

Clinico-epidemiological profile of Patients Who have consumed Poison and Reported to MIMS Government Hospital in Mandya

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ABSTRACT

Introduction: Poisoning is one of the commonest health problems in patients who present to Emergency Department, causing significant morbidity and mortality in them. Study aims and objectives were to know the reason for poisoning, to know the relationship between poisoning and their socioeconomic status and to study morbidity and mortality of such poisoning patients

Material and methods: Study was done at a tertiary care teaching hospital at MIMS, Mandya. Study was conducted between July- 2017 to December 2017. Data was collected from all the poisoning cases admitted during this period to the emergency ward and medical wards. Demographics, etiological and clinical profile were studied.

Results: Out of 260 patients, there were 120 (46%) males and 140 (54%) females. Out of 260 patients 209 (80%) patients belong to hindu religion. Out of all patients 160 (61.5%) were from rural area and 100 (39.5%) were from urban area. Age of the patients ranged from 17 to 70 years. Vomiting and pain abdomen was the predominant symptom [(n=93 (35.8%)], followed by giddiness (8%) and breathlessness (7.3%). Drugs of different class (34.6%) was the most common poison followed by Organophosphate compounds (15%) followed by Rat killer (10.4%) poison. Mortality was found to be 6.2% and was mainly due to organophosphate compounds.

Conclusion: Poisoning was more common in young female patients, so they should be emotionally supported in stressful circumstances, poisoning was more common in rural areas because of their occupation like agriculture and easy availability of compounds. Mortality was higher in case of organophosphate poisoning. Early care in tertiary centre may help to reduce mortality in India.

Keyword: Poisoning, Organophosphours compounds, Aluminium phosphide, Rat killer.

INTRODUCTION

Poison is a substance that causes damage or injury to the body and endangers one's life due to its exposure by means of ingestion, inhalation or contact¹. Acute poisoning was major health problem in developing countries like India causing significant morbidity and mortality. Easy availability of these compounds is reason for more poisoning in our country. It has been estimated that, in India five to six persons per lakh of population die due to acute poisoning every year³. In India, as agriculture is the main occupation, insecticides and other agrochemical fertilizers are used to a greater extent and the poisoning with such products are more common⁴. It is important to take urgent preventive measures to reduce the incidence of poisoning and reduce the morbidity and mortality.

Study aims and objectives were to know the reason for poisoning, to know the relationship between poisoning and their socioeconomic status and to study morbidity and mortality of such poisoning patients

MATERIAL AND METHODS

The study was conducted between July-2017 to December-2017. Data was collected from all the poisoning cases admitted during this period to the emergency ward and medical wards.

Information collected about the type of poison consumed, age and sex, marital status, religion, duration of hospitalization, whether they belonged to rural or urban areas, mode of poisoning, occupation of the patient and the outcomes of the victims of poisoning and documented in the pre-structured proforma and statistical analysis was done. Once patient admitted to hospital, after resuscitation completed, detailed history and examination was done. In examination, particular emphasis was given on vital signs, smell from mouth/vomitus/clothes, type of breathing, pupillary size. Local examination was carried out in snake bite, scorpion sting and corrosive poisoning.

The poisoning agents were grouped under 6 heads namely insecticides, envenomation, cleaning chemicals, kerosene, seed poisoning, drugs and unknown agents. Informed written consent was obtained.

The diagnosis of poisoning was based on one or more of the following: definite history of poisoning and supporting circumstantial and physical evidence. Treatment was given specific to the cases and outcome was observed. Ethical approval was taken from Institutional Ethics Committee.

STATISTICAL ANALYSIS

Detailed data collected from the patients or from attenders were entered in latest SPSS version and analysis was carried out descriptively.

RESULTS

260 cases of poisoning patients admitted at our hospital from

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Poison	M Shoaib Zaheer et al ² (%)	Present study (%)
Organophosphate	25.8	15
Rat poison	8.3	10.4
Snake bite	12.4	9.6
Scorpion sting	3.3	7.7
Herbicide	20	7.7
Drugs	10	34.6
Kerosene	2.4	7.7
Unknown compounds	6.5	7.3

Table-1: Shows the comparison of nature of poisonings with other studies

Age (years)	M. Shoaib Zaheer Et al ² (%)	S K Das et al ³ (%)	Present study
17-20	26.9	23.2	8.5
21-30	56.8	40.5	35.4
31-40	9.6	21.6	30
41-50	6.7	14.7	26.1

Table-2: Comparison of age groups of patients with other studies

Clinical Profile	M Shoaib Zaheer et al ² (%)	Present study
Male	54.4	46
Female	46.6	54
Rural	72	61.5
Urban	28	39.5
Suicidal	80	88
Accidental	15.8	12
Mortality	15.8	3.8

Table-3: Comparison of different clinical and epidemiological profile

July -2017 to December-2017 were studied, majority of cases were between 21-30 years of age [(n=92(35.4%)] followed by 31-40 years of age [(n=78(30%)]. Reason for more incidence of poisoning in these age groups was multifactorial like family issue, financial problems.

Female cases (54%) were more than males (46%), this is because more often exposed to stress and family problems. Majority of the cases from rural (61.5%) and 39.5% cases from the urban area. Cases were from the lower (85.4%) and middle (10.7%) socio economic class. The middle and lower socio economic classes are more vulnerable to fact that they are under more financial stress.

In present study, majority from Hindu religion (80%) Muslims were (17%). Hindu predominance may be due to the fact that major population is of Hindu religion in our region.

The incidence of poisoning is marginally more in illiterates (54%) than literates (46%). Predominance of illiterate group may be due to lack of knowledge to solve their problems and financial problems.

Route of exposure for most of the poisons is oral (89%) followed by sub cutaneous route (8.5%). Nature of the

poisoning in most of the cases is suicidal (85%) followed by accidental exposure (15%). Most frequent symptom among patients is vomiting and pain abdomen (35.7%), local pain (17%), giddiness (8%) and breathlessness (6%).

In our study different class of drugs poisoning (34.6%) like paracetamol, diclofenac, phenytoin, ferrous sulphate, thyroxine tablet poisoning is most common, may be because easily availability of these drugs over the counter. Organophosphate (15%) poisoning is second most common poison, followed by rat killer (10.4%), snake (9.6%) and scorpion (7.7%) envenomation.

Nature of the poisoning was suicidal (88%) followed by accidental (12%). Reason for suicidal cases may be due to many factors such as increase in unemployment, economic instability, family problems and failure of love affairs. It was observed that family problems (42%) were the leading stress factor.

Out of 260 cases 211 (81.2%) were discharged, 16 (6.2%) were sent to DAMA and 17 (6.5%) cases were referred. Mortality was found to be in 10 (3.8%) cases. Maximum mortality was related to organophosphate compounds (80%) followed by Aluminium phosphide (20%).

DISCUSSION

In this study commonest agent of poisoning was drugs of different class (34.6%), followed by organophosphate (15%) and Rat poison (10.4%) respectively. Incidence of poisoning was more in females compared to other studies showed higher incidence in males (table 1).

Maximum cases were young age group 21-30 (35.4%) followed by 31-40 (30%) age group. The incidence in other studies like M Shoaib et al² were similar (table 2). High incidence of poisoning in these age group was due to multifactorial like family, financial problems and more mental stress

Majority of the cases belong to poor (84.5%) and middle (10.7%) socio economic class status irrespective of their rural or urban distribution. Findings of present study coincides with these results because rural population is more exposed to insecticides and pesticides and inhabitation of poisonous reptiles in unhealthy and hilly rural areas (table 3).

Studies done by both M Shoaib zaheer et al² (67.3), S K Das et al³ (50%) showed majority in married group. Present study relates them (72%). Married patients more vulnerable to family stress, financial problems and adjustment related problems.

Maximum mortality (3.8%) was due to organophosphate poisoning. Though a number of factors such as dose consumed, level of available medical facilities, time interval between intake of poison and arrival at hospital, can affect the outcome.

CONCLUSION

In county like India poisoning was most common cause for emergency admission and causing more morbidity and mortality and also economical burden to the family and the country. It is important to take necessary measures to

reduce the incidence of poisoning by proper education and psychiatric counselling to high risk population. Most important thing is giving proper training to primary physicians at primary health care level regarding first aid.

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