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## Histoid Nodules of Leprosy on the Lip

### TO THE EDITOR:

A 45-year-old man was seen in June 1990 for multiple asymptomatic nodules on the upper lip and nose of 3 months' duration. He gave a history that in 1981 he had multiple skin patches which were diagnosed as lepromatous leprosy by a local leprologist and was treated with dapsone 50 mg daily. He discontinued the treatment after 2 years without consulting the doctor. The patches had disappeared at that time. The nodules on the lip and nose developed gradually since January 1990. There was no fever or other constitutional symptoms.

Examination revealed multiple, well-circumscribed, firm, dome-shaped, smooth, nontender nodules on the upper lip and nose skin (The Figure). The nodules on the nose were skin-colored while those on the lip were coppery-red. The nodules appeared as if arising from normal-looking skin and mucosa. The nodules at the alar nasi coalesced to form a cluster of nodules. There were no other skin or mucosal lesions elsewhere on the body, although there was wrinkling of the skin of the pinna of the ears.

Routine laboratory tests on blood (total and differential leukocyte count, ESR, hemoglobin), urinalysis and renal and liver function tests were within normal limits. A blood VDRL (Venereal Disease Research Laboratory) test was negative. An X-ray of the chest was normal. Slit-skin smears from the earlobes, forehead, chin and dorsa of middle fingers did not show acid-fast bacilli (AFB), but those taken from nodules of the nose and lip revealed numerous AFB, the morphologic index (MI) being 80% and bacterial index (BI) 5+. There were no AFB in the slit-skin smears taken from normal-appearing skin of the nose and mucosa of the lip. A histopathological study of the



THE FIGURE. Histoid leprosy nodules on the nose and upper lip.

biopsies of the nodules on the nose and lip revealed circumscribed collections of thin, spindle-shaped histiocytes arranged in a whorl pattern throughout the dermis. A few lymphocytes also were seen. Ziehl-Neelsen-stained tissue sections showed numerous, long, uniformly stained AFB arranged in parallel bundles inside the histiocytes. There were no globi.

The patient was treated with multidrug therapy consisting of dapsone, rifampin and clofazimine as recommended by WHO (WHO/MDT) for multibacillary cases (<sup>5</sup>). There was a gradual fall in the MI, and it became zero at the end of 6 months of MDT. The nodules regressed slowly and when seen after 3 years of MDT, they all had disappeared leaving faint atrophic macules. The MI remained zero and the BI had fallen to 2+, after which he was lost for follow up.

Histoid leprosy originally described by Wade (3) is a variant of lepromatous leprosy. It is characterized by the development of firm, hemispheric, dome-shaped, well-defined nodules on an apparently normal-looking skin. Many cases occur during a relapse after dapsone monotherapy or may arise *per se* without any prior chemotherapy. The nodules tend to arise in unusual body sites, such as the lower back, loins or axillae or over the chest and neck (1).

Clinical and histopathological features of the nodules in our patient suggested a diagnosis of histoid leprosy. The lesions appeared as a relapse of lepromatous leprosy, probably due to inadequate dosage and duration of dapsone monotherapy. The possibility of infection with dapsone-resistant *Mycobacterium leprae* also exists in our case, although we could not prove it due to the lack of facilities for animal inoculation studies. WHO/MDT resulted in complete clinical cure of leprosy in this patient, although a few dead bacilli persisted at the site of the nodules.

Another interesting feature observed here was the presence of histoid nodules on the lip mucosa. Unlike the nose lesions which were skin-colored and appeared in clusters, the lip lesions were discrete and coppery-red. This color variation is probably due to

the increased vascularity and decreased melanization of the lip mucosa. Involvement of the mucous membrane is quite unusual in histoid leprosy, although rarely nodules have been reported to develop on the mucosal surface of the hard palate and glans penis (2), and may also occur in the nasal mucosa (4).

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## Minimal Inhibitory Concentrations of Lomefloxacin and Minocycline Against Drug-Sensitive and Drug-Resistant Isolates of *M. tuberculosis* Compared on L-J and 7H11 Media

TO THE EDITOR:

Rifampin derivatives,  $\beta$ -lactam antibiotics with  $\beta$ -lactamase inhibitors, and fluoroquinolones are the newer and highly promising drugs against tuberculosis. Among them, little is known about the activity of lomefloxacin, a new difluoropiperazinyl quinolone (10, 11, 14), and minocycline, a long-acting tetracycline derivative, against *Mycobacterium tuberculosis*. Minocycline has been studied with respect to its effect on *M. leprae* only (4, 6–8).

In the present study, we have tested a total of 97 *M. tuberculosis* strains for their susceptibility to lomefloxacin and minocycline by the minimal inhibitory concentration (MIC) method using both Lowenstein-Jensen (L-J) medium and 7H11 medium to see if the high protein content of L-J medium would have any effect on the MICs. The strains tested included 46 *M. tuberculosis* strains resistant to S (streptomycin) H (isoniazid) R (rifampin) /HR and 51 susceptible to SHR isolated from patients. Their susceptibility to ciprofloxacin