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PATTERN AND OUTCOME OF ACUTE POISONING CASES AT TERTIARY CARE HOSPITAL

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ABSTRACT

Almost, a million people die annually as a result of suicide with chemicals accounting for a majority of these deaths. It is assessed that deliberate ingestion of pesticides causes 3,70,000 deaths each year. It has been estimated that in India five to six persons per lakh of population die due to acute poisoning every year. Poisoning is the fourth most common cause of mortality in rural India. In India, Aluminium Phosphide (ALP) and Organophosphate Poisonings (OP) are widely used to control pests and insects and have become major contributors of deaths due to poisoning. This study has been aimed to determine the demographic pattern that is the mode and type of poisoning and try to come at a statistics of the outcome.

INTRODUCTION:

Every year more and more number of people are dying of poisoning. This may be suicidal, accidental or the worst which is homicidal. In a country like ours with increasing number of suicidal cases especially with farmers this study becomes an absolute necessity to determine the cause and fate of the same. Almost, a million people die annually as a result of suicide with chemicals accounting for a majority of these deaths. It is assessed that deliberate ingestion of pesticides causes 3,70,000 deaths each year.[1] It has been estimated that in India five to six persons per lakh of population die due to acute poisoning every year. Poisoning is the fourth most common cause of mortality in rural India.[2] In India, Aluminium Phosphide (ALP) and Organophosphate Poisonings (OP) are widely used to control pests and insects and have become major contributors of deaths due to poisoning.[3,4,5] In addition to that snake bite is a common medical emergency faced by rural population. Early diagnosis, treatment and prevention are crucial in reducing the burden of poisoning-related injury in any country. A majority of people died worldwide from unintentional poisoning. Of these deaths, 84% occurred in low- and middle-income countries. Mass murder and genocide is also known to be caused by poisoning. Last year in South Korea a lethal poison was used to kill a member of the Royal family where the victim succumbed to the poison within minutes. This study has been aimed to determine the demographic pattern that is the mode and type of poisoning and try to come at a statistics of the outcome.

AIMS AND OBJECTIVES:

The study has been aimed to determine the demographic pattern that is the mode and type of poisoning and try to come at a statistics of the outcome.

MATERIALS AND METHODS:

Thirty patients were selected for the study randomly.
The study was done in St. John's Medical College.

Inclusion Criteria:

Confirmed cases of poisoning

Exclusion criteria:

Patients on drugs that mimics poisoning (Over dose of drugs which was used therapeutically)

In all patients, a detailed history was taken, clinical examination was done. Data was obtained in prestructured proforma regarding age, gender, marital status, education status, circumstances, type of poison, requirement of ventilatory support (ICU stay), outcome.

RESULTS:

Table 1: Mean Age of the Patients

Mean Age	Standard Deviation
27.65 years	13.98 years

Table 2: Sex Distribution:

Male	Female
11	19

Table 3: Marital Status:

Married	Unmarried
08	19

Table 4: Educational status:

Education	Frequency
Primary Education	19
High School	03
Graduate	06
Post Graduate	01
Professional Course	01

Table 5: Circumstances:

Circumstances	Frequency
Accidental	09
Suicidal	20
Homicidal	01

Table 5: Table 5: Test for Significance (Education and Suicidal)

Total	X-Value	P-Value (<0.05)
19	0.435	0.0023

Table 6: Type of Poisoning, ICU support and Outcome:

Type of Poisoning	Frequency	ICU Support	Outcome
OP Poisoning	17	100%	35.29% fatal
Corrosive Poisons	01	100%	100% fatal
Drug Overdose	01	100%	100% Survived
Other Available Chemicals	04	Nil	100% Survived
Snake Bite	01	100%	100% fatal
Alcohol	06	33.33%	100% recovered and survived.

DISCUSSION:

Illiteracy also counts for the accidental cases of poisoning. This finding also shows that education is important in preventing poisoning. This maybe because widespread use of pesticide in agriculture sector in rural area. Poverty, failure of crops, family problems and easy availability of the poison in their household made people of rural area more prone for poisoning. Other studies also show that poisoning are more common in rural areas.[6,7,8] However, some studies from state of Karnataka, the incidence was more in those who were from urban background.[9,10]

In a country like ours with increasing number of suicidal cases especially with farmers this study becomes an absolute necessity to determine the cause and fate of the same. Almost, a million people die annually as a result of suicide with chemicals accounting for a majority of these deaths. It is assessed that deliberate ingestion of pesticides causes 3,70,000 deaths each year.[1] It has been estimated that in India five to six persons per lakh of population die due to acute poisoning every year. Poisoning is the fourth most common cause of mortality in rural India. In India, Aluminium Phosphide (ALP) and Organophosphate Poisonings (OP) are widely used to control pests and insects and have become major

contributors of deaths due to poisoning. In addition to that snake bite is a common medical emergency faced by rural population. Early diagnosis, treatment and prevention are crucial in reducing the burden of poisoning-related injury in any country. A majority of people died worldwide from unintentional poisoning. Of these deaths, 84% occurred in low- and middle-income countries. Mass murder and genocide is also known to be caused by poisoning. Last year in South Korea a lethal poison was used to kill a member of the Royal family where the victim succumbed to the poison within minutes.

Our study is in agreement with the other studies. Organophosphate and aluminium phosphide are common agents used for poisoning because of low cost and easy availability and since majority of patients in our study were from rural background and were farmers, they used these pesticides instead of other poisons. Snake bite is also common in our study because of predominance of people of rural area. Difference in choice of poisonous substances used by males and females was found to be statistically significant Corrosive/acid/phenyl, organophosphate compounds, rat killer, drugs, hair dye/oil are easily available in home, so women select these poisons instead of others. Proportion of men was higher as compared to women for snake bite, petrol/diesel poisoning and alcohol intoxication. This be explained by the fact that alcohol addiction in India is more common in men. In rural India, men mainly work in the fields making them prone for snake bites. Petroleum products are easily accessible to men more in comparison to women. Among miscellaneous poisoning, we have noted poisoning with thinner, kanneer seed, 2,4-dinitrophenol sodium, nitrobenzene, glass powder, ethylene dibromide, Kanchmar, peppermint oil, benzene hexachloride, lizard bite, centipede bite and Bengal monitor bite.

CONCLUSION:

We as suggested by the previous studies also suggest the government should regulate the import, manufacture, sale, transport, distribution and use of insecticides and pesticides.

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