P03-61 - **CHARACTERISTIC CSF AND PERIPHERAL BLOOD CYTOKINE LEVELS IN NEUROLOGICAL AND PSYCHIATRIC PATIENTS**

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Background: We investigated neuropsychiatric patients with non-bacterial meningitis (N-MEN)), assumed chronic low level neuroinflammation (schizophrenic SCH-S and affective spectrum disorders PSYCH-A) and tension headache (CEPH). Cytokines investigated were IL-1beta, IL-2, IL-8/CXCL8, the antiinflammatory IL-10 and IL-17.

Purpose: to differentiate chronic and acute neuropsychiatric diseases by cytokine profiles and to evaluate cytokine levels in the CSF and peripheral blood to characterize the two compartments

Methods: Included were 10 N-MEN, 10 CEPH, 15 PSYCH-A and 16 PSYCH-S patients. Peripheral blood and CSF was taken in parallel. Measurement on a commercial multiplex immunoassayplatform (Mesoscale) by a modified protocol. Statistics: Mann-Whitney-U-Test and Kruskal-Wallis H-Test.

Results: Highest levels of IL1b, IL-2, IL-8 and IL-17 were observed in the CSF of N-MEN, whereas in serum, levels were not or slightly elevated. Significant ($p < 0.05$) tested in CSF for N-MEM versus CEPH,PSYCH-A,PSYCH-S for IL-8 and versus PSYCH-A,PSYCH-S for IL-17. IL-10 CSF levels were also highest in N-MEM, and significant also versus CEPH,PSYCH-A,PSYCH-S, but IL-10 in serum was even higher than in CSF. We observed in all cytokine (except IL-2) significant differences either in serum or in CSF or both between the diseases; but more frequent CSF than in the serum.

N-MEN patients displayed highest ratios of CSF to serum levels for all cytokines (mean between 1.6 and 63).

Conclusions: Investigation of cytokines in CSF is more sensitive than in serum to detect differences between neuropsychiatric diseases. Cytokine patterns are disease specific. Elevated IL-1beta, IL-2 and IL-8 CSF/serum ratios in N-MEM may indicate an intrathecal synthesis of cytokines.

https://doi.org/10.1016/S0924-9338(10)71171-8 Published online by Cambridge University Press