Clinical aspects of neuroborreliosis in Bydgoszcz, Poland

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Background: The aim of the study was to assess the clinical, radiological and laboratory findings of neuroborreliosis.

Methods: Patients with diagnosed neuroborreliosis from 2006 through 2007 at Departament of Infectious Diseases in Bydgoszcz were analyzed. The diagnosis was based on the presence of neurological symptoms with serologic evidence to exposure to Borrelia burgdorferi and/or erythema migrans (EM) in the medical history.

Results: In the study period 37 (female - 70.3% mean age: 48 years) cases of the neuroborreliosis were recognized. Acute neuroborreliosis was recognized in six cases with the incubation period from 3 to 10 weeks. Clinical presentation included: facial nerve palsy (3), six cranial nerve lesion (1), six cranial nerve lesion and the retrobulbar neuritis (1), meningitis (1). 5 from 6 patients were diagnosed with the Bannwarth’s syndrome with meningitis and painful radiculitis. Symptoms occurred concomitantly with erythema migrans (EM). In all cases CFS abnormalities were noted: lymphocytic pleocytosis (713-2883 cells/mL), elevated proteins (213 to 450 mg/dL) and normal CFS/serum glucose ratio. The late neuroborreliosis (LNB) was diagnosed in 31 patients. The group of 28/31 patients had history of tick bite, 25 had history of untreated EM - 2-7 years before neurolological impairment.

Clinical presentation: 12 - painful polyraduloneuropathy with numbness and paraesthesia, 5 - paraplegia, 5 - reflex asymmetry; 1- Guillain-Barre-like syndrome, 3- disseminated neurological symptoms: paraplegia, cerebellar ataxia and mental deterioration, 5- memory loss, headache.

CFS examination was performed in all patients. 20/31 had CFS abnormalities: 6 - elevated proteins, 15 - lymphocytic pleocytosis, 1 - lymphocytic pleocytosis and elevated proteins. In all cases specific antibodies to Borrelia burgdorferi were detected in CFS and in serum. MRI was performed for 2/6 patients with early borreliosis and in 13/31 patients with late NB. Abnormalities in white matter with multifocal hyperintense lesions in T2-weighted and FLAIR scans of brain were detected in 5 patients with LNB.

All patients were treated with ceftaxone 2 g/day. In all cases with early neuroborreliosis clinical outcome was good, all symptoms resolved whereas neurologic deficits from LNB improved slowly and have not subsided completely.

Conclusion: This study gives an overview of serologically confirmed neuroborreliosis. We have shown large spectrum of clinical symptoms in the late stage of disease with not satisfactory outcome in most of them.

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Diagnosis and treatment challenges in patients with chronic tick Associated Poly-organic Syndrome (TAPOS) - Case series

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Background: Chronic Lyme disease is often considered in case of long lasting miscellaneous symptoms after tick bites. Despite new codified diagnosis algorithm and treatment persistent signs and symptoms frequently occur. The aim of the study was to assess the diagnosis of Tick Associated Poly-organic Syndrome (TAPOS) and to evaluate the treatment’s efficacy.

Methods: A consecutive case series of patients referred to the Cluj-Napoca Teaching Hospital of Infectious Diseases (January 2006 - October 2009) revealed 52 patients with TAPOS. Inclusion criteria were: more than 18 years of age, chronic symptomatology, positive Borrelia burgdorferi serology and/or tick-bite. Data was collected through chart review and medical observation. We used two clinical scores classifying the diagnosis of TAPOS. All patients were seropositive for IgM and/or IgG antibodies to Borrelia burgdorferi (EIA and western blotting). Treatment regimen was established according to the literature data. They received intravenous ceftriaxone, 2 g daily for 21-28 days and doxycycline 200 mg daily for 21 days. Patients with persistent symptoms were retreated with the same regimen.

Results: The baseline assessment documented that the most frequently reported symptoms were neuropsychological (90%), systemic (98%) and articular (23%). The sex ratio was 0.26 (41 women, 11 men), the average age was 43.2 ± 12.6 years. Only 7 patients experienced erythema migrans, 57% had tick exposures and Borrelia burgdorferi serology was 92% positive [44 (84%) IgM positive, 19 (36%) IgM and IgG positive]. According to both clinical scores all patients were classified as ”very probable” or ”probable”. All patients were evaluated at 3 months showing a decrease in the number and intensity of signs and symptoms and the same serologic pattern. Ten patients were 2-3 times retreated due to persistent clinical picture, all presenting mood disorders or depression. No case of clinical aggravation or serious adverse events was reported and Jarish-Herxheimer syndrome was observed just in two cases. Most of the patients remained with at least one neuropsychological complain.

Conclusion: Diagnosis of miscellaneous Borrelia burgdorferi chronic infection is challenging but should be always considered if prolonged symptomatology or tick related. Treatment regimens are not standardized, we appreciate as reasonable shorter 6 week regimens.

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