



K66 Postmortem Pediatric Toxicology

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After attending this presentation, attendees will have gained an appreciation for 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 18th 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 or issue-specific concern, including pharmaco-toxicokinetic data and other relevant ancillary information, followed by audience participation to provide interpretive clarity around case-specific impacts 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.

Four cases will be presented that highlight the difficulty in assessing the role of toxicants in each case or the lengths one must go to in some cases. Karen Ross, MD, Erik Christensen, MD, Greg Schmunk, MD, and Laura Labay, PhD will be reviewing cases from their years of experience as forensic pathologists and toxicologist, respectively, that highlight the issues and confounders in the pediatric population.

Dr. Ross will discuss the difficulties associated with interpreting drug findings in perinatal cases when exposure took place *in utero*. Multiple variables in the context of *in utero* exposure present unique challenges in assessing any contribution to death. Included in the complexities are considerations of pharmacokinetics and pharmacodynamics of both the mother and the fetus. These, and other issues, will be discussed.

Dr. Christensen will examine the potential role of olanzapine in the death of a 2-week-old infant and whether breastfeeding represents a competent cause of exposure, in addition to other considerations. Breastfeeding is often attributed to causing adverse effects in nursing neonates/infants without careful consideration of the complexities of such conclusions.

Dr. Schmunk will review a case involving the death of a 12-year-old after administration of the neuromuscular junction blocker succinylcholine. He will speak regarding cautions with the use of this commonly used agent in the pediatric population and what the cutoff for "pediatric" should be for this compound.

Dr. Labay will present a case that highlights the lengths to which one must go in the toxicological investigation related to the death of a young child. Analyses of a pillow case, mattress pad, and hair from the exhumed child were used to bring light to the role of diphenhydramine, dextro/levo methorphan, and/or doxylamine in the cause and



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manner of death of this 10-month-old child. This case reinforces the fact that routine toxicological examinations may not suffice in every case.

Pediatric, Postmortem, Toxicology