

IS APPROPRIATE 14-DAYS ANTIBIOTIC THERAPY IN A PATIENT WITH BACTERIAL MENINGITIS WHEN PLEOCYTOSIS IS DISAPPEARED?

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Bacterial meningitis (BM) is a medical emergency requiring urgent antibiotic therapy (AT). Physicians complete AT after confirming no pleocytosis in cerebrospinal fluid (CSF) and no growth of bacteria in the CSF, and the duration is usually 14 days. We report a patient who had aggravated leptomeningitis after disappearance of pleocytosis due to *Streptococcus pneumoniae* and finishing 14-days AT. A 68-year-old man was admitted out hospital complaining of right hemiparesis. Neurologic examination revealed global aphasia and hemiparesis suggesting dysfunction in the left hemisphere. MRI at admission showed prominent leptomeningeal enhancement in the left cerebral hemisphere. Initial CSF study revealed pleocytosis (440/ul), elevated protein (254.4 mg/dL) and decreased glucose (2 mg/dL, serum: 165 mg/dL). The organism from CSF and blood was *Streptococcus pneumoniae* sensitive to penicillin. He was treated with intravenous penicillin for 14 days and follow up analysis of CSF showed no pleocytosis and bacteria. MR at that time revealed improving but incomplete disappearance of leptomeningitis. Neurologic examination at discharge was unremarkable. He revisited our hospital complaining of fever for 10 days after discharge. Repeated analysis of CSF showed re-appearance of pleocytosis (27/ul) and elevated protein (83.1 mg/dL). MR at that time showed aggravated leptomeningitis in the left hemisphere without parenchymal lesions. He was treated with antibiotics for 6 weeks. He had no aggravation of meningitis after then. In conclusion, BM should be treated for a period of longer than 14-days if brain MR showed sustained enhancement even though there is no pleocytosis and bacteria in CSF.