EDITORIAL

We have considered it expedient to publish a somewhat larger number of the Review by combining the July and October numbers. The difficulties of printing and of collecting articles from many different countries is appreciated by Editors of technical journals, and therefore the necessity for this decision will be understood. The Editor is most grateful for the response which has come for articles, but more material is needed if the Review is to maintain a standard of efficiency which will make it of value, especially to the leprosy worker who is away from centres of research, and is unable to seek the advice of the more experienced leprologist.

One of the main reasons for publishing in one issue both the July and October numbers is the necessity for a considerable amount of travelling abroad by the Editor, as Medical Secretary of the Association. He will shortly be making a tour of East Africa, visiting the Sudan, Uganda, Kenya, Tanganyika, Nyasaland and N. Rhodesia. One of the main objects of this visit is to examine the possibility of a Leprosy Research Unit in the High Commission's Territories, and to choose, in consultation with the Inter-Territorial Leprologist, a site for an institution which could be developed into a research and training centre for East Africa. We therefore publish in this number of the Review an outline of the proposed research scheme. It is accepted that the most practical lines of research are those of Epidemiology, Immunology and Therapy. We feel, however, if leprosy is to be understood adequately, that more detailed research is necessary along the lines of Histopathology and Bacteriology. In any case it is our opinion that a true assessment of the sulphone drugs and new chemotherapeutic and antibiotic agents cannot be undertaken without a study of biopsy material taken at regular intervals from patients under treatment.

It is natural that much of the work on leprosy is concentrated on sulphone therapy, and an increasing number of articles from workers using these remedies over a period of years are being published. We therefore offer no apology for once again devoting a large section of this Review to such articles. Lowe has previously stated that diamino-diphenyl-sulphone (DDS) was excreted in significant amounts in the milk of nursing mothers, and therefore the article by Dr. Dreisbach, of Kano, N. Nigeria, is of particular interest. It has been the universal experience of all workers that

children separated from infective parents at birth, or very shortly after, seldom, if ever, contract leprosy. Nevertheless, it is reassuring to have further evidence that probably a measurable concentration of sulphones (both sulphetrone and the parent sulphone) is present in the tissues of babies on the breast, to give such infants some protection. With this additional precaution one can recommend that babies born of mothers with leprosy should not be weaned, but should be separated from the mother except when the child is put to the breast. A garment preventing contact of the baby with the parent's body should be worn by the mother, and only the nipple should be exposed. With adequate sulphone therapy there appears to be no reason why mothers should not be permitted to feed their infants.

An interesting point arises in Dr. Dreisbach's article, when he states that " It is our opinion, and it has been *adequately substantiated* (italics ours) we feel by epidemiological studies, that all active cases of leprosy are infectious." This raises the question of the infectivity of the case in which acid-fast organisms cannot be found by standard methods of examination. With the newer techniques of staining for acid-fast bacilli in the tissues, and the concentration method described by Dr. Khanolkar in this issue, it cannot be denied that M. leprae can be found in all active cases. Nevertheless to state that such cases constitute a public health danger seems, on all evidence available, rather an exaggeration.

We believe that if careful search could be made, and this is often impossible, for the latent period of leprosy is so long, that in all cases the open contact would be discovered. Further, it is probable that open cases visiting houses for a few nights would constitute a far greater danger to the household than a closed case living in the same house. In one instance it took fifteen years to trace an open contact of a closed case isolated in a leprosy hospital in India, and the lepromatous contact was discovered in this country! We would therefore urge great caution before too much stress is laid on the possible infectivity of the closed case, for all schemes so far devised in which the open case has been adequately isolated point to this measure as being effective in the control of the disease. Evidence of this statement we hope to produce in a future issue of this Review.

The article by Dr. Garrett and Dr. Corcos gives further evidence that unless very carefully administered, even in the small dosages advocated, serious toxic results may be occasionally encountered on giving the mother-sulphone. We draw our readers' attention to

their article, and would remind them that in areas where the lepromatous rate is high (30-40%) these toxic accidents are liable to be somewhat greater. It is a logical argument to state that a minimum of toxicity is a price worth paying for DDS, but it must be admitted that toxic signs do occur, and occasionally these are of a serious nature. No adequate comparison of an equivalent number of cases on DDS and on aqueous sulphetrone has yet been published, but as far as we know the latter remedy has never shown serious hepatitis, renal damage or psychosis, and there is at least an alternative to oral Dapsone. Admittedly this substance has to be given by injection and is somewhat more expensive than the parent sulphone. The present annual cost of aqueous sulphetrone, at 3 gms. a week, is 14/6d.; at 2 gms. a week, which appears to be an effective dose, it is 9/6d., as compared with 11/- with Dapsone on a dose of 800 mgm. per week.

Dr. Lowe's article on Agranulocytosis during the administration of Thiasemicarbazone is a salutary reminder that modern chemotherapeutic remedies have their dangers as well as their advantages. It would be well for those administering thiosemicarbazones to be watchful for these complications. Our opinion with regard to sulphone therapy has now been fairly well formed. For convenience and cheapness DDS (Dapsone) is the choice, but it is not free from toxic signs, some of which are serious and possibly fatal. In mass therapy, where there are dangers of over-dosages due to misuse of the drug, or when therapy cannot adequately be controlled, we believe it is safer to administer aqueous sulphetrone (50% solution) parenterally. In cases of toxicity due to DDS, thiosemicarbazone does not seem to be a wise alternative because there is evidence that it too is a hepatic poison. We again believe in such instances parenteral sulphetrone is the alternative, unless the newer remedies, such as isonicotinic acid hydrazide, prove to be effective—there is no adequate clinical evidence of this as yet.

Dr. Wheate's article on leprosy control raises many points and it will be of great interest to follow the work in East Africa, for here again is an area where control of leprosy on a wide scale seems possible. We welcome particularly Dr. Wheate's emphasis on the need for preventive measures, for we feel that without adequate emphasis on the need for prevention, our new and powerful therapeutic weapons will have much less chance of success. This point is well illustrated in the Eastern Province of Nigeria where largely as a result of clan segregation centres set up by Dr. Davey nearly twenty years ago, leprosy as a serious endemic disease has ceased to exist. It should be mentioned in this connection that sulphones

were introduced on a wide scale only a couple of years ago, and therefore are only responsible for a more rapid decline of the curve of incidence. Without sulphones leprosy it is believed would have been controlled in this area. With sulphones confidence has been established, and the day when leprosy is no longer a public health problem has been measurably hastened.

The article by Dr. H. Paul on the negative rate in persons treated with sulphone therapy over a period of 4 years, suggests that in Madras, with all forms of treatment, the number of negative cases is approximately 40%. The work of Khanolkar on examination of tissues for acid-fast bacilli, both in section and by special concentration methods, described in this number, raises the question as to whether a person can be completely freed from all organisms. If in addition credence is given to the work of the Swedish bacteriologists, Reenstierna and Hallberg, then the possibility that the M.leprae may revert in the tissues to a relatively virulent non-acid fast fungus form, must be seriously considered. In passing, it may be of interest to mention that these workers detected such forms in a nerve in which there were only the remnants of a few acid-fast granules. The case had been negative for two years and had been given sulphone therapy. All these questions raise research problems of the greatest interest. We are aware that negative rates of 90% have been recorded elsewhere over a six-year period, but there are so many factors, e.g. severity of type, race of the patients, methods of assessing negativity etc., that it is difficult to make a comparison between workers in different countries investigating remedies under vastly different conditions. While we firmly believe that in a period of six years the great majority of lepromatous cases should become negative under standard methods of examination, we must not lightly pass over the possibility of degenerate and other forms of M.leprae remaining in the tissues, from whence a recrudescence of the disease may arise later. Hope there is, great hope, for those who suffer, but this hope must be tempered by reasonable caution, lest the victory so near approaching proves to be a pyrrhic one.

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