

PROFILE OF ACUTE POISONING CASES RECORDED IN M S RAMAIAH MEDICAL COLLEGE AND TEACHING HOSPITAL.

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ABSTRACT

Poisoning is a major problem all over the world and comprises a significant bulk of hospital admissions at a tertiary care hospital. There has also been a change in the pattern of poisoning in various areas, hence, important to know the pattern of poisoning in a given region so as to enable in making a rapid clinical diagnosis, initiate proper treatment to reduce morbidity and mortality. To find out the patient profile, the common poisons and outcome of poisoning cases a retrospective analysis of all acute poisoning cases admitted to the casualty of M S. Ramaiah Medical College & Teaching Hospital for a period of one year was done. Data on age, sex, type of poisoning, poisonous substances consumed, treatment, outcome and counselling were analysed. The age varied from 1-80 years. The male female ratio was 1.05: 1. Majority of the poisoning cases were of 21-30 years. Moreover, 85% cases reported were intentional poisoning and 25% cases of poisoning were with miscellaneous agents followed by 22% each of organophosphorus & single medicinal preparations. During the hospital stay 87% of patients were discharged after effective treatment. Suicide attempts were common among adolescents and 69% of the cases were counseled.

Keywords: *Poisoning; organophosphorus; counselling; outcome.*

INTRODUCTION

Acute poisoning is a common medical emergency all over the world including India and constitutes a significant bulk of hospital admissions through the emergency department. It is also a common cause of mortality, especially among the young people. Use of poison is the main method of attempted suicide¹. Technological avalanche with its social and mental pressures has further worsened the scenario². For effective treatment and preventive measures, information on the nature and extent of poisoning is required to reduce the high morbidity and mortality associated with poisoning. This could be achieved by drawing some strategies which include improved clinical management of poisoning, provision of counseling services for vulnerable individuals and restricted access to pesticides and drugs.

OBJECTIVES

- To determine the age and sex distribution in poisoning cases.
- To find out the incidence of types of poisonings and common poisons / drugs consumed.
- To assess the associated diseases in poisoning cases.
- To assess the effective treatment, outcome and counseling.

MATERIALS & METHODS

A retrospective analysis of all acute poisoning cases admitted to the emergency and casualty department of M.S Ramaiah Medical College & Teaching Hospital, Bangalore for a period of one year was done to study the pattern of acute poisoning. All the admitted cases of poisoning were included in the study. Data on age, sex, circumstances of poisoning, poisonous substance/ drugs consumed, type of poisoning, associated diseases, outcome and counseling if done were collected and analysed by descriptive analysis.

RESULTS

A total of 383 patients were admitted with poisoning during the one year period of study. There were 197 (51%) males and 186 (49%) females. The male female ratio was 1.05: 1 (Fig 1). The age of the patients varied from 1 to 80 years. Majority of the poisoning cases were from the age range of 21- 30 years with almost an equal proportion of male female ratio 1.04: 1 (Fig 2). Of the total 383 poisoning cases 323 (84%) were suicidal, whereas 54 (14%) were homicidal and 06 (2%) accidental (Fig 3).

The common poisons consumed were from the miscellaneous category which amounted to 96 (25%) cases, followed by single drug and organophosphate compounds 84 (22%), 83 (22%) respectively, unknown 48 (12%), mixed drugs 29 (8%), snake bite 18 (5%), drug with miscellaneous agents 16 (4%), and organophosphates with alcohol / fruit juice 9 (2%) (Fig 4).

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The outcome of poisoning cases was that 334 (87%) cases were discharged after effective treatment, while 26 (7%) of patients were shifted to other hospitals for want of ventilators whereas 12 (3%) were brought dead and 11 (3%) of patients were discharged against medical advice (Fig 5).

It was observed that in about 30 cases of poisoning there was history of associated diseases (Fig 6). Majority of the poisoning cases 271 (72%) were treated symptomatically, whereas 105 (28%) were specifically treated for organophosphorus and snake bite (Fig 7). Moreover, 246 (69%) of the patients were counselled during their hospital stay (Fig 8).

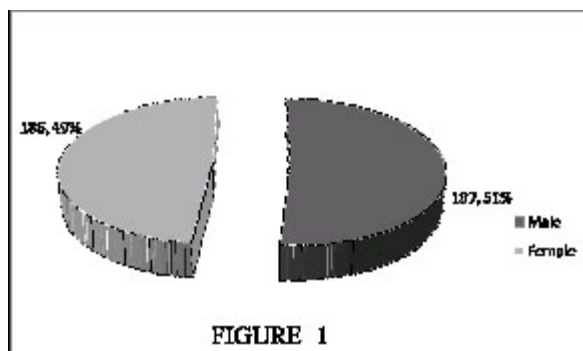


FIGURE 1

Fig. 1: Sex distribution

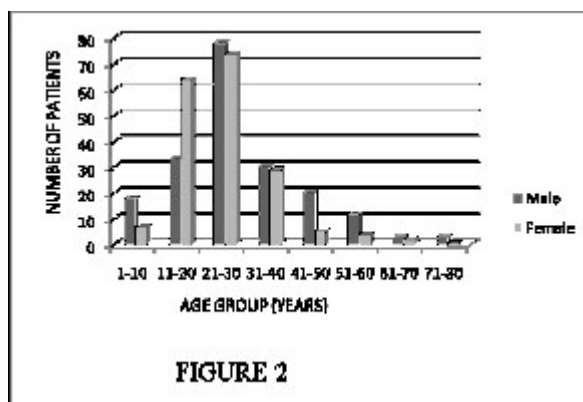


FIGURE 2

Fig. 2 : Age and sex distribution

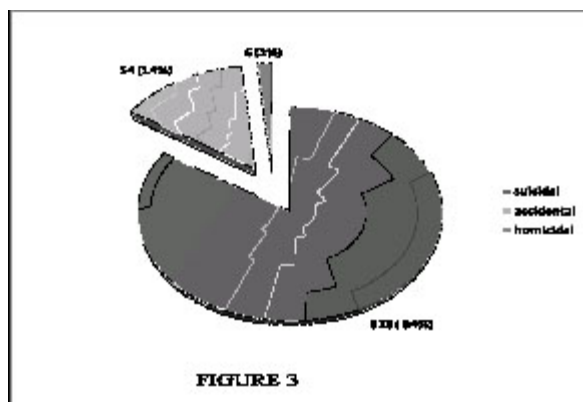


FIGURE 3

Fig. 3 : Types of poisoning

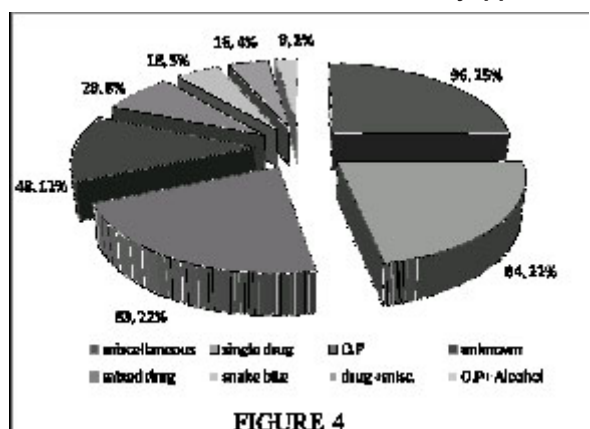


FIGURE 4

Fig. 4 : Types of poisons and drugs

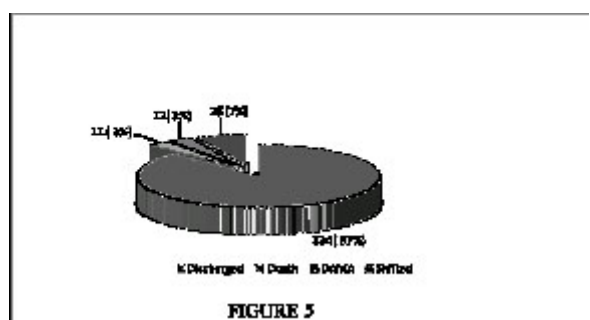


FIGURE 5

Fig. 5 : Outcome of poisoning

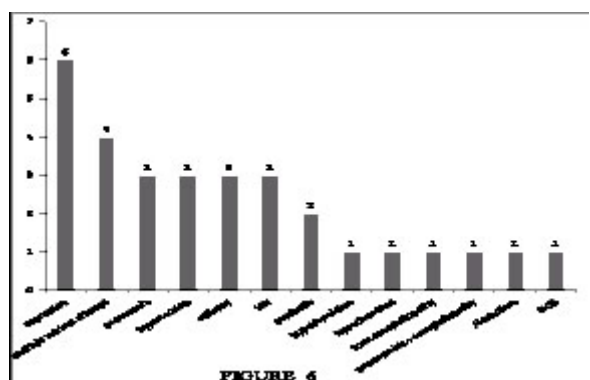


FIGURE 6

Fig. 6 : Associated diseases in poisoning cases

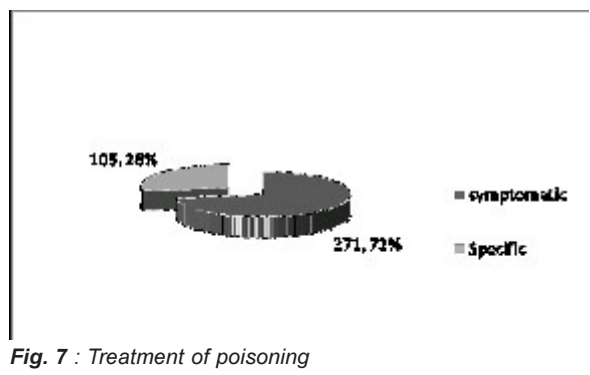


Fig. 7 : Treatment of poisoning

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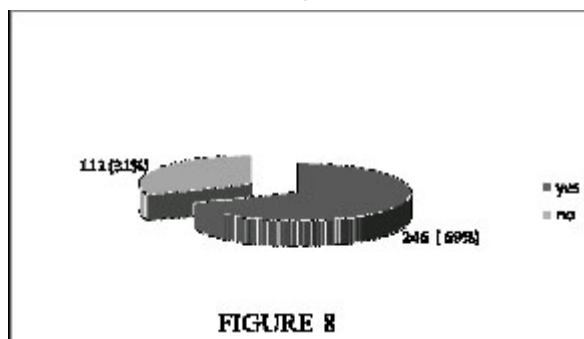


Fig. 8: Counseling

DISCUSSION

This study showed that majority of the poisoning cases was from the age range of 21- 30 years with almost an equal proportion of male female ratio of 1.04: 1. This vulnerable age group is also observed by Suvedi in a study at Bir Hospital thus implicating that the young adults are at more risk and there is a need for intervention program ³.

In this study it was observed that the poisoning episodes whether intentional, accidental or homicidal, majority were with miscellaneous agents (25%) like household disinfectants, fertilizers, plant extracts, acids and alkali, mosquito repellents, car polish, battery dry cell etc. followed by organophosphorus poisoning and single drug ingestion which constituted 22% each of the total cases. The common insecticide used for poisoning was methyl parathion (Metacid) which is consistent with the studies carried out in Nepal³. In this study medicinal preparation used for poisoning was 22 % with single drug and 8% with mixed drugs and 4% with a combination of drugs and miscellaneous agents like alcohol, household disinfectants. The most common drugs used as a single agent were sedative hypnotics, antipsychotics and antiepileptics followed by analgesics like non-steroidal antiinflammatory drugs, morphine, antihistamines and muscle relaxants respectively. Our study is also consistent with the study at Bir Hospital and shows that the use of medicinal preparations for deliberate poisoning ranged between 8 and 22 % ³⁻⁵.

Eighty four percent of cases were intentional poisoning for suicidal attempt which is consistent with other studies which show almost similar percentage of suicidal attempts^{6,7}. The hospital stay of admitted patients with poisoning ranged from one to fifteen days. The mean hospital stay was 7 days. Similar findings have been observed in other studies as well^{8,9}. This study shows that only 3 % cases were brought dead or died on the way to the hospital while other studies show that the mortality ranged from 5-8%^{5,6,9}. About thirty cases showed associated diseases which could have led to the suicidal tendencies in such individuals.

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Majority of the cases were treated effectively with specific antidotes and the rest symptomatically. Only 69% of patients could be counselled reasons being they were shifted to other hospitals due to lack of beds in ICU, discharged against medical advice, died or brought dead and non compliance to the advise for undergoing counselling.

The above observations suggest that there is an urgent need for strict implementation of the Pesticide Act, which regulates the import, manufacture, sale, transport, distribution and use of pesticides with a view to prevent risk to human beings ^{10,11}.

Other strategies include improved clinical management of poisoning, provision of counseling services for vulnerable individuals and restricted access to pesticides ^{12, 13, 14}.

CONCLUSION

Most of the poisonings were suicidal attempts. With the increasing stress in life, suicide among young adults and adolescents is a common public health problem. Patients with intentional poisoning must undergo psychiatric consultation during their stay in the hospital for the treatment of poisoning. This will minimize the risk of next attempt of self harm.

Strict rules must be followed regarding sale of psychotropic medicines and pesticides. Potentially poisonous medicines must not be sold without prescription. As poisoning is a common medical problem, the clinical management have to be improved by several measures like establishing poisons information and monitoring centre in different parts of the country, preparing rational treatment guidelines for poisoning, training health care providers and ensuring easy availability of antidotes.

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