

Retrospective Study of Common Poisoning at Tertiary Care Centre

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Abstract: Acute poisoning with various substances is common everywhere. The earlier the patient reaches Tertiary Care Centre the better is resuscitation and good outcome is expected with use of specific antidote. The aim of study is to characterize the poisoning cases admitted to Tertiary Care Centre at Kolhapur district in CPR Hospital Government Medical College, Maharashtra between 2012 to 2015. We reviewed the data obtained from the hospital medical records and included the factors like: Compound consumed, age of patients, demographic factors, occupation & outcome of patients and psychiatric evaluation. Total 1774 patients were studied. Out of which 1064 were males & 710 were females from age group of 14 to 85 years. Death due to OPP is 11.94%, Paraquat Poisoning is 58% & unknown poisoning is 10.66%. We can prevent deaths by early intervention and specific antidotes if we know the compound beforehand. In our study, unknown compounds were difficult to trace and diagnose due to unavailability of specific tests in our centre as well as non-affordability was also an issue.

Keywords: Common poisoning, drugs, organophosphorus, paraquat, poisoning mortality

1. Introduction

Poisoning from intentional substance abuse as well as from unintentional toxic exposures remain a significant health concern for hospital emergency departments. The substances responsible for accidental poisoning and the methods used for self-poisoning have changed considerably over time. WHO estimated that approximately 3 million pesticide poisoning occurs worldwide and cause more than 2,20,000 deaths per year. Developing countries like India and Sri Lanka report alarming rates of toxicity and death. Suicidal poisoning with organophosphorus compound is seen with increasing frequency and carries 4-30% mortality in Indian studies. Survival rate of grammoxone (paraquat) is 30 mg/kg which is equivalent to 7-8ml of 24.6% solution. Mortality rate of paraquat poisoning is 55.2% in developing country.

2. Aims & Objectives

This is a retrospective study of clinical profile of common poisoning patients admitted to our tertiary care centre RSCM GMC, CPR Hospital Kolhapur, Maharashtra, India.

3. Materials and Methods

We have studied 1774 patients, retrospectively from June 2012 to May 2015 in ICU and medical wards. Diagnosis was based on thorough clinical history and examination.

4. Results

1774 patients were studied from the age group of 14-85 years of which 1064 (59.97%) were males and 710 were females. The incidence in age group 21-30 years (46%) in males and 47% in females respectively. Majority cases belonged to rural population and were farmers.

System involved	Symptoms %	Compound poisoning
GIT	75%	OPP
	92%	Paraquat
	64%	Phenyl
	50%	Unknown
Respiratory failure	9.3%	OPP
	58%	Paraquat poisoning
Hepatorenal	83%	Paraquat poisoning
Neurological	39.96%	OPP

Trends of compounds consumed:

Name of compound	No. of Patients	Percentage
OPP	561	31%
Paraquat	100	5.6
Alcohol	222	12.5
Unknown	469	26
Sedative drug overdose	103	5.8
Phenyl	97	5.4
Rat kill powder	78	4.3
Mortein	88	4.9
2,4 diamine	56	3.1

Number of deaths: 188 (total)

Death due to compound	No. of patients	Percentage
OPP	67	11.94
Paraquat	58	58
Unknown	50	10.66
Alcohol	10	4.5
2,4 diamine	3	5.3

Occupation	Percentage
Farmers	48
Jobbers	10
Housewives	22
Students	12
Working females	8

Psychiatric Evaluation

Reason	Percentage
Accidental	28
Deliberate self-harm (Suicidal)	32
Financial	12
Marriage disharmony	14
Acute stress reaction	14

5. Conclusion

Poisoning cases from our studies were due to easy accessibility to farmers from rural area. Mortality in Paraquat poisoning is due to late arrival and large quantity consumption with hepato renal shut down and ARDS. Mortality due to OPP is because of late arrivals and fatal dose consumption. On psychiatric evaluation, it is revealed that young people had deliberate self-harm, financial crisis in farmers, marriage disharmony, acute stress reaction to exam failure and lack of studies, heartbreaks and accidental poisoning in few cases. With this data we must sensitise the rural population regarding fatal toxicity of paraquat compound and also opp compounds. We can prevent accidental exposures by taking proper safety measures while spraying. Young people needs more counselling and proper situation handling and good communication between children and parents.

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