

Epidemiological studies that ignore mechanism of disease causation are flawed and mechanistic evidence demonstrates that vaccines cause autism

Vinu Arumugham
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vinucubeacc@gmail.com

Background

Drs. Pulendran and Ahmed of the Emory Vaccine Center write¹:

“Despite their success, one of the great ironies of vaccinology is that the vast majority of vaccines have been developed empirically, with little or no understanding of the immunological mechanisms by which they induce protective immunity. However, the failure to develop vaccines against global pandemics such as infection with human immunodeficiency virus (HIV) despite decades of effort has underscored the need to understand the immunological mechanisms by which vaccines confer protective immunity.”

Since vaccinologists are themselves ignorant of vaccine mechanisms, how can we expect epidemiologists to understand the mechanisms? So most epidemiological studies ignore mechanism of adverse event causation. If you ignore mechanism, you cannot design the study with appropriate controls. So the results of such epidemiological studies have to be discarded due to confounding.

Discussion

There are at least five mechanisms by which vaccines can cause autism:

1. Folate receptor protein in cow's milk contaminated vaccines (e.g. DTap) cause the development of folate receptor alpha antibodies (FRAA) that block folate uptake and cause autism.²⁻⁴
2. GAD65 containing chick embryo cell culture protein contaminated vaccines (e.g. MMR) can cause GAD65 antibody related autism.⁵⁻⁸
3. A pregnant woman who is making vaccine induced FRAA, can block folate uptake in the fetal brain and cause autism.⁹
4. A pregnant woman who has developed GAD65 related autoimmunity due to vaccines can affect fetal brain development.
5. Women can have maternal autism related antibodies other than the two described above.¹⁰

Many epidemiologists think they can answer the question “do vaccines cause autism?”, without taking into account the mechanisms of causation. It is easy to demonstrate that they are wrong.

Considering item 1, if a study of DTap association to autism is performed, the controls cannot receive any other cow's milk contaminated vaccines such as Prevnar. If they ignore this possible mechanism, they will miss any association between cow's milk contaminated vaccines and autism.

A study of vaccinated vs. unvaccinated children would cover items 1 and 2 but miss 3, 4 and 5.

This illustrates the futility and invalidity of current epidemiological studies that try to answer the question while ignoring the mechanisms of causation. So conclusions of studies, including the latest

one by Taylor et al.¹¹ need to be discarded. Obviously, this is a general problem that affects most vaccine safety studies.

Proven mechanism is involved in vaccines causing autism

Injected proteins cause the development of allergies. Known for a hundred years.

https://www.nobelprize.org/nobel_prizes/medicine/laureates/1913/ricet-lecture.html

Today, we know that as IgE antibody mediated allergy.

Repeated injection of bee venom proteins cause the development of IgE mediated bee sting allergy.¹² Injecting influenza virus proteins causes the development of IgE mediated allergy to influenza viral proteins.¹³⁻¹⁶

Injected egg proteins cause the development of egg allergy.¹⁷

Tetanus vaccine package insert at the World Health Organization (WHO)¹⁸ says:

"The vaccine has the appearance of a greyish-white suspension and does not contain any horse serum protein. Therefore it does not induce sensitization to sera of equine origin."

In other words, a horse serum protein containing vaccine can induce IgE mediated sensitization to horse serum proteins.

And this list is huge as previously documented.¹⁹

This basic immunological concept of injected proteins causing IgE mediated allergy is taught in medical school.

Medical Immunology notes from the University of California, Irvine, School of Medicine.

<http://jeeves.mmg.uci.edu/immunology/CoreNotes/Chap21.pdf>

pg. 157:

"A guinea pig can be sensitized by intramuscular injection of an antigen, say OVA (ovalbumin). Its immune system responds by producing antibody to OVA, including (but not exclusively) IgE. Some of this circulating IgE will be fixed onto mast cells in various tissues, including the vasculature and respiratory tract. Three weeks later, the same animal can be challenged either with an intravenous dose of OVA or by exposure to an aerosol containing OVA. Following IV injection, the animal will rapidly develop severe vascular shock and die within a few minutes (the combination of venule constriction and capillary dilation results in pooling of blood in the peripheral circulation and a drastic drop in blood pressure). If exposed to the aerosol, it will equally rapidly die from bronchial constriction, an experimental model for human asthma."

So injecting ANY protein causes the development of IgE mediated allergy to that protein and allergic asthma to that protein.

Now consider that cow's milk contaminated vaccines contain the bovine folate receptor (FR) protein.³ As expected, it can cause IgE mediated allergy to bovine folate receptor protein.

It has been demonstrated with numerous studies that if a person with IgE mediated allergy is able to consume the allergen as part of oral immunotherapy for example, they will develop IgG4 antibodies specific to that protein.²⁰⁻²²

Since cow's milk contains only small amounts of FR, any allergic reaction would be mild. So a person with IgE mediated allergy to FR can consume cow's milk, resulting in the development of IgG4 antibodies specific to FR.

It has been demonstrated that FRAA of the IgG4 isotype is the main cause of folate receptor binding/blocking in 75% of autism patients as previously explained in detail.³

It has been demonstrated that these FRAA bind with higher affinity to bovine FR, proving their origin.²³

Human and bovine FR have 90% amino acid sequence homology.²³

Therefore, antibodies synthesized against bovine FR, cross-react and bind to human FR resulting in autism.

Conclusion

Epidemiological studies that ignore possible mechanisms of causation are invalid and their results should be discarded.

Wraith et al.²⁴⁻²⁶ have suggested that bioinformatics analysis and pre/post vaccination autoimmune serology be conducted for vaccine safety. Vaccine makers and regulators have refused to perform these safety studies, with devastating consequences.

Mechanistic evidence demonstrates that vaccines do in fact cause autism.

References

1. Pulendran B, Ahmed R. Immunological mechanisms of vaccination. *Nat Immunol.* United States; 2011 Jun;12(6):509–17.
2. Frye RE, Sequeira JM, Quadros E V, James SJ, Rossignol D a. Cerebral folate receptor autoantibodies in autism spectrum disorder. *Mol Psychiatry.* 2012;18(3):369–81.
3. Arumugham V. Autism Spectrum Disorders: A special case of vaccine-induced cow's milk allergy? [Internet]. 2017. Available from: <https://www.zenodo.org/record/1034557>
4. Kattan JD, Cox AL, Nowak-Wegrzyn A, Gimenez G, Bardina L, Sampson HA, et al. Allergic reactions to diphtheria, tetanus, and acellular pertussis vaccines among children with milk allergy. *J Allergy Clin Immunol.* 2011;Conference(var.pagings):AB238.
5. Rout UK, Mungan NK, Dhossche DM. Presence of GAD65 autoantibodies in the serum of children with autism or ADHD. *Eur Child Adolesc Psychiatry.* Germany; 2012 Mar;21(3):141–7.
6. Arumugham V. Role of MMR II vaccine contamination with GAD65 containing chick embryo cell culture in the etiology of type 1 diabetes [Internet]. 2017. Available from: <https://www.zenodo.org/record/1034771>

7. Arumugham V. Cancer immunology, bioinformatics and chemokine evidence link vaccines contaminated with animal proteins to autoimmune disease: a detailed look at Crohn's disease and Vitiligo [Internet]. 2017. Available from: <https://www.zenodo.org/record/1034777>
8. Arumugham V. Bioinformatics analysis links type 1 diabetes to vaccines contaminated with animal proteins and autoreactive T cells express skin homing receptors consistent with injected vaccines as causal agent [Internet]. 2017. Available from: <https://www.zenodo.org/record/1034775>
9. Frye RE, Sequeira JM, Quadros E, Rossignol DA. Folate Receptor Alpha Autoantibodies Modulate Thyroid Function in Autism Spectrum Disorder. *North Am J Med Sci.* 2014;7(1):1–7.
10. Arumugham V. Strong protein sequence alignment between autoantigens involved in maternal autoantibody related autism and vaccine antigens [Internet]. 2017. Available from: <https://www.zenodo.org/record/1034571>
11. Taylor LE, Swerdfeger AL, Eslick GD. Vaccines are not associated with autism: An evidence-based meta-analysis of case-control and cohort studies. *Vaccine.* 2014;32(29):3623–9.
12. Eich-Wanger C, Muller UR. Bee sting allergy in beekeepers. *Clin Exp Allergy.* 1998;28(10):1292–8.
13. Smith-Norowitz T a, Wong D, Kusonruksa M, Norowitz KB, Joks R, Durkin HG, et al. Long term persistence of IgE anti-influenza virus antibodies in pediatric and adult serum post vaccination with influenza virus vaccine. *Int J Med Sci.* 2011;8(3):239–44.
14. Davidsson A, Eriksson JC, Rudblad S, Brokstad KA. Influenza specific serum IgE is present in non-allergic subjects. *Scand J Immunol.* 2005 Dec;62(6):560–1.
15. Nakayama T, Kumagai T, Nishimura N, Ozaki T, Okafuji T, Suzuki E, et al. Seasonal split influenza vaccine induced IgE sensitization against influenza vaccine. *Vaccine.* 2015 Nov 9;33(45):6099–105.
16. Woo EJ. Allergic Reactions After Egg-Free Recombinant Influenza Vaccine: Reports to the US Vaccine Adverse Event Reporting System. *Clin Infect Dis.* 2014;60:777–80.
17. Yamane H. N. U. Serological examination of IgE- and IgG-specific antibodies to egg protein during influenza virus immunization. *Epidemiol Infect.* 1988;100(2):291–9.
18. India SI of. TETANUS TOXOID VACCINE ADSORBED [Internet]. [cited 2009 Jul 20]. Available from: http://www.who.int/immunization_standards/vaccine_quality/pq_135_136_137_TT_SII_PI_20012630_0.pdf?ua=1
19. Arumugham V. Professional Misconduct by NAM Committee on Food Allergy [Internet]. 2016. Available from: <https://www.zenodo.org/record/1034559>

20. Hoyt AEW, Schuyler AJ, Heymann PW, Platts-Mills TAE, Commins SP. Alum-Containing Vaccines Increase Total and Food Allergen-Specific IgE, and Cow's Milk Oral Desensitization Increases Bosd4 IgG4 While Peanut Avoidance Increases Arah2 IgE: The Complexity of Today's Child with Food Allergy. *J Allergy Clin Immunol*. Elsevier; 2017 Jul 7;137(2):AB151.
21. Savilahti EM, Rantanen V, Lin JS, Karinen S, Saarinen KM, Goldis M, et al. Early recovery from cow's milk allergy is associated with decreasing IgE and increasing IgG4 binding to cow's milk epitopes. *J Allergy Clin Immunol*. 2010;125.
22. Vickery BP, Lin J, Kulis M, Fu Z, Steele PH, Jones SM, et al. Peanut oral immunotherapy modifies IgE and IgG4 responses to major peanut allergens. *J Allergy Clin Immunol*. 2013;131(1).
23. Ramaekers VT, Sequeira JM, Blau N, Quadros E V. A milk-free diet downregulates folate receptor autoimmunity in cerebral folate deficiency syndrome. *Dev Med Child Neurol*. 2008;50(5):346–52.
24. Wraith DC, Goldman M, Lambert P-H. Vaccination and autoimmune disease: what is the evidence? *Lancet* (London, England). England; 2003 Nov;362(9396):1659–66.
25. Arumugham V. Flawed assumptions fuel autoimmune disease: The sorry state of vaccine safety science [Internet]. 2017. Available from: <https://www.zenodo.org/record/1034760>
26. Arumugham V. Vaccine induced autoimmunity: The price we pay for a flawed vaccine design and safety process [Internet]. 2017. Available from: <https://www.zenodo.org/record/1034593>