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COEXPRESSION OF VIMENTIN AND CYTOKERATIN IN UVEAL MELANOMA

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Uveal melanoma is the most common primary malignant intra-ocular tumor in adults. Liver metastases are frequent due to hematogenous dissemination. The coexpression in vitro of vimentin and cytokeratin by uveal melanoma cells, the interconverted phenotype, has been described as a metastatic factor. Purpose: This study is designed to investigate the coexpressivity of vimentin and cytokeratin in human uveal melanoma and its correlation with cell type, which is the single most important prognostic factor for uveal melanoma. Methods: One hundred formalin-fixed, paraffin-embedded uveal melanomas were obtained from the Armed Forces Institute of Pathology. They were classified according to cell type using Callender's modified classification. All 100 tumors were immunostained for vimentin and cytokeratin 8 and 18, using the peroxidase anti-peroxidase method. Results: The analysis showed that 44 cases (44%) were positive for cytokeratin, and 86 cases (86%) were positive for vimentin. Forty-three cases were positive for both vimentin and cytokeratin. Of all cases that expressed the interconverted phenotype, five were strongly positive with more than 20 cells per 20 high power fields. The other 38 cases presented with scattered positive cells mainly in the apex of the tumour and were considered weakly positive. The cases were also evaluated regarding the predominant cell type of the tumour. The majority of the tumours 58 (58%) were mixed cell type, while 22 (22%) were spindle cell tumours and 20 (20%) were epithelioid cell tumours. Conclusion: Uveal melanoma cells do coexpress vimentin and cytokeratin. The expression of an epithelial marker such as cytokeratin by melanoma cells may represent a transformation of the cytoskeleton of malignant cells. Those changes in the cytoskeleton may play an important role in the metastatic process.