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DIPLOPIA AS THE PRESENTING MANIFESTATION OF PRIMARY MDR – TB IN A YOUNG CHILD: THE FIRST OF IT'S KIND.

Respiratory Medicine

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KEYWORDS

INTRODUCTION

Primary MDR-TB characterizes patients who have no prior TB treatment history or treatment of less than one month duration. Tuberculosis of the CNS accounts for approximately 1% of all of the diseases caused by MTB.[1]

CASE REPORT

- Five year old male child presented with rotation of right eye ball towards nasal side, sudden in onset associated with diplopia and headache
- On examination he was lethargic, pulse rate – 98/min, respiratory rate – 20/min, Temperature – 98.6 F. Laboratory investigation revealed Hb 11.2mg/dl, TLC 16,300 , Platelet count 5.35 lakh, ESR 47, INR 1.1, CRP 1.08, LFT/ KFT within normal limits. viral markers non reactive
- MRI Brain revealed two well defined lesions appearing heterogeneously hyperintense on T2W image with hypointense periphery and internal invaginations showing mild peripheral restricted diffusion on DW images were seen in right cerebellar hemisphere and vermis.
- MR Spectroscopy showed depressed NAA peak and no elevation of choline peak.
- MRS findings in conjuction with CEMRI findings suggested an infective etiology likely abscesses, tubercular or pyogenic.
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- MRI orbit findings were suggestive of optic neuritis with signs of increased intracranial tension
- HRCT Chest revealed minimal right pleural effusion with nodular thickening of pleura, areas of ground glass appearance and mosaic attenuation in both the lung parenchyma and subcentimetric sized mediastinal lymph nodes
- Gastric aspirate sample was taken and sent for CBNAAT analysis which revealed rifampicin resistant MTB for which he was started on ATT as per MDR regimen.
- Fifteen days in the course of the treatment the patient presented again with severe headache and was subsequently operated for the ICSOL via a posterior craniotomy (the resected specimen stained positive for AFB)
- He was discharged on the seventh post -operative day with resolution of the headache and diplopia and is doing fine to the present day.

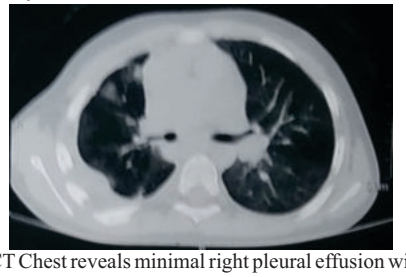


FIG - HRCT Chest reveals minimal right pleural effusion with nodular thickening of pleura. Linear subsegmental atelactatic changes in the right lower lobe and middle lobe. Area of ground glass appearance and mosaic attenuation in both lung parenchyma. Subcentimetric sized mediastinal lymph nodes

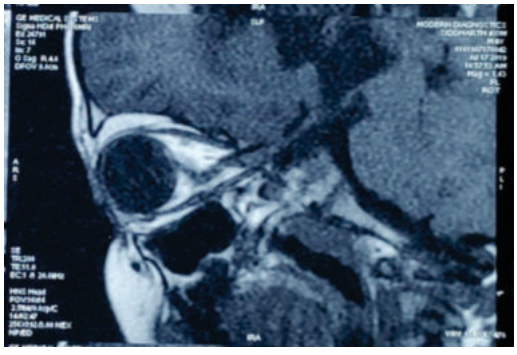
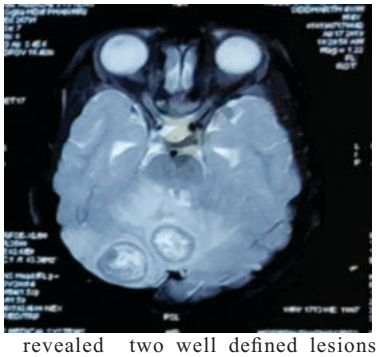
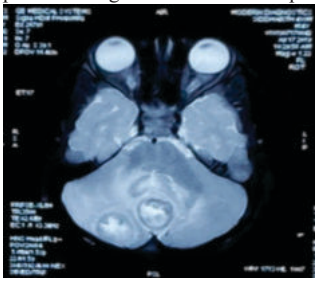


Fig MRI of orbits reveals torturous bilateral optic nerves with modrate perineural edema in their proximal intraorbital course and flattening of posterior sclera surface. Findings are suggestive of optic neuritis with signs of increased intracranial tension.



MRI brain revealed two well defined lesions appearing heterogeneously hyperintense on T2W image with hypointense periphery and internal invaginations are seen in right cerebellar hemisphere and vermis with moderate perilesional edema in the cerebellar hemispheres and right middle cerebellar peduncle.



DISCUSSION

Tuberculomas are conglomerate, caseating foci that arise within the brain, spinal cord, leptomeninges, ventricles, or subdural space. They commonly occur in patients who have a history of tuberculosis[2]. However, tuberculomas may also develop in patients with no history of tuberculosis and normal chest x- ray and may present primarily with neurological manifestations. MRI showed two tuberculomas in right cerebellar hemisphere and vermis of the patient. MRS adds great value in the specific diagnosis of tuberculoma in case of ring-enhancing lesions, wherein it demonstrates a very high lipid peak, reduction in NAA, creatinine and a choline/creatinine ratio of >1. This lipid peak is very much specific for tuberculoma and is not found in any case of neurocysticercosis, the other common differential diagnosis of a ring-enhancing lesion[3]. While such patients are managed by ATT and steroids our patient also required surgical intervention. A similar case was also described by Saxena presenting as supranuclear gaze palsy without diplopia as a manifestation of a tuberculous brain stem lesion[4].

CONCLUSION :

To the best of our knowledge this is one of the rarest presentation of primary MDR TB as tuberculoma. Though most of the patients respond to medical management with ATT and steroids, some may require urgent surgical intervention to relieve the neurological symptoms which was the case in our patient.

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