

arthralgia, conjunctivitis, and dry mouth. Immunological and biochemical laboratory studies were positive for sarcoidosis, a multisystem granulomatous disease that affects adults between 20 and 50 years old [Lopez V et al. *Int J Dermatol* 2011].

Although available epidemiological data confirm that genetic factors are unequivocally relevant in MS, large extended families with multiple affected individuals are extremely uncommon [Sawcer S. *Ann Indian Acad Neurol* 2009]. Most families contain no more than two or three affected individuals and no clear mode of inheritance can be inferred [Sawcer S. *Ann Indian Acad Neurol* 2009].

These data suggest that genetic susceptibility to autoimmune disease may be a mosaic of common sets of pleiotropic alleles as well as effects specific to one or a few diseases [IMSGC. *Genes Immun* 2009]. Further research is warranted to unravel the puzzle.

## RIS with Dissemination on MRI

The wide use of magnetic resonance brain imaging has led to the unexpected detection of lesions that appear typical of multiple sclerosis (MS) in otherwise asymptomatic patients [Spain R, Bourdette D. *Curr Neurol Neurosci Rep* 2011], a condition called radiologically isolated syndrome (RIS) [Okuda DT et al. *Neurology* 2009].

The natural course of RIS is largely unknown [De Stefano N et al. *PLoS One* 2011]. Although disease-modifying therapies work best when given early in MS, the decision to proactively treat patients with RIS is countered by the increasing risks associated with disease-modifying therapies as well as the uncertain prognostic outcome of RIS [Spain R, Bourdette D. *Curr Neurol Neurosci Rep* 2011]. D. Bartko, MD, Central Military Hospital, Ruzomberok, Slovak Republic, presented a poster that addressed this conundrum in a case report.

The patient was a 17-year-old female with uncertain vision problems. The ophthalmologist's diagnosis was uveitis. The neurologic examination was normal. The brain MRI showed abnormalities suggestive of MS (5 Gd-enhancing hyperintensities, periventricular involvement, and ovoid corpus callosum). Results were not consistent with a vascular pattern. Over 9 years, there were no clinical symptoms.

A new MRI showed 16 Gd-enhancing brain and cervical spinal cord hyperintensities, locations that are considered predictors for MS. Dissemination in space and time were noted. Cerebrospinal fluid had 3 cells/mm<sup>3</sup>. No oligoclonal bands were observed. The IgG index was normal. VEP, BAEP, and SEP were repeatedly normal.

Despite the high lesion load, the patient remained asymptomatic, with normal neurological examinations.

Despite recommendations to treat individuals with spinal cord lesions, the authors chose a strategy of watchful waiting, with regular examinations and repeated cognitive testing.

Prof. Bartko concluded that dissemination on MRI without clinical symptoms is not MS, and therefore, should not be treated.

## Extracranial Venous Pathology May Play an Important Role in Developing MS

Chronic cerebrospinal venous insufficiency (CCSVI) is thought to be a pathologic phenomenon exclusively seen in multiple sclerosis (MS). As such, it has generated immense interest in the patient and scientific communities and has also ushered in a potential shift in the treatment paradigm of MS, involving endovascular balloon angioplasty or venous stent placement [Khan O et al. *Ann Neurol* 2010].

CCSVI is characterized by multiple stenoses of extracranial veins—the internal jugular (IJ) and azygous (AZ) veins. Miro Denišlič, MD, PhD, MC Medicor, d.d., Ljubljana, Slovenia, presented a poster on a clinical trial to highlight the occurrence and effects of obstructions in the extracranial venous system.

A total of 100 MS patients participated in the study. There was no control group. The threshold for angioplasty was a luminal diameter reduction of 50%. Catheter venography (CV) was performed under mild anesthesia.

Results showed that the degree of narrowing in the IJ and AZ veins was similar in the group of MS patients with an early and progressive course of the disease. The number of venous lesions was related to clinical disability. The left IJ vein was more often involved than the right one; narrowing of the AZ vein occurred less frequently (52%).

After angioplasty, patients reported improvements in headaches, vision problems, fatigue, and urinary dysfunction, and fewer spasms. Significant improvement in quality of life was demonstrated. In two patients (2%), CV examination did not reveal any vascular abnormality. No major side effects were reported.

Despite controversies surrounding CCSVI, extracranial venous pathology may play an important role in developing MS. Findings from a recent study on endovascular treatment indicated that the therapy appeared to be a safe and reliable method for treating CCSVI [Petrov I et al. *J Endovasc Ther* 2011].

Prof. Denišlič and his colleagues concluded that further investigation of timely angioplasty is warranted.