

**ASEPTIC MENINGITIS WITH NO CELLULAR PREDOMINANCE**

**A.E. Figueiredo, S.C. Jacinto, P. Sande-Lemos**

*Department of Pediatria, Hospital Fernando Fonseca, Amadora, Portugal*

*antoniof@oninet.pt*

Background: Aseptic meningitis is usually characterized by a mononuclear cell predominance in the cerebrospinal fluid (CSF), whereas bacterial meningitis is characterized by a polymorphonuclear (PMN) cell predominance. Objectives: To assess the influence of duration of illness on the CSF leucocyte differential and the role of the CSF differential in discriminating between aseptic versus bacterial meningitis. Methods: A retrospective chart review was conducted of all cases of aseptic meningitis in children > 28 days admitted to the Hospital. The cases were defined as having at least 8 white blood cells/mm<sup>3</sup> and the absence of bacterial growth on culture. PMNs were considered to be predominant when the percentage of neutrophils was > 50% of cells. Results: 285 cases of aseptic meningitis were reviewed. The patients ranged in age from 29 days to 15 years (median age 5,4 years). 78,2% of children had fever, vomiting and headache. Regarding CSF cellularity: 12,6% of children had > 500 cells/mm<sup>3</sup> (maximum 2.700 cells/mm<sup>3</sup>). There was a predominance of PMN when the lumbar puncture was performed within 24 hours from the onset of the disease but afterwards there was no statistically significant predominance of either PMN or lymphocytes even at 72 hours. Conclusions: In aseptic meningitis there was a PMN predominance in the CSF in the first 24 hours of disease. Afterwards no cellular type predominance could be found. Therefore cellular predominance cannot be used as a sole criterion for discriminating between aseptic and bacterial meningitis.

