

TITLE: EXPRESSION OF COLLAGENASES IN HANSEN'S DISEASE

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ABSTRACT:

Leprosy is a neglected disease that has great clinical, epidemiological and immunological repercussions. MMP7 make part of a group of collagenases that are considered pleiotropic and perform multiple functions that modulate the host defense system. Recently new approaches have broadened the discussion around the role of the enzyme in the disease spectrum. In this context, the formation of the healing process and inactivation of the microbicidal response in Hansen disease still need to be better understood. Thus, the present study investigated the expression of collagenase in polar forms of leprosy. To develop the study, 31 patients attended in the dermatology outpatient clinic of the Tropical Medicine Center of the Federal University of Pará were selected according to the Ridley and Jopling classification. Among the cases, 17 were Tuberculoid and 16 were Lepromatous. For the immunostaining of the tissue with the anti-MMP7 antibody, the histological sections were submitted to immunohistochemistry technique. Regarding the statistical analysis, frequencies were obtained, measures of central tendency and of dispersion and for the investigation of the hypotheses the Mann-Whitney test. Regarding the immunostaining for MMP7, it was observed that the distribution of the enzyme by the inflammatory infiltrate in both clinical forms was more present in the endothelium of new blood vessels and in the cytoplasm of foamy macrophages in the lepromatous form to than the tuberculoid form. In this context, the present work highlights that the participation of MMP7 in this new approach in the immunopathology of Hansen broadens the discussion about the role of the enzyme by way of regulation of tissue repair response since the number of lesions is determinant to trigger the activation of macrophages as well as the immunosuppressive response in the lepromatous form of the disease.

Keywords: Leprosy, MMP7, Macrophage.

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