

## Cardiogenic Shock: The Main Cause of Mortality in Acute Aluminum Phosphide Poisoning

Sir,

We read with interest the latest review by Farahani *et al.*<sup>[1]</sup> As aluminum phosphide (ALP) is a significant issue in some toxicological centers in Iran<sup>[2,3]</sup> and India, we think that there are some concerns about this article that is worth mentioning.

- First, the authors stated that severe hypotension in ALP poisoning was not associated with heart failure. We have significant concern about this claim. There is a large body of evidence in the literature that mentions severe cardiac dysfunction and consequently very low ejection fraction, indicating cardiogenic shock after exposure to ALP poisoning.<sup>[4-7]</sup> Although we agree with the authors that vascular integrity insufficiency is one of contributing factors in severe hypotension in these patients, it seems that cardiogenic shock confirmed by echocardiography is more important.<sup>[4-7]</sup> In this regard, treatment of cardiogenic shock with intra-aortic balloon pump, extracorporeal membrane oxygenation, digoxin, glucose/insulin, and glucagon had interesting results in other studies.<sup>[4-7]</sup>
- The authors stated “We recommend that only vegetable oils or liquid paraffin to be used after acute ALP poisoning for a safe gastric decontamination.” This claim is considered an unproved claim since just a case report supports it. Moreover, in animal studies, ALP is dissolved in almond oil before its gavage into the animal’s stomach, so it is a great doubt about the efficacy of oils for decreasing ALP absorption in stomach.<sup>[8]</sup>
- The authors recommended bicarbonate in the management of ALP poisoning just in cases with pH <7. This suggestion

is against other studies and is based on unproven hypotheses.<sup>[6]</sup>

Thank you so much for your interesting study.

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Nil.

### Conflicts of interest

There are no conflicts of interest.

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