

Oral Presentation - 30

Can We Prevent Food-Borne Outbreaks of Pesticide Poisoning?

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Abstract

Background: Recently 23 schoolchildren died after consuming food laced with organophosphates in a school in Bihar, India. We looked at the possible risk factors and preventive measures to control the recent outbreaks in India.

Subjects and Methods: The web-based search Google and PubMed search engines were used. The MeSH terms used for searching the database were Pesticides, Food-borne Outbreak, India. The details of all food-borne outbreaks of pesticide poisoning were obtained from the reports originating in the lay press and the case series/ case reports. The data extracted included the involved population, the number of victims, the mode of toxic exposure, the cause for toxicity and the outcome. The risk factors were obtained. Based on these findings some preventing measures are being suggested.

Results: On Google and Google scholar, 49,000 results were obtained and a meticulous search was made to remove the duplicate records. Individual incident reported in the lay press and published literature was carefully selected. There were in total 15 major/ minor incidents of reported food-borne outbreaks. The majority was accidental but two incidents of possible homicidal nature were also noted. The number of victims involved ranged from two to 1000. Children and young adults were the most susceptible population. Cooked grain, water and oil were identified as the most common food items responsible for causing the outbreaks. The storage of wheat/rice/dal, oil and water in the old used containers of pesticides was responsible for majority of the accidents. Heat resistant nature of the pesticide was responsible for most of the accidents. Undetectable pesticide in oil and water were the other factors responsible for the outbreaks. In most of the cases the diagnosis was suspected on clinical symptoms and definitive diagnosis of food-borne pesticide poisoning was possible only in 3 cases where the residual food could be tested for the presence of pesticides.

Conclusion: Food-borne outbreaks of pesticide poisoning are preventable. Proper methods to discard used pesticide containers and educating people against storing food items in used pesticide containers can help prevent these mishaps