Short sighted influenza control policy based on poorly designed vaccines will sicken more people

Vinu Arumugham
Sep 2017
vinucubeacc@gmail.com

The simple picture currently portrayed

The World Health Organization (WHO) selects 4 influenza virus strains each year for vaccine development. Vaccines are developed and administered. If most people get the vaccine, we have herd immunity and individual protection.

The complex reality

Natural influenza immunity is better than vaccine induced immunity

Influenza vaccine induced immunity lasts for no more than a year, usually only for a few months[1] and sometimes the vaccine may not work at all. WHO may not have selected the right strains. Declining long term, strong, natural herd immunity due to increasing influenza vaccination, increases the likelihood of pandemics. Natural influenza infection results in decades of protection to related strains. People who were infected by swine flu decades ago had protection against the recent pandemic flu.[2]

Influenza vaccine causes allergy and allergic asthma

Injected proteins cause the development of allergy and allergic asthma to those proteins.[3]
Whether the vaccine works or not, vaccine recipients develop or boost long term IgE mediated allergy to four types of hemaggluttinin (HA) proteins,[4–6] aeroallergens and egg proteins,[7] following quadrivalent influenza vaccine administration.

Extreme care is needed to eliminate aeroallergen contamination of vaccines. Clean rooms used in vaccine production can filter out large particles (like complete pollen grains, but not subpollen particles). Fine allergen particles cannot be completely filtered out.[8,9] Focus is on preventing contamination with viable organisms, not allergens. So vaccines can be expected to be contaminated with all types of aeroallergens brought into the plant by plant personnel. Plant personnel are the main source of aeroallergen contamination. They can be expected to bring all aeroallergens such as house dust mite, pollen, cat dander, roach allergens etc., to the plant.
Annual vaccination with influenza vaccine is therefore also an aeroallergen allergy booster shot.[10–13]

As previously described[3], the Institute of Medicine (IOM) wrongly concluded that influenza vaccine is not associated with asthma. The vaccine boosts aeroallergen related allergies and asthma.

Prediction of allergic reactions to the Flublok vaccine come true

The Flublok vaccine was approved (inexplicably) with 3X the HA protein content as the regular vaccine. There is no science behind the approval of Flublok. It is like going to two doctors with the

same headache complaint and getting 325mg of acetaminophen from one and 1000mg from the other. I predicted that Flublok will cause allergic reactions due to IgE mediated sensitization caused by previous influenza vaccines and the high HA content in Flublok. VAERS reports of reactions to Flublok occurred as predicted[14].

Flublok being egg-free was touted as a safe vaccine for those with egg allergy.[15] But it caused allergic reactions due to IgE mediated sensitization to the influenza HA protein itself.[6]
And further, it is more likely than a regular vaccine to boost or cause *de novo* HA allergy.

And reacting to the vaccine is not the only problem. The IgE mediated allergy persists far longer than vaccine protection. So if you are infected, as a top allergy researcher put it:
“It would certainly stand to reason that having IgE that recognized flu epitopes could make the course of one’s flu significantly worse.”

Effectiveness

Antigenic drift occurs between virus replicating in the wild and the virus replicating in chick eggs for the vaccine. The resulting mismatch between vaccine viral proteins and actual viral proteins, causes the vaccine to be ineffective.

Repeated influenza vaccine administration causes vaccine effectiveness to go down.[16] Repeated Flumist administration failed spectacularly.

Mclean et al.[16] wrote:"Current- and previous-season vaccination generated similar levels of protection, and vaccine-induced protection was greatest for individuals not vaccinated during the prior 5 years."

One possible explanation is that upon repeat vaccination, circulating long-term persistent anti-influenza IgE antibodies, bind to the injected antigens, neutralize them and make them unavailable for IgG antibody generation required for disease protection.

Cancer

Periodic influenza related fever is a natural protection against cancer[17]. We have evolved to depend on this natural protection. The influenza vaccine interferes with this natural protection.

Autoimmunity

Injecting animal protein contaminated vaccines into healthy humans is barbaric

Influenza vaccines are contaminated with egg proteins, Madin Darby Canine Kidney (MDCK) cell proteins or insect cell proteins, etc.[18] This will result in allergy or numerous autoimmune diseases due to molecular mimicry between these proteins and human proteins as we had with Pandemrix vaccine induced narcolepsy.[19,20]

For every case of diagnosed autoimmune disease, there are numerous subclinical cases.[21] These subclinical diseases could shave decades off your life. So these “rare” diagnosed adverse events are the tip of the iceberg.

Protein sequence alignment between GBS epitope, influenza viruses and *C. jejuni*

Guillain–Barré syndrome (GBS) an autoimmune disorder, has been associated with natural *Campylobacter jejuni* infections and with the influenza vaccine.

Method

BLASTP methodology was used for protein sequence alignment. As shown before[22], a BLASTP sequence alignment score of 19.3 was obtained comparing human hypocretin receptor and H1N1 nucleoprotein contained in the Pandemrix vaccine. This level of sequence alignment was sufficient to cause autoimmunity that resulted in hypocretin dysregulation and narcolepsy.[20] Therefore any score equal to or higher than 19.3 suggests high probability of autoimmunity.

While vaccines target one or a few particular viral, bacterial proteins, most vaccines are contaminated with all proteins from that virus or bacteria. Example: the Pandemrix vaccine contained both H1N1 hemagglutinin (target) and H1N1 nucleoproteins (contaminant). The exceptions are recombinant vaccines. In recombinant vaccines, the vaccine contains only the target protein from the target organism. The target protein is produced usually by genetically modifying yeast (*Saccharomyces cerevisiae*). Hepatitis B[23,24] and HPV vaccines[25] are produced using this technique. Such vaccines are however, contaminated with all *Saccharomyces cerevisiae* proteins.

Results

Protein sequence alignment was performed between human alpha-2,8-sialyltransferase 8E[26], *C. jejuni* and influenza strain proteins. Protein sequence for alpha-2,8-sialyltransferase 8E was obtained from Uniprot[27].

hypothetical protein [Campylobacter jejuni]
WP_088261625.1 660 1

See 1 more title(s)

GenPeptGraphics Next Match Previous Match

Alignment statistics for match #1

Score	Expect	Method	Identities	Positives	Gaps
40.8 bits(94)	0.029	Compositional matrix adjust.	26/63(41%)	34/63(53%)	1/63(1%)

```
Query  162  KKCAVVGNGGILKNSRCGREINSADFVFRCNLPPISEKYTMDVGVKTDVVTVNPSIITER  221
            K+ AVVGN     N   G EI+S D V R N    + K+  D GVKT++  V P+ +
Sbjct  482  KRIAVVGNSPCELNKNRGEEIDSHDVVIRFNNFSSNLKFHRDYGVKTNIWVVTPA-LNSI  540

Query  222  FHK  224
            FHK
Sbjct  541  FHK  543
```

PB1-F2 protein [Influenza A virus (A/Uganda/MUWRP-043/2008(H3N2))]
AEA04121.1 90 1

GenPeptGraphics Next Match Previous Match

Alignment statistics for match #1

Score	Expect	Method	Identities	Positives	Gaps

25.8 bits(55) 370 Composition-based stats. 10/21(48%) 15/21(71%) 1/21(4%)

```
Query  214  NPSIITERFHKLEKWRRPFYR  234
            NP+ ++ R H LE+W +PF R
Sbjct  66   NPTQVSLRTHALEQW-KPFNR  85
```

PB1-F2 protein [Influenza A virus (A/KOL/507/2007(H1N1))]
ADV39680.1 90 1

GenPeptGraphics Next Match Previous Match

Alignment statistics for match #1

Score	Expect	Method	Identities	Positives	Gaps
24.3 bits(51)	1491	Composition-based stats.	9/21(43%)	15/21(71%)	1/21(4%)

```
Query  214  NPSIITERFHKLEKWRRPFYR  234
            NP+ ++ R H L++W +PF R
Sbjct  66   NPTQVSLRTHALKQW-KPFNR  85
```

With all scores above 19.3, there is a strong likelihood of the influenza vaccine causing GBS antibodies.[28]

Universal influenza vaccine

If a universal influenza vaccine were possible, our immune system would have produced such antibodies that protect against all influenza viruses.

One possible reason why such universal protection does not occur, is that the invariant antigens of the influenza virus may have molecular mimicry to human self antigens. So our immune system does not risk autoimmunity by creating antibodies against the invariant parts of the influenza virus.

One would expect from evolution that the influenza viruses best suited for survival are likely to have evolved invariant antigens that resemble human self antigens. Such a feature blunts the human immune response to the virus. So a universal vaccine is likely to result in unacceptable autoimmunity risk.

Conclusion

Influenza vaccines cause anti-influenza allergy, aeroallergen allergy and allergic asthma. Anti-influenza allergy causes vaccine ineffectiveness due to IgE neutralizing vaccine antigens. Allergy to influenza, increases morbidity and mortality when a person is eventually infected by the strain due to inevitable vaccine failure (wrong strain chosen by WHO, antigenic drift between wild and vaccine strains, IgE mediated antigen neutralization, etc.).

When the vaccine works, it provides temporary immunity at the expense of allergy, autoimmunity, cancer and loss of long term protection against influenza.

When the flu vaccine "works", it makes the population more dependent on WHO making the right strain selection every time and no antigenic drift between wild and vaccine strains. We are creating a more vulnerable population (allergic asthma to HA and no natural influenza protection) that is dependent on an unreliable vaccine.

Influenza vaccine is therefore contributing to increasing influenza related morbidity and mortality.

Where are the peer-reviewed studies accounting for all the above factors and still supporting the oft-repeated claim that the benefits of the vaccine far outweigh the risks?

We need a new influenza control policy redesigned from scratch to address the big picture.

References

1. Radin JM, Hawksworth AW, Myers CA, Ricketts MN, Hansen EA, Brice GT. Influenza vaccine effectiveness: Maintained protection throughout the duration of influenza seasons 2010-2011 through 2013-2014. Vaccine. Netherlands; 2016 Jul;34(33):3907–12.
2. Shim E. PRIORITIZATION OF DELAYED VACCINATION FOR PANDEMIC INFLUENZA. Math Biosci Eng. 2011 Jan;8(1):95–112.
3. Arumugham V. Medical muddles that maim our children with allergies, asthma and autism [Internet]. Unpublished; 2017. Available from: https://www.zenodo.org/record/1034595
4. 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.
5. 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.
6. 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.
7. 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.
8. Hu S-C, Shiue A, Liu H-Y, Chiu R-B. Validation of Contamination Control in Rapid Transfer Port Chambers for Pharmaceutical Manufacturing Processes. Lin Y-P, editor. Int J Environ Res Public Health. MDPI; 2016 Nov 12;13(11):1129.
9. Luczynska CM, Li Y, Chapman MD, Platts-Mills TAE. Airborne Concentrations and Particle Size Distribution of Allergen Derived from Domestic Cats (Felis domesticus): Measurements Using Cascade Impactor, Liquid Impinger, and a Two-site Monoclonal Antibody Assay for Fel d I. Am Rev Respir Dis. American Thoracic Society - AJRCCM; 1990 Feb 1;141(2):361–7.
10. Alice Hoyt, Peter Heymann, Alexander Schuyler, Scott Commins TAEP-M. Changes in IgE Levels Following One-Year Immunizations in Two Children with Food Allergy [Internet]. 2015. Available from: https://wao.confex.com/wao/2015symp/webprogram/Paper9336.html
11. Markt A, Björkstén B, Granström M. Immunoglobulin E responses to diphtheria and tetanus toxoids after booster with aluminium-adsorbed and fluid DT-vaccines. Vaccine. 1995;13(7):669–73.

12. Edelman K, Malmstrom K, He Q, Savolainen J, Terho EO, Mertsola J. Local reactions and IgE antibodies to pertussis toxin after acellular diphtheria-tetanus-pertussis immunization. Eur J Pediatr. Germany; 1999 Dec;158(12):989–94.

13. Arumugham V. Professional Misconduct by NAM Committee on Food Allergy [Internet]. 2016. Available from: https://www.zenodo.org/record/1034559

14. 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.

15. Yang LPH. Recombinant trivalent influenza vaccine (Flublok®): A review of its use in the prevention of seasonal influenza in adults. Drugs. 2013;73(12):1357–66.

16. McLean HQ, Thompson MG, Sundaram ME, Meece JK, McClure DL, Friedrich TC, et al. Impact of repeated vaccination on vaccine effectiveness against influenza A(H3N2) and B during 8 seasons. Clin Infect Dis. 2014;59(10):1375–85.

17. DeNardo GL, DeNardo SJ. Update: Turning the Heat on Cancer. Cancer Biother Radiopharm. 140 Huguenot Street, 3rd FloorNew Rochelle, NY 10801USA: Mary Ann Liebert, Inc.; 2008 Dec;23(6):671–9.

18. Vaccine Excipient & Media Summary [Internet]. 2015 [cited 2016 Jan 16]. Available from: http://www.cdc.gov/vaccines/pubs/pinkbook/downloads/appendices/B/excipient-table-2.pdf

19. 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

20. Ahmed SS, Volkmuth W, Duca J, Corti L, Pallaoro M, Pezzicoli A, et al. Antibodies to influenza nucleoprotein cross-react with human hypocretin receptor 2 (ABSTRACT ONLY). Sci Transl Med. 2015;7(294):294ra105–294ra105.

21. Balaji C, Kevinkumar V, Aravindhan V. Long term persistence of inflammation in children vaccinated with Salmonella conjugate vaccine is associated with augmented Th9-Th17 cytokine. Cytokine. 2017 Mar;91:128–31.

22. Arumugham V. Significant protein sequence alignment between peanut allergen epitopes and vaccine antigens [Internet]. 2016. Available from: https://www.zenodo.org/record/1034555

23. Recombivax HB Package Insert [Internet]. [cited 2016 May 8]. Available from: http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM110114.pdf

24. Engerix B Package Insert [Internet]. [cited 2016 May 8]. Available from: http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM224503.pdf

25. Gardasil Package Insert [Internet]. Available from: http://www.fda.gov/downloads/BiologicsBloodVaccines/Vaccines/ApprovedProducts/UCM111263.pdf

26. YUKI N. Guillain–Barré syndrome and anti-ganglioside antibodies: a clinician-scientist's journey. SUZUKI K, editor. Proc Jpn Acad Ser B Phys Biol Sci. Tokyo, Japan: The Japan Academy; 2012 Jul 25;88(7):299–326.

27. UniProt: the universal protein knowledgebase. Nucleic Acids Res. 2017 Jan 4;45(D1):D158–69.

28. Arumugham V. Flawed assumptions fuel autoimmune disease: The sorry state of vaccine safety science [Internet]. 2017. Available from: https://www.zenodo.org/record/1034760