

LACTIC DEHYDROGENASE ISOENZYMES IN CEREBROSPINAL FLUID IN DIFFERENTIATING BETWEEN BACTERIAL AND ASEPTIC MENINGITIS

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Background: Early differentiation of bacterial from aseptic meningitis may be difficult. Our aim was to determine the pattern of distribution of lactic dehydrogenase (LDH) isoenzymes in cerebrospinal fluid (CSF) of patients with bacterial and aseptic meningitis and to follow their activity in the course of the disease. Methods: One hundred and fifty-seven patients were enrolled in the study during a six year period. They were divided into three groups: bacterial meningitis (n=31), aseptic meningitis (n=65) and healthy controls (n=61). Total LDH level and LDH isoenzyme percentages in the CSF were measured in each patient. In two patients, repeat lumbar puncture was performed, and CSF LDH isoenzymes were measured during the course of the disease. Results: Each group showed a distinct LDH isoenzyme pattern of distribution with a statistically significant difference in the percentages of the various isoenzymes among the groups ($p < 0.001$). Adequate antibiotic treatment of bacterial meningitis resulted in a change in the distribution of the LDH isoenzymes in the CSF towards a normal pattern. Conclusions: The LDH isoenzyme profile in the CSF can help clinicians in differentiating between bacterial and aseptic meningitis.



