INVITED SPEAKERS

Dr. Abdullatif Aloumi is a distinguished emergency medicine specialist with expertise in clinical toxicology. He earned his medical degree from Aberdeen University, UK, and completed his residency in Emergency Medicine. Furthering his specialization, he pursued a fellowship in Clinical Toxicology at Sidra.

Currently, Dr. Aloumi is an Attending Physician in the Emergency Department at Al-Amiri Hospital, Kuwait. He also serves as faculty for the Kuwait Board of Emergency Medicine and leads the research committee of the residency program, contributing to advancements in medical education and research. Additionally, he is the Director of the Kuwait Poison Control Center, overseeing essential toxicology services in the region.

Methanol Content in Hand Sanitizers: The Kuwait Poison Center Experience

Background: Hand sanitizer use became a regular practice during the COVID-19 pandemic. Alcohol-based formulations commonly use ethanol or isopropyl alcohol. Hand sanitizer availability in homes makes them readily accessible to children. This poses a risk of unintentional ingestion or use on a large body surface area causing toxicity, which especially concerning with methanol use. Methanol can be a contaminant or component in manufacturing alcohol-based hand sanitizers. We reviewed the results of laboratory analysis of hand sanitizers in Kuwait containing methanol and compared these finding to the product label.

Method: We reviewed the results of lab analysis of all commercially available alcohol-based hand sanitizers containing methanol in Kuwait between 2020 and 2023. These results were compared to the product label to determine: 1) if products containing methanol detected by lab analysis were labeled as methanol-containing; 2) if the percentage of methanol in each product was correctly disclosed on the label; and 3) for products failing to disclose methanol content in the correct percentage, what was alternately identified as a product content.

Results: In total, 162 hand sanitizers with analytical data were reviewed. Of these, 18.5% (30/162) contained methanol, but none of these products' label disclosed methanol as an ingredient. To a statistically significant degree ($p<0.001$), all the hand sanitizers sample with methanol did not include methanol in their ingredient label, and our H0 was rejected.

The methanol concentration in these products ranged between 0.4% and 87%. Of the 30 methanol-containing hand sanitizers, none had labeling identifying methanol as a component, and 90% (27/30) were labeled as containing ethanol. These products were manufactured in 24 different countries including Austria, Bahrain, Brazil, Bulgaria, China, France, Egypt, Germany, India, Italy, Jordan, Kuwait, Lebanon, Oman, Poland, Russia, Spain, South Africa, South Korea, Thailand, Turkey, United Arab Emirates, United Kingdom, and the United States.

Discussion: In this study, 18.5% of Kuwait's hand sanitizers contained methanol, but no product labeling disclosed methanol as an ingredient, and 90% identified ethanol as the sanitizer alcohol ingredient. This is concerning given the drastically different toxicities of ethanol and methanol. The inaccurate labeling of these products could facilitate inappropriate management after exposure to these methanol-containing sanitizers, with dire health consequences.

Conclusion: In our sample, no sanitizers disclosed methanol as an ingredient, and 90% of methanol-containing hand sanitizers were labeled as ethanol-containing. Management of patients with exposure to these products should take into consideration the possibility that hand sanitizers labeled as ethanol may contain methanol.