Expression of Prostate-Specific Membrane Antigen (PSMA) in Brain Glioma and its Correlation with Tumor Grade.

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BACKGROUND & OBJECTIVE: Angiogenesis is an essential component of tumor growth. Expression of PSMA on the neo-vasculature of many solid tumors, including glioblastoma multi-form, has been determined. The pattern of expression suggests that PSMA may play a functional role in angiogenesis.

METHODS: expression of PSMA in different grades of brain glioma was evaluated by the immunohistochemistry method to determine the probable usefulness of anti-PSMA antibody as complementary target therapy in different grades of glioma.

RESULTS: Overall, 72 cases of low (grade I and II) and high (grade III and IV) grade gliomas were evaluated for expression of PSMA. Positive PSMA staining was observed in 12 (33.3%) of high grade and 3 (8.3%) of low grade gliomas. Although, high grade tumors more commonly had positive result for PSMA (P value=0.009), the intensity of staining was significantly stronger in low-grade tumors (P value=0.009).

CONCLUSION: Expression of PSMA in different grades of glioma might provide a basis for further investigations focusing on selective target therapy in combination with the current standard care in all glioma grades, to improve treatment efficacy.

KEYWORDS: Glioma; Grade; Prostate-Specific Membrane Antigen; Tumor Angiogenesis

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