



**STUDY ON POISON CASES IN A TERTIARY CARE
HOSPITAL AT ANANTHAPURAMU DISTRICT,
ANDHRA PRADESH, INDIA**

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Abstract

Objective: To determine the incidence and severity of poisoning cases in Batthalapalli town at Ananthapuramu district and to impart knowledge by providing patient counseling and pamphlets distribution in Batthalapalli town. **Design:** Retrospective and prospective observational study. **Materials and Methods:** All the poisoning cases due to various agents who attended Emergency from 1st January 2017 to 30th Dec 2022 were evaluated retrospectively and prospectively. **Results:** A total of 358 poisoning cases were attended emergency for over a period of 4 years. The overall male to female Ratio was 2:1. Organophosphorus was the most commonly used for self-poisoning 33%. Farmers 37%, service holders 22% and students 14% were commonly involved in self-poisoning. Intentional poisoning comprised 53% of all poisoning. **Conclusion:** Majority causes of intentional/accidental have been identified and factors contributing occupation related agro chemical poisoning was identified. The involvement of clinical pharmacist has helped the physicians in accessing complete information on various treatment options available for the treatment of poison cases.

Key Words: Poison, Intentional, Farmers, Knowledge

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INTRODUCTION

A poison is a substance capable of producing adverse effects on an individual under appropriate conditions¹. A poison is any substance that is harmful to the body when eaten, breathed, injected or absorbed through the skin. Any substance can be poisonous if enough is taken. Poisoning is a significant health related problem in every country. Occupational exposure to industrial chemicals and pesticides, accidental or intentional exposure to household to pharmaceutical products and poisoning due to venomous animals, toxic plants and food contamination, all contribute to morbidity and mortality² of poison cases. The danger of poisoning range from short-term illness to brain damage, may lead to coma and death. Young children are particularly

vulnerable to accidental poisoning in the home, as are elderly people, often from confusion. Hospitalized people and industrial workers are also vulnerable to accidental poisoning by drugs errors and from exposure to toxic chemicals³. The incidence of poisoning is high, fortunately morbidity and mortality due to poisoning is low. Poison Information Centers should be established in various parts of our country for helping the poisoning cases. There should be a proper treatment protocol regarding poisoning in every hospital. All poisoning cases with features of toxicity, toxic dose, IM or IV use, multiple agents used and associated with other medical illness should be admitted in wards after emergency treatment⁴.

MATERIALS AND METHODS

A retrospective study from Jan 2017 to Dec 2020 and prospective study from Jan 2021 to Dec 2022 was analyzed the all poisoning cases who attended emergency department of Government General Hospital & RDT Hospital Batthalapalli, Anantapuramu district over a period of 5 years. A total of 358 poisoning cases were included in this study. Data regarding age, sex, occupation, types of poisoning, agents for poisoning, types of disposal were collected from the hospital records and analyzed. All types of poisoning were included in this study.

RESULTS AND DISCUSSION

Retrospective Study

A total of 358 poisoning cases were attended emergency over a period of five years. The overall male to female Ratio was 2:1. In the retrospective study, the majority of the poisoning cases were found in farmers. They were found most commonly involved in poisoning 37% whereas service holders occupied the second place occupied the 22% of all poisoning. In this study organophosphorus was the most commonly used for self-poisoning 33% cases and food poisoning was the second common poisoning after organophosphorus. Intentional poisoning comprised 53% whereas accidental poisoning comprised 47%. 41% of poisoning cases had to be admitted of their seriousness but 29% of the poison cases were discharge from emergency after emergency management.

The following tables show the results of the retrospective study.

TABLE 1
TABLE SHOWING THE DIFFERENT PHASES

PHASES	TOTAL NO. OF CASES	%	MALE	%	FEMALE	%
Retrospective study	245	68	153	67	92	33
Prospective study	113	32	72	64	41	36
Total	358	100	225	-	133	-

TABLE 2
TABLE SHOWING TYPES OF POISON CONSUMED IN RETROSPECTIVE STUDY

TYPE OF POISON	NO. OF CASES	PERCENTAGE (%)
Organophosphorus	82	33
Food poisoning	54	22
Drug Poisoning	42	17
Snake bite	37	15
Miscellaneous	18	7
Unknown poisoning	12	5
TOTAL	245	100

TABLE 3
TABLE SHOWING OCCUPATION OF THE PATIENTS IN RETROSPECTIVE STUDY

OCCUPATION	NO. OF CASES	PERCENTAGE (%)
Farmer	91	37
Service holder	53	22
Students	35	14
House wife	43	18
Others(including children)	23	9
Total	245	100

TABLE 4
TABLE SHOWING MODE OF POISON IN RETROSPECTIVE STUDY

REASON	NO. OF CASES	PERCENTAGE (%)
Accidental	115	47
Intentional	130	53
Total	245	100

TABLE 5
TABLE SHOWING CONSCIOUS LEVEL OF PATIENT IN RETROSPECTIVE STUDY

CONSCIOUS LEVEL	NO. OF CASES	PERCENTAGE (%)
Fully Conscious	102	42
Disturbed Conscious	143	58
Total	245	100

TABLE 6
TYPES OF DISPOSAL OF THE PATIENTS IN RETROSPECTIVE STUDY

DISPOSAL	NO. OF CASES	PERCENTAGE (%)
Discharge from ER	71	29
Put Patient under observation	98	40
ICU admission	41	17
Deaths	35	14
Total	245	100

Prospective Study

In the prospective study, farmers were found 41% whereas service holders occupied the second place occupied the 23% of all poisoning. In this study also organophosphorus was the most commonly used for self-poisoning comprises of 38% cases and food poisoning was the second common poisoning after organophosphorus. Intentional poisoning comprised 55% whereas accidental poisoning comprised 45%. 25% of poisoning cases had to be admitted of their seriousness but 19% of the poison cases were discharge from emergency after emergency management.

The following tables show the results of the prospective study.

TABLE 7
TABLE SHOWING TYPES OF POISON CONSUMED IN PROSPECTIVE STUDY

POISON	NO. OF CASES	PERCENTAGE (%)
Organophosphorus	43	38
Food poisoning	23	20
Drug Poisoning	20	18
Snake bite	16	14
Miscellaneous	6	5
Unknown poisoning	5	4
TOTAL	113	100

TABLE 8
TABLE SHOWING OCCUPATION OF THE PATIENTS IN PROSPECTIVE STUDY

OCCUPATION	NO. OF CASES	PERCENTAGE (%)
Farmer	46	41
Service holder	26	23
Students	15	13
House wife	18	16
Others(including children)	8	7
Total	113	100

TABLE 9
TABLE SHOWING MODE OF POISON IN PROSPECTIVE STUDY

MODE	NO. OF CASES	PERCENTAGE (%)
Accidental	51	45
Intentional	62	55
Total	113	100

TABLE 10
TABLE SHOWING CONSCIOUS LEVEL OF PATIENT IN PROSPECTIVE STUDY

CONSCIOUS LEVEL	NO. OF CASES	PERCENTAGE (%)
Fully Conscious	46	41
Disturbed Conscious	67	59
Total	113	100

TABLE 11
TYPES OF DISPOSAL OF THE PATIENTS IN PROSPECTIVE STUDY

DISPOSAL	NO. OF CASES	PERCENTAGE (%)
Discharge from ER	28	25
Put Patient under observation	45	40

ICU admission	22	19
Deaths	18	16
Total	113	100

CONCLUSION

The study was carried out at the tertiary care hospital in Batthalapalli town. Since for the whole town, the emergency unit is available in hospital, there is a rising in number of poison cases coming to the hospital. Every year a substantial number of poison cases were admitted in this hospital. The reason may be the easy obtainability of agro products in this area which is an important agricultural zone. Majority of the poisonous cases were illiterates and economically backward. These people should be made aware of the poisonous effects of agrochemicals. It is important that there should be strict rules regarding sale of pesticides and agro products. Such substances should not be sold without proper license and qualified person. All household harmful chemicals and medicines should be placed in a place that is not accessible to the children. The involvement of clinical pharmacist has helped the physicians in accessing complete information on various treatment options available for the treatment of poisonous cases.

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