilli show elongation, branching and granules formation similar to growth of other acid-fast bacilli on the slide inserted under the skin of the white rat.

(2) It is suggested that murine leprosy bacilli will multiply even in the absence of body cells if there is adequate infusion of body fluid in a susceptible animal (white rat) under conditions where invasion of body cells is obstructed.

(3) Propagation of murine leprosy bacilli in murine leprosy-sensitized white rats is slow and minute compared to the non-sensitized control.

***Trop. Dis. Bull., Vol. 53, No. 10, October 1956**

Outlines of Campaigns against Social Diseases. IV. The Recently Passed Italian Legislation for those suffering from Leprosy, whether Arrested or not, with a Brief Indication of the Statistical and Epidemiological Situation of Leprosy in Italy, by **G. Del Vecchio**. *Igiene e San. Pubblica*, Rome, 1956, Jan.-Feb., Vol. 12, Nos. 1/2, 50-63. [13 refs.] English summary (8 lines.)

At the end of 1955 there were in Italy 443 patients known to be suffering from leprosy, of which 193 were interned in hospitals and 250 at home. There were also records of 213 such patients who had died in recent times. The largest concentration (102) was in Calabria, the second largest (80) in Sicily, and the third (50) in Apulia. Laws which have been recently promulgated provide for more accommodation for leprosy patients, especially in rural colonies, and make provision for relatives and other dependents of patients. In 1947 Tobia claimed that there were 364 with leprosy in Italy, of whom 84 had entered from outside, 175 had acquired the disease in the country, while in 105 the origin of the disease was uncertain. In 1954 Manca Pastorino assessed the number of leprosy patients at 400, and in the end of that year the number was found to be 434. The measures adopted in other countries for the control and relief of leprosy are quoted, and on the results obtained in these countries the present new regulations are based.

Leprosy: A Changing Situation in Eastern Nigeria, by **T. F. Davey, C. M. Ross and B. Nicholson**. *Brit. Med. J.*, 1956, July 14, 65-8.

Up to 1948 the incidence of leprosy in Eastern Nigeria was phenomenally high; for instance a survey of the Abua clan in 1937

* Reprinted with permission.

showed 492 patients with active leprosy in a population of 14,515 (34 per thousand). The character of the disease was, however, mild, lepromatous cases forming a small minority, and indeterminate cases being common.

Since 1948 a steady reduction has gradually become evident. Typical of this, in one group of villages where work began in 1941 the new cases in the first three years were 37, 45 and 71, while in 1952, 1953 and 1954 there were only 8, 10 and 8 respectively. It was possible to maintain a close watch for new cases, but patients co-operated and "came forward for treatment on their own initiative, presenting extremely early lesions". The question is asked: has there been an epidemic with a rapid decline over a short period of years? This might have resulted from the sudden opening up of the country under British rule without corresponding sanitary safeguards; the people themselves are of the opinion that leprosy spread rapidly during that period. Leprosy is common among both children and adults, "and the unstable indeterminate and borderline varieties of leprosy among the higher age groups is particularly suggestive. It is what one would expect in the earlier stages of an epidemic with all age groups susceptible."

There is also the possible effect of cross immunity with tuberculosis, but "the impression remains that, even if tuberculosis is having a limiting effect on leprosy in and around ports and townships, its effects in remoter rural areas are not yet sufficient to have contributed much to the decline of leprosy already observed in such areas".

Another factor to be considered is the improvement in sanitation, standard of living, child health and medical facilities. Then there are the leprosy control measures which were begun about 1935; many local anti-leprosy schemes spread throughout the area from 1938 to 1943, in which entire communities often participated. Over the last 20 years several thousands of those with the lepromatous type were isolated in settlements in E. Nigeria, and "in Owerri and Rivers Provinces, during the past 15 years approximately 10,000 patients have been isolated for longer or shorter periods in local segregation villages".

Lastly, there is the effect of sulphone treatment. Since 1949 treatment with oral DDS has gradually been introduced. "Treatment is extremely popular, attracting patients at an earlier stage of the disease than ever before. Early lepromatous cases speedily become bacteriologically negative. The general public is increasingly leprosy-conscious, and prejudice in localities long resistant to local leprosy control measures has finally succumbed.

Relapses hitherto have been unimportant, and there have been no grounds for losing the confident outlook that sulphone treatment engendered."

While natural regression, the spread of tuberculosis, and the higher standard of living have a part, there is no doubt that the intense and widespread leprosy control work has been of extreme importance, and that its cost to the British taxpayer has entirely justified itself.

Leprosy and Childhood, by **J. A. K. Brown**. Central African Journal of Medicine, 1956, May, Vol. 2, No. 5, 173-80.

From his experience of leprosy in Uganda and Nigeria the author questions the conclusion that leprosy has any predilection for children. In Southern Nigeria one third of the patients in settlements were under 15; in the Uganda leprosarium at present 29 per cent are children. "In one of the larger leprosarria [in Uganda] at a recent examination, 225 (36 per cent) of 631 resident patients had been admitted during childhood, but in this particular district children form about half the population." It is an error to think that susceptibility diminishes with age. "It may be distressing to know that 27 per cent of the leper population of East Africa is under the age of 20, but it is important to remember that the other 73 per cent got through their childhood and adolescence safely, only to become infected after reaching maturity." [It is difficult to say how many of the 73 per cent were infected, though without showing symptoms, before the age of 20. A low child rate is often regarded as a sign that the epidemic is on the downgrade.] The suggestion is made that the more susceptible children are usually those 'one of whose parents had leprosy. Where both parents have the disease the susceptibility is presumably greater still.' [This assumes hereditary susceptibility, but no evidence in favour of this assumption is put forward.]

The Differentiation of Hansen's and Koch's Bacilli by Staining with Sudan Black, by **F. Contreras, J. Guillen and J. Terencio**. Rev. "Fontilles", Valencia, 1956, Jan., Vol. 4, No. 1, 15-16.

A half per cent solution in absolute alcohol of Sudan Black B is incubated at room temperature for 48 hours; 7 cc. of this is mixed with 3 cc. of distilled water, shaken and filtered twice. A 1 per cent aqueous solution of safranin is used as the differential stain. The Sudan Black is decolourized with acetone. With 51 smears from nose and skin of lepromatous patients all were positive using the usual Ziehl stain; but all were negative with

Sudan Black, though when restained with Ziehl they all became positive. All of 10 smears from positive tubercular sputum were found positive with both Ziehl and Sudan Black. It is considered that the use of Sudan Black is a useful differential method for distinguishing between tuberculosis and leprosy.

Clinical and Immunological Results in Adult Leprosy Patients Vaccinated Orally with BCG, by **F. Contreras, J. Guillen, J. Tarabini and J. Terencio**. Rev. "Fontilles", Valencia, 1956, Jan., Vol. 4, No. 1, 33-8.

Sixteen lepromin-negative leprosy patients (15 of them of the lepromatous type) were vaccinated orally with BCG. The amount given was approximately 0.1 gm. once a week for 3 weeks, only one patient being given 0.2 gm. In none of the patients was there a change in the lepromin reaction to positive. In a group of 11 of these patients who were suffering from lepra reaction the reaction disappeared permanently except in two, in whom it became slight and fugitive. With the exception of one patient who belonged to the dimorphous group, all the patients improved in general health and wellbeing. While this improvement may be due in part to other forms of treatment, it was considered that in some cases the improvement was caused by the vaccination with BCG.

Combined Use of INH and DDS in the Treatment of Leprosy, by **Dharmendra and K. R. Chatterji**. Leprosy in India, 1956, Vol. 28, No. 1, 3-6.

In a previous article the authors reported that INH was of definite value in the first 8 to 12 weeks of treatment, but that after that there was a setback. They suggested its use in combination with sulphones. In this trial 24 patients of the lepromatous type were at first taken, but 2 were not included in the results because treatment was too short. The remaining 22 were treated from 20 to 103 weeks. The dose of INH was 50 mgm. quickly increased to 200 mgm. daily. That of DDS was 25 mgm. slowly raised to 10 mgm. daily. Toxic signs were practically nil, and at least less than with DDS alone. Of the 22 patients 6 showed marked improvement clinically and bacteriologically, 9 showed moderate improvement, and 7 slight improvement. "The combined treatment with INH and DDS appears to be more effective than with either of the drugs alone. It is possible that the addition of DDS delays the development of INH resistant strains of the leprosy bacillus."

Isoniazide in High Doses along with Streptomycin and Aminoacids in the Treatment of Leprosy, by **G. Tarabini Castellani**. Rev.

"Fontilles", Valencia, 1956, Jan., Vol. 4, No. 1, 19-31.

Two series of patients were treated: the first (of 8 patients) with isoniazid and streptomycin with the occasional addition of glutamin acid; the second series of 3 patients with isoniazid and glutamin acid throughout. Details of each patient are given. Glutamin acid was given for its detoxicating effects. Of 7 severe lepromatous cases 3 became permanently bacteriologically negative in the nasal mucosa, but only one become temporarily negative in skin examinations. One patient improved only very slightly, probably due to acquired resistance to INH. Two patients with many bacilli treated with the glutamic acid combination showed temporary improvement, but relapsed again within 60 days. It is considered that while generally speaking the best treatment is with sulphones, there are certain cases which will initially improve better on a combination of INH and streptomycin; but the improvement is only transitory unless it is followed up by sulphone treatment. The maximum daily dose of INH varied from 1,200 to 2,000 mgm.

***Trop. Dis. Bulletin, Vol. 53, No. 11, November 1956**

A Note on the Less Familiar Forms of Leprosy, by **H. W. Wade**.

Leprosy in India, 1956, April, Vol. 28, No. 2, 41-9. [30 refs.]

It is emphasised that the primary criterion of classification is clinical, the Mitsuda test and histopathology being contributory but secondary. The intermediate group is counted as those with simple flat macular lesions in the course of development. Some of these will become lepromatous, others tuberculoid. Those which take neither of these two courses but remain pale and anaesthetic should be classified as maculo-anaesthetic, whether or not they are accompanied by clinical affection of the related nerves.

Major and minor tuberculoid forms are both chronic, and the former should not be regarded as a reacting form of the latter. Two kinds of reaction are described in the tuberculoid type: *tuberculoid reactivation* where the nature of the lesions does not change in spite of the acute condition, and reactional *tuberculoid leprosy* with a relatively abrupt onset that causes marked clinical and histological changes. The border-line form occurs in a tuberculoid where there is loss of resistance for some reason or other, chiefly as the result of repeated reactions; but it is not in itself reactional. These cases are liable to be mistaken for lepro-

* Reprinted with permission.

matous, and the Mitsuda reaction may be negative; there are likely to be abundant bacilli, but the histological picture is different from that of the lepromatous type. They retain potentially some degree of resistance, but if left to themselves tend to become lepromatous. The question arises as to prognosis in cases which were formerly borderline and still retain that potential resistance.

Two kinds of lepromatous reaction are described: the ordinary acute reactivation where there are many bacilli, and the acute infiltration (pseudoe exacerbation) in which there are fewer bacilli. This latter occurs in patients under sulphone treatment, and it has been suggested that it occurs in those who had previously suffered from the borderline form but had gone on in the direction of lepromatous, and that this reaction is a sign of this process in reverse and an attempt to change latent into active resistance.

Lastly is mentioned the "spectrum" concept, that while polar cases are most common, there are between the two poles various gradations, and "intermingling and blending of the features of related varieties".

[This paper is one of considerable value, and should help to clear up various points in classification which are difficult to understand.]

In the **Archives of Leprosy**, Minas Gerais, Brazil, Oct. 1955. Dr. Diniz reports in his summary:—

The author, who for the last years has done prophylactic work against leprosy, gives a broad sketch of the situation of that disease in the State of Minas Gerais. He states that the number of patients has steadily increased from 2.25 per thousand inhabitants in 1950 to 2.71 in 1955. The index of prevalence has risen from 1.38 in 1944 to 1.95 in 1954. He also states that the infectious forms of the disease showed a percentage of 66.55, being thus higher than the percentage for the rest of the country, which is 56.5 per cent. He then alludes to the prophylactic measures adopted in the State where there are six leper asylums, housing 5,518 patients.

"In spite of the worsening situation, the author recognises the benefit of isolation as practised intensively for more than 20 years, for without it the situation would be still worse. He proposes the adoption of a new method of combating the disease, a method which he has advocated on several occasions. The specialists in leprosy, whose number is small, could work in conjunction with the specialists in medical sanitation, who in their

territory could take an appreciable part in the campaign in the following ways: education of the masses, education of communicants, sulphonic treatment, selective isolation."

On page 257 of the above Journal, Dr. José Mariano reports the use of Sulfon Cilag, which he injects intradermally into lesions using a 10 per cent solution in distilled water, and injecting as much as 5 cc.s at one sitting. This was repeated every eight days and was found to help in clearing up resistant lesions.

On Leprosy in Martinique, by E. Montestruc. Biol. Med. 1956, May-June, Vol. 45, No. 3, 247-343, 2 figs.

Leprosy was unknown in this Caribbean island till its first mention in 1751. From then on the history is traced. A systematic survey was not made till 1933. For a time patients were lodged in a leprosarium at Desirade. But this place was not at all popular and was an obstacle to gathering patients for treatment. In 1948, when Martinique, Guadeloupe and Guiana became departments of France, a more liberal policy was adopted and pavilions attached to the hospital at Fort-de-France were erected, sufficient to hold 120 patients. During the years 1934 to 1954 the annual numbers of patients registered rose from 66 to 196, making a total for these 21 years of 1,648. From 1948 to 1954 the 821 patients registered were classified as 28.3 per cent lepromatous, 15.9 per cent tuberculoid, and 55.7 per cent indeterminate. As to ages, during the longer period of 21 years, 29 per cent were under 15, and 53.1 were less than 25 when registered. As regards familial infection, out of the last hundred patients registered 51 were brothers and sisters, 18 had maternal infection and 14 paternal, 9 were avuncular, 7 were cousins, and there was 1 conjugal. It is calculated that in 1954 as many as 700 to 800 patients received ambulatory treatment in dispensaries or from private doctors. About 150 were treated in the special hospital wards. Unfortunately these beds instead of being used for short periods for patients needing temporary treatment, 50 per cent are blocked with incurables. In spite of sulphone treatment, the disease seems to be increasing rather than diminishing, largely due to patients taking treatment irregularly. This is shown by the fact that in 1954, 196 new patients were registered, of whom 45 were lepromatous, 13 tuberculoid and 122 indeterminate, a total number 3 times that of 20 years ago. The article compares the leprosy epidemic to that of poliomyelitis, only that the latter is receiving abundant attention, while leprosy is being comparatively neglected. It finishes with a programme considered indispensable for the elimination of leprosy in the years to come.

The Classification of Leprosy (an Historical Survey of the Problem with Comments on the Recent System proposed at Madrid), by **H. v. R. Mostert**.

This is a clearly written and well-illustrated article, particularly suitable for helping the general medical practitioner to recognise the abstruse divisions and subdivisions under which leprosy is classified. The historical survey traces the various nomenclatures which have been used from the time of Hansen up to the Madrid Congress in 1953. Though classification is primarily clinical, a certain amount of laboratory help is needed. Fortunately for those in outlying areas in Africa most cases are either tuberculoid or lepromatous, presenting typical lesions clinically.

Drs. Francisco Compa and Jose Fernandez write on *BCG in the Prophylaxis of Leprosy*. *Revista Argentina de Dermatosisiflogia*, Vol. 39, 1955.

The course of the disease is described in a girl and a boy who had lived with their lepromatous mother till they were respectively 4 years and 18 months of age, when they were removed to a preventorium. The lepromin reaction of both was at that time negative. To convert the reaction to positive they were given 9 intradermal injections of 0.1 c.c. of bacillary lepromin, but without result. They were then given 100 mgm. of BCG orally. Two years later the girl was free from leprosy, but the boy showed tuberculoid lesions. The lepromin reaction of both had become positive. Four years after the first examination the girl was still free from leprosy, and the lesions of the boy showed regression, though he had had no treatment. The lepromin reaction of both remained positive. The authors ascribe the favourable immunological changes in the children to the vaccination with BCG.