

To study role of clinical and laboratory parameters for diagnosis of tuberculous meningitis in a tertiary care centre

Sivanand Sandilya Patel

Vardhman Mahavir Medical College & Safdarjung Hospital, New Delhi

Introduction

Diagnosis of tuberculous meningitis is still an enigma as most of the times the laboratory results do not co-relate with the established parameters for tuberculous meningitis. This study aims at evaluating various clinical and laboratory parameters for rapid diagnosis of tuberculous meningitis.

Material & Methods

A total of 36 clinically diagnosed tuberculous meningitis cases on the basis of modified Ahuja's criteria were included in the study. CSF was analyzed for cytological, biochemical, and microbiological parameters (ZN smear microscopy, culture by BactALERT 3D method, Real TimePCR). Radiological findings on CT/MRI were obtained. Real Time PCR was performed by Genosen's MTBC/MOTT. The isolate was confirmed to be Mycobacterium tuberculosis by Accuprobe culture identification kit, Genprobe.

Results

Amongst the clinical parameters, majority (47%) of the cases had altered sensorium fol-

lowed by neck rigidity (36%), muscle weakness (30%), abnormal pupil's response (30%), focal neurological deficit (20%) and positive babinski sign (19%). Computed tomography findings showed communicating hydrocephalus as the most common finding (22%) followed by tuberculoma(17%) and infarcts(8%). Extraneurological active pulmonary TB evidence was present in 20% cases and past history of tuberculosis in 13%. Culture was positive for Mycobacterium tuberculosis in 11% of the cases. The sensitivity for radiological evidence was 91% followed by cytology (58%), biochemistry (58%), and real time PCR (25%).

Conclusion

Most of the tests including culture, cytology, biochemical analysis and molecular assays have shown sensitivity of less than 60%. The present study concludes that radiological evidences along with clinical suspicion remain the best parameter for diagnosis tuberculous meningitis.