



K14 Fatal Chloroquine Intoxication in a 2-Year-Old Child

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After attending this presentation, attendees will have a better understanding of the signs and symptoms of chloroquine intoxication and the distribution of chloroquine in postmortem specimens from a child fatality.

This presentation will impact the forensic community and/or humanity by assisting forensic toxicologists and medical personnel to consider the possibility of chloroquine intoxication in a child with a previous history of malaria presenting with symptoms of uncontrollable shaking, profuse sweating, bradycardia, and diffuse cerebral edema.

The authors present the case history and toxicology findings of a child fatality involving chloroquine. A 2-year-old male was found shaking, gasping for air, and complaining of feeling hot shortly after eating his dinner. The child lost consciousness and was taken to the emergency room. Observed symptoms in the hospital included bradycardia, sweating, hypoxia, and diffuse cerebral edema. He died the following day. Few details regarding the case history were known at the time. The child had been previously treated for malaria in Africa before his family migrated to the U.S. less than a year prior. However, there was no recent history of illness or allergies, and prior to this incident the child had been described as a normal healthy 2-year-old.

Specimens were submitted for a full toxicological analysis, including an alcohol analysis by headspace gas chromatography with flame ionization detection; a screen for drugs of abuse and several prescription drug classes using an enzyme-linked immunosorbent assay technique (ELISA); and a screen for basic compounds using gas chromatography-mass spectrometry (GC-MS). Positive findings were confirmed and quantitated using GC-MS. Chloroquine was detected in subclavian blood at a concentration of 34.4 mg/L.

Chloroquine is used as an antimalarial agent. It is not available as an over-the-counter medication in the U.S. and it is suspected that the family brought chloroquine from Africa. Symptoms of chloroquine toxicity range from headache, confusion, dizziness, gastrointestinal upset, and visual disturbances, to hypotension, vasodilation, respiratory depression, and eventual cardiac arrest. The cause of death in this case was determined to be "*chloroquine intoxication*," and the manner of death was "*accident*." A discussion of the case circumstances, the autopsy and toxicology findings, and chloroquine pharmacokinetics will be presented.

Chloroquine, Fatality, Child