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Case Report

Tuberculoma and meningioma; masquerading each other in a young elderly patient

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ABSTRACT

A tuberculoma is a relatively rare variant of tuberculosis, and sometimes resembles a meningioma in the first instance, both radiologically and in gross appearance. Here we report a case of 59 year old man presenting with pyrexia of unknown origin since 1 month. On MRI brain, it was suggestive of meningioma, but CSF analysis was suggestive of tuberculosis and patient responded with anti tubercular treatment.

1. Introduction

Tuberculoma was first described in 1927, is a rare presentation of tuberculosis and hence it remains a diagnostic dilemma even today.[1] Tuberculoma can be present in supratentorial as well as infratentorial compartment, but the incidence of intracranial tuberculomas is decreasing day by day. It is uncommon to have a tuberculoma that imitates meningioma radiologically. Here, we report a case of a young elderly who presented as a case of pyrexia of unknown origin who had a meningioma on an MRI brain scan that lat er turned out to be tuberculoma.

2. Case Report

A 59-year-old male patient presented with complaints of fever for 15 days. It was associated with headache and generalized body ache. Fever was high grade on and off since then. There was no history of chills or rigors. No history of cough, breathlessness, pain in the abdomen, vomiting, loose motions, blurring of vision, photophobia, seizures, loss of consciousness.

The patient was admitted outside where he was treated with multiple antibiotics based on suspicion, but the fever persisted.

On examination, the patient was afebrile, conscious and oriented to time, place and person. The patient's higher functions were normal. His chest was bilaterally clear and had no tenderness over the abdomen. He had no neck stiffness, no focal neural deficits or any CNS abnormalities.

All routine investigations were done. The patient had undergone screening USG abdomen and pelvis. All the reports were negative.

In the search for the cause of fever, the patient had also had CECT abdomen-pelvis done which was suggestive of mild hepatomegaly. A magnetic resonance imaging (MRI) with contrast was done which showed well defined extra-axial mass lesion noted in the left temporal region at the anterior pole appearing isointense on T1W1 and FLAIR, iso-hyperintense on T2W1 and with moderate homoge nous post-contrast enhancement with dural tail enhancement having size of 16 x 10 mm. A final impression was given as well defined extra-axial mass lesion in left temporal region at the anterior pole; features suggestive of meningioma.

The condition did not explain the complaints of the patient – Fever.

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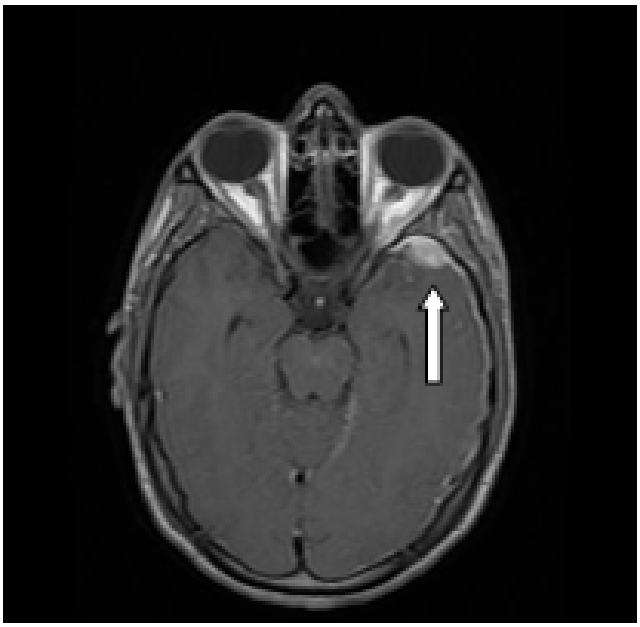

Fig. 1: T1 Magnetic Resonance Imaging Showing Meningioma

Hence lumbar puncture was done. CSF showed lymphocytic predominance with proteins of 68 mg/dl and glucose 46 mg/dl. CSF for ADA was 88 U/L (strong suspect $>$ 12.35 U/L).

Keeping the above reports in mind, the patient was started on anti-tubercular drugs and steroids.

The patient responds dramatically. He was observed for 5 days after starting AKT. There was no fever spike recorded. The patient was advised no surgical intervention as the meningioma was too small to be removed and was advis ed to continue anti-tubercular drugs. Patient was doing well on follow up after 3 months on anti tubercular treatment.

3. Discussion

Tuberculomas are very common i ntracranial tumors. Extra-dural tuberculoma is likely to mimic meningioma on CT and MRI imaging. However, tuberculomas mimicking meningiomas are exceptional.[2] They are rarely seen in developed countries nowadays. It is common in developing countries like India. Intracranial tuberculomas can be seen both supratentorial and infratentorial. Children commonly have infratentorial tuberculomas.[3] Tuberculoma is a rare manifestation of intracranial tuberculoma wherein the mass is diffusely infiltrating the dura, often resembling a meningioma . It was first reported as an autopsy finding in 1927 by Pardee and Knox who des cribed it as, "a meningitic process without exudation, usually situated in the frontal and parietal regions." (1)When the meningeal inflammati on is confined, it forms a hard fibrous mass attached to dura without caseation or calcification. These extra-axial tuberculomas are commonly located in frontoparietal areas however other locations like pontine, pericallosal and suprasellar cisterns have also been described. The clinical course is varied but usually slow and progressive[4] They commonly present with symptoms and signs of raised intracranial pressure that includes vomiting, headache, blurring of vision, seizures or paresis, and torticollis.[1] None of the mention ed features were present in our case. Investigation o f choice for such a mass is an MRI scan. The lesion is hypointense on T1 - weighted, and T2-weighted scan shows hypointense lesion with surrounding hyperintense edema and enhances w ell with Gadolinium contrast.[5] Surgical resection has been approach toward tuberculomas, but in our case, since the lesion was too small to be resected, the patient was advised the medical line of management. Manifestations of tuberculomas mainly depend upon location within the brain. Common symptoms include nausea, vomiting, headache, seizures, and vision changes.[6,7] Typical management in cases reported includes either medical management with ATT and steroids or surgical excision followed by ATT. Of the seven reported cases reviewed, two underwent only medic al management, two had surgical excision only, and three had a combination of surgical inter vention and medical management, as was the clinical course in our patient. Differentiating tuberculoma preoperatively from a meningioma allows a trial with medical management that is a combination of ATT and steroids. Diagnosis of tuberculoma preoperatively needs a suspicion and is very challenging, especially when the reare no extra - cranial tuberculous foci.

4. Conclusion

Tuberculoma presenting as meningioma is a rare entity. Here the patient had presented with pyrexia of unknown origin with no other signs or symptoms suggestive of tuberculosis or CNS involvement. A young elderly immunocompetent patient presenting with PUO brings a challenge to the clinician in making the diagnosis. We had to search for the cause and for which he had to do multiple investigations based on the differential diagnosis we had made.

In a country like India, tuberculosis should always be thought of whenever a patient presents with PUO. The patient had responded immediately to the AKT.

5. Source of Funding

None.

6. Conflict of Interest

None.

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