

Leprosy in India and Ceylon.

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THE readers of the REVIEW might be interested in a brief account of the tour which was recently made, and in the conclusions which were come to, with regard to the present situation in the above countries.

It was most interesting to the writer personally to revisit India and to see something of the changed attitude towards leprosy. In the first place, the initial reaction to the policy of enlightenment which has been pursued satisfactorily by the Indian Council of the British Empire Leprosy Relief Association, has been apparently to make the problem more acute. The leprosy colonies, especially in Bengal, Bihar and the Central Provinces, are more than full, and one is astonished at the number of sufferers who have to be turned away. It is now being revealed that the number of those infected with leprosy is more numerous than ever. Both in this journal and elsewhere the question whether these are active and new infections, or whether many of them are inactive and old infections, which owing to better methods of diagnosis have been revealed, will be discussed.

Perhaps the best method of helping readers of the REVIEW to grasp the present situation would be first to deal with personal work attempted at the places visited in India, and then deal more particularly with the situation in Ceylon.

WORK AT PURULIA.

The first station which was visited was Purulia, where I had the privilege of working for three months. There is not space to enter into a description of the improvements in this excellent institution of the Mission to Lepers since I was last there; sufficient is it to state that it can now be considered in the first rank of leprosy institutions. As a result of the improvements, surgical and medical, conditions could be dealt with in a manner which hitherto was impossible. I think one may definitely say that we established the fact that it is possible to enucleate two or sometimes three metatarsal bones and still preserve an efficient foot. In order then to help readers, it might be well very briefly to describe the conditions which necessitate such an operation, and the operative technique, and after care.

In the first place, I think it may be taken as an axiom that whenever there is a long standing trophic ulcer on the foot, the trouble probably lies with the metatarsal bones.

It is unwise unless urgent to operate on a metatarsal bone where there is any suspicion of acute sepsis. The best type is the individual who has a long standing ulcer indurated and with a considerable amount of heaped up cornified tissue. Frequently there is an adherent scab, but when this is taken off, not infrequently a small sinus is detected leading down to necrotic bone. The general tendency is to be cautious, but in most cases bold surgery pays in the long run. Wherever there is a doubt about the soundness of a metatarsal bone it is wise to open up the ulcer and to explore, and if the metatarsal is found necrotic, to remove it.

There are one or two general principles which need to be laid down :—

- (a) As far as possible clear up the operating area of any acute sepsis.
- (b) Never approach the metatarsal from the sole of the foot, always make the incision in the dorsal aspect.
- (c) Make a large enough incision in order to work properly, but define the proximal joint before endeavouring to separate the bone.
- (d) Separate the bone from above and work downwards.
- (e) Try to avoid any injury to the articular surface of the cuneiform and cuboid bones.

Some workers state that the first metatarsal should never be removed, but as a result of many operations on metatarsal bones, I feel that if there is definite evidence of necrosis there need be no hesitation in removing the first metatarsal. In fact, in one patient who had bandages on his foot for years, I removed the first and second metatarsal bones, and as a result a firm scar was produced with no evidence of breakdown, and the patient has had now no further trouble, and has a very useful foot.

Another controversial subject is whether the resulting wound should be sutured or not. The points in favour of suturing are :—

- (1) It is a neater operation.
- (2) The wound heals very much more quickly.
- (3) Sloughs may not form so readily as there is a chance of healing by first intention.

Against these are the following points :—

- (1) The operation area is almost impossible to sterilise completely and therefore sepsis is liable to take place, and stitches have to be removed.
- (2) By allowing the wound to heal by granulation, the resultant scar is much stronger and, therefore, the wound is less liable to break down.
- (3) There is a great deal of unavoidable trauma to the tissue and, therefore, it is doubtful whether it is good surgery to suture a wound, the base of which is liable to slough.

My own practice is not to suture, although if the foot is clean and the tissue healthy, I may alter this practice and close the wound by a few deep mattress sutures. If the incision has had to be made longer than usual to expose the articular surfaces of the cuneiforms or cuboid, then it is wise to put in a few sutures at the bottom of the wound in order accurately to appose the skin surfaces and lessen the danger of trauma to these articular surfaces, and so guard against necrosis.

A general rule is, that if an articular surface is damaged inadvertently, then the head of the bone immediately proximal should be removed, *e.g.*, if the articular surface of a metatarsal is damaged in removing a phalanx, then the head of the bone should be removed.

With regard to the type of dressing, we hope to publish an article by those working on this in a later number of the REVIEW, but generally speaking, the best dressing in uncomplicated cases we find to be 1 : 1,000 acriflavine. If there is much slough then four-hourly eusol gauze packs are inserted, taking care not to make them too "soppy." A few days with these usually produces healthy granulation tissue. Occasionally, if the wound does not respond to acriflavine, we find mercurochrome will stimulate granulation tissue formation.

Another operation which we hope to discuss at a later date, which we found relieved the distressing epiphora resulting from lagophthalmus due to the paralysis of the seventh nerve, is that of lateral tarsorrhaphy. The *raison d'être* of this operation is a shortening of the lids and a partial closing of the lid margin so as to protect the cornea and prevent tears from running down the cheeks; the operation is very simple and seems to be most worth while.

In view of the fact that the reticulo-endothelial system is the one which endeavours to cope with the invasion of bacilli, Dr. Ryles and Dr. Ryrie simultaneously bethought themselves of using the aniline dyes in the treatment of leprosy, because it is these dyes which are taken up by the endothelial cells. As a result of the work of Dr. Ryles we tried out intradermal injections of Brilliant Green over a period of four months at Purulia. The detailed results of these experiments will be published at a later date, but we found that intradermally the drug had little effect on the bacilli, though there was an apparent improvement in some cases in the clinical condition. Experiments are at present being made in connection with Bonny's Blue, but it is too soon to make any statement.

MODERN DEVELOPMENTS AS A RESULT OF ADVANCES
IN TREATMENT.

One of the chief results of the new outlook in leprosy is the increasing number of early lesions coming to our notice. As a result of this, the clinical aspect of leprosy is becoming more complicated than was hitherto realised. There are still many aspects of the disease which are little understood, but the impression that leprosy is just pathogenic to man seems to be confirmed, and the organism seems to find considerable difficulty in gaining a footing. Probably a great deal of disturbance to normal health is necessary before this takes place.

While the disease is closely analogous to tuberculosis in many of its aspects, the organism seems to act as a parasite and form a symbiosis of an almost perfect nature. This is illustrated by the type of case not infrequently seen where there is little clinical evidence, yet on examination innumerable bacilli are found wherever a scraping is taken. In such cases a balance seems to be set up between the body and the organism in such a way that the bacillus can still live and multiply and yet cause little or no damage to the host. There seems little evidence of the production of toxins, and the reaction to the organism by the body seems to be a reaction to a foreign body rather than to a toxin producing organism.

The hypothesis that leprosy is usually acquired in childhood or early adolescence is being more generally accepted. I personally believe that a large proportion of cases become infected during these periods, and further I feel certain that, as in tuberculosis, so in leprosy, there are many abortive types. I am of the opinion that once adult life is reached the chances of acquiring the disease are greatly diminished, and if there have only been slight evidences of a leprotic infection which have remained inactive during the periods of stress and strain, the chances of these becoming lit up are slight.

While in India the writer had the privilege of attending the All India Leprosy Conference held in Calcutta in March. It is impossible to analyse the findings of this Conference in detail, but the impression gained by attending it was that a new era of leprosy work has opened out. The preventive aspect of the problem is coming into its rightful place, and the initial enthusiasm with regard to treatment is being replaced by an altogether more reasoned outlook.

It is inevitable when some fresh start is made on an age-long scourge, that there should be an initial somewhat excessive optimism, for if it were not for the ideals and optimism of pioneer workers, few far reaching discoveries would be made. Further, as a result of the new treatment we have attained a bird's eye view of the disease which it would have been impossible to obtain otherwise. We are, however, realising that there is a limit to treatment and that the abortive case does exist, hence the importance of an efficient organisation of preventive units. What I do feel, however, that the Conference did not stress sufficiently, was that the increase in leprosy was not necessarily a real increase, but only an apparent one, and that the actual incidence of the disease does not matter, but it is whether there is evidence for spread. The leprosy problem is too vast to cope with as a whole, and therefore, it is essential that further data should be accumulated, so that Public Health authorities should know where to concentrate on active anti-leprosy measures. While special treatment centres perform a useful service, they may not be helping towards the control of the disease, unless they are attached to a proper preventive unit and are in touch with an institution. The memorandum on a model clinic, which has been prepared by the School of Tropical Medicine, Calcutta, in pursuance of Resolution III, can be obtained on application.

It is very encouraging to note that the pendulum is swinging towards the preventive side and that the claim that leprosy can be prevented by treatment alone is being modified. Once the following points are grasped then the dawn of the day when this scourge will be controlled will be brought nearer :—

- (a) Leprosy is a preventable disease ;
- (b) That all cases do not necessarily need treatment—this applies to early as well as late cases ;
- (c) That treatment cannot bring certain cases to a stage of non-infectivity ;
- (d) That isolation for certain cases is essential ;
- (e) That the seriousness of the problem is not uniform, but only certain areas may need special concentration ;
- (f) That it is a disease which is only one of the endemic diseases and should be part of a general public health system.

I think it may be said that the Calcutta Conference made a most valuable contribution towards this end.

The resolutions of the Calcutta Conference are reprinted in this issue.

(To be continued).