COMPARISON ZINC PHOSPHIDE POISONING TO ALUMINUM PHOSPHIDE POISONING

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Objectives: Zinc phosphide (ZP) is a pesticide that acute poisoning with it is seen in some countries such as Iran and India. It's named "Mouse cyanide" in Iran and nowadays acute intentional ZP poisoning is nearly common in Iran. Based on Toxicology Text books and many articles on these subjects, the mechanisms and clinical presentation of ZP is similar to Aluminium phosphide (ALP) which was mentioned before.

Methods: We reviewed 50 medical files of acute Zinc phosphide poisoning and 50 cases of acute Aluminum phosphide poisoning that were admitted to Poisoning ward of Loghman poison center in Tehran from March 2010 to September 2011 to compare the presentation of toxicity, prognostic factors and outcome between these two groups. ***Results:*** In ZP poisoning, abdominal pain was the commonest symptom (48%) followed by haemodynamic instability (22%). Only 4 of 50 cases of had mild loss of consciousness in which all of these had GCS more than ten. Cardiac dysrrhythmias, agitation, and convulsion were not seen in none of the ZP poisoning cases in comparison to ALP with 33,58,4 percent respectively. Mean arterial serum PH and serum Bicarbonate significantly was lower in ZP than ALP poisoning (7.34 vs 7.13 and 24.1 vs 14). Although shock and severe hypotension resistant to treatment was the commonest cause of morbidity and mortality in ALP poisoning it was seen in ZP poisoning with low frequency (99% in ALP vs 22% in ZP). Just one patient with ZP poisoning died due to multiorgan failure. Mortality rate was 0.5% in ZP versus 64% in ALP.

Conclusions: In against of ALP poisoning, haemodynamic instability and cardiac dysrrhythmias are not common presentation at ZP poisoning. In spite of common mechanism for both poisons, acute ZP poisoning has lower morbidity and mortality than ALP toxicity.