

(A Health Awareness Initiative)

NEURO NEWSLINE

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BRAIN METASTASIS...

Brain metastasis (secondaries) are tumours (cancer) that originate in tissues or organs in the human body and spread to the brain. It happens to be an important cause of morbidity and mortality in cancer patients. These are the most common intracranial tumours, slightly more than half of all brain tumours. The incidence of metastatic brain tumours in the United States is approximately 170,000 new cases every year. 15-30% of patients with cancer elsewhere develop brain metastasis. The route for spread of brain secondaries is through blood (hematogenous).

Lung, breast, melanoma, renal and colon cancer spread to the brain the most. Roughly 30-60% of the lung cancers metastasise to the brain ranking the top, followed by breast cancers where 20 to 30 percent of them strike the brain. The incidence of brain metastasis is based on age. It is the highest during the fifth to seventh decade of life, and sort of decline after that. However, the incidence is lower in children, only 6 to 13 percent of cancers in children spread to the brain.

Symptoms and signs:

The most common symptoms are headache, vomiting and altered level of consciousness, which are the cardinal features of raised

intracranial pressure. More than half the patients develop headache as the initial symptom, and vomiting is projectile. Certain group of patients develop personality changes and some do present in a semiconscious state or in deep coma. 35 % of brain metastasis present with epileptic fits. Suspect brain metastasis if the patient is above the age of 45 years and having seizures (or fits) for the first time in life. A part of these patients develop weakness or numbness in one half of the body.



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Diagnosis

CT scan done with contrast or MRI of the brain will be the best investigation to find and assess the nature of these tumours. Most commonly these present as multiple lesions in the brain on the first scanning itself. However, close to 50 % of brain metastasis are solitary, that is a single lesion mimicking other primary brain tumours. Some spread to the meninges (covering of the brain) leading to hydrocephalus (block in cerebrospinal fluid pathways). This is known as 'carcinomatous

meningitis' and patients present with neck pain and rigidity apart from headache / vomiting.

Treatment

Surgery plays an important role along with radiation therapy and chemotherapy in the management of brain metastasis. Surgery is aimed at providing or confirming the diagnosis whenever the primary site is unknown using the CT guided stereotactic technique for biopsy. In large solitary metastasis, excision of

the tumour is done to give symptomatic relief and reduce the tumour load so that radiation can act better. Chemotherapy drugs are designed to kill tumour cells both at the primary site as well in all other sites where metastatic lesions have spread including brain. Gene therapy for brain metastasis is still in its infancy. The overall prognosis in brain metastasis is generally poor and it depends on the spread of disease in other parts of the body, the aggressive nature of the tumour and the extent of neurological deficit. Early detection and prompt treatment will enhance survival time and quality of life!



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