Lepr Rev (1981) **52**, 197–200

Abstracts

3. **Sociological Studies on Leprosy from the University of Barcelona.** Dr Alicia Kaufmann of the University of Barcelona, Facultad de Ciencias Economicas y Empresiarles, Departmento de Sociologia, Spain, has kindly drawn attention to two publications which may not have received adequate circulation:

1. 'Study of the Perception of Health in General and Leprosy in Particular in Buenos Aires (Argentine Republic) by Alicia Kaufmann (sociologist), Maria Baliña (psychologist) and Luis M. Baliña (doctor).

This was published in *Revista de Leprologia de Fontilles*, September–December, 1975, Vol. X, No. 3, and is an interesting contribution to the sociology of this disease. The objectives were to determine (1) the degree of knowledge the community had about illness in general and (2) the specific knowledge the community had about leprosy.

2. 'The Leprosy Patient and His Integration into Society: Some Psycho-social Aspects of the Problem', by Alicia Kaufmann and Carmen Sotorrio.

This was published in *Boletin de estudios y documentacion del SEREM*, No. 13, April 1979, Madrid. This paper includes a review of the pattern and extent of leprosy in Spain.

For those who do not have access to these publications, it may be possible to obtain typescripts from Dr Kaufmann at the above address, and one set is available from the Editorial Office in Oxford.

4. MILLAN J **Leprosy control in Guadeloupe.** 1980 *Médecine Tropicale* **40** (4), 433–8, 441–5.

Part I. The special features of leprosy control in the West Indian islands collectively called Guadeloupe is that the medical personnel responsible for the organization are microbiologists with epidemiological leanings.

When the individual leprosy sufferer has been diagnosed (apparently after self-presentation – the precise mode is not indicated), he is provided with a record card containing all relevant social and medical information, including the report of the slit-smear examination, nasal mucus, biopsy and lepromin test. He may choose to be treated either at the Pasteur Institute or at a dispensary or hospital.

The diagnosing doctor notifies the administration (without revealing the patient's identity if the latter so desires), and close watch is kept on the developing epidemiological situation as disclosed by the accumulated notifications. Regular examination of contacts is instituted, and social security grants are made where necessary. Close liaison is maintained with a hospital in Paris when immigrants from Guadeloupe suffering from leprosy seek employment in metropolitan France.

Certain tensions are apparent between doctors in private practice and those in charge of the leprosy control programme, but on the whole co-operation is satisfactory, providing as it does for a reliable laboratory service and expert advice on treatment and contact examination, and the resources of the social services.

0305–7518/81/052197 + 04 $01.00

Part II. In view of the threat of widespread sulphone resistance consequent on prolonged monotherapy with dapsone, since 1975 multi-drug therapy for multibacillary forms of leprosy has been advocated. The two aims of the programme, based on the treatment of tuberculosis, have been the rapid reduction of infectivity and ambulatory treatment wherever possible.

The details of treatment follow accepted patterns; for tuberculoid and near-tuberculoid leprosy, monotherapy with dapsone for a period of 5 years is advised; for multi-bacillary leprosy, a multi-drug regimen consisting of rifampicin and dapsone (and frequently, ethionamide as well) is followed for 2 years, and then dapsone is continued for life.

In cases of clinically suspected sulphone resistance, dapsone is replaced by clofazimine; but dapsone is reintroduced sometimes subsequently if clofazimine proves unacceptable for some reason. (The reasoning for this unusual recommendation is not given.)

Corticosteroids are prescribed (a) at the beginning of treatment of patients with tuberculoid leprosy where nerve damage is already present; and (b) in patients developing mild forms of reaction. Reversal reactions, very common in all forms of borderline leprosy, are treated with clofazimine.

Admission to hospital is allowed for certain categories of patients, and surgery of peripheral nerves is practised where indicated.

Domiciliary treatment is controlled by a nurse who gives a month's supply of tablets to individual patients. She is responsible for the early diagnosis of the reactional state.

Overall supervision is provided by the anti-leprosy service, which is responsible for the 6-monthly examination of all patients. After a suitable period of treatment, patients are placed in the category 'under observation without treatment' for 2 years, a period that may be lengthened in cases of nerve damage or its sequelae.

An epidemiological enquiry is instituted after notification, so that any antecedent details of interest and particulars of household contacts may be elicited and followed up by regular examination.

As a rule, chimioprophylaxis is not advocated, nor is lepromin testing done on contacts.

S G Browne

5. NEGASSI K, CLOSS O, HARBOE M. (1979) **Cross-reactions between serum proteins and water soluble liver tissue antigens of the nine-banded armadillo (*Dasypus novemcinctus Linn*) and man.** *Clin exp Immunology* **38**, 135–47.

This elegant paper demonstrates by crossed immunoelectrophoresis (CIE) that there are at least 12 antigenic determinants in common between liver tissue of the nine-banded armadillo and human serum proteins. Nine of the cross-reacting substances were identified by modifications of the method using monospecific rabbit antisera for human serum proteins. In addition, by a modification of CIE to show separation of cathodic moities the authors demonstrated 12 cross-reacting substances between human and armadillo liver homogenates.

The authors also mention their previously unpublished observation of the presence of armadillo antigen in *Mycobacterium leprae* preparations from several sources. They review the experimental evidence for breakdown of tolerance to self antigens and suggest that the microgram quantities of armadillo antigen that might contaminate the 'dirtiest' preparations that have been used for skin testing in man are within the danger limits. Finally, the authors suggest that a form of CIE could be adapted for monitoring *M. leprae* preparations for contamination with armadillo antigen and that such preparations should meet certain standards before they are used.

That there should be common antigens shared between armadillos and humans is hardly surprising. After all, we are only animals within the same class and separated by only a few tens of millions of years; nothing in evolutionary terms. Neither is it conceivable that there are so many different antigenic determinants that a few of

the thousands expressed by any one mammalian species should not be shared by another. Thus the findings of Negassi and his colleagues were to be expected.

The warning given in the final paragraph of their discussion should not be taken too lightly. After all, it is probable that armadillo protein bound to the cell wall of mycobacteria harvested from the tissues of armadillo may be exceptionally immunogenic. (This was shown to be the case for bovine serum albumin or egg albumin readily coated onto BCG by Crum and McGregor, 1976.) In view of this, repeated use of armadillo-grown *M. leprae* products in an individual would be unwise and there can be little doubt that the number of bacilli included in any would-be vaccine should be kept to a minimum. One must be wary of accepting that many doses of armadillo lepromin have been given with complete safety. Autoimmune sequelae could ensue months after the injection and, in underdeveloped parts of the world at least, such complications or even deaths might not be related to a past skin test.

J L Stanford

6. MILLAN J (1980) Le dépistage de la lépre dans un secteur de la Guadéloupe [French West Indies]. **[Leprosy case-finding in an area in Guadeloupe.]** *Médecine Tropicale,* **40**, 161–8.

This article, summarizing as it does the results of case-finding activities in a delimited area of Guadeloupe (French West Indies) over a period of six years (1973–79), not only provides precise figures of cases of leprosy detected, but also gives indications of wider application. While the anti-leprosy service has remained the lynchpin of case-seeking and case-finding during the period under review, the number of practising doctors has increased from 190 to 307, two-thirds of the latter being general practitioners.

The most productive methods of case detection are the systematic and regular screening of the entire population of school-children every 2 years by a competent team accustomed to rapid examination of the entire exposed skin. The organization of the visits of the team is accepted by staff and children, and apparently causes minimal disruption. Such active case-finding reveals early leprosy and thus is of importance in forestalling infections among contacts as well as instituting treatment before nerve damage has occurred. On the other hand, the 'passive' detection by practitioners reveals an established deformity rate of 12.8% among those diagnosed after self-presentation.

Of the 275 cases detected during the period under review, 113 were found among school-children; 40 of the 275 were domestic infections – a figure indicating the importance of regular examination of contacts of known cases, and the high effectiveness of the examination of this group. A disquieting feature of the survey is the unchanged level of patients detected with multibacillary forms of leprosy, despite the notable reduction by four-fifths of the total number of patients diagnosed during the 6 years.

The author sees in the statistics he quotes a justification for the preservation of a leprosy case-finding service as providing a real contribution to leprosy control and a source of continuing education for doctors who rarely see (or recognize) cases of leprosy occurring in their practice.

S G Browne

7. BOVET JL (1980) Traintement chirurgical de la paralysie faciale chez le lépreux en Iran. **[Surgical treatment of facial paralysis in leprosy sufferers in Iran.]** *Médecine Tropicale* **40**, 185–8.

The high incidence of facial nerve damage in Iran (12%) suggests that the preparalytic stage of leprosy is undetected and untreated.

The author gives an account of the main surgical procedures adopted to remedy the results of facial nerve damage, emphasizing the frequency of unilateral upper facial palsy accompanied by sensory loss

consequent on concomitant damage to the ophthalmic division of the trigeminal nerve. The overriding aim of surgical intervention is to prevent blindness from exposure keratitis.

He favours temporalis transfer as giving good results in the hands of visiting surgical teams from France, Switzerland and India, and has reservations about the usefulness of the silicon thread insertion technique.

Unfortunately the author does not present a critical follow-up of the results obtained, nor does he indicate the place of physiotherapy and re-education in the prevention of recurrence of the condition that surgery may claim to relieve. The questionable long-term results of the surgical treatment of the sad cosmetic and functional aftermath of upper and lower facial palsy, emphasize the importance of vigorous case-finding and adequate treatment of all cases of leprosy, particularly those in which the facial nerve is at risk, from neighbouring tuberculoid lesions, acute inflammation or exposure to severe cold.

S G Browne

8. **Skin Biopsy.** *The British Medical Journal*, 24 and 31 May 1980; sections 1 and 2.

Dr Allan Highet and Dr Robert Champion from the Department of Dermatology in Addenbrooke's Hospital, Cambridge, UK have contributed two most valuable sections on skin biopsy to the *BMJ* under the heading 'Procedures in Practice'. The first deals with local anaesthesia, the excision of the biopsy by scalpel and punch, and other techniques which may be used in dermatology – curettage, epidermal (shave) biopsy, needle biopsy and skin surface biopsy. The second describes the choice of lesion, body site and the orientation of the incision. There is an important warning about the dangers of using vasoconstrictors (adrenaline or felypressin) in the local anaesthetic in the fingers, toes, ears or penis – where intense vasospasm may result in tissue necrosis. Full details are given, under fixation, for material which is to be examined by immunofluorescence. The authors conclude with a plea for the submission of adequate clinical information, a diagram of the body site from which the biopsy was taken, and correct labelling. Both sections are well illustrated.

A C McDougall