

**OBJECTIVE:** To compare yields of cerebrospinal fluid (CSF) studies in the diagnosis of tuberculosis meningitis (TBM). **DESIGN:** Prospective laboratory study, Kenyatta National Hospital, Kenya. **STUDY POPULATION:** Consecutive patients with 1) headache, neck stiffness and altered consciousness for more than 14 days, 2) above features plus evidence of tuberculosis elsewhere in the body, and 3) on standard antimeningitic drugs for one week without response, were included. Those with contraindications to lumbar puncture, confirmed causes of meningitis (except TB) and on anti-tuberculosis treatment were excluded. **METHODS:** CSF cell counts, glucose and protein were assayed. CSF was stained on ZN, cultured on LJ and BACTEC and subjected to PCR and LCR for Mycobacterium tuberculosis DNA sequences. Positive tests for M. tuberculosis were classified as definite and the rest as probable TBM. **RESULTS:** Fifty-eight patients with a mean age of 33.0 years were recruited. Mean CSF cell count was 71/microl and CSF lymphocyte count up 67%. Mean CFS protein and glucose were 2.10 g/l and 2.05 mmol/l, respectively. BACTEC was positive in 20 cases, LJ 12, LCR eight, and PCR and ZN one each. Twenty-six patients had definite and 32 probable TBM. Patients with definite TBM had significantly higher CSF protein, lower CSF glucose, higher CSF cell count and lower CSF lymphocytes. **CONCLUSION:** TBM can be confirmed in half of clinically suspected cases. More sensitive tests for confirmation of TBM are required.