K82 Postmortem Pediatric Toxicology

Robert A. Middleberg, PhD, NMS Labs, 3701 Welsh Rd, Willow Grove, PA 19090; Nikolas P. Lemos, PhD, OCME, Forensic Lab Division, Hall of Justice, N Ter, 850 Bryant St, San Francisco, CA 94103; Daniel S. Isenschmid, PhD, NMS Labs, 3701 Welsh Rd, Willow Grove, PA 19090; Margaret Greenwald, MD*, 37 State House Station, Augusta, ME 04333; and Lucas Zarwell, MFS*, OCME, 1910 Massachusetts Ave, SE Bldg. 27, Washington, DC 20003*

After attending this presentation, attendees will gain an appreciation of the challenges unique to toxicological findings in postmortem pediatric cases. Attendees will learn interpretive guidelines for pediatric cases involving forensic toxicology in both a general and case-specific sense.

This presentation will impact the forensic science community by further delineating the interpretive aspects of toxicological findings in the pediatric population.

In this 14th Annual Special Session within the Toxicology section, pediatric cases involving toxicological findings are discussed. As a relative dearth of interpretive information exists involving toxicological findings in the pediatric population, this session is a forum to help elucidate and clarify such issues. The format is a short case presentation including pharmaco-toxicokinetic data and other relevant ancillary information followed by audience participation to provide interpretive clarity around the case-specific impact of the toxicological findings. This session, attended by various sections of the Academy, allows for various perspectives of case issues that lead to integrative consensus, or differing opinions, as to cause-of-death in children.

Dan Isenschmid, PhD, will be presenting a case where a 2-month infant was characterized as being “colicky.” The teenage mother, an illegal alien from Mexico, may have seen a doctor in Mexico and received medications for the infant. The infant died after administration of the obtained substances. Specimens obtained at autopsy were analyzed and determined to contain acetaminophen, metoclopramide, and chlorpheniramine, at concentrations potentially adversely affecting the health of the child. The pharmacology of these agents as well as potential toxicity to the infant will be discussed.

Peggy Greenwald, MD, will be speaking to a case involving α-PVP and pentylone in a 1-month-old infant. These relatively new compounds to the drug scene belong to the class of substances more commonly referred to as “bath salts.” Case studies involving the presence of such compounds in infants are indeed rare today. This case study will reflect on the pharmacology and toxicology of these compounds and strive to ascertain expected effects in infants.

Lucas Zarwell, MS, will discuss two cases of uncommon toxicological findings in children. The first case involves a 2-year-old that complained of “hotness.” This finding was accompanied by shaking, sweating, and gasping for air. The child became non-responsive and, despite resuscitative efforts, died. Toxicological findings demonstrated a fatal concentration of chloroquine and metabolite. Chloroquine is used in children for the treatment of malaria. As little as 1g is potentially fatal in a child. The second case involves a 6-year-old who was found in seizure. She died 2 hr later and had a negative autopsy. Toxicological analyses demonstrated a fatal concentration of the atypical antidepressant bupropion. Bupropion is used in children for such conditions as ADHD. Seizures are a minor side effect of bupropion administration in children, but have been reported.

The case studies presented reflect current-day findings in medicolegal investigations of childhood deaths. In years past, discussions of these types of cases have been educational and demonstrative of the issues in this special population. Only through these continued case studies and audience participation can there be shared perspectives on the meaning of the toxicological findings.

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