



Pathology/Biology Section - 2015

H122 A Fatal Case of Reye's Syndrome Associated With Pepto-Bismol®

Sasha Osbourne, MD, Institute of Forensic Sciences, 1885 Old Spanish Trail, Houston, TX 77054; and Stephen K. Wilson, MD, 1885 Old Spanish Trail, Houston, TX 77054*

After attending this presentation, attendees will be familiar with the etiology, pathogenesis, and potential fatal complications associated with Reye's syndrome.

This presentation will impact the forensic science community by informing attendees of how the current generation of both doctors and parents would benefit from reminders about the dangers associated with the use of all salicylate-containing compounds in children and teenagers.

A fatal case of a 7-year-old male who developed profound vomiting and loss of appetite three days after receiving an influenza A vaccination is presented. His mother gave him Pepto-Bismol® and Gatorade® as treatment and sent him to bed. He was found unresponsive less than 12 hours later and pronounced dead four minutes after arrival at the hospital. Autopsy findings included diffuse mixed micro- and macrovesicular steatosis of the liver, microvesicular steatosis in the renal tubule cells, and cerebral edema. A postmortem nasopharyngeal swab screening was positive for influenza A. Toxicology was positive for salicylate. Follow-up with the mother indicated that she was aware of the warnings against aspirin use in children and she maintained that she only gave her son Pepto-Bismol® and Gatorade®.

Reye's syndrome is a rare severe neurologic disorder consisting of a biphasic illness characterized by a viral infection followed by an acute onset of non-inflammatory encephalopathy and hepatic failure, with rapid progression to death if not properly treated. It most commonly affects children younger than 16 years of age who are treated with aspirin during certain viral infections, including varicella and influenza. The exact cause is unknown, but it is thought to result from mitochondrial impairment resulting from the actions of salicylate and its metabolites, hydroxyhippurate and gentisate. This impairment appears to be intensified during viral illnesses. The incidence of Reye's syndrome has drastically decreased since the 1980's public health campaign in the United States and Europe, which advised parents and healthcare workers of the dangers of using aspirin and other aspirin-containing products to treat children with chickenpox or influenza like illnesses. In 1986, the Food and Drug Administration mandated that all medications containing aspirin (salicylate) were required to include labels with warnings against use in children because of the potential to cause Reye's syndrome. As a result of these initiatives, the number of Reye's syndrome cases in the United States has declined from 555 cases in 1980 to approximately two cases per year currently.

This case represents the need for reiteration of the dangers of using less-familiar salicylate-containing compounds in children, especially since most young doctors and parents have had no experience with this syndrome, given its near eradication since the effective public health campaign of the 1980s.

Reye's Syndrome, Aspirin, Forensic Pathology