

A CASE REPORT OF ISOLATED BRAINSTEM TUBERCULOMA WITHOUT ANY FOCAL NEUROLOGIC DEFICIT

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ABSTRACT: A 7 yr. old girl presented with headache and vomitings. Investigations showed brainstem tuberculoma at the level of pons. Isolated presentation of tuberculoma of brainstem is rare. In this report, it was aimed to present isolated brainstem tuberculoma without any focal neurologic deficit and other systemic involvement or past or family history of tuberculosis and importance of neuroimaging in diagnosing tuberculoma even in the absence of neurologic deficit.

KEYWORDS: Tuberculoma, Brainstem.

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INTRODUCTION: Tuberculosis is still endemic in developing countries. Neurotuberculosis is significantly contributing the mortality and morbidity in pediatric patients. Tubercular meningitis and intracranial tuberculomas are the two frequent manifestations of neurotuberculosis. A tuberculoma is a tuberculous focus, which results from aggregation of caseous tubercles. Tuberculoma usually manifest raised intracranial manifestations and focal neurologic deficit simulates brain tumour. CNS Tuberculomas, either multiple or single, usually presents as a diagnostic challenge, specifically in patients without constitutional symptoms or evidence of tuberculosis elsewhere in the body.

CASE REPORT: A 7 yr. old female child presented with complaints of headache since 3 days, vomitings since 3 days. Severe headache all over the head. Vomitings are present and are non-bilious non-projectile. Developmental history normal appropriate for the age. Immunization history followed national immunization schedule. BCG scar present. No past history of tuberculosis or other significant history. No family h/o tuberculosis. On general examination child is conscious, irritable. Vitals are normal. No cranial nerve palsy. On motor system examination power, bulk, tone normal no focal neurologic deficit. No involuntary movements. No sensory loss. No autonomic disturbances. No signs of meningeal irritation. Skull and spine normal. Gait normal. On MRI scan there is solitary tubercular granuloma present at level of pons. Fundoscopy normal, no optic disc edema. The TST is reactive (12mm). Chest X Ray is normal.

DISCUSSION: In developing countries, the incidence of brain tuberculoma constitutes 5-40% of intracranial SOL.¹ Lesions are most often singular but may be multiple. Isolated brainstem tuberculomas are rare, accounting for 2.5-8% of all intracranial tuberculomas.² Isolated tuberculomas presenting as mass lesions in the brain stem without evidence of tuberculous involvement of any other system or other parts of the CNS, are distinctly rare.³ It has been reported that the predominant locations of tuberculoma are supratentorial in adults and infratentorial in children.⁴ The most common symptoms are headache, fever, focal neurologic findings, and convulsions. The TST is usually reactive, but the chest radiograph is usually normal. On CT or MRI of the brain, tuberculomas usually appear as discrete lesions with a significant amount of surrounding edema. Contrast medium enhancement is often impressive and can result in a ring-like lesion.

Vimla et al⁵ reported a 12 year old patient, who presented with isolated "1½ syndrome".⁵ Piyush Gautam et al reported Isolated Pontine Tuberculoma Presenting as Horizontal Gaze Palsy.⁶ In our case there no neurological deficit except severe headache and vomitings. Important and clinically interesting and significant observation is there is an evidence of paradoxical expansion the lesions may occur some times and may lead to worsening the clinical condition.⁷ This paradoxical response usually occurs during first 3 months from the start of therapy.⁸ Corticosteroids therapy should be given and ATT should be continued.

CONCLUSION: Isolated brainstem tuberculosis is very rare presentation. Important thing to be remember is there is chance of paradoxical enlargement of the lesion or may be appearance of new lesions may occur due to enhancement of immuneresponse during the treatment. And it is not an indication of stopping treatment.

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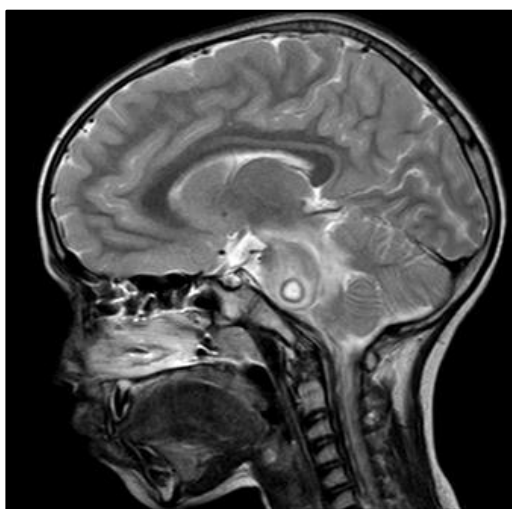
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MRI axial section showing tuberculoma at the level of pons



MRI sagittal section showing tuberculoma at the level of pons