An unusual neurological facet of Tubercular meningoencephalitis: Top of basilar artery syndrome

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AIM:

To highlight an unusual and extremely rare presentation of Tubercular Meningoencephalitis (TBM) manifesting as Top of Basilar Artery (TOBA) Syndrome, emphasizing diagnostic challenges in a young female.

CASE:

Patient: 27-year-old female, previously healthy.

Symptoms (3 months): Intermittent fever, holocephalic headache, vomiting, weight loss.

Progression (1.5 months): Cognitive decline, decreased sensorium, right-sided weakness.

Ocular findings: Vertical gaze restriction, impaired convergence, Collier's sign (fig !)

Background:

- TBM can be a complex and challenging condition with diverse clinical manifestation in endemic areas.
- According to a study by Hsieh and colleagues, 75% of infarcts occurred in the "TB zone" supplied by the medial lenticulostraite and thalamoperforating arteries, whereas only 11% occurred in the "ischemic zone" supplied by the lateral lenticulostraite and thalamogeniculate arteries. (1)
- Bilateral thalamic infarcts represent approximately 0.6% of all cerebral infarts (2).
- Posterior circulation strokes account for 15-20% of all strokes with basilar artery occlusion extremely rare happening in less than 1%.

Investigations:

- CSF: Lymphocytic pleocytosis (20 cells/µL, 85% lymphocytes), ↑Protein (147 mg/dL), ↓Glucose.
- MRI Brain: Vasculitic infarcts—midbrain, pons, bilateral thalami & occipital lobes (fig 2).
- CTA/MRV: Normal.
- LANCET consensus TBM Score: 19 - Probable TBM
- Other possible etiologies ruled out.

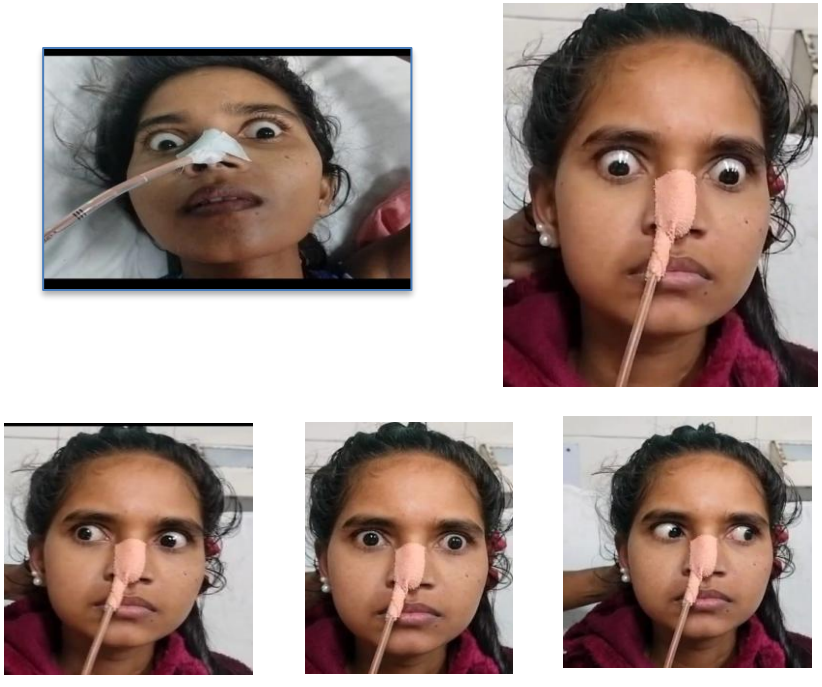

Figure 1

Results:

- Diagnosed with TBM with TOBA Syndrome (rostral midbrain, pons ,b/l thalami and occipital involvement).
- Initiated on ATT + Corticosteroids + Supportive therapy.
- Marked clinical improvement over follow-up in sensorium, ocular movements and cognition.

Discussion AND Conclusion

•The initial presentation in our case of altered mental status, aphasia and cognitive impairment are all suggestive of rare involvement of dorsomedian nucleus and intralaminar nuclei, the two components of paramedian nucleus.

• Presence of upward gaze restriction, impaired convergence and lid retraction (collier's sign) pointed to significant rostral midrain involvement.

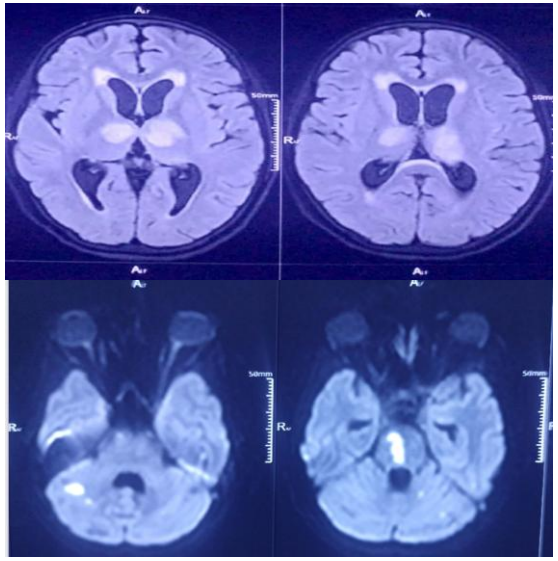

Figure 2.

References :

1. Hsieh FY, Chia LG, Shen WC. Locations of cerebral infarctions in tuberculous meningitis. Neuroradiology. 1992;34:197–9.

2.Gossner J, Larsen J, Knauth M. Bilateral thalamic infarction: a rare manifestation of dural venous sinus thrombosis. Clin Imaging. 2010;34(2):134–7. doi: 10.1016/j.clinimag.2009.05.008.