Editor's Column

Candida-caused autism?

By Bernard Rimland, Ph.D.

Candida albicans is a yeast-like fungus which inhabits almost all humans. It lives on the moist dark mucous membranes which line the mouth, vagina and intestinal tract. Ordinarily it exists only in small colonies, prevented from growing too rapidly by the human host's immune system, and by competition from other microorganisms in and on the body's mucous membranes. When something happens to upset this delicate natural balance, candida can grow rapidly and aggressively, causing many unpleasant symptoms to the host. Some of the symptoms are widely known and acknowledged. Vaginal yeast infections, primarily caused by candida, present the most common case in point. Thrush, the white yeast infection of the mouth and tongue which is common in infants, is another well-known example of candida overgrowth.

In recent years a minority of physicians have begun to try to persuade their colleagues, and the public, that candida may present consequences far more devastating to human well-being than vaginitis and thrush. They cite Japanese studies showing that candida is able to produce toxins which cause severe long-term disruption of the immune system and may also attack the brain. In extreme cases, they claim, severe disorders, totally resistant to conventional treatment, can occur as a result of candidiasis. These include depression, schizophrenia and, in some cases, autism.

It is much too early to reach a firm conclusion, but, based on the weight of the information gathered to date, it seems to me highly probable that a small, but significant, proportion of children diagnosed as autistic are in fact victims of a severe candida infection. I further believe that if the candida infection were successfully treated in these few cases – much easier said than done – the symptoms of autism would show dramatic improvement.

In a typical case of this kind, the child appears to be a normal, reasonably healthy infant for the first 18 to 24 months. Speech has started, and the child displays the usual level of interest in his family and his surroundings. A series of ear infections occur which are routinely treated by antibiotics. Soon thereafter, ominous changes begin to occur. Speech development stops, then regresses, often to the point of muteness. Within a few weeks or months the child becomes unresponsive and loses interest in his parents and his surroundings. The concerned parents take the child to various specialists, and finally come up with a diagnosis of "late onset autism." The story is familiar. We all know of such cases.

In 1981, this happened to Duffy Mayo, the then three-and-a-half-year-old son of Gianna and Gus Mayo of San Francisco. Duffy had been a bright and active youngster, learning to speak in both English and Italian before regression set in. After the diagnosis of autism had been applied by two specialists, the Mayos were lucky enough to take Duffy to allergist Alan Levin in their search for help. Levin found that Duffy's immune system was severely impaired. Of special interest was the fact that Duffy had been given a number of treatments with antibiotics, which were intended to control his ear infections. Levin knew that such antibiotics often kill the microorganisms which compete with candida in the human body and thus allow candida to grow to overwhelming proportions.

Aware of the mounting evidence that candida might be less benign than commonly believed, Levin tried Nystatin, an anti-fungal drug which is toxic to candida but not to humans. Duffy at first got worse (a common reaction, caused by the toxins released by the dying candida cells). Then he began to improve. Since Duffy was sensitive to molds, the Mayos moved inland to a dryer climate. Since candida thrives on certain foods (especially sugars and refined carbohydrates) Duffy's diet required extensive modification. Today Duffy is an active, greatly improved 10-1/2-year-old child with few remaining signs of autism. His immune system is still impaired, however, and he still requires treatment.

Most physicians skeptical

When the Los Angeles Times published a long, syndicated article about Duffy in 1983, the Mayos, and the Institute for Child Behavior Research, which was mentioned in the article, began receiving letters and phone calls from parents of autistic children throughout the country. It seems that there are many autistic children whose problems started soon after long-term antibiotic therapy, or whose mothers had chronic yeast infections which they had passed along to the infants. How many of these might in fact be *caused* by candidiasis? No one knows.

William G. Crook, the well-known pediatric allergist of Knoxville, Tennessee, has mentioned several similar cases in his book *The Yeast Connection* and in his lectures. Cecil Bradley (one of Duffy Mayo's physicians) recently told me that he has seen eight "autistic" children who respond favorably to anti-candida drugs and diet treatment.

ICBR has been gathering information on the possible link between autism and candida since 1966, when our first research assistant, Dale Meyer, noticed that thrush seemed to be mentioned unusually often in the letters and questionnaires sent to us by parents. I am fairly well convinced that there is a connection and that perhaps 5% to 10% of autistic children – those given many courses of antibiotics, or born with thrush or afflicted with thrush soon after birth – will improve when properly treated for candida. However, there is no consensus among physicians on the candida/autism linkage.

While it is too early to reach a firm conclusion, it seems highly probable that a small proportion of children diagnosed as autistic are in fact victims of candida infection.

Judging from contacts with several hundred parents over the past few years, only about one physician in 20 or 30 will give serious consideration to the possibility that treating candida may alleviate the symptoms of autism. Most physicians regard concern with candida as just another fad, soon to be forgotten. I wish they were right, but I don't think they are.

Even if the parent is lucky enough to find a knowledgeable physician, the battle is a long way from won. There are 30 or 40 strains of candida, and some are very resistant to treatment. Nystatin, quite possibly the safest prescription drug on the market, will work on the weakest candida strains. Ketoconosal (Nizerol) is a stronger drug, but much more likely to have adverse side effects. Diet is said to be at least as important as drugs in treating candida. There are also non-prescription substances said to have anti-candida effects, such as acidophilus, caprylic acid, and other readily available substances, some of which have been used to treat candida for hundreds of years. All of these approaches have been tried, with varying degrees of success.

Although we have learned a good deal about the possible link between autism and candida in the past few years, there is a great deal more that we need to know.

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Readers interested in learning more about the possible candida/autism linkage are invited to send a long, self- addressed, stamped envelope to the Institute for Child Behavior Research, 4182 Adams Avenue, San Diego, CA 92116, requesting publication #65, the "Candida Information and Questionnaire Packet." The cost is $1.