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RELIMINARY STUDIES OF THE EFFECT OF LAVAMISOLE ON THE IMMUNE RESPONSE OF MICE INFECTED WITH LEISHMANIA

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Abstract:

The susceptibility of various strains of mice to infection by Leishmania tropica (major) was recently studied in this laboratory. The infection in A/J, C3H, CBA, AKR/J, AKR/CU, and C57B1 mice (the semi resistant strains) remained cutaneous and the animals recovered within 4-6 months. However BALB/c mice developed generalized infection after two months of exposure resulting in death 3-4 months later. When compared to the semi resistant strains, BALB/c mice exhibited a poor delayed hypersensitivity (DH) to Leishmania antigen, but a relatively higher humoral response. In this study, the effect of levamisole on modulation of cell mediated immunity, d well as regulation of disease in A/J and BALB/c mice was investigat6d and compared: 1. Thirty days after infection, the titer of antibody in levamisole treated A/J or BALB/c mice was similar to the corresponding untreated control. However, when compared to the controls, the magnitude of DH was decreased in levamisole treated A/J mice but partially increased in similarly treated BALB/c mice. The course and severity of infection was influenced by levamisole treatment in A/J mice. Forty-eight days after infection, approximately 45% of the control mice as compared to 5% of the treated animals exhibited cutaneous ulcers. Furthermore, the mortality rate in the control animals was 27%, whereas, none of the treated. A/J mice died during this period. Similarly 48 days after infection. 100% of the untreated control BALB/c mice and 65% of the, levamisole treated animals developed ulcers. The drug, however, had no effect on the death of the infected BALB/c. Levamisole in doses 2-8 times higher than that used In vivo had no effect on the In vitro proliferation of the organism.

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top