



A case report of tuberculoma occipital lobe with bilateral abducent nerve palsy

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Abstract : Tuberculoma is conglomerate caseating foci usually located within the brain substance. Can also arise in leptomeninges, ventricle, subdural space (tuberculoma en plaque).

Keyword : TUBERCULOMA, PAPILLOEDEMA

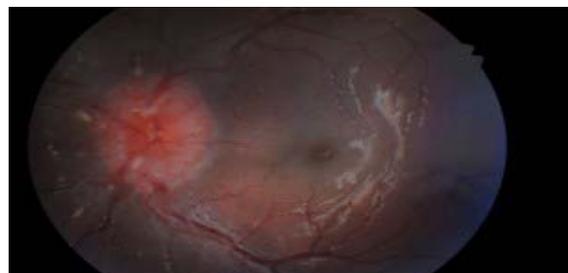
Central nervous system disease caused by Mycobacterium tuberculosis is an uncommon, yet undoubtedly a devastating manifestation of tuberculosis. CNS tuberculosis accounts for only 10% of all cases of tuberculosis, carries a high mortality and a distressing level of neurological morbidity.

CASE REPORT

14 year old female patient came with the chief c/o headache and c/o double vision since 10 days. On detailed history the headache was bifrontal associated with giddiness and vomiting and the diplopia was binocular present through out the day. No other positive history present. No significant past, family and present history was present. General examination ,vitals and systemic examination found to be normal. On ocular examination RE Vision 6/18 with correction 6/6,LE Vision 6/9 with correction 6/6.No head tilt, no facial asymmetry. EOM BE-abduction restriction on extreme gaze. On anterior segment examination BE lids normal, conjunctiva & cornea was clear, anterior segment was normal in depth, pupil was reacting to both direct and consensual light reflex and the accommodation was intact and the lens was clear. Cranial nerve examination found to be normal except 6th cranial nerve [mild abduction restriction on extreme gaze]. Fundus examination shows BE media clear, disc-margins blurred, obliteration of physiological cup present and absence of spontaneous venous pulsation and venous dilatation present which suggested a picture of established papilledema. Diplopia charting showed B/L uncrossed diplopia in all directions of gaze.



RE FUNDUS



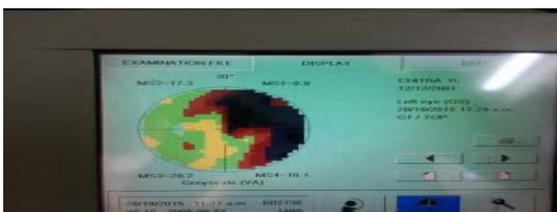
LE FUNDUS



BE colour vision was normal, fields on perimetry shows right sided homonymous hemianopia with sparing of macula with enlargement of blind spot and the above perimetry findings were confirmed by automated perimetry.



RE PERIMETRY

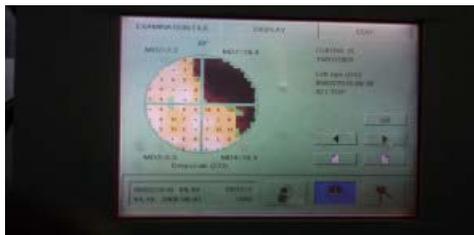


LE PERIMETRY

Blood investigation shows mild rise in ESR, test for HIV ELISA was negative, chest x-ray was normal. MRI brain shows 3.1*3cm well defined T1[isointense]T2[hypointense] intraaxial nodulocystic lesion noted in the occipital region with surrounding edema and the lesion shows rim enhancement on contrast suggestive of tuberculoma. The patient was started on category I ATT, Tab phenytoin , T.pyridoxine as per the advise given by physician. Patient was reviewed 1 month after starting ATT. Patient was symptomatically better with no diplopia and full range of extra ocular movements and showed improvement in visual field defects



RE repeat perimetry



LE repeat perimetry

DISCUSSION

Differential diagnosis of ring enhancing lesion in MRI Granulomatous lesions-Tuberculosis and neurocysticercosis other lesions- Brain abscess, Contusion injury, Infarcts, Multiple sclerosis, Glioma. Tuberculoma is a conglomerate caseating foci usually located within the brain substance. Can also arise in leptomeninges, ventricle, subdural space (tuberculoma en plaque). Occurs in patients who have a h/o PTB, tubercular meningitis and can also be associated with concomitant HIV infection. Also present in persons without any past h/o PTB and CXR shows no evidence of pulmonary disease. Clinically the patient presents with signs and symptoms of space occupying lesion without evidence of systemic TB or meningeal inflammation most of the times. Clinical manifestation depends primarily on the location of the lesion. Tuberculoma developing adjacent to optic nerve, chiasm, tract will produce unilateral or bilateral visual loss with variety of field defects. Damage to parasellar cranial nerves may produce diplopia due to ocular motor nerve palsies and pain and numbness due to trigeminal neuropathy. Destruction of pituitary gland leads to panhypopituitarism. Tuberculoma within cerebral hemispheres cause visual loss due to interruption of postgeniculate visual pathways which can produce homogenous field defect and cortical blindness. Tuberculoma in cavernous sinus can produce single or multiple cranial nerve palsy. Tuberculoma within brainstem and cerebellum can produce e or multiple cranial nerve palsy, gaze paresis, internuclear ophthalmoplegia, nystagmus, abnormal vestibulo ocular reflex. papilledema can be seen on fundus. Routine peripheral blood counts and biochemical tests are of little value in the diagnosis. Many patients exhibit mild anemia and leucocytosis. Diagnosis of tuberculoma may be suspected from the results of neuroimaging. Early lesion typically appears as hypo or isodense mass that shows generalized or peripheral rim enhancement after IV injection of contrast and associated with significant surrounding brain edema. Differential diagnosis for such lesion is neurocysticercosis, metastasis. CT guided biopsy can be done for definitive diagnosis. Nonsurgical medical line of treatment is the treatment of choice. Anti tubercular drug for 12weeks and steroid for reducing brain edema can be given As India is an endemic country for tuberculosis, presumptive diagnosis is made with neuroimaging and patients are empirically started on ATT. Confirmative final diagnosis is established by the patients clinical improvement and followup neuroimaging shows evidence of decrease in edema and size of the lesion after taking ATT.

CONCLUSION

This case emphasises the importance of examination of extra ocular movements, visual fields and fundus examination in patients presenting with headache and diplopia because a false localizing sign may be the only presentation of a space occupying lesion.

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