TITULO

Aggressive behavior of Merkel cell carcinoma of the skin may be related to tumor microvasculature density

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Abstract

First primary MCC is a disease of elderly people. It is only sporadically reported before age 50; then, its overall age-adjusted incidence rate starts increasing gradually, from age 50 to age 65, then progressively in both males and females

This study was undertaken to: (1) assess Langerhans cell population, that of their precursor, stromal microvasculature density, and epidermal proliferative index in Merkel Cell Carcinoma (MCC) and (2) to evaluate the prognostic value of these parameters in its metastasis occurrence. This is a retrospective study investigating twenty-five subjects aged between 20 and 90 (mean 70) years with biopsy-proven MCC. Patients were distributed into several groups according to the occurrence of metastasis. Diagnosis was based on the positive identification of a specific immunohistochemical profile including CK 20, NSE and Chromogranin. Langerhans cells were identified using an antibody directed against membrane CD1a while their precursors were characterized by human CD34 positive immunostaining. Proliferation index was quantified using MIB-1 antibody. As expected, surface density of CD1a+ cells was significantly reduced in epidermis overlaying the tumor, as compared with normal skin.. On the other hand, proliferation index of MCC cells and overlaying keratinocytes was very high (41% and 13%, respectively). No correlation was found between these parameters and the clinical outcome of patients.

Immunohistochemical staining labeling with CD34 also showed a higher number of intratumoral blood vessels compared with other skin malignancies such as melanoma among others. The median observation period was 38 months. Together, these results indicate that intratumoral microvasculature density may be the one of these quantitative parameters that correlates with metastasis occurrence.

Key word: Merkel cell carcinoma, ageing, angiogenesis.