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TUBERCULOSIS MENINGITIS WITH OPHTHAL INVOLVEMENT

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ABSTRACT

Patient with TB meningitis associated with vision involvement (opto-chiasmatic arachnoiditis) when not properly followed up or not early diagnosed or those who didn't undergo the full course of treatment, leads to worsening of complication and permanent irreversible vision loss. This case study presents the outcome of the patient with the above mentioned condition when diagnosed as soon as the symptom started and underwent full course of treatment.

Keywords: Tuberculosis Meningitis, Optochiasmatic Arachnoiditis, Suprastellar Cistern, Hydrocephalus, Complication, Vision Loss

INTRODUCTION

Tuberculosis meningitis, which accounts for 70 to 80 per cent of cases of neurological TB, is still an important public health problem in developing countries. Several co-morbid conditions such as intercurrent viral infections, advanced age, malnutrition, alcoholism, HIV/ AIDS, use of corti-costeroids and other immunosuppressive

drugs may compromise cellular immunity of the host leading to reactivation of a latent infection **[1]**. However, a majority of cases of TBM occur in the absence of any clinically demonstrable extra-cranial infection or overt disturbance in host immune function. Tuberculosis meningitis presents with many dreadful complication which leads to life threatening situation **[2]**. One such complication is opto-chiasmatic arachnoiditis which leads to visual impairment in the patients with TBM. The mechanisms for this may include arteritis or compression of the anterior visual pathways due to hydrocephalus or tuberculoma. This leads to visual impairment presenting with the clinical picture seen in the disease **[3]**.

CASE REPORT

HISTORY

A 22 year old male patient presented with the complaints of Fever and headache associated with vomiting for 3 days. He presented with chief complaints of convulsions a day back with one episode, generalized in nature, lasted for 5 minutes associated with loss of consciousness. History of progressive bilateral loss of vision present.History of neck stiffness present. No history of altered sensorium. No history of cough, sore throat , or breathlessness. No history behavioral change. No history of similar illness in the past. He has no Co-morbidities. No history of intake of any medications.

EXAMINATION

On examination, patient was conscious, oriented to time, place and person, febrile (100.4 F). BP-120/80mmhg, Pulse 90bpm, Spo2- 98%under Room air. No skin hyperpigmentation or rashes. Chest sounds were normal and lung fields were clear. Per abdomen- soft, bowel sounds heard and no organomegaly. CVS- S1,S2, heard, no added sounds. CNS examination Motor, sensory and autonomic functions normal. Visual acuity – Right eye 6/18 and Left eye 6/12.

COURSE

With the suspicion of Infective Etiology with neuro-involvement, patient was started on supportive therapy and necessary investigation were sent. CSF analysis shows ADA >18, Sugar-35 mg/dl, Protein - 167mg/dl, Gram stain for AFB- Positive. CBNAAT CSF analysis – Positive.HIV/ Hep-B/ Hep C- Negative.Indian ink negative and CSF for cryptococcal antigen negative. In the view convulsion and progressive loss of vision, MRI Brain with constrast was taken , it showed enhancing lesions in the suprasellar cistern in the chiasmatic region of optic nerves associated with hydrocephalus, thickening and enhancement of basal meninges, sublte shaggy leptomeningeal

enhancement is noted predominately in right Fronto-Parietal sulcalspaces. Other condition mimicking TB meningitis had been ruled out. From the above Findings and investigation, we came to diagnosis of TB meningitis with optochiasmatic arachnoiditis. Patient was started on CAT -1 ATT regimen for 6 months along Dexamethasone at 8 mg/day for 4 weeks.

OUTCOME

Visual acuity began to improve drastically. Constitutional and other symptoms subsided a month after the start of ATT and Dexamethasone. The patient was reviewed after completion of treatment course, showed complete visual recovery from optochiasmatic arachnoiditis and symptom-matically improved.

DISCUSSION

Tuberculous meningitis is primarily a disease of the meninges of brain and spinal cord along with adjacent brain parenchyma. Exudates of tuberculous meningitis, if dominantly present in the interpeduncular, suprasellar and Sylvian cisterns, results in optochiasmatic arachnoiditis and tuberculoma **[4]**. Thick basal exudates compress and occlude the blood supply to the optic nerve and the optic chiasma, and produce a severe vasculitis, which affects the meningeal vessels on the surface of these structures Acid-fast bacilli may also be demonstrated in the necrotic material. The impairment of vision in patients with optochiasmatic arachnoiditis and tuberculous tuberculoma is often of insidious onset and slowly progressive, but rarely it can be of acute onset. The vision loss may be unilateral or bilateral, and frequently blindness is complete **[5, 6]**.

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