

# Acute Zinc Phosphide Poisoning in Nepal

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## ABSTRACT

**Introduction:** Zinc phosphide is a commonly used household rodenticide. Due to its low cost, widespread use and easy availability, it is emerging as a common deliberate self-poisoning agent in Nepal.

**Objective:** This study aimed to analyze zinc phosphide poisoning calls to the Nepal Drug and Poison Information Center.

**Methods:** An epidemiological study was carried out for all zinc phosphide poisoning calls to the Nepal Drug and Poison Information Center from July 1997 to June 2008. There were 2394 cases of rodenticide poisoning out of which 1871 were zinc phosphide alone. Five hundred and twenty three cases were excluded from the study due to ingestion of other rodenticides, co-ingestants involved and for those patients who were lost on follow up.

**Results:** Sixty six percent of exposure involved female (n=1236) and remaining were male (34%, n=635). Ages ranged from 2 years to 57 years with a mean of 22.66 years ( $\pm 11.84$ ). Reasons of exposure were deliberate self-poisoning (81%), unintentional (17%) and unknown (2%). About 85% of patients on arrival to hospital emergency department were asymptomatic. Among mild (12%) and moderate (3%) cases, the most frequent initial presenting sign was abdominal pain (71%), followed by vomiting (22%), dizziness (13%), and headache (11%). In-hospital observation time ranges from 6 hours to 76 hours with a mean ( $\pm$ S.D.) for asymptomatic patients was 10.5 ( $\pm 8.7$ ) hours, for symptomatic patients was 16.7 ( $\pm 6.7$ ) hours. Ninety six per cent of patients presented within first 2 hours post exposure.

**Conclusion:** Most zinc phosphide exposure calls involved either asymptomatic or mild symptoms regardless of reason of exposure. Unnecessary hospital observation for asymptomatic patients has increased the total cost of management of poisoning cases and added burden to already overstretched health care system of the country. Therefore, it is recommended that if patients remain asymptomatic for up to 6 hours post ingestion, they should be discharged with adequate psychological counseling.

**Keywords:** Zinc Phosphide, Poisoning, Nepal Drug and Poison Information Center (NDPIC).