

Celiac disease and neurological disorders

An interesting study on celiac disease and neurological disorders was completed in Israel. Celiac disease is an autoimmune disorder that requires a gluten-free diet to relieve symptoms (chronic diarrhea, malabsorption syndrome, failure to thrive, and/or abdominal pains).

For this research, over 100 subjects with celiac disease, mostly children or their caregivers, and young adults, completed questionnaires that included items on neurological status. A matched control group also completed the survey. Physical exams were conducted when warranted.

Overall, about 50 percent of persons with celiac disease had neurologic disorders compared to 20 percent of control subjects. These disorders included hypotonia (decreased muscle tone), developmental delay, learning disorders and ADHD, headache, and cerebellar ataxia (the sudden onset of a movement disorder, often after a viral disease). Epileptic disorders were only marginally more common in celiac sufferers. In contrast, those with celiac disease did not have an increased incidence of tics—in fact, a higher percentage of controls had tic disorders than the celiac group.

Nathanel Zelnik, MD, et al. Range of neurologic disorders in patients with celiac disease *Pediatrics* Vol. 113 No. 6 June 2004, pp. 1672-1676.

Editor: This is a relatively small study, so caution should be made when interpreting the information on tics. It would be interesting to know if the gluten-free diet followed by those with celiac disease served to prevent the development of tics. This is speculation, and more research on this subject would be worthwhile.

Anticonvulsant reported to cause tics

Tics have been documented as an unusual side effect to Lamotrigine in children, an anticonvulsant that has been successful in controlling rapid cycling and mixed bipolar states, as well as major depression. The authors suggest patients with severe language dysfunction may be particularly susceptible to this reaction.

Sotero de Menezes MA, Rho JM, Murphy P, Cheyette S. Lamotrigine-induced tic disorder: report of five pediatric cases *Epilepsia*. 2000 Jul;41(7):862-7.

Deep brain stimulation for TS

Deep brain stimulation (DBS), a surgical procedure in which electrodes are implanted, has proven useful on a small scale for advanced Parkinson's disease when the subthalamic nucleus is treated. Mania was a side effect in some subjects.

The same treatment has been used in a small number of patients with severe cases of Tourette syndrome. Three cases reported in the literature were reviewed, and results were positive at long-term follow up. Reportedly, major tics and associated behavioral disturbances disappeared.

Visser-Vandewalle V. Deep brain stimulation in movement disorders. The applications reconsidered *Acta Neurol Belg*. 2004 Mar;104(1):33-6.

Editor: DBS recently received major media coverage when a young man with TS had dramatic improvement from the procedure. It is risky and costly, but represents hope for those with severe and disabling symptoms. The surgery was completed at University Hospitals of Cleveland. Their website is: www.uhhs.com.

Shortly after the procedure was featured on the *Oprah Winfrey Show*, a young man in his 20s contacted ACN for information. He has struggled with TS for many years; I gave him some contact information and explained that DBS was a serious intervention. During the course of the conversation, I asked if he had ever noticed if anything made his tics worse. He said he definitely had, and the worst offender was chocolate. He quickly added, "But I don't want to change my diet. I just want the operation."

IVIG not found helpful for tic disorders without strep

A placebo-controlled study of 30 patients suggests that intravenous immunoglobulin therapy (IVIG), which reportedly can sometimes be beneficial for tics or related disorders when the symptoms show a relationship with streptococcal infections (i.e., PANDAS), is not helpful for traditional tic disorders. Based on results for the specific protocol used, the authors do not recommend IVIG for tic disorders.

Hoekstra PJ, Minderaa RB, Kallenberg CG. Lack of effect of intravenous immunoglobulins on tics: a double-blind placebo-controlled study *J Clin Psychiatry*. 2004 Apr;65(4):537-42.

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