

NAVIGATING POISON EMERGENCIES: THE INTERPLAY OF POISON INFORMATION CENTERS AND PHARMACISTS**Arun kumar Nagul, Saurabh Sharma*, Khushboo Gupta, Sandip Prasad Tiwari, Rupali Bharti Sao****Faculty of Pharmacy, Kalinga University, Naya Raipur, Chhattisgarh India (492101)***Corresponding Author's E mail: saurabh.sharma@kalingauniversity.ac.in

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ABSTRACT

Poison is a substance capable of producing damage or dysfunction in the body by its chemical activity. Poisoning can be accidental or intentional. In many parts of the developing countries pesticide poisoning, food poisoning, drug over dose, insecticidal poisoning, chemicals and cosmetics poisoning, animals and plants poisoning causes more deaths than infectious diseases. Poisoning with the Organophosphate pesticide is responsible for the majority of deaths in most cases, particularly those from rural areas. Easy accessibility and low cost of the pesticides is one of the common reasons of self-poisoning. Self-poisoning with plants parts, although uncommon globally, is locally popular in some regions. Poisoning may be an attempt at suicide in depressed persons. Other higher groups include the elderly, hospitalized patients, drug errors, workers exposed to occupational chemicals and persons exposed to environmental pollution. Regulating availability of pesticides and improving medical management could have a rapid effect on deaths from self-harm in rural areas. Information and identification of certain products like household products, corrosives chemicals, Industrial chemicals, poisonous plants, animal poisoning (Snakebite, scorpion, spider bite), and look alike products may help in management of poisoning. Management of poisoning is one of the biggest challenges facing by the physicians at present globally.

Keywords: Self-poisoning, Pharmaco informatics, Poison control, Pharmacy services**INTRODUCTION**

Any substance that harms the body if it goes inside it is considered a poison. Damage may vary from (headache or nausea) to serious (fits, extremely high fever, even death), and some poisoning victims may not survive. The Latin term *potare*, which means to drink, is where the word poison originates. When a poisonous material is consumed, inhaled, or comes into contact with the skin, eyes, or mucous membranes like the mouth or nose, it can cause poisoning. Accident and emergency rooms frequently admit patients for accidental or purposeful poisoning. In excess, almost every substance can be toxic to the body. Certain substances can be deadly in trace amounts. (For instance, a small quantity injected by snakebite or a teaspoon by mouth.) Others only become toxic when consumed in huge quantities.¹ The

dosage is the total amount of a chemical that enters the body at one time. A toxic or poisonous dose is one that results in poisoning. The threshold dose is the lowest amount that may be harmful. A chemical won't cause poisoning and may even be advantageous if it enters the body in smaller amounts than the threshold dose. For instance, medications work well when taken as directed, but some can be deadly if taken in excess.²

THE PHARMACIST'S ROLE IN POISON CONTROL CENTERS:- EXPOSURE TO A POISON

People are considered to have been exposed to a toxin when they interact with it. The duration of contact, the amount of poison that enters the body, and the amount of poison that the body has the capacity to eliminate during this period all participate in the exposure's effects. Exposure can occur one time or multiple times. Acute exposure can occur from many exposures over a day or less, or from a single interaction that lasts for seconds, minutes, or hours. Contact lasting several days, months, or years is referred to as chronic exposure. It could go on forever or be interspersed with times when no contact occurs. exposure that is limited to the workplace; it is not constant, for instance.³.

PHARMACIST'S ROLE IN POISON CONTROL CENTERS

The Chicago Poison Control Center members have created operational strategies that are most sensible for their specific regions since the program's inception in 1954. Some centers operate under the emergency department of a general hospital, some work with the local health department, and some start out as a service of the nation medical society or the pediatrics department of a medical school. To some degree, the role that a hospital pharmacist may play is over looked⁴.

When determining how to manage a center, There are several things to take into account, including the population size, the geographic area to be served, and the people that are available. The most effective tactic for that specific location should be used. However, appointing the hospital pharmacist as the poison control officer appears to be a workable and realistic solution in the majority of cases. A statistical analysis of the many kinds of drugs that were accidentally reported as poisonings in Chicago in 1959 reveals that 56 percent of the cases involved some kind of prescription. The pharmacist is more knowledgeable about these drugs than the other hospital staff members are. As such, he ought to be of great assistance to the doctor in addition to the patient⁵.

The primary thing to know in any situation involving unintentional poisoning is the following:

1. The toxicity level of the chemicals consumed.
2. The quantity of poisonous material consumed.
3. Time elapsed since ingesting a hazardous material.
4. Atypical indications or symptoms brought on by poisoning.
5. Emergency medical care.
6. The finest care.
7. The prognosis.

POISON CENTERS

In Chicago, the first poison center opened its doors in the early 1950s. It gave clinicians treating children poisoned information. Over for the duration of the following ten years, the quantity of poison centers skyrocketed, reaching over 600 countrywide by the 1960s. The majority were found in emergency rooms with few resources and without "dedicated" staff members. Untrained staff routinely answered calls, and patient education and data collecting were essentially nonexistent.⁶

PHARMACIST SPECIALISTS

The person who is generally in charge of answering inbound calls to local poison centers has been dubbed a "poison information specialist." These specialists have a variety of educational backgrounds, but the majority are pharmacists or registered nurses, both of whom are qualified to work in this capacity⁷.

INDIA NEEDS AN ACUTE POISONING REGISTRY DATA BASE

Among the most frequent causes of hospitalization in underdeveloped nations is acute poisoning.⁸ Acute poisoning cases are on the rise annually in nations such as India, where agriculture plays a significant economic role. Poisoning is fourth in rank most prevalent cause of death in underdeveloped nations such as India, where the rate of death fluctuates about 15 % and 30%. In industrialized countries, the frequency of death from poisoning varies between 1% and 2%. This is especially true in India's countryside.⁹

COLLABORATIVE EFFORTS: ENHANCING POISON MANAGEMENT

The synergy between poison information centers and pharmacists is essential for effective poison management. Here's how their collaboration can be optimized:

Seamless Communication: Effective communication between PICs and pharmacists is crucial. When a poisoning case is reported, PICs provide pharmacists with detailed guidance on treatment protocols, which pharmacists can then implement in their practice¹⁰.

Integrated Care: Pharmacists and PICs can work together to integrate care, ensuring that the treatment plans devised by PICs are implemented correctly. This includes monitoring the patient's response to treatment and making necessary adjustments¹¹.

Continued Education: Ongoing training and education for both PIC staff and pharmacists ensure that they are up-to-date with the latest developments in toxicology and pharmacotherapy. This continuous learning fosters a more effective response to poisoning emergencies¹².

Community Outreach: Both PICs and pharmacists can engage in community outreach programs to raise awareness about poison prevention. Through educational initiatives, they can inform the public about safe medication practices and the importance of seeking immediate help in case of poisoning¹³.

CONCLUSION

Navigating poison emergencies requires a coordinated effort between poison information centers and pharmacists. PICs offer expert advice and guidance, while pharmacists provide crucial medication management and patient care. Together, they form a robust response system that enhances the effectiveness of poison management, ultimately protecting and improving patient outcomes. By fostering strong collaboration and communication between these two key players, the healthcare system can better address the challenges posed by poisoning emergencies and ensure a safer environment for all.

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