Wild Mexican Armadillo with Leprosy-like Infection

TO THE EDITOR:

Wild armadillos (*Dasypus novemcinctus*) are being monitored for acid-fast bacilli at the Departmento de Investigaciones Inmunológicas del I.S.E.T., S.S.A., in Mexico City. To date 96 armadillos have been examined, including 33 from the state of Mexico, 57 from the state of Sinaloa and 6 from the state of Morelos.

One of these 96 animals was brought into the colony 6 August 1979. It was captured in the Municipio of Sta. Ana Jilotzingo, state of Mexico, around 40 km northwest of Mexico City, and died suddenly on 23 October 1979. A necropsy was performed and smears examined for acid-fast bacilli (AFB). Nasal smears were negative, ears were 1+ on the Ridley scale ([3]) as were the tongue (1+) and lymph nodes (1+) which were enlarged. Two small nodules were found beneath the skin. Suspensions from the nodules and lymph nodes were prepared and inoculated on Sabouraud's, Löwenstein-Jensen (L-J) and 7H10 media and held at 37°C in air for three months. No growth of acid-fast organisms was seen.

Frozen lymph nodes, skin nodules, and nerve tissues were brought to the Medical Research Institute, Florida Institute of Technology, Melbourne, Florida, U.S.A., where suspensions were prepared and inoculated into the mouse foot pad on 2 November 1979, blind passage. Less than 10^3 organisms per foot pad were inoculated due to insufficient material.

Mice were sacrificed 6½, 9, and 11½ months after foot pad inoculations and tissues were harvested from infected foot pads by the method of Shepard ([4]). The tissues were homogenized in balanced salt solution (BSS) containing 0.1% bovine serum albumin, using a glass homogenizer. The suspensions were then used for bacillary counts, using the pin-head method of Hanks, *et al.* ([2]), for evaluating the loss of acid fastness after extracting with pyridine ([1]) and for inoculating on standard mycobacterial media.

Mouse foot pad results were as follows:

Suspension	AFB per foot pad (months post inoculation)		
	(6½)	(9)	(11½)
Lymph node	0.56×10^5	4×10^5	2.8×10^5
Skin nodule	0.38×10^5	1×10^5	1.6×10^5
Nerve	Negative	Negative	Negative

At each foot pad harvest, each positive suspension was inoculated on Löwenstein-Jensen and 7H10 media and incubated in air at 32°C and 37°C for three months. No growth was seen. On pyridine extraction, the organisms lost acid fastness.

First passage material from mouse foot pad (lymph node suspension), when reinoculated by the methods described above into the mouse foot pad, gave growth curves normal for *Mycobacterium leprae.* The AFB lost their acid fastness on exposure to pyridine, and the foot pad suspension showed no growth on L-J or 7H10 media after three months' incubation at 32°C and 37°C.

From these results, the AFB appear to be *M. leprae,* the first evidence of leprosy to be found in a wild armadillo in Mexico.

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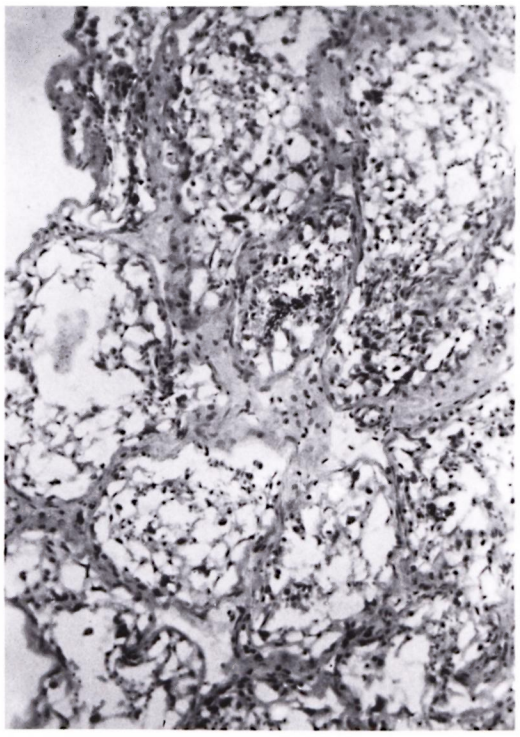
Testicular Biopsy in Antispermatozoal Antibody Positive Tuberculoid Leprosy Patients

TO THE EDITOR:

In an earlier study of antispermatozoal antibodies (ASA) in tuberculoid leprosy, 9 out of 33 cases were found to show ASA in their sera but in none of these cases was testicular biopsy possible ([1]).

In the present communication, 24 male and 4 female tuberculoid patients were studied for the presence of ASA. Anti-spermatozoal antibodies were demonstrated in 8 out of 24 male tuberculoid patients (33%) by sperm agglutination, immobilization and hemagglutination tests. None of the female tuberculoid cases showed evidence of ASA. The incidence of ASA in the male patients increased with the duration of the disease.



THE FIGURE. Testicular atrophy in tuberculoid leprosy cells of the tubules show vacuolar degeneration (H & E ×100).

The tuberculoid patients who were ASA positive were subjected to testicular biopsy. These biopsies showed thickened basement membranes of the seminiferous tubules and vacuolar degeneration of the cells lining the tubules. There was no evidence of spermatogenesis. Interstitial cells were found to be increased (The Figure).

The exact mechanism of production of ASA in tuberculoid leprosy is not known since the testes are never affected clinically. In view of the atrophic changes observed in the testes, it is possible that there may be some cell-mediated tissue damage to the testes occurring in tuberculoid disease which results in the production of ASA.

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