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Medulloblastoma in a 12 year boy-A Case Report

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Abstract
Brain tumors are the most common solid tumors in children of which medulloblastoma comprises 20-25% [1] of all paediatric brain tumors and is the most common brain tumor in children. Here, we present a case of 12 year old male boy who was admitted in the paediatric department of MKCG medical college with complains of fever, headache and vomiting for last 1 month. He was initially diagnosed as a case of Tubercular meningitis (TBM), but on doing MRI was found to have medulloblastoma.

Key words
Brain tumors, Medulloblastoma, TB meningitis

Introduction:

Medulloblastoma is a primitive neuroectodermal tumor arising in cerebellum[2].It is relatively rare and 70% of all medulloblastomas are diagnosed in children under 10 years with male predominance[3].The clinical presentation is due to enlarging tumor in the posterior fossa and duration of symptoms is for about 1-2 moths as it is a fast growing tumor. Sometimes, it may mimic TB meningitis. The most common oncogenic factor noticed is isochromosome 17q [4].It may spread to cerebellar peduncle and/or the floor of the left ventricle, anterior to the brainstem and inferiorly to the cortical spine or superiorly above the tentorium.It may also spread via CSF intracranially or in the leptomeninges and spinal cord[5].Similar tumor arising from pineal region is termed pineoblastoma and those arising from other CNS location are called primitive neuroectodermal tumors(PNET).

Case report
A 12 year old male boy admitted to the paediatric department of MKCG medical college with complains of fever, headache and vomiting for last 1 month. The child was a 4th order child born out of consanguineous marriage, immunized as per age (NIS) but BCG scar was absent. He was thin built and under nourished. There was history of contact with an open case of tuberculosis. On examination, the child was irritable, there was ataxia and wide based gait, right sided lateral rectus palsy.Bulk,tone and reflexes were normal. Neck rigidity and other meningeal signs were present. On doing fundoscopy bilateral papilledema was found. Because of these features a provisional diagnosis of Tubercular meningitis (stage 2) was made. But mantoux was negative, sputum by CBNAAT did not find mycobacterium tuberculosis and chest x-ray came out to be normal. CSF study was normal. After admission the child was getting IVF,NG Feed IV steroids,3% NS. With this conservative management child showed transient improvement from raised ICT features. Following which MRI was done(FIG 1&2).A lobulated heterogenous intensity mass lesion occupying 4th ventricle, moderate obstructive hydrocephalus and periventricular ooze were seen. This was suggestive of neoplasm like medulloblastoma. After the final diagnosis the child was referred to higher centre for further management.

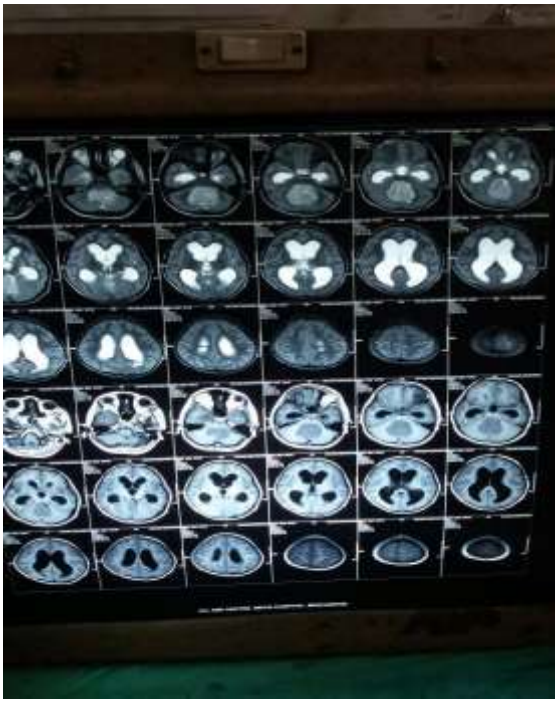

Fig 1 and 2: MRI showing medulloblastoma and moderate hydrocephalus.

Discussion

Medulloblastoma is predominantly present in cerebellar vermis hence there is presence of ataxia [3].As the tumor grows ,obstruction of CSF passage through the 4th ventricle results in hydrocephalus. The outcome depends on 3 principle factors, age, extent of post-operative residual disease and the metastatic stage of the disease [6].A multi-modality management is required. Initially surgery to achieve as much resection as possible followed by radiotherapy and chemotherapy [7].

Conclusion

In countries like India where the prevalence of TB is high, TB meningitis should be the first diagnosis in this case. But other rare diseases like ICSOL (e.g. medulloblastoma), brain abscess should be considered as a differential diagnosis. Thus neuroimaging and CSF analysis play a pivot role towards diagnosis.

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