Milkshake of toxins: a case report on mixed pesticide ingestion (Chlorpyrifos, Cypermethrin, Herbicide, and Xylene)

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ABSTRACT

Background: There is a growing burden of pesticide poisoning in the Philippines due to easy availability and inadequate regulatory oversight. The varying toxicities of different pesticides can complicate management, especially due to the limited understanding of the synergistic effects or increased toxicity that may result from combinations of these chemicals.

Case Report: This case presents a 63-year-old male who ingested 3 bottles of pesticides with the active ingredients of Chlorpyrifos, Cypermethrin, Butachlor, Pretilachlor, and Xylene. The patient was referred by EMS following a poisoning incident, with medical directives to ventilate using a BVM, provide immediate transport, and bring the pesticide bottles for identification. At the ED, the patient is unresponsive, hypotensive 80/60 mmHg, tachycardic at 116 beats per minute (bpm), tachypneic 31 breaths per minute, and desaturation of 89%. He had pinpoint pupils and milky-white, petroleum-like oral secretions. In further history, he had been drinking alcohol with friends, after one hour, he complained of weakness, abdominal pain, vomiting, and diarrhea. Two hours later, he was found unresponsive with noted pungent and frothy oral vomitus. Treatment was initiated for organophosphate ingestion. He was immediately decontaminated and intubated. Gastric lavage with activated charcoal was done, and atropinization at 1 mg/kg was administered every 15 minutes with continuous monitoring. The patient was referred to the UP Poison Management Center, where atropine nebulization was advised. The patient was admitted to the intensive care unit, where atropinization was continued. Other interventions included the use of inotropes for hypotension, benzodiazepines for seizures, and the correction of electrolyte imbalances and acidosis. Antibiotics were given for the pneumonitis and aspiration pneumonia. The patient was discharged improved after 21 hospital days.

Conclusion: We discussed a rare case involving the ingestion of a combination of pesticides, noting that there is limited research on their interaction and combined effects on human health. This case highlights that it is crucial to identify the active ingredient, prioritize decontamination and treatment, and have a multidisciplinary approach for effective management. Proper documentation and reporting are also essential for consumer education and for the regulation and monitoring of appropriate pesticide usage.

Keywords: Poisoning, organophosphate, Philippines.