

LETTER TO THE EDITOR

NEED FOR ANTIDOTE FOR ALUMINIUM PHOSPHIDE POISONING

Sir,

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Aluminium phosphide is a solid fumigant pesticide and rodenticide, widely used as a grain preservative throughout the country. It is marketed in India in the form of tablets with many trade names.

Reports of use of aluminium phosphide for committing suicide are common. The incidence is reported to be more in males, usually suicidal and rarely accidental or homicidal.

Human toxicity of aluminium phosphide occurs due to the toxic effects of phosphine which is liberated in stomach on ingestion (1). The effect is worse in the presence of hydrochloric acid in the stomach. It is widely absorbed from gastrointestinal tract and has cytotoxic action as it inhibits mitochondrial respiration. It affects almost all systems i.e. gastrointestinal, cardiovascular, respiratory, hepatobiliary, renal and central nervous

system. It is also known to affect muscles and adrenal cortex, and to cause bleeding diathesis.

Since there is no specific antidote available till date the treatment is only symptomatic, the best being gastric lavage. Management is in the form of treatment of shock, arrhythmias, hypoxia and metabolic acidosis (1). Innovative strategies like magnesium therapy and use of vegetable fats to inhibit the release of phosphine have been tried, but the results have not been consistent. The administrative control on the availability has been advocated but has a lot of limitations.

In the absence of a specific antidote and in the perspective of high mortality, there is an urgent need to undertake research aimed at finding a specific antidote.

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REFERENCE

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