The pathogenesis and treatment of brain metastases: a comprehensive review.


ABSTRACT

Brain metastases are the most common intracranial tumors and their incidence is increasing. Untreated brain metastases are associated with a poor prognosis and a poor performance status. The role of surgery in the management of multiple brain metastases is still controversial. As more than 70% of patients have multiple metastases at the time of diagnosis, whole brain radiotherapy is the treatment of choice in most cases. Brain metastases are an ideal target for stereotactic radiosurgery, as they are better circumscribed than primary brain tumors. Currently, chemotherapy has a limited role in the treatment of most brain metastases. Several new therapies, with a good penetration through the blood brain barrier, such as temozolomide, have been used in brain metastases with different results depending on the histology of the primary tumor. A better understanding of the complex processes underlying the development of brain metastasis will enable us to develop more satisfactory targeted treatments.