The Puzzle of Autism-Spectrum Disorders

Biomedicine as an Option for Assessment and Treatment of Patients, Including Those with Lyme Disease and Borrelia-Related Complex

by Kurt N. Woeller, DO

Autism presents a level of complexity from a medical diagnostic and treatment standpoint because of the underlying medical issues affecting this special group of individuals (see below). Also, the prevailing attitude in traditional circles "that nothing can be done for these kids" and that behavior, speech, and other types of applied cognitive training therapies are the only way to approach an autistic child doesn't help. This viewpoint creates confusion and doubt amongst parents looking for real answers to their child's health concerns.

This same type of closed-minded attitude by traditional authorities seems to be the current situation with Lyme disease in the United States today. Current estimates are that 20,000 people are afflicted with Lyme disease every year.[1] These are Lyme cases that originated with known tick-bites. Most of these people, if treated early enough with appropriate antibiotic therapy such as Doxycycline for 30 days,[2] have a great chance of full recovery. Yet a significant number of those suspected of having Lyme have no associated or known tick-bite. These people can present with fatigue, inflammatory arthritis, chronic headaches, muscle and joint pain, and other types of debilitating ailments. If their initial illnesses are not treated with Lyme-specific therapeutics, these persons can go years without assessment until an astute clinician considers Lyme as a possible entity. Unfortunately, the current state of affairs for those physicians trying to treat patients with "chronic Lyme" by thinking outside the conventional box is very similar to physicians such as myself who know that, for the majority of children with autism, their condition can be greatly improved with biomedical intervention.

The Lyme debate is best summarized by the current situation in Connecticut, where the Attorney General has stepped in to intervene between two competing medical organizations guidelines – IDSA (Infectious Diseases Society of America) and ILADS (International Lyme and Associated Diseases Society). The debate between the two organizations concerns how to best treat people who contract the infection each year.[1] In short, IDSA's position is simple: short-term antibiotics for known Lyme patients is all that is needed with no need or reason for long-term therapy. However, ILADS takes the position that each patient's response is different and that, many times, long-term therapies are necessary. ILADS feels that Lyme is much more than an acute illness and needs to be adequately addressed in a more comprehensive fashion. ILADS

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makes the point that other infectious diseases, such tuberculosis and Q-fever, need long-term antibiotic therapy and that short-term treatments based on the notion of acute illness are inadequate. From my personal experience, ILADS has it correct.

From there, Dr. Rimland began to collaborate with like-minded physicians who were using nutrition and targeted vitamin and mineral therapies for their chronically ill patients, some of whom were autistic. From these early efforts, the Defeat Autism Now (DAN!) organization was born. From their original meetings in Dallas, Texas in 1995, a group of highly respected clinicians and researchers have sprung forth,

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So what about biomedical intervention for children (or adults) with an autism-spectrum disorder (ASD)? Why is most of the medical profession so close-minded about the potential benefits of biomedical intervention? Finally, is the current situation with Lyme also affecting a percentage of the autism population? From my position, it certainly does, and the real possibility is that the Borrelia organism and other potential co-infections (i.e., Erlichia, Babesia) need to be addressed in these children. First, let's explore the roots of biomedicine for autism and see why a comprehensive biomedical approach is necessary.

The Roots of Biomedical Therapy for Autism

The biomedical movement for autism-spectrum disorders (ASD) got its start from an organization called the Autism Research Institute, founded by the late Bernard Rimland, PhD, (1928-2006) in San Diego, California. Dr. Rimland had always felt that autism and its related disorders had its roots in biological causation and was not just a psychological or neurodevelopment disorder. In his early work, Dr. Rimland advocated the use of vitamin B6 and magnesium to help with the cognitive challenges facing autistic individuals. In a significant number of kids who tried this simple therapy, B6 worked very well – better eye contact, improved speech, and less hyperactivity were a few examples of its results.

dedicated to researching and treating the various health issues seen so commonly in autistic individuals: autoimmune and digestive protein disorders,[3-6] (digestive problems including chronic elevated measles antibodies,[7] yeast and bacteria overgrowth),[8] metabolic disorders, (including detoxification imbalances and methylation defects),[9] heavy metal toxicity,[10] and more.

The DAN! organization is to be commended for its ongoing dedication to unraveling the health issues of many autistic children. The DAN! Conference, held twice yearly, is an incredible resource of information for parents and doctors seeking answers to the biomedical issues of children with ASD. Of course, the concepts of good diet and proper immune and digestive function that promote health and vitality are nothing new to the world of natural medicine (and the readers of the *Townsend Letter*). Natural healers, herbalists, and nutritional laymen have for years been promoting healthy diets and the removal of toxins as disease prevention. However, what the DAN! organization has been able to do is bring these issues to the forefront of the autism epidemic which we now face. They are an important bridge between alternative medical views and the traditionalists, who view ASD as a purely neuro-developmental disorder with no hope for improvement or recovery, much the same way ILADS supports a broader view of Lyme disease.

The Puzzle Scenario

There are many questions to be answered regarding the cause and treatment of autism, Persuasive Developmental Disorders (PDD), and other ASDs. The solutions are not always simple; the cause is often multi-factorial; and the testing and subsequent treatments are sometimes complicated and expensive. It is important to realize that, as with everything in medicine, there are no guarantees of absolute illness recovery, especially with complex disorders involving the nervous system. However, there is reason for hope and enthusiasm regarding the biomedical treatment of children with ASD. Much can be done to help these children reach their full potential, and in my experience, many children have had significant mental, emotional, and overall health improvements through specific diagnostic and treatment approaches.

Each child is like a puzzle. The factors that influence their physical health and mental/emotional well-being are many. As mentioned above, the many physical challenges these children face need to be addressed systematically. A direct approach is prudent, and doing good diagnostic assessment is necessary. Also, implementing specific targeted therapies, particularly in the beginning, in my opinion, has done wonders to jumpstart the healing process for many ASD patients. However, the puzzle scenario is a real one, which creates some difficulties with respects to biomedical therapy, because one child may not respond positively to a particular therapy, whereas another child may respond quite profoundly, speaking in sentences almost immediately. This can be true for even those kids who are harboring Borrelia as a potential contributing factor in their underlying health condition.

LIA Foundation

At a recent think tank in San Diego hosted by the Lyme Induced Autism (LIA) Foundation (www.liafoundation.org), the discussion centered around the potential link between autism and infection with Borrelia and

other co-infections commonly seen in Lyme Disease – Erlichia, Babesia, etc. Input from a number of leading researchers and practitioners in the field of Lyme suggested that Lyme disease (Borrelia derived by tick-borne contact) may play a role in the autism condition. However, a more common scenario is that the Borrelia organism has been contacted by other means – other insect vectors or trans-placental transfer from an infected mother.[11]

In this scenario, the child is not manifesting with Borrelia infection directly from tick-borne illness (which in my practice, upon history-taking from parents, is almost never mentioned), but instead presents with a more insidious infection without classic acute manifestations as seen commonly in Lyme disease. The think-tank members indicated the need to classify those cases of Borrelia-induced illness as something separate from classic Lyme disease (which is the term generally applied to Borrelia infection contracted via a tick bite). One term mentioned was Borrelia-Related Complex (BRC), which is multi-factorial disorder complicated by Borrelia and other confounding infections along with a dysregulated immune system, which leads to a state of chronic disease. The same pathophysiological manifestation can still exist with BRC as seen in latent Lyme, but BRC is not a Borrelia infection derived via a tick bite.

A research project is underway with the assistance of those of us who attended the think tank and with IgeneX laboratory to evaluate how many autism-spectrum children are actually carrying Borrelia infection in their body. Estimates at this point range from 40% to 60% (estimate given by the think-tank members from clinical experience), but more conclusive data is needed. The results of this study will go along way in determining the extent of BRC and autism.

The Biomedical Approach Incorporates Many Aspects of Medicine

A biomedical approach to autism-spectrum disorders utilizes a wide variety of therapies, diagnostic testing, and medication (if needed) to optimize each child's health potential. I have listed below a brief outline of how I approach a child with ASD. My initial goal is to obtain critical information regarding a child's underlying health condition while implementing specific therapy to jump-start a particular child's cognitive dysfunction such as speech delay, attention and focusing problems, and environmental and social awareness. One of the best therapies I have found for these issues is methylcobolamin injections (see discussion below). I separate my laboratory assessment into two different categories: blood and non-

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blood. For most children, all testing can be done at the same time, but the option for non-blood testing in those children where blood testing in the beginning stage of assessment may not be appropriate:

Diagnostic Testing (BHD = BioHealth Diagnostics, DD = Doctor's Data, GPL = Great Plains Laboratory, ISL = Immunosciences, Inc.)

- **Non-Blood:**
  - **Comprehensive Stool Analysis (DD or GPL)** – evaluates for bacteria, parasitic and yeast overgrowth and infection, as well as markers for digestive immunity and inflammation.
  - **Organic Acid Test (GPL)** – evaluates for metabolic metabolites of yeast, clostridia bacteria, oxalates, and other functional nutritional deficiencies.
  - **Urinary Peptides (GPL)** – useful for peptide assessment from wheat (gluten), soy, and casein.[4,5]
  - **Hair Analysis (DD or GPL)** – evaluates for the presence of heavy metal exposure and certain mineral imbalances such as copper, lithium, iodine, molybdenum, and selenium.
  - **Porphyrin Profile (Labbio Laboratoire Phillipe** – www.labbio.net) – urine analysis for porphyrin metabolism. Porphyrins are the building blocks for heme synthesis, and imbalances indicate heavy metal exposure and toxicity.[13]
- **Blood:**
  - **Comprehensive Blood Chemistry** – including CBC, metabolic profile, liver, kidney, and thyroid assessment
  - **Comprehensive Food Sensitivity** – evaluates for elevated IgG levels to common food sensitivities as indicators for immune and physiological stress.
  - **Packed Red Blood Cell Analysis** – evaluates for mineral depletion particularly copper, magnesium, selenium, and zinc.
  - **Metallothionein Profile (GPL)** – evaluates the functional capacity of metallothionein (an indicator of heavy metal detoxification capacity), as well as zinc, copper, and ceruloplasmin imbalances, which appear to be an issue for a subset of autistic individuals.[12]
  - **Viral Panel (BHD, ISL)** – evaluates IgG and IgM to common viruses including CMV, EBV, HHV-I, II, and VI, and Varicella. Measles IgG and IgM can be added separately.
  - **Lyme IgG, IgM and Lyme IFA (IgeneX)** – evaluates for common band markers for *Borrelia burgdorferi.*

First-Line Therapy: Building Block for Success

One of the first therapies I implement for any ASD patient is something called methylcobolamin injection therapy (Methyl-B12), as outlined by James Neubrander, MD.[14] In my practice, this therapy is offered as first-line treatment to begin the process of supporting methylation defects[15,16] and cognitive dysfunction for ASD individuals.[14] The process is very simple and is outlined extensively on Dr. Neubrander's website (www.drneubrander.com) with video files demonstrating how the therapy is done. If a parent can begin Methyl-B12 with their child while we are waiting to receive their laboratory tests results, then, in many cases, we can speed up the child's healing response quite dramatically.

In my experience, the top five areas that are consistently improved for ASD children with the methyl-B12 therapy are the following: attention, eye contact, language improvement – both receptive and expressive – enhanced environmental awareness, and increased willingness to socialize. For some kids, these changes may be subtle at first, while others show marked improvement very early on – sometimes within weeks.

My approach is similar to Neubrander's in that Methyl-B12 therapy is implemented for at least five weeks without any other changes to a child's medication, dietary, or supplement program. This scenario usually works out just fine, as it can take three to five weeks in many cases to obtain the above-listed test results back and then schedule a follow-up laboratory review with the child's parents. The methyl-B12 injections appear to give the most consistent results.[14] Other forms of methyl-B12 are available such as nasal, oral, or sublingual, but overall response is mixed. Methyl-B12 injections are available via prescription only, but pre-filled insulin syringes are available for ease of administration by either practitioner or parent. For most cases, the injections are implemented by the parent every 72 hours to begin with. The injection is given subcutaneous in the outer upper quadrant of the buttocks. The injections are virtually painless, but a lidocaine cream can be applied to numb the injection site, if necessary. For more specifics about this important therapy, you can refer to material from Dr. Neubrander at www.drneubrander.com or my resource center website at www.stillpointhealth.com.

What is the Bottom Line?

Once you have obtained a child's test results back, a more detailed treatment program can be implemented based on the patient's needs – whether it be nutritional supplements; dietary intervention such as gluten, dairy, and soy-free diets; anti-fungal or anti-bacterial treatment; or specific therapy for Borrelia infection, if detected. The prioritization of therapeutic implementation is a tricky one. In my experience with ASD, if the parents have begun using the methyl-B12 therapy, my next step would be dietary and nutritional supplementation support. Improving digestive function by eradicating or reducing bacteria and yeast overgrowth is important for long-term success as well. Once these therapies are in place and you are confident the child is being

supported nutritionally, more direct therapy can be implemented against Borrelia or co-infections, as well as other compounding issues such as heavy metal toxicity, viral loads, etc. All this, at times, is hard work and takes persistence, consistency, and dedication on the part of the practitioner, along with the help of parents to help overcome the complex health challenges for their ASD child(ren). In the end, the rewards can be gratifying and the outcome sometimes miraculous.

The medical issues of many children with an autism-spectrum disorder is an ever-evolving conundrum for physicians and parents. The same can be said for patients dealing with the ravages of Lyme disease. Those organizations and physicians unwilling to open their minds to the reality of these patients' health challenges have already become worthless in their ability to help. For those of us left in the battle, we must keep searching for new clues and better ways of implementing what we know works as well as other potential therapies that may benefit our patients.

My approach is just an example of how to deal with the health complexities of children with autism and other related disorders. Whether Borrelia is playing a role or not with a particular child with ASD, a thorough biomedical approach is warranted and extremely helpful for many of these kids.

Notes

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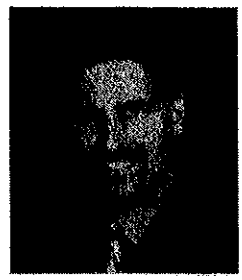

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