INFECTIOUS DISEASES (BACTERIAL, FUNGAL, VIRAL, PARASITIC, INFESTATIONS)

ENDOPLASMIC RETICULUM STRESS MARKERS AND INTERLEUKIN 1 IN LEPROSY SKIN LESIONS

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Objective: The primary objective is to evaluate the local expression of the proteins that characterize ERE and its relationship with the expression of IL-1β.

Methods: We analyzed, by immunohistochemistry, the tissue expression of inflammasome markers in 43 leprosy skin lesion samples, 13 were indeterminate, 15 were tuberculoid, and 15 lepromatous leprosy.

Results: Cell expression of GRP78/BiP was higher in TT lesions (13.84 ± 3.9 cell/field) than in LL lesions (10.41 ± 2.57 cell/field) or IL lesions (8.96 ± 3.15 cell/field). PERK expression was also higher in TT lesions (13.33 ± 3.68 cell/field) then in LL (12.48 ± 3.77 cell/field) or IL (7.49 ± 2.61 cell/field) lesions; with difference statistically significant between TT and IL, and LL and IL clinical forms, but not TT and LL lesions. IRE1α was highly expressed in TT (12.21 ± 2.35 cell/field), followed by LL (7.84 ± 1.14 cell/field), and IL (7.34 ± 2.17 cell/field) lesions, with a statistically significant difference between TT and the other clinical forms. ATF6 was more expressed in TT (10.11 ± 2.38 cell/field), followed by IL (7.48 ± 1.77 cell/field), and LL (6.93 ± 1.77 cell/field) clinical forms, with statistical difference between TT and the others clinical presentations of leprosy. IL-1β was higher in LL (19.36 ± 6.50), followed by that in TT (13.24 ± 9.38 cell/field) and IL (7.17 ± 5.45 cell/field).

Conclusion: These results represent the first evidence of relationship between ERE and IL-1β in samples of skin lesions from leprosy patients.

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