A Rare Case of Suspected Neurobrucellosis Presenting as Acute Demyelinating Encephalomyelitis

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INTRODUCTION

Neurobrucellosis is a rare complication of systemic brucellosis that can mimic CNS demyelinating disorders like ADEM or NMO. Overlapping clinical and radiological features often delay diagnosis and targeted therapy.

MATERIALS & METHODS

33-year-old female with 15 days history of intermittent fever, headache and neck pain radiating to shoulder. Later developed right upper and lower limb weakness.

Started on steroids for suspected ADEM with partial improvement.

Subsequently developed slurring of speech, diplopia, left facial deviation, focal seizures and altered sensorium. Intubated for respiratory distress with persistent fever spikes. **History of cattle rearing and raw milk intake present.**

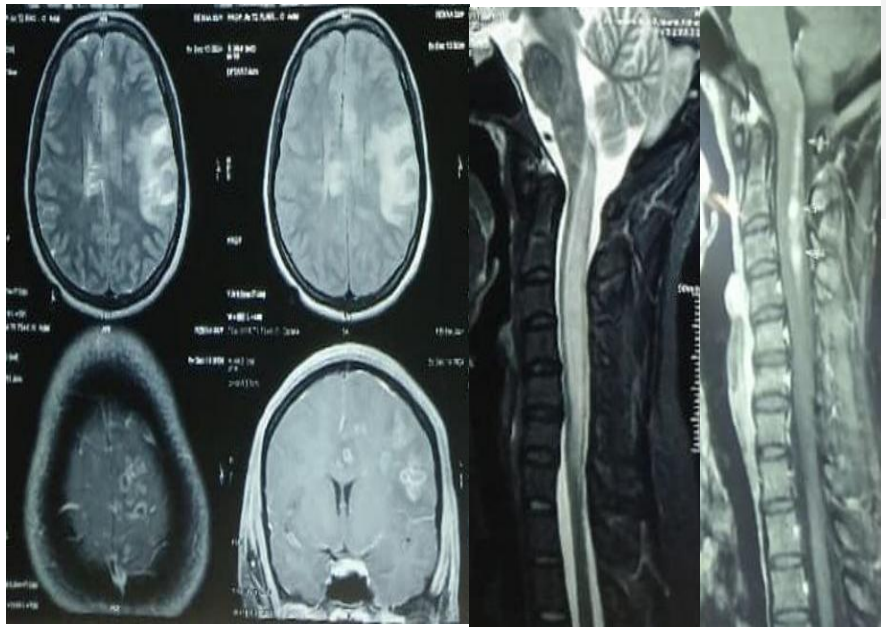
On examination: GCS E1VTM2, pupils 3 mm reactive, dolls eye reflex impaired, Paucity of all limb movements, brisk deep tendon reflexes.

Investigations: elevated total WBC counts

CSF acellular, protein 25 mg/dl, glucose 87 mg/dl, cultures negative.

Serum IgM Brucella positive.

MRI brain and spine: multiple T2/FLAIR hyperintense nodular lesions with cervical cord involvement, patchy nodular enhancement



RESULTS

She was treated with iv antibiotics and PLEX initially, later with high dose meropenem, Rifampicin and gentamicin. GCS improved to E3VTM3. The patient developed pneumothorax and despite interventions succumbed to the illness.

DISCUSSION

Neurobrucellosis occurs in 3–5% of systemic brucellosis cases and can present as meningitis, encephalitis or myelitis. CSF may be normal or non-specific, making serology (Brucella IgM/IgG) crucial in endemic areas.

CONCLUSION

This case highlights the diagnostic complexity of neurobrucellosis its atypical demyelinating presentation. A high clinical suspicion and timely initiation of appropriate antibiotics are critical to improving prognosis.

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