

Letters to the Editor

Having been convinced for many years of the importance of the nasal mucosa as the portal of exit of *Mycobacterium leprae*, I welcome the resurgence of interest in the subject as shown in recent issues of *Leprosy Review*.

It should be more generally recognized that many of the early investigators were very much aware of the vast numbers of acid-alcohol-fast organisms that could leave the body daily by this route. Examination of the nasal mucus and of the nasal mucosa was advocated in the routine teaching of such authorities as Professor Albert Dubois in the Institut de Médecine Tropicale Prince Léopold, Antwerp, in the '30's.

The objections raised by certain bacteriologists that organisms present in the discharged mucus might be contaminants multiplying in the mucus, led to a transfer of interest to the examination of material obtained under direct vision from suitable sites of the mucosa of the nasal septum and of the anterior aspects of the middle and inferior turbinates. There could be no doubt that acid-alcohol-fast bacilli from these lesional sites had the morphological appearance of *Myco. leprae*, and that their occurrence in globi was very suggestive that they were indeed *Myco. leprae*. (The mouse footpad technique was, of course, not then available.)

In one respect, our experience in Africa differs from that reported from India. In routine examination of mucoid material obtained from the nasal cavity of every patient diagnosed as suffering from early lepromatous leprosy, acid-alcohol-fast organisms were found in under 2% of patients before they were found in the dermal lesions. A possible explanation might be that minimal changes in the deeply-pigmented African skin were noticed and recognized in a leprosy-conscious population, and shown to the trained medical auxiliary and the touring doctor within six weeks of their appearance.

Thus, while the examination of nasal mucus might be a useful screening procedure for early lepromatous disease in India, such would not be the case in Central or West Africa. Similarly, epistaxis as a presenting sign was almost unknown in Africa, as were nasal obstruction and crusting. The relevance of such factors as the wide vestibule and nares in the Bantu, the temperature of the nasal mucosa and submucosa, and possible genetic and racial differences, are at present matters of conjecture.

On the other hand, once lepromatous infection had become widespread, and the apparently healthy skin contained numerous bacilli, *Myco. leprae* could be found in the nasal mucosa. And, in the case of relapse, bacilli might be present in the nasal discharge before they reappeared in the dermis and at a time when no clinical evidence of recrudescence was apparent.

S. G. BROWNE

Dr. Pedley's Letter, *Lepr. Rev.* 46, 87.

The main purpose of my article (Dec, 73) was to show that in Chinese patients the B.I. and M.I. of the nasal mucosa were usually lower than those found in the skin smears taken from the same patient at the same time, and could not be relied upon for diagnosis if a single smear was to be examined or checked. My accent was upon the fact that the findings were in the Chinese racial group and may not be applicable to other racial groups, some of whom had already been examined.

I have no argument with Dr Pedley regarding his statement that "the finding of a positive nose blow smear always yields valuable information". Any positive smear yields information but what conclusions can he draw from a negative, or repeatedly negative smear? My statement implied that the nose blow did not yield any useful information over and above that acquired by the more regular methods of smearing. When a competent technician finds a negative smear by a standard method we have now come to accept this as meaning that the disease has reached a certain stage and the patient is no longer infective. However, according to Dr Pedley's article of March 73 (which was not available when we planned or wrote our article) he states that 31 patients with negative "blow" results may in fact have been secreting bacilli which could have been found if further examinations had been made.

In our patients we repeatedly found that the nose blows showed lower B.I. and M.I. counts than the nasal smears and these were usually lower and became negative sooner than the other skin smears.

Dr Pedley stresses the importance of nasal mucus in transmitting the infection, and this could well be a major factor in the spread of the disease, but at present we do not know what other routes can and cannot be implicated. Surely we are not being asked to state infectivity on nasal blows alone without regard for other possible methods of spreading infection until further information is available.

I would be interested to see a correlation between the blow results and those from regular skin smears. In Chinese patients we have checked and found that it is rare to discover any morphologically normal bacilli in the skin of an L.L. type patient after six months regular therapy. This is the same time factor given by Dr Pedley.

Our laboratory technicians always seem to be overworked, and it takes longer to examine a negative or near negative smear than one that is loaded with bacilli. I would prefer to have definite results than have to rely on negative results, especially when someone as experienced as Dr Pedley suggests that they may in fact be false negatives. While the blow yields many bacilli it is surely a useful guide to the infectivity but can we rely on it for stating non-infectivity too? Perhaps Dr Pedley could enlarge on the collection technique so that our results could be more comparable.

Racial differences and social customs may also be relevant here. In Chinese patients it is not common to find copious anterior nasal discharge except in the presence of an acute coryza, but we do frequently find A.F.B. in the "sputum" of newly diagnosed patients with L.L. type leprosy who are being investigated for tuberculosis. The organisms were routinely cultured for many years and rarely ever grew Tuberculosis bacilli and so it was assumed that they were *Myc. leprae*. Perhaps the Chinese custom of clearing the postnasal space and throat most energetically could warn that this "sputum" is really nasal mucus and that we should examine this "sputum" in Chinese patients rather than the discharge from

the anterior nares. Could this account for the problems that we encountered in obtaining suitable material from Chinese patients by blowing?

The collection of a blow is technically easier and less uncomfortable for the patient than a smear. If Dr Pedley could advise regarding the techniques he has found to be best, I, for one, would be happy to try and investigate the usefulness of the blow amongst other racial groups. Unfortunately in Hong Kong, where the specialized Leprosy Hospital is soon closing down, we do not have sufficient highly active lepromatous patients to enable us to do any further investigations at this stage. However, there are other centres in Asia where a number of racial groups are treated at the same clinic. Would it be possible to gain co-operation of those in charge to investigate these variants further so that the reliability and usefulness of nasal blows can be clarified.

Twenty years ago any patient with acid fast debris in his skin was regarded as being infectious. We have come a long way since then and patients are more readily allowed to continue to work once the disease is under treatment. Let us consolidate our gains but look forward to solving the residual problems so that patients and the general communities can benefit from our investigations.

*Christian Hospital,
Manorom,
Central Thailand,
Thailand*

GRACE WARREN

References

- Pedley, J. C. (1973). The nasal mucus in leprosy. *Lepr. Rev.* **44**, 33-35.
Warren, A. G. (1973). The bacterial load in the nasal mucosa of Chinese patients. *Lepr. Rev.* **44**, 183-185.