Necessity of global consensus for implementing new initiatives for treatment of aluminum phosphide poisoning

Aluminum phosphide (ALP) is an agricultural pesticide that is used worldwide to kill pests and rodents. It is effective and cheap pesticide that make it readily available especially in developing countries. Its global attention arises from the fact that poisoning in cases of deliberate or accidental exposures leads to high mortality rate, as there is not efficient and definite antidote, thus, current treatments yield no reasonable results. This is why researches are encouraged and supported at the national levels to find a way to establish an effective treatment strategy.

Accordingly, governments have focused on the prevention of toxic exposures to decline unfavorable outcomes, yet data demonstrate continuing aluminum phosphide poisonings. Prohibiting sale to the public and increasing public awareness about this hazardous pesticide rendered limited results and the poison can still be purchased illegally on the black market and in traditional medicinal shops and this is the reason why physicians still encounter this poisoning commonly in emergency departments. Even so, a suggested substitution has been the non- toxic formulation Banan, nevertheless, current evidence unfortunately, does not show a link between its use and a decline in fatal exposures. It appears these preventive strategies still need to be employed and expanded in vulnerable groups.

To now, scientific researches to produce an effective antidote have not had good practical results. In fact, metabolic disturbances and their resultant adverse outcomes are believed to originate from direct cellular toxicity caused by toxic gases produced during poisoning (phosphine and diphosphine). The poison takes its actions in the cells and drugs have not been able to reverse its actions effectively. Therefore, the researchers have recently offered new initiatives for more effective treatment of poisoned patients by means of the basic theory of' attenuating and eliminating of toxic agent and blocking its local injuries'. The researchers hope implementing the new interventions reduce mortality rate substantially and help scientists reach a global consensus for establishing effective treatment of patients suffering aluminum phosphide poisoning event.

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