

Abstract

NOGUEIRA, M.E.S. Inoculation of *Mycobacterium leprae* in the cheek pouch of hamster's. Botucatu, 1999. 98p. Tese (Doutorado) - Faculdade de Medicina, Campus de Botucatu, Universidade Estadual Paulista "Júlio de Mesquita Filho".

The use of the hamster cheek pouch in experimental leprosy was evaluated through the inoculation of 6.0×10^8 *M. leprae/ml* in its subepithelial tissue in 60 animals. A control group of 12 hamsters was inoculated in the foot pad. The animals were sacrificed 20 and 48 hours, 7,14,21 and 28 days after inoculation. Histological sections stained with hematoxylin-eosin and Faraco-Fite were used to evaluate the evolution of the lesions. The evaluation of the bacilli viability in cheek pouch was done by bacilli recovery test using mice inoculated in the foot pad and sacrificed six months after inoculation. The results led us to the following conclusions: a) acute inflammatory phase to *M. leprae* in the cheek pouch was a short term non-specific and exsudative response; b) after the exsudative phase, the lesions evolved into macrophagic granuloma formation similar to the lepromatous leprosy in humans; c) there was a remarkable increase of the bacteriologic index, as opposed to the biological characteristics of *M. leprae* a fact that was interpreted as a local concentration after reabsorption of edema and congestion; d) the lesion in the foot pad initiated with a short term exsudative phase and evolved into epithelioid granulomas similar to the borderline leprosy; e)

the initial increase of the bacteriologic index in the foot pad until 14 days after inoculation can be interpreted as a consequence of the local concentration due to reabsorption of edema and congestion. The decrease of the bacteriologic index after this period could be a result of the lymphatic drainage of the bacilli; f) the *M. leprae* recovery test from the foot pad of mice suggests that there was no multiplication of the bacilli; g) in spite of the high dosages inoculated, there was a tendency to the regression of lesions at both inoculated sites.

Keywords: Hamster; Cheek pouch; Granuloma; Mycobacterium leprae.