

Brainstem Tuberculoma: Case Report

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Abstract : Brainstem localization for tuberculomas is rare. A case diagnosed and operated in our department was presented due to its localization property. He had 19 months of follow-up period and showed a certain amelioration.

Key Words : Brainstem, Tuberculoma

INTRODUCTION

In developing countries, 5 to 8% of space-occupying lesions of the central nervous system (CNS) are caused by tuberculomas (1). Among these, brainstem localization is rare and if extra cranial tuberculosis is not found, preoperative diagnosis can be extremely difficult (5). Although computerized tomography (CT) and magnetic resonance imaging (MRI) may be helpful in diagnosis, there is no imaging technique that can differentiate tuberculomas reliably from other intracranial mass lesions. A case diagnosed and operated successfully in our department with 19 months follow-up is presented.

CASE REPORT

A 29-year-old man was admitted to hospital with symptoms of headache, dysphasia and left hemiparesis. Past history showed a diagnosis of pulmonary tuberculosis with the initiation of anti tuberculosis therapy 3 months previously. On physical examination the left hemithorax was unable to assist ventilation and diffuse ronchus was apparent on auscultation. Neurological examination revealed multiple cranial nerve palsies with

3,5,6,9,10,11 on the right and 6,9,10 on the left, left hemiparesis including the face, horizontal nystagmus, static and kinetic dysequilibrium with cerebellar signs. A chest x-ray showed fibrocalcific changes in both apices. Cranial CT revealed a mass lesion in the brainstem with a multiloculated isohypodense core, surrounding oedema and dense border during contrast enhancement and apparent fourth ventricle compression (Fig. 1). By the evaluation of the case it was highly suspicious for a tuberculoma in brainstem localization since there was a previous history of pulmonary tuberculosis.

Medical therapy was arranged with close clinical and tomographic follow-up. As there was no response to medical therapy the patient underwent a sub-occipital craniectomy. On operation the pons was seen to be asymmetrically swollen. A 3 mm incision was made for pons in the midline and cystic and calcaceous material was drained. Histopathological examination confirmed tuberculosis and the patient was followed with serial CT scans. Nineteen months after the operation, neurological examination showed only horizontal nystagmus and CT obtained at the same time showed complete resolution of the lesion (Fig. 2).



Fig. 1 : Preoperative cranial CT showing a mass lesion in the brainstem with a multiloculated isohypodense core, surrounding oedema and dense border during contrast enhancement, and apparent fourth ventricle compression.



Fig. 2 : Postoperative Cranial CT (19 months after operation) showing resolution of the lesion.

DISCUSSION

CNS tuberculoma is a rare form of extrapulmonary tuberculosis and is frequently a result of haematogenous spreading from a primary focus, characteristically most often the lung (8). Supraten-

torial tuberculomas occur most frequently in adults and infratentorial tuberculomas in children (8). CNS tuberculomas are most frequently reported from developing countries (4). As in our case previously known pulmonary tuberculosis may force a neurosurgeon to think about an intracranial mass lesion as a tuberculoma. Systemic tuberculosis was found in 55 % of brainstem tuberculomas (7). Cerebral tuberculoma is a disease of young adults (below 30 years-old) and sex distribution is equal (2). There is no specific CT finding for tuberculomas (9) whereas MRI may give more specific information (3,4). Anti-tuberculosis therapy and serial CT scans must be the first choice of treatment. If the lesion is unresponsive to medical treatment or if elevated intracranial pressure is present, surgery must be considered (6).

The brainstem is a rare localization for tuberculosis but it must be always kept in mind that in a case with a previous history of tuberculosis and an intracranial space occupying lesion, tuberculoma may be the diagnosis.

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