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CEREBRAL METASTASES, THERAPEUTIC OPTIONS

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Intracranial metastases are the most common and devastating neurological complications of systemic cancer. Brain metastases can be located anywhere in the central nervous system. Therapeutic management of patients with brain metastases depends on the location and number of brain lesions, the biology of the primary tumor and the extent of the disease.

A systematic review of the literature was performed, using the databases Medline, Pub Med, Google Scholar to identify relevant articles, with reference to "brain metastases", "therapeutic options".

Although in many cases brain metastases develop in patients with known cancer, they often originate in an unknown primary tumor, which may not be found even at autopsy. Overall survival from diagnosis to untreated patients is 1-2 months, which can be extended to 6 months in patients receiving conventional radiotherapy and chemotherapy. The therapeutic approach for patients with brain metastases is intended to relieve symptoms. Surgical management continues to be the standard of treatment, accompanied by radiotherapy using two different techniques: stereotactic radiosurgery or whole brain radiotherapy (or a combination of these). Neurosurgery is an important part of treatment for many patients with brain metastases, also aimed at obtaining a histopathological diagnosis, reducing intracranial pressure, improving symptoms and, as far as possible, prolonging survival. Numerous technological advances have reshaped the way radiation is used for patients with brain metastases. Specifically, innovations in patient immobilization, target location, and treatment delivery have improved the process and logistics for stereotactic radiosurgery, which is now the radiation of choice for many patients with brain metastases. Laser interstitial thermal therapy uses focal laser energy provided through a small fiber optic catheter to cause interstitial hyperthermia and coagulate surrounding tissue and has been increasingly used to treat patients with primary and secondary brain tumors.

Surgery plays an important role in the management of brain metastases, allowing a definitive histological diagnosis in patients without a known history of cancer, allowing clinicians to alleviate the symptoms of intracranial hypertension (thus providing immediate relief to patients) and serving as the main therapeutic approach. However, in recent years it has been replaced by advanced radiotherapy techniques.