

# Does Free Iron in the Brain Interact with Vaccines to Trigger Lipid Peroxidation and Hemorrhagic Encephalopathy?

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## Subdural Hematomas in Infants

Subdural hemorrhages are not uncommon in asymptomatic term newborns. Based on magnetic resonance imaging (MRI), Whitby et al. reported subdurals in 9 of 111 infants in 2004.<sup>1</sup> Similar findings had been reported in 2002 by Chamnanvanakij and coworkers,<sup>2</sup> but the Whitby study repeated the positive MRIs in four weeks and found that the “haematomas had completely resolved.”

Based on these findings, the authors observed that the medicolegal implications of isolated subdural hemorrhages in infants older than 4 weeks are important when there is suspicion of nonaccidental injury, thereby implying that such findings are more likely to be related to traumatic child abuse by parent or caretaker than to birth injury.<sup>1</sup>

There are a number of reasons to view this conclusion with reservations. First, a series of nine infants, though suggestive, is too small to draw any conclusions. Second, standard pediatric texts list prolonged labors, fetal malpresentations, and large babies as possible sources of *major* brain hemorrhages. Third, Tauscher et al. reported an association between histologic chorioamnionitis, increased levels of cord blood cytokines, and intracerebral hemorrhage in preterm neonates.<sup>3</sup> Fourth, intracerebral hemorrhage occurs in up to 50 percent of very low-birth-weight infants and is thought to represent a substantial cause of morbidity and mortality in these infants.<sup>4</sup> The Whitby report did not take into account any of these risk factors in its conclusion that intracranial hemorrhage in an older infant is probably unrelated to birth.

## The Effect of Iron Released from Subdurals

Free iron released from subdural hematomas and taken up by nearby tissues in the form of hemosiderin is another consideration. Iron overload is known to be destructive in cases of hemochromatosis, resulting in liver, pancreatic, and renal failure as well as coagulopathies.<sup>5</sup> The effect of free iron as a potent free-radical generator in or surrounding the brain is as yet unknown. However, in other tissues, hydroxyl and superoxide radicals are formed. The superoxide is converted by superoxide dismutase to hydrogen peroxide, which may injure cells by peroxidation of lipids of the membranes of the microsomes, mitochondria, or other cell membranes or structures.<sup>6</sup> Although we do not know precisely how long the hemosiderin remains in and around the brain, it probably persists and remains hazardous for a time after resolution of the hematoma.

The brain is unique among the organs. It is highly fatty, with membrane lipids constituting 60 percent of the solid matter.<sup>6</sup> Although constituting about 6 percent of body weight in an infant,<sup>7</sup>

it receives about 15 percent of normal cardiac output and accounts for nearly 25 percent of the body's oxygen consumption.<sup>8</sup> In addition, both brain and retina contain a relatively high percentage of the omega-3 fatty acid docosahexaenoic acid (DHA),<sup>9-14</sup> which serves as the primary building block of the membranes of these structures. As it is highly unsaturated, DHA is far more unstable and prone to damaging peroxidation (rancidity) than other classes of fats. Reason indicates the probable danger of free iron in a highly oxygenated area combined with the presence of fats unusually susceptible to oxidative damage. The addition of other metabolic stresses and/or toxins may trigger a firestorm of free-radical pathology, resulting in damaging oxidative changes in the brain.

## Vaccines and Vitamin C Depletion

In the 1960s and 1970s, Kalokerinos, while working as a health officer among the Australian aborigines, became appalled by high infant mortality, approaching 50 percent in some areas. Noticing signs of scurvy in some children, Kalokerinos thought the deaths might be related to vitamin C deficiency.

Also observing that deaths commonly followed vaccinations, especially if the child was ill with a common viral infection, Kalokerinos began administering regular vitamin C supplements and avoiding vaccines when a child was ill, even with a mild respiratory infection. Thereafter, pediatric death rates dropped nearly to zero in his health district.<sup>15</sup> Unfortunately, the importance of these clinical observations has not yet been recognized, and meaningful scientific investigation into a possible connection between vitamin C deficiency and vaccine reactions remains unexplored.

While the recommended 30 mg of vitamin C per day is generally adequate for a healthy infant, it may be rapidly consumed when the infant is stressed, as by the presence of free iron in and around the brain, the injection of vaccine components, or other factors, especially in combination. Vaccines contain many toxins and free-radical generators, including formaldehyde, mercury, aluminum, phenols, alcohols, mineral oil, antibiotics, bacterial endotoxins, and foreign viral DNA. Viral infections have been shown to reduce vitamin C levels by 50 percent.<sup>16</sup>

## Sudden Death in Infants

In earlier years infant deaths were commonly attributed to sudden infant death syndrome (SIDS). Today in the same clinical situations deaths are often attributed to shaken baby syndrome (SBS), or nonaccidental trauma. Very rarely are vaccines considered as possible causes of findings diagnosed as SIDS or SBS even though there are animal models for vaccine-induced/endotoxemic hemorrhagic encephalopathy in the

scientific literature.<sup>17-20</sup> Although these experiments used whole-cell pertussis vaccine, while acellular pertussis vaccines are being used today, the cumulative effects of the larger numbers of vaccines are unknown and may equal or exceed those of the whole-cell pertussis vaccine.

Some human studies now indicate that adverse vaccine reactions may be taking place on a larger scale than currently recognized.<sup>21-23</sup> The situation demands sober, objective, scientific investigation to find the underlying truth.

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**Potential conflict of interest:** For the past several years, Dr. Buttram has written medical reports in defense of persons accused of “shaken baby syndrome.” He has testified in court in some of those cases.

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