



STUDY OF SOCIO-DEMOGRAPHIC AND CLINICAL PROFILE OF VARIOUS POISONING CASES IN ADULTS AT TERTIARY CENTRE

Dr. Rootik patel

Resident, Department of General Medicine, Geetanjali Medical College and Hospital, Udaipur, Rajasthan, India

Dr. J. S. Jhala*

Associate Professor, Department of General Medicine, Geetanjali Medical College and Hospital, Udaipur, Rajasthan, India *Corresponding Author

ABSTRACT

Background – In this study, we determined data of all poisoning cases admitted in medicine ward and intensive care unit with detailed history about nature of poison, time of consumption and circumstances of poisoning.

Method- This is a cross-sectional, Descriptive, Observational, analytical study on the sociodemographic and clinical profile of various poisoning cases in Geetanjali Medical College and Hospital, and Udaipur.60 cases were included in the study. .

Results- The patients between ages 31-40 are highly 36.7% exposed to poisonous substance with 75.0% female predominance while 25% male, 78.3% were married, 65% patients had education less than 12th class, 43.3% were housewife, organophosphorus is most common 31.7% and upper middle class patients were highest 31.7%.

Conclusion- This study found that organophosphorus was the leading cause of acute poisoning .most common mode was intentional. Majority patients belong to upper middle socioeconomic class with predominance in age 31-40years more common in females who are married and are housewives

KEYWORDS : Organophosphorus, poison

BACKGROUND

A poison is any substance that is harmful to your body when ingested (eaten), inhaled (breathed), injected, or absorbed through the skin. Poisons have been used for many purposes across the span of human existence, most commonly as weapons, anti-venoms, and medicines ^(1,2).

Over the last few decades agricultural pesticides have become a common household item in rural areas of the developing world. Due to their easy availability, pesticides have also become commonly used for intentional self-poisoning ^(3, 4). Poisoning is an acute presentation and demands a need for early and aggressive management in Emergency. Early identification and triage helps to guide the needed resuscitation efforts and other management priorities like use of antidotes, supportive measures and psychiatric care if needed ^(5, 6). The incidence of poisoning in India is among the highest in the world. It is estimated that more than 50,000 people die every year from toxic exposure. According to the National Poisons Information Centre, New Delhi, analysis of poisoning calls showed that the highest incidence of poisoning was due to household agents (44.1%) followed by drugs (18.8%), agricultural pesticides (12.8%), industrial chemicals (8.9%), animals bites and stings (4.7%), plants (1.7%), unknown (2.9%) and miscellaneous groups (5.6%)(7). Poisoning patients with the evidence of organ failure require admission to the intensive care unit (ICU) for organ support and specific management. There are various clinical entities that can determine the clinical course and outcome in the ICU. Besides the type of poison, delayed presentation and multi-organ failure that require immediately advanced life support organ can lead to high mortality ^(8,9)

AIM AND OBJECTIVES:

1. To study sociodemographic profile of patients with poisoning.
2. To study the relationship between sociodemographic variables by nature of poisoning.
3. To determine nature and frequency of poisoning.

MATERIALS AND METHOD:

This is a cross sectional, Descriptive, Observational, Analytical study which was conducted on 60 patients admitted in medicine ward and intensive care unit with poison case in Geetanjali Medical College and Hospital, Udaipur. The study

was conducted from June 2018 to December 2018.Data of patients were collected by detailed case history from patient or the attendant regarding nature of poison ,circumstances of poisoning and time of consumption. All routine investigations was done. Follow-up of the enrolled cases was done to know about the clinical course, complications, treatment received and the outcome and data regarding age, sex, time elapsed after intake; circumstances of poisoning, name of the poisonous substance, chemical type, and duration of hospitalization, severity and outcome were collected in the pre-structured proforma. Informed consent was obtained from all subjects to participate in the study. Patient confidentiality was maintained.

Inclusion criteria:

- 1) Inpatients having Organophosphorus poisoning, Aluminium phosphide, Zinc phosphide, chemicals and drugs.
- 2) Inpatients age more than 18 years.

Exclusion criteria:

All cases with food poisoning and allergic reactions to drugs.

RESULTS:

With 60 cases study most common poison is organophosphorus 31.7% with intentional ingestion 95.0% highest among age group 31-40 years with female predominance 75.0% and most commonly seen in married 78.3% and are housewives 43.3%.majority of patients were educated less than 12th class 65% and those who belong to upper middle class 31.7% were highest.

Table 1: Age Group

| | Frequency | Percent | |
|--------------------------|-----------|---------|-------|
| Age Group (Years) | 31-40 | 22 | 36.7 |
| | 21-30 | 17 | 28.3 |
| | <20 | 10 | 16.7 |
| | 41-50 | 10 | 16.7 |
| | 51-60 | 1 | 1.7 |
| | Total | 60 | 100.0 |

Table 2: Sex

| | Frequency | Percent | |
|------------|-----------|---------|-------|
| Sex | Female | 45 | 75.0 |
| | Male | 15 | 25.0 |
| | Total | 60 | 100.0 |

Table 3: Marital status

| | | Frequency | Percent |
|----------------|-----------|-----------|---------|
| Marital status | Married | 47 | 78.3 |
| | Unmarried | 13 | 21.7 |
| | Total | 60 | 100.0 |

Table 5: Occupation

| | | Frequency | Percent |
|------------|-----------|-----------|---------|
| Occupation | Housewife | 26 | 43.3 |
| | Student | 16 | 26.7 |
| | Farmer | 11 | 18.3 |
| | worker | 7 | 11.7 |
| | Total | 60 | 100.0 |

Table 6: Socioeconomic status

| | | Frequency | Percent |
|----------------------|--------------|-----------|---------|
| Socioeconomic status | Upper Middle | 19 | 31.7 |
| | Lower | 18 | 30.0 |
| | Upper Lower | 16 | 26.7 |
| | Lower Middle | 7 | 11.7 |
| | Total | 60 | 100.0 |

Table 7: Poisonous substance

| | | Frequency | Percent |
|-----------------------------|------------------|-----------|---------|
| Name of poisonous substance | celphos poison | 18 | 30.0 |
| | organophosphorus | 19 | 31.7 |
| | Phenyl | 6 | 10.0 |
| | dolo | 3 | 5.0 |
| | Insecticide | 3 | 5.0 |
| | laxman rekha | 3 | 5.0 |
| | alprax | 2 | 3.3 |
| | clonotril | 2 | 3.3 |
| | crocin | 1 | 1.7 |
| | lobivon | 1 | 1.7 |
| | metocard xl | 1 | 1.7 |
| | prolomet xl | 1 | 1.7 |
| | Total | 60 | 100.0 |

DISCUSSION:

In the current study, it was found that the majority of the patients belonged to 31-40 years age group. However, in contrast to the current study Vaidya et al., (2012) found that majority of the patients were aged in 21-30 years of age group. The study showed female predominance. Contrastingly, in the study of Vaidya et al., (2012) the male patients outnumbered the female patients. In the current study majority of the patients were married. However, according to the study of Reddy et al., (2018) there was not much difference between the married and unmarried patients. In the current study, it was found that the majority of patients belonged to upper middle socio-economic class. In contrast to the current results, Reddy et al. (2018) found that the majority of patients belonged to upper lower socio-economic the current, it was found that the most common poisoning substance was Organophosphorus. Similarly, the study of Vaidya et al., (2012) found the Organophosphorus was the most common type of poisoning substance.

CONCLUSION

It was found in the current study that Organophosphorus was the leading Cause of acute poisoning. The most common mode of poisoning was intentional. Majority of the patients in the current study belonged to upper middle socio-economic Class which clarified the reason of suicidal tendencies among the study population. The study also depicted that more number of married females consumed poisonous substances. The study also depicted that more number of married females consumed poisonous substances. Increasing incidence of mortality due to poisoning (either suicidal or accidental) makes it necessary to take some measures, to reduce the same.

REFERENCES:

- Muhammad NI, Nasimul I. Retrospective study of 273 deaths due to poisoning at Sir Salimullah Medical College from 1988 to 1997. *Leg Med.* 2003; 5:S129-31.
- Ahuja H, Mathai AS, Pannu A, Arora R. Acute poisonings admitted to a tertiary level intensive care unit in northern India: patient profile and outcomes. *J Clin Diagn Res* 2015; 9:UC01-4.
- Jeyaratnam J (1990) acute pesticide poisoning: a major global health problem. *World Health Stat Q* 43: 139-144.
- Eddleston M, Phillips MR (2004) Self-poisoning with pesticides. *BMJ* 328: 42-44.
- Bhandari R, Bhandari R, Gupta PR. Trend and outcome of acute poisoning case: an experience from emergency department of eastern Nepal. *Int J Community Med Public Health.* 2018; 5(1):66-71.
- Cairns FJ, Koelmeyer TD, Smeeton WM. Deaths from drugs and poisons. *N Z Med J.* 1982; 96:1045-8.
- Asawari R, Pawar A, Kakane B, Dave P, Shaj K, Gulam AJ. Toxicological Pattern of Poisoning in Urban Hospitals of Western India. *J Young Pharm.* 2017; 9(3):315-320.
- Rajbanshi LK, Ariyal B, Mandal R. Clinical Profile and Outcome of Patients with Acute Poisoning Admitted in Intensive Care Unit of Tertiary Care Center in Eastern Nepal. *Indian J Crit Care Med.* 2018; 22(10): 691-696.
- Gagandeepa S, Dheeraj K. Neurology of acute organophosphate poisoning. *Neuro India.* 2009; 57:119-25.
- Vaidya YP, Hulke SM. Study of trends of poisoning in the cases reported to government hospital, Yavatmal. *Chron Young Sci.* 2012; 3:63-7
- Kanchan T, Menezes RG. Suicidal poisoning in Southern India: Gender differences. *J Forensic Leg Med.* 2008; 15:7-14.
- Harish D, Chavali KH, Singh A, Kumar A. Recent advances in the management of poisoning cases. *J Indian Acad Forensic Med* 2011; 33:74-9.
- Srinivasa K, Yadukul S, Madyastha M. Study of profile of poisoning cases reported to district hospital, ChamaraJanagar, Karnataka, India. *International Journal of Basic & Clinical Pharmacology.* 2016; 5(4):1215-19.
- Kanchan T, Menezes RG. Suicidal poisoning in Southern India: Gender differences. *J Forensic Leg Med.* 2008; 15:7-14.
- Prakruti PK. Bangalore records second-highest rate of suicide in the country. *Bangalore Mirror Bureau;* 2015.
- Prajapati T, Prajapati K, Tandon R, Merchant S. Acute chemical and pharmaceutical poisoning cases treated in civil hospital, Ahmedabad: one year study. *Asia Pac J Med Toxicol* 2013; 2:63-7.
- Reddy S, Revathi D, Prassanna LV, Ramesh AC. Sociodemographic profile of patients with acute poisoning in the 10(6):50-56.
- Nimal S, Laxman K. Pattern of acute poisoning in a medical unit in central Srilanka. *Forensic Sci Int.* 1988; 36:101-4.
- Maheswari E, Abraham L, Chacko CS, Saraswathy GR, Ramesh AC. Assessment of pattern, severity and outcome of poisoning in the emergency care unit. *J Appl Pharm Sci* 2016; 6:178-83.
- Singh O, Javeri Y, Juneja D, Gupta M, Singh G, Dang R. Profile and outcome of patients with acute toxicity admitted in intensive care unit: experiences from a major corporate hospital in urban India. *Indian J Anaesth* 2011; 55:370-4.
- Tendon SK, Qureshi GU, Pandey DN, Aggarwal A. A profile of poisoning cases admitted in S.N. Medical College and Hospital, Agra. *J Forensic Med Toxicol.* 1996; 13:10-2.