Alpha-v-beta3 integrin expression in melanocytic nevi and cutaneous melanoma

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Abstract

Background: Alpha-v-beta3 integrin (αvβ3) is a vitronectin ligand and plays an important role in melanoma progression.

Objectives: The purpose of the study was to evaluate the expression of αvβ3 in superficial spreading cutaneous melanoma, in both conventional and tissue microarray (TMA) paraffin-embedded-tissue specimens, and correlate with histopathological variables and patient survival.
Material and methods: A total of 159 tissue samples from compound nevi (n = 19), in situ melanoma (n = 5), thin melanoma (n = 34), thick melanoma (n = 72) and metastatic melanoma (n = 29) were studied.

Results: Compound nevus epithelioid cells had a mild expression of \( \alpha \beta_3 \). In situ melanoma cells had the highest expression among all specimens, when compared to nevi (\( p = 0.0000 \)) and to invasive melanoma (\( p = 0.0003 \)). Expression of \( \alpha \beta_3 \) did not differ according to depth of invasion or did it increase in metastatic cells.

Conclusion: Our results suggested that \( \alpha \beta_3 \) integrin might have no impact on melanoma behavior. However, high levels of \( \alpha \beta_3 \)-integrin expression for in situ melanoma may be related to pre-invasive phenotype with marked potential to invade.

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