

The Nasal Discharge in Leprosy

By T. F. Davey*

IT HAS BEEN known for a long time that the nasal discharges from people suffering from lepromatous leprosy may contain *M. leprae*. For many years this important aspect of leprosy has been neglected, in the mistaken idea that what went on in the nose was simply reflecting what was going on simultaneously in the skin. As a result of this, it is only recently that leprosy in the nose has come under detailed scrutiny with the use of modern techniques, and through the coming together of Leprologists, Bacteriologists, Pathologists, and Ear, Nose and Throat Specialists at laboratories across the world, not only has interest been re-awakened, and the early findings given impetus, but very important new facts have emerged. Much of the material for such studies has come from patients at Dichpalli in Andhra Pradesh. Findings to date may be summarised as follows.

1. A nasal discharge is almost universal among people with untreated lepromatous leprosy in central India.

2. The discharge is distinctive, and its nature and quantity varies very much with the humidity of the atmosphere. In damp conditions it is thick and purulent, resembling that seen in chronic nasal catarrh, but is often blood stained. It varies in amount from $\frac{1}{2}$ ml to 3 ml or more daily. In dry weather it tends to solidify and form crusts which are partially adherent to the mucous membrane of the nose, and can become very hard and cause much discomfort to the patient.

3. The discharge may contain enormous numbers of *M. leprae*, many of them viable. Every one of 31 samples tested at the Medical Research Council Laboratories, London, by Dr. Rees, proved infective when injected into the mouse footpad. Numbers of *M. leprae* in nasal discharges are of the same order as those *M. tuberculosis* in the sputum of open cases of tuberculosis.

4. In dark conditions, the bacilli can resist drying and stay alive for periods of up to seven days outside the body. Personal hygiene in village life is often defective, and patients may be very careless how and where they clear their noses. There is clearly here an extremely important factor in the transmission of leprosy.

5. The capacity to discharge *M. leprae* from the nose does not develop slowly with the advance of the disease. It is directly related to clinical activity at every stage of lepromatous leprosy. While important in cases of relapse and exacerbation, perhaps its most striking feature is its frequency in the very early stages of lepromatous leprosy. The nose can be seriously involved internally while the disease in the skin of the face and elsewhere is still almost imperceptible. Such a patient can be an important source of infection to others.

6. Dapsone treatment rapidly dries up the specific discharge, and after only two months of dapsone treatment it is no longer important.

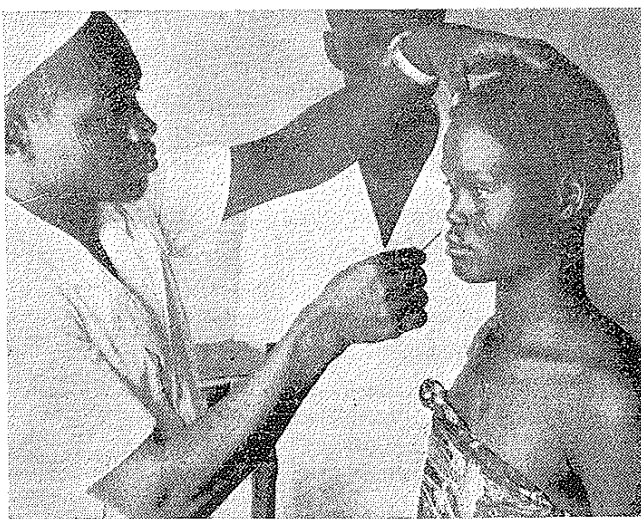
7. Patients suffering from dapsone resistance also discharge dapsone resistant bacilli from their noses. As a result, we may expect in future that cases of leprosy will arise who are resistant to dapsone treatment from the start.

8. Knowledge of these facts does not mean that a nurse caring for leprosy patients is exposed to risks hitherto unsuspected. Obviously patients with leprosy should not be allowed to clear their noses in hospital and clinic rooms, and should always wash their hands after clearing their noses. The space to clear the nose is outside, in the sunlight.

9. The care of the nose in patients with nasal discharge is of profound psychological importance to the patient, and a service both easy and deeply appreciated. It calls for a little specialised training in the use of the nasal speculum and the recognition of the internal anatomy of the nose, but is well within the capability of leprosy workers everywhere. It consists essentially in the careful removal of crusts, if necessary after preliminary softening with warm water or suitable lotion, and then the application of a mild antibacterial ointment, aimed at minimising dryness and keeping secondary infection at bay. Dr. Hogerzeil's suggestion of vioform as the essential agent is valuable.

10. The detailed microscopic findings of the exact location of the bacillus in the nose and its routes of escape, have yet to be published. What comes out quite clearly is that in man, in the mouse and in the armadillo, the nose is a site highly favoured by *M. leprae*, a place where it makes vigorous growth, and spreads both outwards, into the nasal cavity and the exterior, and also inwards, into the blood.

11. In borderline and other forms of leprosy, infection in the nose is only rarely of importance. $\square$



The examination of a new patient reporting for treatment includes the extraction of nasal mucus where the Hansen germ is usually found

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