

## ABSTRACTS

UNGAR, J., TOMICH, E. G., PARKIN, KATHLEEN, R. and  
MUGGLETON, P. W.

Effect of Pyridoxine on the Action of Isoniazid. *Lancet*, 2, July, 1954, p. 220.

The toxic effects of isoniazid given for long periods are discussed, including "burning feet syndrome" and pellagra (suggesting vitamin deficiency), agranulocytosis, skin rashes, headache dizziness, pains in hands and feet. A record is quoted that the symptoms are not relieved by giving nicotinamide or vitamin B<sub>1</sub>. A recent report is made that neuritis occurring in 40% of patients treated with isoniazid is relieved by giving pyridoxine.

The present paper records studies in animals. High doses of isoniazid retard growth and cause involution of thymus and testes and reduce fertility. These effects in animals can be prevented by giving pyridoxine but not nicotinic acid. Pyridoxine did not interfere with the action of isoniazid on tubercle bacilli in cultures or in experimental animals.

It is suggested that patients receiving isoniazid and showing signs of drug intolerance should be given pyridoxine.

FLOCH, H. and RIVIEREZ, M.

Discussion sur le role possible de l'heredite dans la transmission de la lepre. (Discussion of the Possible Role of Heredity in the Transmission of Leprosy.) *Bull. Soc. Exot.* 1953, v. 46, No. 6, 922-5.

The case is described of a child born of a mother who had suffered from leprosy. This child developed a lesion of the left buttock on the 8th day after birth, and this gradually spread to the hip and to the back. On repeated smears and biopsy no bacilli could be found. The lesion continued till the death of the child at the age of between 2 and 3 months. The biopsy showed diffuse cellular infiltration in the superficial part of the dermis and distension of blood vessels. The question is discussed whether leprosy can be hereditary, and it is concluded that this is not possible, but that very occasionally there may be a congenital infection in the uterus.

ERNEST MUIR.

MONTESTRUC, E.

Vaste lepromme bacillifere chez un enfante de trois mois ne de parents sains. (Coexistence d'une tache monoglique.) (Extensive Bacillary-Positive Lepromatous Lesions in a Child of Three Months born of Healthy Parents). Bull. Soc. Path. Exot. 1953, v. 46, No. 6, 877-80.

At the time of examination the child was 3 months old. Leprous lesions covered about one-fifth of the body surface and numerous bacilli were found in serum taken from the lumbar region. The dermal lesions were first seen when the child was 2 months old. As far as the authors know this is the earliest age at which lepromatous leprosy has been found. As the parents were healthy it is presumed that infection was obtained from the father's sister who not only had leprosy but had nodules of the elbows rich in bacilli. When leprosy occurs in infants it has been suggested that infection takes place in the uterus, but here there is no question of this as the mother was healthy, and the danger of familial or cohabitational contagion is clearly shown. There was also a small naevus showing through the leprosy lesion, but this is not supposed to have any connection with the leprosy infection.

ERNEST MUIR.

MONTESTRUC, E.

A propos de la classification de la lepre de R. Chaussinand. (La reaction d'Hemagglutination dans les differentes formes de la lepre.) (The Classification of R. Chaussinand and the Haemagglutination Test in the Different Forms of Leprosy.) Bull. Soc. Path. Exot. 1953, v. 46, No. 6, 985-91.

This is a plea that the simple form of classification advocated by Chaussinand should have added to it the haemagglutination test results (Middlebrook and Dubos) as a means of dividing the three principal forms of leprosy. Results of a number of tests are tabulated in support of the proposition: not only were more positive results obtained in the lepromatous form, but the mean titres were very much higher.

ERNEST MUIR.

FLOCH, H. and SOHIER, R., with the technical collaboration of  
BUISSIERE.

La reaction d'hemagglutination a la tuberculine (type Middlebrook-Dubos) dans la lepre. (The Haemagglutination reaction to Tuberculin (Type Middlebrook-Dubos) in Leprosy. Bul. Soc. Path. Exot. 1953, v. 46, No. 6, 918-22.

The reaction was tested in the sera of 102 leprosy patients. In lepromatous cases positive results were higher (64.5 per cent), than in tuberculoid (25.9 per cent), and indeterminate cases (22.8 per cent). It might be convenient to study this test as additional biological evidence in the diagnosis and prognosis of leprosy.

ERNEST MUIR.

## MARKIANOS, J.

Action eventuelle de l'injection de lepromine sur l'apparition de la lèpre et sensibilité tardive à cet antigène provoquée par la vaccination au B.C.G. (Eventual Effect of Lepromin Injection on the Appearance of Leprosy and Delayed Sensitivity to this Antigen Provoked by B.C.G. Vaccination.) Bull. Soc. Path. Exot. 1954, v. 47, No. 1, 30-32.

The following is a translation of the author's summary:—

Leprosy became manifest 21 days after injection of lepromin in a child having a negative Mitsuda reaction, who had been separated from leprous parents for 22 months. The question is posed whether the injection of this antigen had favoured the appearance of a previously latent infection. Later, B.C.G. vaccination resulted in a positive Mitsuda reaction 194 days after this single injection of lepromin.

H. J. O'D. BURKE-GAFFNEY.

## BLANC, M., PROST, MARIE T. and MARIE-SUZANNE (Soeur).

Influence de l'injection d'une suspension d'un mycobactérium isolé d'un cas de lèpre (souche Chauviré) sur la réaction de Mitsuda. (The influence of the Injection of a Suspension of the Mycobacterium Isolated from a Case of Leprosy (Chauviré Strain) on the Mitsuda Reaction.) Bull. Soc. Path. Exot. 1953, v. 46, No. 6, 1009-14.

This is a suspension in normal saline of a mycobacterium isolated from a leprous patient, cultivated in Sauton's medium, and killed by heating to 120° C. This antigen is not the mycobacterium of leprosy as it gives a positive reaction when injected intradermally into cases of leprosy of the lepromatous type. It is claimed that of 339 subjects studied, 240 (70.8 per cent) had a negative Mitsuda reaction, that after injection of this antigen in these 240 subjects 155 (64.5 per cent) became Mitsuda-positive, and that of the lepromatous cases (it does not say how many or their general condition) 50.8 per cent. became Mitsuda-positive.

ERNEST MUIR.

## LAVIRON, P., LAURET, L. and JARDIN, C.

Treatment de la lèpre par les injections hebdomadaires de suspensions de T.B.I. (Note préliminaire.) (Treatment of Leprosy with Weekly Injections of T.B.I. Suspensions.) Bull. Soc. Path. Exot. 1953, v. 46, No. 6, 886-9.

The suspension consists of 60 gm. of crystallized T.B.I. in 460 c.c. of a mixture of equal parts of neutral chaulmoogra oil and chaulmoogra ethyl esters with 4 per cent of guaiacol. Of this the patients received 5 c.c. weekly, equal to 600 mgm. of T.B.I. The

trial had only lasted from 3 to 5 months, but already 70 per cent have shown amelioration. It is hoped by further trials to study the absorption and work out the dosage. In the 25 patients already treated there were no adverse signs apart from slight local pain and occasional slight reactions.

ERNEST MUIR.

LAVIRON, P., LAURET, L. and SCHNEIDER, J.

*Etude de l'activite antilepreuse des thiosemicarbazones.* (Study of the Antileprous Activity of the Thiosemicarbazones.) *Bull. Soc. Path. Exot.* 1953, v. 46, No. 6, 880-85.

In addition to T.B.I the authors tried out 3 other allied derivatives (4544, 4545 and 4546 R.P.); in none of these 3 were the results encouraging or comparable to those obtained with T.B.I. With the last (T.B.I) 38 patients were treated. Of 32 lepromatous cases, 20 showed much improvement after periods varying from 12 to 38 months' treatment, and 9 showed less improvement. Of 3 tuberculoid cases 2 showed considerable improvement, and of 3 undifferentiated 2 showed much improvement. The authors consider that clinical improvement with T.B.I is equal to that with sulphones, but that the bacteriological action is less marked. T.B.I may be used as a complement to, or a substitute for, sulphones, but it should only be used under hospital conditions or for individual medication.

ERNEST MUIR.

CHAUSSINAND, R., GABBAI, A., DORENLOT, H. and VIETTE, M.

*Action de l'hydrazide de l'acide Isonicotinique sur la maladie de Hansen.* (The Action of Isoniazid in Leprosy.) *Bull. Soc. Path. Exot.* 1953, v. 46, No. 6, 905-10.

After treating 44 patients, 31 of whom were lepromatous, for periods varying from 3 to 12 months with isoniazid alone or in association with D.D.S., the authors found that isoniazid was well tolerated in daily doses up to 7 mgm. per kgm. of body weight. There were cutaneous improvements in 13 lepromatous and 1 indeterminate, but there was aggravation of nerve symptoms in some of the tuberculoid cases. Isoniazid is better tolerated but less effective than the sulphones. It cannot be recommended by itself, but may be used with profit along with the sulphones, and more trials should be made of this combination.

ERNEST MUIR.

LAVIRON, P. and LAURET, L.,

Essais de traitement de la lèpre par l'hydrazide de l'acide isonicotinique (I.N.H.) seul ou associé à la diamino-diphenylsulfone (D.D.S.) et à la streptomycine. (Treatment Trial of Leprosy with Isoniazid either alone or in Combination with Dapsone (D.D.S.) or Streptomycin.) Bull. Soc. Path. Exot. 1953, v. 46, No. 6, 896-9.

Under the different categories 18, 9, 10 and 10 patients were treated for 5 months, the daily dose of isoniazid rising to as much as 500 mgm. The only improvement was an increase of weight which occurred in 80 per cent of the patients. The only patients who improved as regards the disease of leprosy were those who were getting small amounts of D.D.S.

ERNEST MUIR.

FLOCH, H.

Interet du benzal-isonicotyl-hydrazone-meta-sulphonique en therapeutique antilepreuse. (The Use of Isonicotyl Hydrazone of Metasulphobenzaldehyde in Treatment of Leprosy.) Bull. Soc. Path. Exot. 1954, v. 47, No. 1, 21-5.

The author has already reported on his results with isoniazid. Since then he has treated for 10 months 18 patients, 8 of whom were lepromatous, with the sodium salt of isonicotyl hydrazone of metasulphobenzaldehyde (G.605). With one exception they all benefited, 2 improved very much and 4 became bacteriologically negative. In the author's opinion the risk of drug resistance to G.605 is similar to that with isoniazid, but the former is active and can be used with profit in association with sulphones in the treatment of leprosy. The average supported dose was 3 gm. daily. For details of actual cases, the original should be consulted.

ERNEST MUIR.

FLOCH, H.

Les hydrazides dérivés de l'acide isonicotinique. Leur essai (notamment celui du benzal isonicotyl-hydrazone metasulfonique) en therapeutique antilepreuse. (The Hydrazides Derived from Isonicotinic Acid, their Trial in the Treatment of Leprosy, especially that of Isonicotyl Hydrazone of Metasulphobenzaldehyde.) Arch. Inst. Pasteur de la Guyane et du Territoire de l'Inini. Publication No. 308, 1953, Dec., 10 pp.

As the consensus of opinion is that isoniazid is of little use in the treatment of leprosy, the author considered certain other kindred substances and chose from among them the sodium salt of isonicotyl hydrazone of metasulphobenzaldehyde (G.605). He found that patients tolerated this drug in about 10 times the dose of isoniazid and that the results were much more favourable. For

adults the most suitable daily amount was 3 gm., larger doses producing gastric disturbances. In 6 lepromatous cases there was bacteriological as well as clinical improvement. A borderline case became bacteriologically negative after 6 months' treatment. As there is a danger of bacilli becoming drug-resistant, the author prefers to use G.605 in combination with sulphones.

ERNEST MUIR.

CHAUSSINAND, R., COLIEZ, R., LEFEBVRE, J. LOISEAU, A. N. and VIETTE, M.

Essai de traitement des griffes cubitales dans la maladie de Hansen par les ultra-sons. (Trials of Treatment of Ulnar Deformity in Leprosy by means of Ultra-Sonic Waves.) Bull. Soc. Path. Exot. 1953, v. 46, No. 6, 899-904.

A quartz electric generator of a frequency of 1 megacycle was used, and the terminal was applied along the course of the ulnar nerve for 8 to 10 cm. above and below the elbow, being the part where the nerve is most superficial. In 2 out of 3 patients with marked claw-hand there was marked improvement, which occurred during the time of the application. The authors suggest that this method should be used on a larger scale.

ERNEST MUIR.

MURAZ.

Note preliminaire sure une organisation rationnelle, en Afrique Equatoriale Francaise de la lutte contre la lepre. (Preliminary Note on a Rational Organisation for the Fight against Leprosy in French Equatorial Africa.) Bull. Ecad. Nat. Med. 1954, v. 138, Nos. 9/10, 155-9.

From recent surveys it is calculated that there are in the French West African territories of Oubangui-Chari, Tchad, Middle Congo and Gabon no fewer than 56,670 sufferers from leprosy. In one district of 14,858 inhabitants, more than 10 per cent suffer from leprosy. At the end of 1953 only about one-fifth of the known cases were under treatment. The scheme proposed is to form villages for leprosy patients, some 78 of these for the whole Federation. Treatment would be given in the form of injections of sulphone (D.D.S.) suspended in chaulmoogra esters twice a month. There would be a large staff of doctors and assistants and, at first, selected treatment centres. Transport would be furnished by 15 motor vehicles and 62 bicycles. In the leprosy villages there would be mass oral vaccination with B.C.G., if its value is confirmed, and arrangements would be made for improved agriculture, horticulture, etc. They would be arranged in a manner similar to the

villages already in existence for the prophylaxis of sleeping sickness. (The author originally advocated such measures nearly 3 years ago.)

ERNEST MUIR.

HOBBY, GLADYS L., HANKS, J. H., DONIKIAN, MARY A. and  
BACKERMAN, T.

An Evaluation of Chemotherapeutic Agents in the Control of Experimental Infections due to mycobacterium leprae murium. Amer. Rev. Tuberculosis, 1954, Feb., v. 69, No. 2, 173-91, 9 figs. (13 refs.).

This paper describes a laboratory method which may serve to determine the efficacy of drugs in the treatment of leprosy, although the authors acknowledge that argument from murine leprosy to human may not entirely apply and that in any case clinical confirmation is necessary. Mice were inoculated intraperitoneally with a suspension of rat testis infected with the Hawaiian strain of Myco. leprae murium. The spleens from mice killed at intervals were homogenized by an elaborate process and acid-fast bacilli counted in films made by a quantitative method. Various control experiments showed that successive counts made in this way were reproducible and reflected accurately the progress of the disease. Therapeutic tests on this basis showed that isoniazid and a chemical isoniazid-streptomycin combination (streptomycylidene isonicotinyl hydrazide) were the most effective drugs, streptomycin and viomycin being next most effective and more so than Promin. Oxytetracycline (terramycin), actithiazic acid, amithiozone, carbomycin and D.D.S. (dapsone) were ineffective. It is pointed out that clinical evidence of the efficacy of some of these drugs is unsatisfactory or contradictory and implied that further clinical trials based on laboratory evidence such as that described in this paper should be instituted.

L. P. GARROD.

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