

Does N-acetyl Cysteine Have Protective Effects in Acute Aluminum Phosphide Poisoning?

Sir,
Recently, an article by Farahani *et al.*^[1] was published in Indian Journal of Critical Care Medicine. Aluminum phosphide (AIP) poisoning is common in Iran, and we

have been involved in the clinical management of the poisoned patients. We have thus read this review article with interest and would like to mention the following points.

AIP is a highly toxic fumigant, which is unfortunately easily available in Iran and some other developing countries and has no effective antidote.^[2] It seems that the main cause of mortality in AIP poisoning is cardiogenic shock due to toxic myocarditis.^[3,4] Moreover, previously approved that deleterious effect of AIP on heart can be attributed to oxidative stress. Thus, it seems that antioxidant therapy by N-acetyl cysteine (NAC) may have an effective role in AIP-induced toxicity.^[2,3]

The authors stated that “there is only one case report that showed administration of NAC as one component of a complex treatment could not save a patient.” In the literature review, we have found several case-control studies which showed NAC reduced cardiotoxicity of AIP. Taghaddosinejad *et al.* revealed that NAC has effect on some cardiac variables and reduce the mortality rate of AIP-induced toxicity.^[3] In addition, Tehrani *et al.* in a prospective, randomized, controlled open-label trial found that NAC may have therapeutic effects in acute AIP poisoning and it can decrease the rates of intubation, ventilation, mortality, and duration of hospitalization.^[2] Moreover, in another case report by Oghabian and Mehrpour, NAC successfully used as an antioxidant agent in addition to other treatments for AIP poisoning.^[5] Another study by Agarwal *et al.* showed that the survival rate increased in patients receiving NAC along with supportive therapy.^[6] In this regard, other researchers also suggested the use of NAC for treating AIP poisoning.^[4] It seems that the administration of NAC in acute AIP poisoning should be considered.

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Conflicts of interest

There are no conflicts of interest.

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