When Lyme disease or other infections cause autism-like symptoms

by Dr. Elena Frid

Autism is a neurodevelopmental disorder that typically presents in childhood, affecting verbal and nonverbal communication skills. Typically, caretakers notice a problem with the child by age 2, when the child begins to learn how to communicate effectively with his/her environment.

Why am I writing about autism in a Lyme publication? Well, it is very simple. Lyme disease and associated disorders can mimic various diseases. For example, neuro-Lyme is a condition where the Lyme bacteria and associated coinfections affect the nervous system directly, as well as contribute to inflammation and autoimmune phenomena that impact the nervous system.

Therefore, various neurologic presentations as well as neurologic disorders can be caused by a multitude of infections such as Lyme disease and related coinfections. In turn, it is crucial to obtain a detailed history, physical exam and diagnostic work up in order to arrive at the proper diagnosis and treatment plan.

In my neurology practice, some children present with diagnoses of autism spectrum disorder (ASD), or pervasive developmental disorder (PDD) later on in life, or have an acute worsening of their symptoms at some point in their childhood. This is an atypical presentation of autism. When children have a list of multiple complaints that don’t fall into the definition of a specific condition, I suspect that there may be an underlying medical problem that is exacerbating their symptoms.

There is a neurologic condition that may mimic atypical forms
of autism and other neurologic disorders known as autoimmune encephalitis. In this condition, a child may present with a number of neuropsychiatric symptoms such as new-onset anxiety, depression, insomnia, behavioral problems, temper tantrums, regressive behavior, paranoia, psychosis, ticks, OCD behavior, seizures, cognitive impairment, and various learning disabilities including trouble reading. There may also be physical complaints such as visual disturbance, pain, weakness, abdominal issues, urinary disturbance, headaches, etc. A child does not have to have all of these symptoms to qualify for the diagnosis.

During an assessment, a neurologist who is trained in autoimmune disorders may find abnormalities on MRI of the head, brain SPECT scan, lumbar puncture, EEG, and blood work. Often blood work will show evidence of antineuronal antibodies. This can indicate a break in the blood brain barrier, causing brain inflammation contributing to the physical and neuropsychiatric symptoms. This inflammation is the result of an autoimmune phenomenon affecting the central nervous system.

Some autoimmune disorders have long been attributed to various infectious processes. Lyme disease and associated disorders can present as infection-induced autoimmune encephalitis, and be the cause of many neuropsychiatric, neurodegenerative and even neurodevelopmental disorders.

Various neurologic conditions are treated symptomatically by mainstream medicine and neurology, as it is believed that the cause for many of the conditions listed above is unknown, or idiopathic. It is crucial to make the distinction between an idiopathic neurologic disorder and a disorder caused by an underlying infection, because the treatment would be vastly different. Often, treating the infection can halt, improve or completely resolve the disorder.

It is important to assess the child neurologically to evaluate
the degree of his/her disability, neurologic damage, and severity of the presenting complaint. Clinical expertise and cutting-edge diagnostic tools help the physician to assess the presenting complaint. This allows the practitioner to distinguish between an idiopathic neurologic disorder and an infectious presentation of a condition that may mimic a neuropsychiatric, neurodevelopmental or neurodegenerative illness.

I urge families with children who don’t fall into the classic autism spectrum disorder presentation, for example, or other developmental/neurologic/psychiatric complaints, to pursue evaluation for infection-induced autoimmune encephalitis with an autoimmune neurologist. Treatment for this group of patients should address both the infectious and the autoimmune component of their illness, not only symptomatic treatment of the neuropsychiatric and neurodevelopmental issues.

Dr. Elena Frid is a board-certified neurologist and clinical neurophysiologist who practices in New York City. She is a member of the International Lyme and Associated Diseases Society. Her website is elenafridmd.com.