

A Retrospective Study of Epidemiological Correlations of Food, Drug and Chemical Poisoning in Al-Baha, Western Saudi Arabia

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Abstract : Poisoning is a common and severe problem worldwide. Due to significant growth in the agricultural, chemical, and pharmaceutical industries over the past few decades, poisoning risks have increased with the use of food, chemicals, and medicines everywhere in the world, especially in Saudi Arabia. Advanced information on acute poisoning patterns is critical for the effective management of poisoning events. This study aimed to examine the characteristics of patients with various patterns of acute poisoning caused by food, drugs, and chemicals that were reported to the Department of Toxicology and Poison Center at King Fahad Hospital and the Poison Center in Al-Baha Province, Saudi Arabia. The study also examined the relationship between demographic characteristics, including age, toxin type, geographical distribution, and poisonings in Baha Province. This retrospective cross-sectional analysis included 622 poisoning cases. The data were collected from 2019 to 2022, and it was found that out of 622 instances, 159 had food poisoning, with more men than females sick (53.5% male and 46.5% female), 377 had drug poisoning (54.1% males and 45.9% females), and 86 had chemical poisoning (74.4% males and 25.6% females). This study found that the most prevalent agents implicated in acute poisoning were medicines, particularly analgesics and antipsychotic drugs. Food poisoning was the second most common acute poisoning, affecting largely males followed by female patients. Finally, chemical poisoning involved acute poisoning, with most cases involving methanol and household items, including the strongest bleaches (chlorines) (Clorox®, Oakland, CA, USA). Insecticides and pesticides were also secondary sources of chemical poisoning. Additional research revealed that the incidence of food, chemical, and drug poisoning was highest in children aged 1-15 years (food poisoning, n = 105, 66%; drug poisoning, n = 120, 31.8%); patients aged 11-20 years had the highest incidence of chemical poisoning (n = 41, 47.7%). Most poisoning incidents among youngsters are caused by easy access to drugs at home. Implementing strategies to enhance public awareness and limit children's access to drugs would contribute considerably to decreasing the community's burden of this problem. The findings of this study suggest that Al-Baha should improve its education regarding the rational and safe use of drugs and chemicals.

Keywords : toxicity, adverse effects, toxicology, poisoning substances

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