

(A Health Awareness Initiative)

NEURO NEWSLINE

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GLIOMA - the common brain tumour

Gliomas are supposedly the most common brain tumour. These primary tumours of the brain are formed due to the proliferation and accumulation of abnormal glial cells to form a mass. Genetic conditions like neurofibromatosis and exposure to radiation predispose to development of glial neoplasms. Gliomas are classified as astrocytomas, oligodendrogliomas and a combination of these do exist. They are either a low grade glioma or belong to the more malignant higher grade tumours. The symptoms and signs of a glial tumour is determined by its location in the brain and its aggressive nature.

SYMPTOMS

The common presentation of a glioma, especially a low grade tumour is a seizure (fits) that occur for the first time in ones life. The seizure may not be associated with any other neurological deficits. Sometimes weakness of the limbs or numbness affecting one side of the body can also set in gradually. This is the usual presentation of a low grade glioma which is termed as a slow growing type. On the other hand we have the high grade gliomas, the glioblastoma or anaplastic astrocytoma which progress rapidly accompanied by neurological deficits. Severe headache with nausea and vomiting, at times associated with giddiness and blurring of vision are the cardinal features of a high grade malignancy. The headache usually worsens in the morning while waking up from bed. It is often exacerbated by coughing, straining and sometimes

bending forwards and placing the head in a dependant position. Vomiting temporarily relieves the headache! Gliomas that affect the brain stem and cranial nerves can produce difficulty in swallowing and chewing, and sometimes deafness too.

DIAGNOSIS

A CT scan or MRI with contrast is done for patients who present with these symptoms & signs. Usually the scan shows the tumour mass and its location. A contrast study is very helpful in determining if the glioma is low grade or it is highly malignant. In

supported by radiation therapy and chemotherapy (for high grade grade tumours like glioblastoma and anaplastic astrocytoma). Stereotactic biopsy is done for those deep seated gliomas for getting at the diagnosis so that radiation/chemotherapy can be instituted. Many of these microsurgery and endoscopic assisted surgeries are done with intraoperative neurophysiological monitoring so that damages to the vital neural structures are minimised. Some patients may require a shunt (VP shunt) surgery in addition when glioma of the brainstem/thalamus lead to secondary



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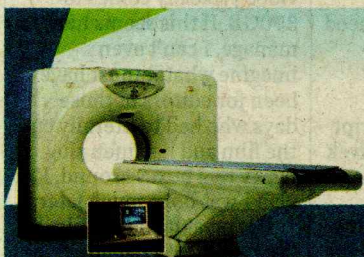
some cases the MR A (angiogram) has been useful to know the vascularity of the tumour and it's proximity to the blood vessels that supply the normal brain. PET scan shows hypo metabolism in the affected areas of the brain.

TREATMENT

Steroids reduce brain edema in a high grade glioma and gives the patient symptomatic relief of headache. It helps to recover motor weakness and vision, thereby letting the patient buy time for the 'definitive' management. Anticonvulsants help to prevent seizures and had to be taken lifelong. Surgery/biopsy remains the 'mainstay' of treatment for glial tumours. It is

hydrocephalus (ventricular dilatation caused by obstruction of cerebrospinal fluid pathways).

The ultimate prognosis and outcome depends on the grade of the glioma. Low grade glioma offer better outcome with longer mean survival time. However the prognosis and long term survival in high grade gliomas are guarded. Early diagnosis and prompt treatment paves way for a better outcome and life span. Newer treatment like immunotherapy has been tried out in some centres in India, yet we need more studies / clinical trials to prove its worth!



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