From: Paula Bryant-Trerise
To: HHC Exhibits

Subject: research in opposition to HB3063

Date: Wednesday, February 27, 2019 9:53:24 PM

Attachments: Common variants associated with general and MMR vaccine-related febrile seizures.pdf

Developmental Regression and Mitochondrial Dysfunction in a Child With Autism.pdf

The first attached research article details a susceptible group with a known genetic variant associated with vaccine related adverse events. Please submit as an exhibit into the public record opposing HB3063.

The second attached research article also details a susceptible group and is therefore also in opposition to HB3063.

Below are abstracts of other research highlighting immune system dysregulation related to vaccination in children with autism. These are also submitted in opposition to HB3063.

Autistic children exhibit undetectable hemagglutination-inhibition antibody titers despite previous rubella vaccination

Article *in* <u>Journal of Autism and Developmental Disorders</u> 6(3):269-274 · September 1976 *with* 69 Reads

DOI: <u>10.1007/BF01543467</u>

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• E. Gene Stubbs

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Abstract

The etiology of autism is unknown, but autism has been associated with a number of diseases, including prenatal rubella. Rubella vaccine challenge was used in an attempt to retrospectively diagnose prenatal rubella in autistic children. This test was selected because unresponsiveness of antibody titer has been reported as helpful in retrospective diagnosing of prenatal rubella. Fifteen autistic children and 8 controls matched for age were challenged with rubella vaccine. Rubella vaccine challenge did not differentiate autistic children from the control subjects. However, 5 of 13 autistic children had undetectable titers despite previous vaccine; all control subjects had detectable titers. This finding of undetectable titers in autistic children suggests these children may have an altered immune response.

• Format: Abstract

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Ann Clin Psychiatry. 2009 Jul-Sep;21(3):148-61.

Phenotypic expression of autoimmune autistic disorder (AAD): a major subset of autism.

Singh VK¹.

Author information

Abstract

BACKGROUND:

Autism causes incapacitating neurologic problems in children that last a lifetime. The author of this article previously hypothesized that autism may be caused by autoimmunity to the brain, possibly triggered by a viral infection. This article is a summary of laboratory findings to date plus new data in support of an autoimmune pathogenesis for autism.

METHODS:

Autoimmune markers were analyzed in the sera of autistic and normal children, but the cerebrospinal fluid (CSF) of some autistic children was also analyzed. Laboratory procedures included enzyme-linked immunosorbent assay and protein immunoblotting assay.

RESULTS:

Autoimmunity was demonstrated by the presence of brain autoantibodies, abnormal viral serology, brain and viral antibodies in CSF, a positive correlation between brain autoantibodies and viral serology, elevated levels of proinflammatory cytokines and acutephase reactants, and a positive response to immunotherapy. Many autistic children harbored brain myelin basic protein autoantibodies and elevated levels of antibodies to measles virus and measles-mumps-rubella (MMR) vaccine. Measles might be etiologically linked to autism because measles and MMR antibodies (a viral marker) correlated positively to brain autoantibodies (an autoimmune marker)--salient features that characterize autoimmune pathology in autism. Autistic children also showed elevated levels of acute-phase reactants--a marker of systemic inflammation.

CONCLUSIONS:

The scientific evidence is quite credible for our autoimmune hypothesis, leading to the identification of autoimmune autistic disorder (AAD) as a major subset of autism. AAD can be identified by immune tests to determine immune problems before administering immunotherapy. The author has advanced a speculative neuroautoimmune (NAI) model for autism, in which virus-induced autoimmunity is a key player. The latter should be targeted by immunotherapy to help children with autism.

PMID:

19758536

• Format: Abstract

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J Biomed Sci. 2002 Jul-Aug;9(4):359-64.

Abnormal measles-mumps-rubella antibodies and CNS autoimmunity in children with autism.

Singh VK¹, Lin SX, Newell E, Nelson C.

Author information

Abstract

Autoimmunity to the central nervous system (CNS), especially to myelin basic protein (MBP), may play a causal role in autism, a neurodevelopmental disorder. Because many autistic children harbor elevated levels of measles antibodies, we conducted a serological study of measles-mumps-rubella (MMR) and MBP autoantibodies. Using serum samples of 125 autistic children and 92 control children, antibodies were assayed by ELISA or immunoblotting methods. ELISA analysis showed a significant increase in the level of MMR antibodies in autistic children. Immunoblotting analysis revealed the presence of an unusual MMR antibody in 75 of 125 (60%) autistic sera but not in control sera. This antibody specifically detected a protein of 73-75 kD of MMR. This protein band, as analyzed with monoclonal antibodies, was immunopositive for measles hemagglutinin (HA) protein but not for measles nucleoprotein and rubella or mumps viral proteins. Thus the MMR antibody in autistic sera detected measles HA protein, which is unique to the measles subunit of the vaccine. Furthermore, over 90% of MMR antibody-positive autistic sera were also positive for MBP autoantibodies, suggesting a strong association between MMR and CNS autoimmunity in autism. Stemming from this evidence, we suggest that an inappropriate antibody response to

MMR, specifically the measles component thereof, might be related to pathogenesis of autism.

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