

IS – 29

Essential antidotes for toxicological outbreaks

Hossein Hassanian-Moghaddam MD, FACMT

Social Determinants of Health Research Center, Shahid Beheshti University of Medical Sciences, Tehran, Iran
Department of Clinical Toxicology, School of Medicine, Shahid Beheshti University of Medical Sciences, Tehran, Iran

Objective:

Toxicological outbreak refers to an increase, often sudden, in the number of cases of poisoning above what is normally expected in that population in a limited geographical area [1]. The aim of this study is to review major human toxicological outbreaks and to elaborate possible role of essential antidotes in minimizing the burden of these toxic exposures.

Methods: Data from PubMed and Google scholar search engines retrieved using Mesh terms of Toxicity OR poisoning AND outbreak. Foodborne diseases were excluded. Repetitive subjects of toxicological outbreaks were ignored to achieve the most common toxicological outbreaks and review the possible efficacy of antidotes. WHO International Programme on Chemical Safety regarding guidelines for poison control reviewed to confront three recent methanol, mushroom and lead toxicity outbreaks in Iran [2, 3].

Results: Toxicological outbreaks impose a huge burden of disease to the society. Many of them are facing to young population and may causes high years of potential life lost (YPLL) and/or disability-adjusted life year (DALY).

Conclusion: Burden of toxicological outbreaks may be underestimated. Antidotes may play a substantial role in minimising the effects of toxic exposures. Difficulties in availability, technical, economic regulatory and geographical aspects are essential barriers particularly in developing countries. Even, providing antidotes available to the community, physicians need knowledge of using them for toxic exposures in appropriate time. A bank of antidotes along with a monitoring system is highly recommended in local, national, and regional level to reduce the cost of maintenance and improve the care of poisoned patients particularly in toxicological outbreaks.

References:

1. http://www.who.int/ipcs/publications/training_poisons/guidelines_poison_control/en/index7.html
2. Soltaninejad K. Outbreak of mushroom poisoning in Iran: April–May, 2018. *Int J Occup Environ Med* 2018;9:152-156.
3. Ghane T, Zamani N, Hassanian-Moghaddam H, Beyrami A, Noroozi A. Lead poisoning outbreak among opium users in the Islamic Republic of Iran, 2016-2017. *Bull World Health Organ*. 2018;96:165-172.