CONJUNCTIVAL MALIGNANT MELANOMA: ASSOCIATION OF CLINICOPATHOLOGICAL CHARACTERISTICS AND TUMORAL EXPRESSION OF CYCLOOXYGENASE-2 (COX-2) TO PROGNOSIS

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Introduction: Conjunctival malignant melanoma is a rare but potentially lethal tumor. Its biologic profile is still largely unknown, with recent studies aiming at establishing histopathological and genetic tumor profiles. The aim of our study was to analyse the associations between clinicopathological characteristics and melanoma cell expression of COX-2 to prognosis, assessing its usefulness as a possible prognostic marker.

Material and Methods: Case series of 50 eyes of 50 patients from 1985 to 2008 with pathologically proven conjunctival melanoma. Demographic and clinical characteristics including preexisting lesions, evolution time, localization, diameter, thickness, local invasion, TMN classification, follow-up time, treatment performed, recurrences, metastasis and tumor-related death were evaluated by reviewing clinical files and pathology.

Expression of COX-2 was detected by immunohistochemistry of formalin-fixed paraffin-embedded tissue samples of 17 primary melanomas. Samples were classified in terms of intensity of staining and percentage of cells with positive reactivity (0 to 4 score).

Results: From our sample of 50 patients, clinicopathological features significantly associated (p<.05) with a poor prognosis (death) included involvement of fornix and tarsal conjunctiva, tumor thickness exceeding 2 mm, local tumor recurrence, lymph node and systemic metastasis.

In the immunohistochemistry subgroup all patients expressed COX-2 although with different grading stages. Only patients with score 4 had a poor outcome. Multivariate association analysis of scores 2 and 3 versus score 4 revealed that solar exposure, recurrence rate, metastasis, corneal invasion and tumor thickness were associated with score 4 patients and, therefore, with a clinical profile with a higher risk of death.

Conclusion: Results suggest that higher COX-2 expression may be a negative prognostic factor in conjunctival melanoma. Further immunohistochemistry studies may increase our understanding of its prognostic value and may provide future therapeutic targets in the treatment of this disease.