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Relationship of NF-κB expression with Astrocytoma Grade and Clinical Outcome

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Abstract : In the diagnosis of glioblastoma multiform (GBM), there is often a disagreement between the WHO based astrocytoma grading and the patient's clinical outcome. NF-κB is assumed to be a good predictor of clinical outcome of astrocytoma. This study will determine the relationship of NF-κB expression with astrocytoma grade and clinical outcome. This analytical cross sectional study were conducted on 25 astrocytoma samples. Samples were analyzed by anatomical pathologists to determine WHO grading and immunohistochemically stained to analyze the expression of cytplasmic and nuclear NF-κB. The clinical outcome was determined from the patient's survival at the end of therapy. The results showed that majority of astrocytoma patients were in grade I (36%), had positive cytoplasmic NF-κB expression (88%), and negative nuclear NF-κB expression(40%). A lower grade of astrocytoma and better outcomes were found in samples with positive cytoplasmic NF-κB expression or negative eotide NF-κB expression. However, no cytoplasmic or nuclear NF-κB expression relationship were found either with astrocytoma degree ($p = 0.543$; $p = 0.442$) as well as clinical outcome of patients ($p = 0.472$; $p = 0.378$). Thus, this study shows that NF-κB can not be used as a predictor of prognosis in patients with astrocytoma. Further research is needed to reassess this relationship with more focus on high grade astrocytoma.
Keywords : Glioblastoma multiform, NF-κB, outcome.

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