DOI:10.4274/tnd.54715
Turk J Neurol 2016;22:37-38

Egemen İdiman
Dokuz Eylül University Department of Neurology, İzmir, Turkey

The 2015 European Committee for Treatment and Research in Multiple Sclerosis (ECTRIMS) Congress was held in Barcelona, October 7th-10th, 2015 with the participation of 9.000 people, according to unofficial figures.

The main topics of the scientific program were as follows: Early treatment approaches in multiple sclerosis (MS), long-term treatment efficacy, B-cell depletion therapy, modulation of the immune response, neuroprotection and repair, prognostic markers, new developments in imaging, genetic and environmental risk factors, and rehabilitation in MS.

The importance of early treatment in MS and its positive effects on physical and cognitive disability were discussed on the basis of clinical, immunologic and radiologic studies.

The importance of modifiable risk factors was emphasized via various studies on eco-genetic relationships, hygiene hypothesis, infectious agents (especially Epstein-Barr virus), vaccines, vitamin D, salt consumption, body mass index stress, and a recently favorite subject, microbiomes.

Natalizumab (NTZ), alemtuzumab, fingolimod, teriflunomide, and dimethyl fumarate studies were the leading remarkable studies on the effectiveness and risk profile of long-term drug treatment. The "Swedish National Cohort Study," which included approximately 1.500 patients with mean treatment duration of 36 months, was one of the most important studies on NTZ. NTZ treatment was discontinued in 1.355 patients because of John Cunningham virus (JC virus) antibody positivity (41.1%) or pregnancy (15.2%); however, NTZ treatment was later restarted in 268 patients because of increased disease activity. It was reported that both long-term clinical follow-up and magnetic resonance imaging (MRI) revealed stabilized disease activity in 496 patients who were on NTZ treatment for more than five years and that "Expanded Disability Status Scale" scores showed improvement. In this series, the highest possible adverse event was reported to be progressive multifocal leukoencephalopathy (PML) (0.3%). In this study, despite the risk of PML, NTZ was reported to be well tolerated, very effective, and to have continuous activity. There were similar results in the other ten studies on NTZ. In addition, switching from NTZ to fingolimod or dimethyl fumarate was reported to increase the risk of relapse. Alemtuzumab has set its role in efficacy and safety by a number of studies. Besides the effectiveness and safety reports of teriflunomide, fingolimod, and dimethyl fumarate, there were studies proving that conventional immunomodulators still maintain their positions. Rituximab was also observed to take part in the treatment of MS besides the treatment of neuromyelitis optica (NMO).

Upon determination of the importance of B-lymphocytes in the pathogenesis, it was emphasized that many drugs were also effective on B-lymphocytes. Effectiveness has begun to be evaluated by "no evidence of disease activity" in all drug studies. The most important treatment innovation in the congress was demonstration of efficacy of ocrelizumab in both relapsing remitting (RR) MS and primary progressive (PP) MS. Studies utilizing lamotrigine, phenytoin, high-dose biotin, amiloride, riluzole, fluoxetine, and anti-lingo in terms of neuroprotection in PPMS without definite conclusions were also presented.

NMO spectrum disorders (NMOSD) were presented in well-attended meetings on the basis of the 2015 criteria. In this serology-based new classification (NMO-immunoglobulin G (IgG) positive and negative cases), clinical criteria, MRI criteria, red flags in diagnosis, new steps in pathogenesis, and new treatment approaches associated with their pathogenesis were discussed in detail.

Early cortical and deep gray matter pathology, iron deposition, and regional focal cortical atrophy, deterioration of thalamic and

Address for Correspondence/Yazışma Adresi: Egemen İdiman MD, Dokuz Eylül University Department of Neurology, İzmir, Turkey
Phone: +90 533 568 53 64 E-mail: egemen.idiman@deu.edu.tr
Received/Geliş Tarihi: 14.03.2016 **Accepted/Kabul Tarihi:** 14.03.2016

thalamo-cortical integrity, relationship between hippocampal inflammation and hippocampal atrophy with depression, cognitive impairment and fatigue, early temporal lobe pathology, decreased perfusion in white matter, relationship between corpus callosum index and cognition were investigated in a large number of studies using new MRI technology and methods (7T MRI and Na MRI, MRI/positron emission tomography, fMRI, magnetic resonance spectroscopy, diffusion tensor imaging, NODDI studies mapping neurite morphology and determining tissue microstructure in post mortem spinal cord) in RRMS and PPMS. Another notable point was that the subject "gadolinium concentration in cerebrospinal fluid (CSF) and parenchyma and its clearance" would be discussed more in the future.

A large of numbers on identification of serum and CSF biomarkers that might have diagnostic and prognostic value were observed. Studies on the values of chitinase-3-like protein 1 (CHI3L1), fetuin-A, S100 protein, glial fibrillary acidic protein, CXCL-13, soluble triggering receptor expressed on myeloid cells-2, lipocalin-2, adipokines, glial and neuronal markers (serum neurofilaments), platelet-derived genes, kynurenine, extracellular micro vesicles, galectin-8, anti-glycolipid antibodies, DNA, RNA and miRNA (especially miRNA150), exosomal RNA signature, and intrathecal IgG and IgM in determining the disease phenotype together with radiologic findings were valuable studies for determining the true meaning of these biomarkers.

Pregnant and pediatric patients with MS were discussed in detail in separate sessions and glatiramer acetate was reported to be used safely during planned pregnancy until pregnancy occurs.

It was an honor for Turkish Neurology that Turkish neurologists attended ECTRIMS 2015 with a large number of studies including almost all of the recent developments.