

Introduction

Multiple sclerosis (MS) and neuro-Behçet's disease (NBD) are recurrent disorders affecting the central nervous system (CNS), causing inflammation and irreversible damage. Inaugural clinical symptoms for both diseases might be very similar and definitive diagnosis could be delayed.

Methods

Cytokines transcription factors related to Th1, Th2, Th17 and T regulatory populations were quantified simultaneously in PBMCs and CSF from 42 patients presenting a first episode of clinical features related to CNS inflammation and 22 controls with non inflammatory neurological diseases enrolled mainly for severe headache. The follow up of 1-12 months did allow a definitive diagnosis of relapsing relapsing (RR) MS in 21 of them and of NBD in the other 19.

Results

In initial blood samples, T-bet was significantly increased only in NBD patients while IFN- γ was elevated in patients who evolved into RRMS as well as to NBD. ROR- γ t, IL-17a, GATA-3 and IL-4 were significantly lower in RRMS patients than in NBD and controls. In initial CSF samples, ROR- γ t, IL-17a and IFN- γ were significantly elevated in patients compared to controls while IL-10 was significantly increased only in NBD patients.

Conclusions

In conclusion, our investigation showed a different cytokine pattern between MS and NBD. Also, we propose to use IL-10 as a predictive marker to help clinicians discriminate between these two neurological disorders.

Learning Objectives

To compare cytokines and transcription factors expression in blood and CNS compartments of NBD and RRMS patients.

References

Yazici, H., Yurdakul, S., Hamuryudan, V., 1998. Behçet's syndrome. In: Klippel, J.H., Dieppe, P.A. (Eds.), *Rheumatology*. Mosby, London, pp. 26:1-26:6.

Akman-Demier G, Serdaroglu P, Tasci B. The Neuro-Behçet Study Group. Clinical patterns of neurological involvement in Behçet's disease: evaluation of 200 patients. *Brain*. 1999; 122:2171-82.

Stadelmann C. Multiple sclerosis as a neurodegenerative disease: pathology, mechanisms and therapeutic implications. *Curr Opin Neurol*. 2011;24:224-9.

Frisullo G, Angelucci F, Caggiula M, Nociti V, Iorio R, Patanella AK, Sancricca C, Mirabella M, Tonali PA, Batocchi AP. pSTAT1, pSTAT3, and T-bet expression in peripheral blood mononuclear cells from relapsing-relapsing multiple sclerosis patients correlates with disease activity. *J Neurosci Res*. 2006 Oct; 84(5):1027-36.

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