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Relationship between Vascular Endothelial Growth Factor (VEGF) with Ki-67 Labeling Index in Intracranial Astrocytoma

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Abstract: Background. Astrocytoma is a neuroepithelial tumor and divided into four grade based on its malignancy. Recently, angiogenesis was found to be an important factor for tumor growth, invasion grade, metastasis and prognosis. VEGF overexpression has been related to tumor progressivity and bad outcome in several type of tumor. Ki-67 was considered as the best marker in order to look for tumor cell proliferation. The aim of this study is to analyze relationship between VEGF expression and Ki-67 labelling index on astrocytoma patients. **Method.** Subject of this study was astrocytoma patients who had been operated between Januari 2014 and Juni 2015. VEGF and Ki-67 expression were determined using immunohistochemistry study. For statistical analysis, chi square and Spearman correlation was choosen. P value < 0.05 was considered significant statistically. **Result:** There is relationship between astrocytoma grading with mortality ($p = 0.0001$; $r = 0.727$). There is no relationship between Ki-67 labelling index with WHO grading ($p = 0.076$) and mortality ($p = 0.297$). There is no relationship between VEGF expression with WHO grading ($p = 0.106$) and mortality ($p = 0.813$). There is no relationship between VEGF expression and Ki-67 labelling index ($p = 0.508$). **Conclusion:** We concluded that VEGF expression and Ki-67 in astrocytoma patient are not related significantly.

Keywords : Astrocytoma, VEGF, Ki-67.

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