Thrombolysis for ischemic stroke in patients with brain tumors.

Abstract:
Thrombolysis is the most successful therapy in acute ischemic stroke. Limitations comprise strict eligibility criteria including many contraindications for thrombolysis, and in particular clinical situations lack of evidence-based data resulting in recommendations based on single experiences. Therefore, the risk-benefit effect of thrombolysis in the presence of brain tumor is unknown. We conducted a systematic literature research of electronic databases (MEDLINE, Google Scholar) covering the period from 1990 to 2012 including search terms "thrombolysis," "stroke," "brain tumor," and "intracranial neoplasm." In addition, we report 1 new case of a 71-year-old patient with a large right frontal meningioma who fully recovered with thrombolysis from a severe ischemic stroke. Our literature research retrieved 12 patients with different brain tumors who were treated with thrombolysis for different reasons. Intracerebral hemorrhage occurred in 1 patient (8.3%) with a glioblastoma, and in the other 11 patients (91.7%), no hemorrhage was documented. In the subgroup of 8 stroke patients, both patients with a glioblastoma had no stroke but rather a focal seizure. Two of 3 patients with meningiomas showed a very good benefit from thrombolysis. In summary, very limited data exist about thrombolysis in patients with brain tumors. Differentiation of tumor by additional neuroimaging before thrombolysis in ischemic stroke is recommended as thrombolysis might
be considered in extra-axial benign appearing neoplasms (eg, meningioma) but is not advisable in intra-axial primary or metastatic neoplasm. Further reporting of thrombolysis in patients with brain tumors is recommended.