

Brain tumours in children

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Abstract

A 10 years old, female patient presented with symptoms of abnormal movement of the body for 5 years, deviation of mouth to left side for 12 days and difficulty in walking for 12 days. We report a very rare case of Brain Stem gliomas. Clinical and imaging findings were suggestive of Brain Stem gliomas.

Key words: Brain tumours, Intracranial space occupying lesion.

Intracranial space occupying lesion includes brain tumours, masses of congenital origin and inflammatory disorders such as brain abscess, neurocysticercosis, tuberculoma and subdural fluid collection. Brain edema may also stimulate space occupying lesions. It may present with increased intracranial tension, altered sensorium of localizing signs. The brainstem is the part of the brain connected to the spinal cord. It is located in the lowest part of the brain, just above the back of neck. The brain stem controls breathing, heart rate, and nerves and muscles used in seeing, hearing, walking, talking and eating. Most childhood brain stem gliomas are pontine gliomas.

Case report

A 10 years old, female patient presented with symptoms of abnormal body movements for 5 years, deviation of mouth to left side for 12 days and difficulty in walking for 12 days. On examination the patient was conscious and cooperative. Vitals were within normal limit and there was no dysmorphism. Right rectus palsy and right facial nerve palsy of lower motor neurone type was detected. All deep tendon reflexes were normal but right planter was down going and left planter upward going. We did MRI which showed low grade glioma in pons and midbrain on the right side extending to middle cerebellar peduncle.



Fig 1: Cut section showing brain stem gliomas

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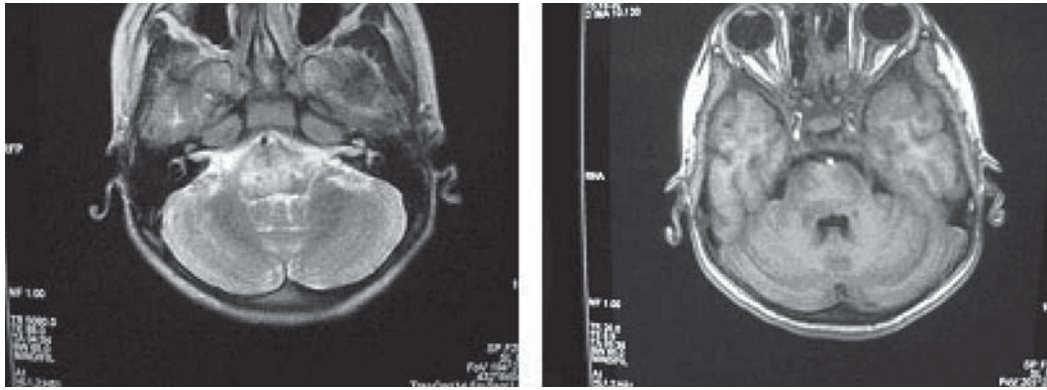


Fig 2: Cut section showing involvement of mid brain and pons.

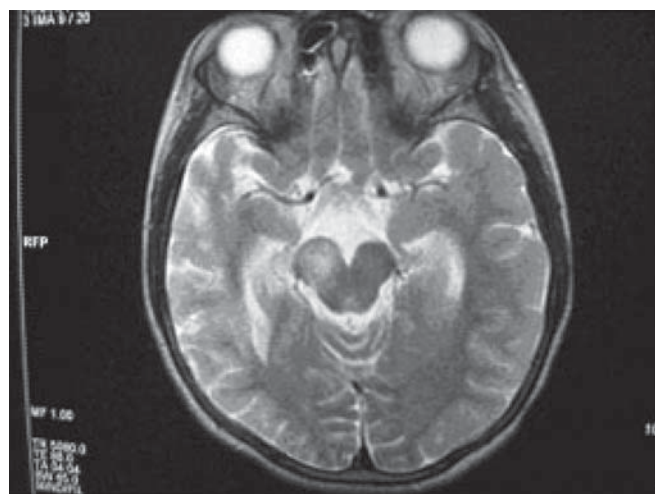


Fig 3: Cut section showing extending towards cerebeller peducle.

Discussion

Brainstem gliomas are a heterogeneous group of tumours commonly seen in children. They represent approximately 10% of the tumours arising in central nervous system and 30% of pediatric posterior fossa tumours^{1,2}. Those localized in the midbrain (7 to 8%) are almost always low grade astrocytoma and are associated with good prognosis, those localized to the medulla (10 to 15%) are also usually low grade astrocytoma with good to fair prognosis, but those localized to the pons (80%) are thought to have dismal prognosis³. Although controversies persist in the diagnosis and treatment of brain stem gliomas, histological studies of the lesion are essential to make a definitive diagnosis and decide on appropriate treatment. The reasons to biopsy brainstem gliomas are to diagnose the tumour type especially focal brain stem lesions and to decompress the exophytic tumour^{4,5,6}.

Conclusion

Glioma of the brain stem causes bilateral involvement of the cranial nerves and long tracts. The usual onset is

in the later half of the first decade. Brain stem gliomas carry the worst prognosis. Most children die within 18 months. Surgical excision is difficult. Hyperfractionation radiotherapy is being evaluated. Chemotherapy does not have significant role.

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