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CASE REPORT

Hidden Toxicity of Human Papillomavirus Vaccine Ingredients

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Abstract

Over the past five years clinicians from numerous countries have implicated human papillomavirus (HPV) immunizations as the cause of diverse systemic ailments, egregious injuries, and even death. Vaccine ingredients in Gardasil and Cervarix contain hidden organosiloxanes (organosilicones) and silica (silicon dioxide), all of which are capable of creating biochemical disturbances that are strikingly similar to the metabolic disruptions identified in both chronic fatigue syndrome and the recurrent public health debacle of silicone gel-filled breast implant toxicity.

Keywords

Human papillomavirus, HPV immunization, Vaccines, Organosiloxanes, Silicone, Chronic fatigue syndrome

Introduction

Recent publications originating from Italy, Japan, Australia, Columbia, India, Ireland, Denmark, Mexico, Norway, Sweden, Canada, France, the USA, and the United Kingdom have reported post-HPV vaccination phenomena that share overlapping clinical features with chronic fatigue syndrome/myalgic encephalomyelitis (CFS/ME), fibromyalgia (FM), postural orthostatic tachycardia syndrome (POTS), complex regional pain syndrome (CRPS), small fiber neuropathy (SFN), and autonomic dysfunction (AD) [1,2]. Typical symptoms include (but are not limited to) prolonged generalized fatigue, chronic headaches, widespread generalized pain, tremors, orthostatic fainting, postural tachycardia, alterations in gastrointestinal motility, gait disturbance, anxiety, paresthesia's, sleep disturbance, learning impairment, difficulty in concentration, and other cognitive phenomena [1-6]. These reported phenomena have created hesitation by some parents to have HPV vaccination administered to their teenage children. The following case history adds to the growing list of adverse HPV vaccine-induced reports and provides insight into disease causation via an in-depth analysis of the complex HPV vaccine ingredients. The standard regimen for Gardasil 4, given at 0, 2, and 6 months, was utilized.

Case Report

A 21-year-old white female, in excellent health and on no medications, received the first of three Gardasil immunizations in October 2012. For twenty years prior to this she had received a variety of other vaccinations without untoward effects, including tetanus, diphtheria, pertussis, influenza, hepatitis A and B, measles, mumps, rubella, and polio. Seven days after the first Gardasil immunization she began to experience generalized fatigue, difficulty in concentration, problems with name recall and word recall, memory lapses, and impaired ability to perform calculations or assimilate new reading assignments, all of which persisted unabated. Eleven weeks later, in January of 2013, she received the second of three Gardasil immunizations. Within a few days her original complaints became augmented, and within another two weeks she began to complain of chronic headaches, widespread generalized pain in multiple joints and muscles, protracted AM stiffness, alternating constipation and loose stools, near fainting episodes when standing up, intermittent palpitations, non-restorative sleep, anxiety, and tingling and numbness in her extremities. Over the next three months she was evaluated by a psychiatrist, rheumatologist, infectious disease specialist, gastroenterologist, neurologist, and cardiologist, but multiple physical examinations, exhaustive diagnostic and invasive investigations, and laboratory tests failed to reveal a reliable explanation

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for her symptoms. A variety of medications from each specialist afforded no improvement in her condition. In May of 2013 she received the third and final Gardasil immunization. Her morbid multisystem illness persisted unabated, and soon thereafter she complained of intermittent eyelid twitching, dry eyes, food intolerances, and odor and smell hypersensitivity. This latter phenomenon was characterized by nausea, dizziness, and headaches on exposure to perfumes, room fresheners, hairsprays, cleansers, deodorants, exhaust fumes, and furniture polish. Repetitive evaluations and prescriptions by the same practitioners did not favorably alter her clinical course. The patient then began to utilize a variety of alternative medicine disciplines and modalities, including dietary inclusions and exclusions, colon hydrotherapy, acupuncture, physical therapy, infusions of vitamins and amino acids, and Reiki therapy. Over the next four years she noted gradual improvement, but by no means resolution, of her multisystem illness.

Discussion

At first glance one might be inclined to implicate an adverse autoimmune reaction to HPV vaccine materials as the cause of this patient's illness. After all, it is now well known that other vaccines, such as influenza and hepatitis B, have already been confirmed as potential initiators of various autoimmune disorders including rheumatoid arthritis (RA), systemic lupus erythematosus (SLE), and Guillain-Barre Syndrome (GBS) [7]. It is equally tempting to implicate HPV vaccine materials as being capable of causing CFS/ME, FM, POTS, CRPS, SFN and AD. Recent publications, however, from Canada, Norway and France, done with proper methodology, have negated most if not all of these associations despite the demonstration of low titer autoantibodies in subsets of symptomatic patients following HPV vaccination [8-10]. Does that make short shrift of proponents' claims of HPV vaccine-induced illness? Not at all, because HPV vaccine-induced illness is an entity unto itself. Stated more simply, it is a genuinely novel disease that cannot be force-fit into any traditional well-defined condition [2,6]. Equally unlikely is the mechanism of disease causation known as ASIA (autoinflammatory syndrome induced by adjuvants, or Shoenfeld's syndrome). ASIA has now been discredited by numerous researchers, and the general population of healthy individuals is exposed to far more aluminum sources than is contained in any vaccine [11,12].

To adequately answer the question of why Gardasil and Cervarix cause injury, one needs to become familiar with the non-antigenic ingredients in HPV vaccines and relate those ingredients to (a) Public health debacles caused by the same toxic environmental exposures, and (b) Recently evolving notions of disease causation in vague syndromes such as CFS/ME. Gardasil 4 and 9 vaccines contain an ingredient known as polysorbate 80 (PS 80), added as a surfactant and emulsifier. PS 80 is a sorbitan compound, but the manufacturing process to produce PS 80 also produces an end product in the soup mixture known as sorbitol. Sorbitol makes the final PS 80 product cloudy which, in turn, would make the vaccine cloudy. So, in order to render the vaccine clear and colorless sorbitol is removed from PS 80 by adding amorphous silica (silicon dioxide) and organosiloxanes (organosilicones). A brand name product that performs the same function is Britesorb. Silica has a long and sordid proven history of human toxicity. Organosiloxanes, with their artificial silicon carbon bonds that never occur in any living organism on earth, are also a mission impossible for humans to deal with [12]. The toxicity of organosiloxanes is now a proven reality and is directly responsible for the multiple ailments in women suffering from the genuinely novel entity known as silicone gel-filled breast implant toxicity [12-15]. This toxicity has nothing to do with autoimmunity, but rather involves disruption of more than two dozen biochemical processes in the body. As an example, one of the degradation products of organosiloxanes is silicic acid, which readily crosses the blood brain barrier and chelates neurotransmitters such as dopamine. Cognitive dysfunction is the expected outcome. Silanols (another degradation product of organosiloxanes) can biointegrate into the proteoglycan matrix macromolecule receptor for acetylcholine, thereby causing unchecked activity of the sympathetic arm of the autonomic nervous system (and hence, palpitations, or rapid heartbeat). Silanols can readily donate a methyl group to any accumulated mercury already present in one's body, thereby synthesizing methylmercury (a vastly more toxic compound). Enhanced DNA methylation can also easily occur, thereby altering epigenetic factors that, in turn, create disturbances in gene expression and the production of autoantibodies and cytokines. Latent viruses that one has acquired during his or her lifetime can be reactivated by a similar toxicity mechanism adversely affecting viral epigenetic control. These types of aberrations can create secondary amplification loops which, in turn, often lead to erroneous impressions of primary infectious and autoimmune etiologies.

An ISCOM (immune stimulating complex) is another ingredient in HPV vaccine materials, whose function is to enhance humeral and cellular immune responses to the antigens in question. ISCOMs contain saponins, which are surfactants and emulsifiers indigenous to a variety of edible plants. Saponins are capable of causing intense foaming activity in aqueous solutions, which is quite desirable when they are added to soaps, shampoos and detergents. But when saponins are routinely utilized in beer production manufacturers add organosiloxanes to control the foaming activity. The implications for preventing HPV vaccines from "bubbling up" are obvious. There is a vast difference between ingestion of a toxin versus parenteral administration of a toxin. The Food and Drug Administration (FDA) has never required any

consumer products containing organosiloxanes to have these compounds listed as ingredients on any labels (and this applies to organic foods as well). This is because for many decades physical chemists have brainwashed biochemists into believing that organosiloxanes are chemically and biologically inert, a premise that is now known to be completely untenable [12,15-17]. Organosiloxanes and their degradation products also adversely affect enzyme functions (and thereby substrates and metabolites), as well as membrane permeability, neuronal transmission, and mitochondria [16]. With regard to mitochondria, oxidative phosphorylation and the electron transfer system are disrupted because silicon behaves like a metal at times, thereby altering electromagnetic fields. This leads to deficiencies in energy production and energy utilization plus impairment of the mitochondrial-mediated cell danger response to other environmental contaminants (such as pesticides, phthalates, etc.) [17,18]. Organosiloxane-induced mitochondrial dysfunction can thus be viewed as "the straw that broke the camel's back" - it is analogous to one's house being on fire, but the fire engines cannot get there. Extracellular spillage of damaged mitochondrial organelles readily triggers activation of both innate and adaptive immunity, creating another secondary amplification loop [16].

Organosiloxanes and their degradation products can biointegrate into life-sustaining matrix macromolecules, which then causes a host of biochemical disruptions [14]. One such macromolecule, a glycosaminoglycan known as chondroitin sulfate, binds the pre-formed mediators of inflammation inside mast cells [14]. When chondroitin sulfate is modified by chemical biointegration inappropriate release of mast cell contents occurs, creating allergic chaos as well as stimulation of other cells to release their inflammatory mediators [14,19,20]. One example of the latter involves mast cell mediated activation of brain microglia to secrete their immune stimulating cytokines [19,20]. Thus, we have yet another example of a secondary amplification loop, which has been referred to as neuroinflammation. Once again one could erroneously conclude that autoimmune mechanisms are the primary offenders.

Leukopenia and thrombocytopenia have been reported in some patients with HPV vaccine-induced illness [21]. Heavy metals, such as platinum and rubidium, are utilized in the polymerization manufacturing process of organosiloxanes, and they do not fall out of the soup mixture at the end [12]. A multitude of pathologic clinical phenomena are known to occur from excessive exposure to heavy metals [12].

Cervarix vaccine ingredients do not contain PS 80, but they do contain sodium dihydrogen phosphate dihydrate (SDPD), a pH buffer and emulsifier. SDPD is manufactured from sodium carbonate (soda ash), and purified sodium carbonate contains residues of silica (silicon dioxide). The true residual silica content of sodium carbonate can vary substantially depending on the assay used to measure it. ISCOMs also are present in Cervarix.

Why does HPV vaccine-induced illness encompass numerous overlapping clinical features described in patients with CFS/ME, FM, POTS, CRPS, SFN and AD? Because over 60,000 organosiloxane compounds have been synthesized in the past eighty years, and they now contaminate every worldwide environmental compartment [15]. A recent publication has linked organosiloxane contamination to the ever-expanding reports of metabolic and biochemical disruptions inherent to vague syndromes like CFS/ME [17]. The list of metabolic dysregulations and dysfunctional physiology in CFS/ME has now been expanded to include both transcriptome changes and hypothalamic dysfunction [22,23], abnormalities that can easily be caused by the organosiloxane-induced alterations of epigenetic and microglial functions outlined earlier in this report. Chronicity can easily become the norm for all of the above syndromes and illnesses due to (a) Organosiloxane interference with normal healing processes, and (b) The perpetuation of biochemical and epigenetic disruptions during cell division [17,18]. The reader is referred to prior publications for a list of consumer items that contain organosiloxanes, their routes of human exposure, and their detection in frogs, seals, honeybees, and routine household inhabitants [12,14-17]. Silicone gel-filled breast implant toxicity is an extreme form of the organosiloxane-induced toxicities outlined in this report because of the extraordinarily large polymer load in recipients.

Conclusion

The controversy surrounding HPV vaccine-induced illness is no longer one of methodology, it is one of terminology. HPV vaccine-induced illness is a genuinely novel and legitimate entity unto itself that shares clinical features with the ever-expanding list of neurologic fatiguing syndromes. This illness is undoubtedly caused by multiple toxic disturbances of the body's biochemistry induced by emulsifiers, surfactants, and immune-stimulatory complexes. HPV vaccine-induced illness is not a psychogenic reaction fueled by the news media and attorneys, nor is it one of primary autoimmune reactivity. It is no longer appropriate to make the statement "if you don't have 'A' (something in the textbook), then you don't have 'B' (something new), i.e. you have nothing". In a recent publication by Ikeda and colleagues, new patients with HPV vaccine related ailments have not appeared after the Japanese Ministry of Public Health withdrew its vaccine recommendation more than four years ago [24]. HPV vaccine-induced illness exemplifies the fact that the complexity of nature far transcends man's ingenuity.

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