Unusual expression of multiple sclerosis (case report)

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Abstract

**Methods:** We investigated a 44 year-old male patient diagnosed with Multiple Sclerosis (MS), who in two years developed typical clinical signs of parkinsonism. Patient investigated neurologically, Brain contrast MRI (1.5 Tesla) was made two times after diagnostics with 1 year interval. Cerebrospinal Fluid (CSF) was researched for oligoclonal bands. CSF and blood were researched by ELISA method to detect IgM and IgG against *Chlamydia pneumoniae*, *Mycoplasma pneumoniae*, *Borrelia burgdorferi*, Herpes simplex 1/2, Cytomegalovirus.

**Results:** Clinically patient expressed amiostatic face, oligo-bradikinesia, extrapyramidal spasticity in all limbs, resting tremor in upper limb fingers, horizontal nystagmus. Brain MRI showed multiple gadolinium enhanced demyelinization lesions in periventricular and subcortical white matter. CSF oligoclonal bands were positive without dysfunction of blood-brain barrier. Particularly, IgG CSF-Serum ratio was 4.6kA, Albumine CSF/Serum ratio -6.2kA, Tibbling CSF ratio-0.75 kA, Local IgG synthesis (Reiber)-1.3kA, Range Albumin CSF-Serum ratio-7.0kA. CSF and blood IgM, IgG were negative against *Chlamydia pneumoniae*, *Mycoplasma pneumoniae*, cytomegalovirus, Herpes simplex ½, while the blood IgG was strongly positive against *Borrelia Burgdorferi*, confirmed by following Western blot test. CSF conventional PCR (target ospA gene) showed positive result for *Borrelia Burgdorferi*. Patient was treated by puls-therapy with 1gr/ intravenous Solumedrol (5 days) along with Rocephin treatment (2gr /iv) for 21 days followed by Antiparkin (Carbidopa 250mg, Levodopa 25mg).

**Conclusion:** MS and even Parkinsonism should be differentiated from chronic neuroboreliosis.