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## **An evaluation of microbiological tests used in the diagnosis of bacterial meningitis**

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Bacterial meningitis is a rapidly progressing, common infection that requires immediate medical attention. To assess the efficacy of different diagnostic tests done at the Microbiology Laboratory, Teaching Hospital Karapitiya (THK) for bacterial meningitis. Bacterial Antigen Test (BAT) and Enrichment Culture were routinely performed for 5 weeks of duration using 50 specimens from clinically suspected meningitis patients. Gram stain and CSF culture were also performed on these 50 specimens concurrently. CSF full reports of the 50 cases were obtained from the biochemistry laboratory of THK. Using BAT, an etiological diagnosis could be made in 4 (8%) of cases of clinically suspected meningitis patients in all age groups. One bacterial meningitis patient was diagnosed using BAT but all the other investigations gave negative results for that specimen. Both CSF routine culture and CSF enriched culture results showed 100% negativity. CSF full report indicated evidence of bacterial meningitis in 7(14%) specimens. Four (8%) specimens were positive for Gram stain and all identified organisms were Gram negative bacilli and those were not compatible with other investigations. In this study 47 (94%) patients had antimicrobial therapy before lumbar puncture (LP). CSF full report seems to be a superior diagnostic tool than Gram stain, enriched culture, routine culture and bacterial antigen test in clinically suspected bacterial meningitis patients. BAT also an important guide to diagnose bacterial meningitis. Cerebrospinal fluid routine and enriched cultures failed to diagnose bacterial meningitis. There is no use of performing routine and enriched cultures for patients who had antimicrobial therapy before LP.

**Key words:** Cerebrospinal fluid, Bacterial meningitis, Antigen test, Routine test.

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