# Isolated Sensory Trigeminal Neuropathy- A Rare Clinical Presentation of Brain Stem Tuberculoma. Case Report

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**Citation**

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**Abstract**

Brain stem tuberculoma is rare entity and to best of our knowledge, its presentation as isolated facial numbness has never been reported in literature. We are reporting a case of brain stem tuberculoma who presented with isolated facial numbness. Diagnosis was established by imaging and other relevant investigations. Both radiological and clinical improvement was noted after 4 months of anti tubercular therapy.

## INTRODUCTION

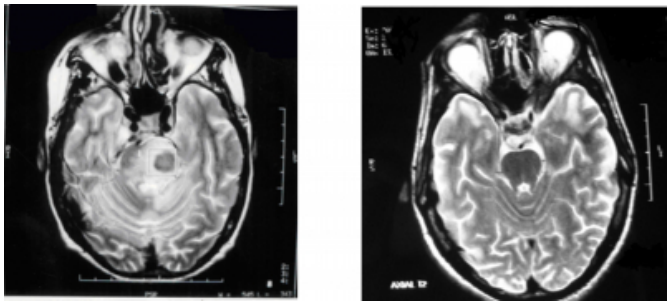
Brain stem tuberculoma is rare entity, usually present with multiple cranial nerve palsies and long tract signs [1]. It should be suspected in patients with space-occupying lesions of the brain stem who live in geographic areas where tuberculosis is endemic. Though they are known to cause usual clinical features of any intrinsic brain stem mass [2], presentation with isolated facial numbness is a rare occurrence. Facial numbness can be seen usually in vascular lesions of pons, both hemorrhage and infarction [3,4]. We here report a case of brain stem tuberculoma who presented with isolated facial numbness. The precise correlation of patient's symptoms and MRI finding was done which implies exclusive involvement of brainstem trigeminal sensory complex. To the best of our knowledge, this is probably the first case report in Indian literature.

## CASE REPORT

This 45 year old female presented with sensation of numbness on entire left half of face, scalp, tongue, part of auricle of one and half months duration. Pain or electric sensation was conspicuous by its absence. There was no difficulty in mastication, alteration of taste, vertigo, weakness or paresthesia in limbs. Patient had history of pulmonary tuberculosis 8 years back, for which she took full course of anti-tubercular therapy. There was no history of diabetes mellitus or hypertension. Neurological examination revealed hypoesthesia in all three divisions of trigeminal nerve. The ophthalmic and maxillary distribution was involved more than mandibular distribution; curiously the corneal reflex was preserved. No apparent jaw deviation or atrophy of muscles of mastication was found. Taste sensation was intact. Fundus examination was normal. Motor system examination revealed normal deep tendon reflexes but planters were extensor bilaterally. Sensory system examination was normal and there were no cerebellar signs.

**Figure 1**

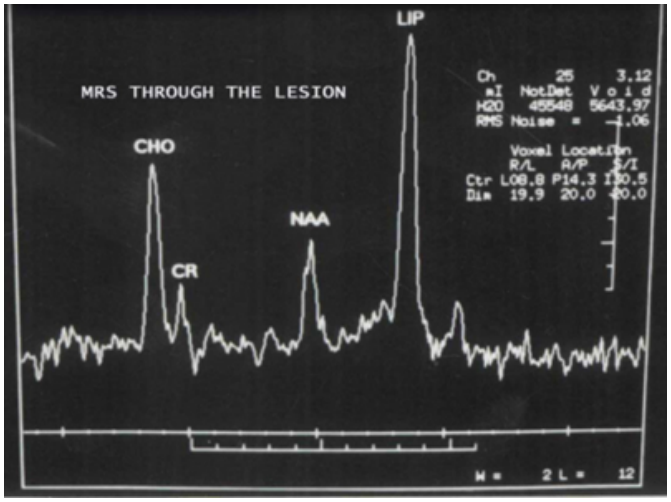
Figure: Axial T2 weighted MRI image showing hypo intense lesion in left side of Pons (Left Side) and disappearance of lesion after treatment (Right Side)



Brain MRI was done that revealed an isolated area of altered signal intensity which was isointense to mildly hyperintense on T1 weighted and hypointense on T2 weighted image in left side of pons. MR spectroscopy revealed raised lipid peak with reduced N- Acetyleaspartate and choline peak. Erythrocyte sedimentation rate was 40 mm in first hour. Mantoux test was positive with 15 mm of induration. X-ray chest showed healed lesion with fibrosis in left upper zone. Other blood investigation including complete blood count, liver function tests, renal function tests, antinuclear antibody and rheumatoid factor were all normal. Ultrasonography of abdomen did not show any abnormality.

**Figure 2**

Figure: MR spectroscopy which revealed elevated lipid peak with reduced NAA and choline peak.




On basis of previous history, positive Mantoux test, MRI and MR spectroscopy findings, diagnosis of brainstem tuberculoma was kept. Other possibilities like neurocysticercosis, sarcoidosis and multiple sclerosis were ruled out by appropriate investigations. After 4 weeks of antitubercular therapy patients started showing improvement and symptoms disappeared within 3 months. Steroid therapy of 8 weeks duration was also given. The recovery corroborated well with the disappearance of lesion on MRI 4 months later. We followed up the patient after six months of start of antitubercular therapy and found him to be doing well and have remained asymptomatic.

## DISCUSSION

The incidence of CNS tuberculoma ranges from 0.15 % of intracranial tumors in Britain compared to 20% to 30% in India.[$_5$]' In the United States, 0.7% of brain tumors comprise of tuberculomas [$_6$].The diagnosis of intracranial tuberculoma should be considered in any patient from a developing country, or with other appropriate exposure, in whom signs and symptoms of a slowly growing cerebral mass develop. Most patients present with weight loss and a positive PPD skin test, and about half will show no evidence of extracranial infection. [$_{78}$]. Usually brainstem tuberculoma presents with low grade fever, weight loss, vomiting, sixth and seventh cranial nerve affection along with motor and sensory symptoms which are usually unilateral. Isolated cranial nerve palsies are often attributed to lesions of the respective nerves along their extra axial courses. However, ischemic or hemorrhagic lesions of the brainstem also cause isolated cranial nerve palsies through involvement of the intra axial segments of the respective nerves. Isolated facial numbness is a rare presentation of brainstem tuberculoma though it has been reported with lateral pontine tegmental hemorrhage [$_2$], infract [$_3$], and metastasis [$_9$]. Brain stem tuberculoma presenting as isolated numbness of face has not been reported yet to best of our knowledge. In view of lesion exactly fitting at the area of principle sensory nuclei and spinal tract of trigeminal nerve (Pontine part), the case under discussion reflects good clinico-radiological correlation (Fig-1). Further, preservation of corneal sensation and reflex is said to be characteristic of surgical lesion of pons [$_2$]. The absence of motor deficit and disturbance of mastication speaks for integrity of motor nucleus of trigeminal nerve. Disappearance of lesion with antitubercular therapy [$_{10}$] along with raised erythrocyte sedimentation rate, positive Mantoux test and characteristic MRI finding in this patient confirms the diagnosis of tuberculoma even in the absence of biopsy. The purpose of reporting this case is to document isolated involvement of sensory nuclei of trigeminal nerve due to tuberculoma.

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