

suggest a specific interaction between BCG, *M. leprae*, and lymphocytes from lepromatous patients. In view of the use of the mixture of BCG and *M. leprae* as a vaccine, the interaction of these two antigens merits further investigation.

—Ronny Ohman, M.D.

*Department of Medical
Microbiology and Immunology
University of Göteborg
Göteborg, Sweden*

—Charlotte Walford

*Department of Biology
Bogazici University
Istanbul, Turkey*

—Paul Converse, Ph.D.

*Department of Immunology
and Infectious Diseases
The Johns Hopkins University
Baltimore, Maryland, U.S.A.*

—Malin Ridell, Ph.D.

*Department of Medical
Microbiology and Immunology
University of Göteborg
Guldhedagatan 10
S-413 46 Göteborg, Sweden*

Reprints requests to Dr. Ridell.

Acknowledgment. Most of the studies were performed at the Armauer Hansen Research Institute

(AHRI), Addis Ababa, Ethiopia. AHRI is supported by the Norwegian and Swedish Save the Children Funds and by the Norwegian (NORAD) and Swedish (SAREC) international development agencies. AHRI is affiliated with the All Africa Leprosy Rehabilitation and Training Center (ALERT). We are particularly grateful to Dr. Martin Dietz (ALERT), who identified patient material for inclusion in the study. Financial support for this study from SAREC and King Oscar II's Jubilee Fund, Sweden, is gratefully acknowledged.

REFERENCES

1. CONVERSE, P. J., OTTENHOFF, T. H. M., GEBRE, N., EHRENBERG, J. P. and KIESSLING, R. Cellular, humoral and gamma interferon responses to *M. leprae* and BCG antigens in healthy individuals exposed to leprosy. *Scand. J. Immunol.* **27** (1988) 515–525.
2. LYONS, N. F. and NAAFS, B. Influence of environmental mycobacteria on the prevalence of leprosy clinical type. *Int. J. Lepr.* **55** (1987) 637–645.
3. MOLLOY, A., GAUDERNACK, G., LEVIS, W. R., COHN, Z. A. and KAPLAN, G. Suppression of T-cell proliferation by *M. leprae* and its products: the role of lipopolysaccharide. *Proc. Natl. Acad. Sci. U.S.A.* **87** (1990) 973–977.
4. RIDELL, M. Cross-reactivity between *M. leprae* and various actinomycetes and related organisms. *Int. J. Lepr.* **51** (1983) 185–190.
5. SHIELD, M. J. The importance of immunological effective contact with environmental mycobacteria. In: *The Biology of Mycobacteria. Vol. 2. Immunological and Environmental Aspects*. Ratledge, C. and Stanford, J., eds. London: Academic Press, 1983, pp. 343–415.

Precautionary Note for Observing Signs of Activity (or Relapse) in Treated Leprosy Patients

TO THE EDITOR:

We would like to bring to the attention of leprosy workers two points which appear to be of significance when reviewing treated leprosy patients for signs of the disease.

A 22-year-old man had a borderline tuberculoid plaque of leprosy on the upper part of his left forearm. After 6 months of regular treatment with multidrug therapy (MDT), rifampin 600 mg monthly supervised and dapson 100 mg daily unsupervised, the plaque subsided well and he was kept under surveillance. During the third month of surveillance, he reported with mildly pruritic, erythematous and scaly le-

sions on the site where the leprosy plaque had been (The Figure). The lesions were of 5 weeks' duration and did not look like those of leprosy. A scraping for fungus in 10% potassium hydroxide was negative. He was advised to apply topical betamethasone valerate and to take oral antihistaminic tablets. Within a month the lesions regressed, removing all fear from the patient's mind. A similar occurrence was seen in two more patients with tuberculoid leprosy after a 2-year surveillance period. Although these cases are seen in rare instances, it is important to recognize them so that benign lesions are not confused with signs of lep-



THE FIGURE. Scaly and erythematous lesions on a healed leprosy patch.

rosy activity. All of our patients had features of subacute eczema with erythema and scaling. In leprosy, erythematous induration is an important sign of activity and scaling is not a feature (except in subsiding reaction). Again, unlike eczematous lesions, the induration due to leprosy gradually increases in size. A history of vesiculation dictates strongly against leprosy.

Clinicians and leprosy workers should be aware of such presentations because they can easily be misinterpreted as a relapse of the leprosy. When in doubt, field workers should refer such cases to the nearest center where expert opinion and histopathological study, if necessary, can be obtained. It would be interesting to know why eczematous lesions were confined to the healed patch of leprosy. This could most likely be a coincidence or may represent a localized form of asteatotic eczema (¹) resulting from the destruction of the pilosebaceous units by leprosy which was further aggravated by scratching.

In the fourth patient seen by us the eczematous lesion was due to an avoidable cause. This person initially had a tuberculoid lesion on the dorsum of the right foot and a markedly thickened, superficial pe-

roneal nerve coursing down the antero-lateral aspect of the same leg. During the period of MDT, two relatively asymptomatic nodular swellings had insidiously formed in the nerve, indicating abscess formation. After 9 months of therapy the skin lesion had completely subsided while the residual nerve thickening and the nodules persisted. The surveillance period of 2 years was unremarkable, and he was declared cured with the reassurance that the nerve thickening and nodularity were likely to remain for a long period but required no treatment. Some months later he came back with an erythematous, crusted and oozing eczematous lesion around a discharging sinus at the site of a nerve nodule. History revealed that a doctor in his home town had tried to aspirate the nodule. Symptomatic therapy along with systemic antibiotics cleared the eczema and, after weeks of proper care, the sinus showed signs of healing. To avoid such complications it is important to mention in the discharge slip that these nodules are best left alone in the interest of the patient so that no doctor attempts to tamper with them (²).

—V. Ramesh, M. D.

*Dermatologist
Department of Dermatology
and Leprology
Safdarjung Hospital
New Delhi 110029, India*

REFERENCES

1. BURTON, J. D., ROOK, A. and WILKINSON, D. S. Asteatotic eczema. In: *Textbook of Dermatology*. Rook, A., Wilkinson, D. S. and Ebling, E. J. G., eds. London: Blackwell Scientific, 1986, pp. 382–383.
2. SAXENA, U., RAMESH, V., MISRA, R. S. and MUKHERJEE, A. Nodularity of the nerves in treated leprosy. *Int. J. Dermatol.* 29 (1990) 497–499.

Borderline Tuberculoid (BT) Leprosy Confined to a Tattoo

TO THE EDITOR:

Mycobacterium leprae, the presumptive causative organism of leprosy, has a reservoir in patients afflicted with paucibacillary

and multibacillary leprosy. Although its precise mode of transmission is only speculative, transmission through prolonged and intimate skin-to-skin contact with an in-