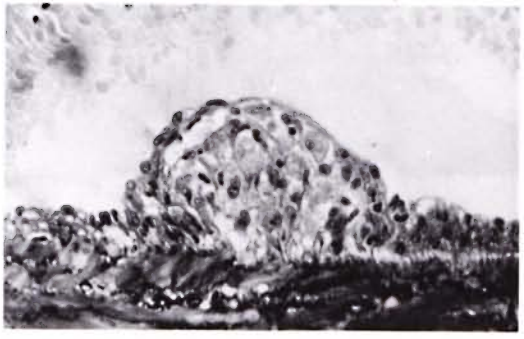
Venous Involvement in Nonlepromatous Leprosy

TO THE EDITOR:

Our earlier report ([1]) of venous involvement in lepromatous leprosy (LL) patients showed a very high (94%) incidence of leprous phlebitis in this group. The study has since been extended to cover the non-LL forms of leprosy, and 24 BT patients were selected for vein biopsy. Cases were selected only when a subcutaneous vein was seen beneath or lying just adjacent to a lesion. In 18 cases the lesions selected were on the extremities, while in six cases they were on the back. Resection of a 0.5–1 cm segment of vein was done along with a skin biopsy. Both the skin and vein biopsies were fixed in formalin, processed, and 5 μ thick paraffin sections were stained with hematoxylin and eosin (H&E), Fite's, and V.V.G. stains. On histological study, only 1 out of the 24 cases showed evidence of vein wall involvement. This case was graded BT-BB clinically and histologically. Sections from the resected vein showed three focal epithelioid cell granulomata located in the intima just beneath the endothelial layer (The Figure). Each granuloma caused a hump-like protuberance into the vein lumen. The endothelium was continuous over each hump. The endothelial cells were flat and did not show any signs of activation. The media and adventitia showed infiltration by epithelioid cells only at the base of the largest granuloma. Most of the cells forming the granuloma were epithelioid in nature. Lymphocytes were scant and no giant cells were seen. Acid-fast bacilli (AFB) could not be found, even after repeated examinations with Fite's stain.



THE FIGURE. Photomicrograph of one of the granulomata showing epithelioid cells in the intimal layer (H&E ×300).

The present study shows that venous lesions may be seen in nonlepromatous forms of leprosy. However, their frequency is much less than in LL cases. It is also possible that the biopsy may not have picked up the well-localized venous lesion in some of the cases. Although AFB were not demonstrated in these lesions, BT-BB leprosy is adequate proof of the presence of AFB in the vein wall at some time or other. The location of the lesions indicates that in this case also the mode of entry was from the vessel lumen. Episodes of bacteremia are known to occur in BT patients ([2]), and may have led to the deposition of organisms and granuloma formation in the vessel wall. The significance of these lesions vis-à-vis disease dissemination, granuloma formation, and as sites for persister organisms needs further study.

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