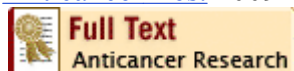




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1: [Anticancer Res.](#) 2009 Feb;29(2):731-6.



Angiogenic factors in plasma of brain tumour patients.

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BACKGROUND: Angiopoiesis and angiopoietic growth factors are of considerable importance in the development and progression of intracranial tumours. However, knowledge of the plasma detectability of distinct angiogenic factors in patients with brain tumour is very limited. This study evaluates the plasma concentrations of the angiogenic factors angiopoietin-2 (Ang-2), vascular endothelial growth factor (VEGF) and platelet-derived growth factor BB (PDGF-BB) in patients with brain tumour. **PATIENTS AND METHODS:** Plasma samples of 78 patients suffering from various types of intracranial tumours (glioblastoma multiforme, GBM, n = 22; astrocytoma, n = 12; meningioma, n = 16; and intracranial metastasis, n = 28) were analysed. For determination of plasma concentrations of angiogenic factor, highly specific enzyme-linked immuno sorbent assays (ELISAs) were used. **RESULTS:** Ang-2 plasma concentration in GBM patients was significantly lower when compared with that in patients with meningioma and intracranial metastasis. Highest levels of VEGF concentrations were detected in plasma derived from patients suffering from meningioma. Interestingly, VEGF plasma levels depended on the number of intracranial lesions, with significantly higher concentrations in patients with 3 or more lesions when compared with those with 2 or fewer lesions. However, no correlation between the survival time of the patients and the plasma levels of the tested growth factors was obtained. Plasma levels of PDGF-BB did not differ between the individual tumour groups. **CONCLUSION:** The detectability of the angiogenic factors Ang-2 and VEGF, as well as of PDGF-BB, in the plasma of patients suffering from various types of brain tumours is described. The plasma detectability of the individual angiopoietic factors seems to depend at least partly on the tumour type as well as on tumour progression. This might be of prognostic and therapeutic relevance.

PMID: 19331229 [PubMed - indexed for MEDLINE]
