Melatoninina: eficaz no melanoma maligno


The expression of MT1 melatonin receptor and Ki-67 antigen in melanoma malignum.

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BACKGROUND: Melatonin, the principal hormone produced by the pineal gland, manifests strong potency of inhibiting growth of dermal melanoma cells both under in vitro and in vivo conditions. Although the mechanism of the phenomenon has not been fully clarified yet, melatonin receptors seem to play a key role in the inhibition. In humans, two main types of high affinity membrane melatonin receptors have been identified, including MT1 (Mel1a) and MT2 (Mel1b) receptors, and their expression increases efficacy of the oncostatic melatonin activity. The principal aim of this study involved determination of location and intensity of expression of MT1 melatonin receptors and of Ki-67 proliferation-associated antigen in dermal melanoma using an immunohistochemical technique and an examination of their reciprocal correlation and their relationship with clinical advancement of the tumour, i.e. with its depth of infiltration.

PATIENTS AND METHODS: Immunohistochemical studies were conducted on the material of 48 cases of dermal melanoma, including 38 primary tumours and 10 metastatic lymph nodes, fixed in formalin and embedded in paraffin. RESULTS: In all the examined cases, positive immunohistochemical reactions were obtained with antibodies to MT1 and Ki-67. Expression of MT1 receptor was more pronounced in primary tumours than in lymph nodes (p<0.05). Depth of tumour infiltration demonstrated a moderate positive correlation with the intensity of MT1 expression (r=0.45; p<0.05) and a strongly positive correlation with the expression of Ki-67 antigen (r=0.79; p<0.05). Moreover, both in primary tumours and in metastatic lymph nodes, a weak correlation was detected between the expression of MT1 receptor and expression of Ki-67 antigen. CONCLUSION: Confirmation of positive correlation between the expression of MT1 receptor and depth of melanoma infiltration may point to future use of MT1 as a prognostic index for such tumours.

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