Volume : 4 | Issue : 8 | Aug 2015 • ISSN No 2277 - 8179

Research Paper

Medical Science

KEYWORDS : Acute poisoning, pattern, organophosphate poisoning, tertiary care hospital

A Retrospective Study of Patients Admitting to A Tertiary Care Hospital with Various Kinds of Poisoning

DrRajnikanth S Malapur Dept of Emergency Medicine, JJMMC Davangere.

DrSoumya M Dept of Paediatrics, JJMMC Davangere. H.no. Indragiri C-1, BEA Quarters, Anjaneya Badavane, Davangere.

ABSTRACT

Objectives: To study the pattern of presentation of patients with different types of poisoning in a tertiary care hospital.

Materials and Methods: This retrospective study evaluated the hospital records of patients with acute poisoning. In a pre-structured proforma, data regarding age, sex, time elapsed after exposure , circumstances of poisoning were recorded. The data were presented as mean ± standard deviation, entered in the open office datasheet, and analyzed with SPSS software.

Results: A total 822 patients were included in the study. Young adult males were more commonly involved than females (M:F 2.5:1). The mean age of the patients was 28 years (range 2-72 years, SD ± 14.3 years). Mean time to receive treatment was 5.2 ± 7.4 (range 1-48 h). Among them OP compound exposure was more then 54.2%. About 45.5% patients received first aid before coming to the hospital. The cause for poisoning was suicidal in 88.1% cases and accident in 12 (11.9%). The patients received treatment as per hospital protocol according to the type of poison they were exposed .

Conclusion: The present study contributes substantial information regarding the epidemiology of various poisoning and acute Organophosphorus poisoning has a major share among them. There is a further need for prospective studies to understand underlying socio-economic factors responsible for Organophosphorus poisoning in our population and, accordingly, address the problems to reduce the incidence of poisoning

Introduction

Of the various kinds of poisoning such as organophosphorous (OP) compound consumption, tablet overdose, snake bite, scorpion sting etc[1,2,3], it is important to know the most common type of poisoning. This will help to know about the major cause of hospitalization in a developing country[4]. In this study we have reported our experience with the pattern of presentation of various poisoning.

Materials and Methods

This retrospective study was conducted in a tertiary care teaching teaching hospital. Hospital records of patients with different kind of poisoning from January 2014 to December 2014 were reviewed. In a pre-structured proforma, data regarding age, sex, time elapsed after poisoning & type of poison were recorded. Different poisonings were treated as per the specific protocols. All the patients were closely monitored with ECG, SpO_2, ABG and chest X-ray as per the requirement. Data were presented as mean ± standard deviation, entered in the open office datasheet, and analyzed with SPSS software. To analyze the variables multivariate linear regression and multivariate logistic regression analysis (as appropriate) were used. A *p*-value of less than 0.05 was considered statistically significant.

Results

A total of 822 patients were included in this study. Young adult males were more commonly involved than females (M:F of 2.5:1)(figure 1). The mean age was 28.0 years (range 2-72 years, SD ± 14.4 years). Mean time to receive treatment was 5.2 ± 7.4 hours (range 1-48 h). By occupation, non-farmers were 56.4% and farmers were 43.6%. About 45.5% patients received first aid before coming to the hospital, while 54.5% did not receive the same. Among various poisoning organophosphorus poisoning was highest followed by snake bite & insect bite. (figure 2). Among them organophosphorous compound exposure was 71.89%. The reason to consume organophosphorous was suicide in 88.1% cases and accident in 11.9%.

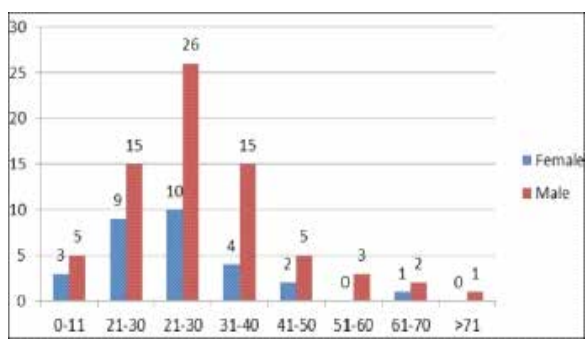

Figure 1: Graph showing age and sex distribution

A	OP poisoning (591)	71.89%
B	Snake bite (118)	14.35%
C	Scorpion bite (13)	1.5%
D	Insect bite (87)	10.5%
E	Dog bite (13)	1.5%

Figure 2 : Graph showing different kinds of poisoning

Discussion

In this study, as in most other studies, organophosphorous compound poisoning were higher as compared to other types of poisoning[5]. Among them male dominated females (M:F ratio range 0.1-6.1), [6,7] and young adults (2 nd to 4 thdecade) were victims of OP self-poisoning[8,9]. In contrast, in accordance with the literature, accidental poisoning was more common in children[10]. The other kinds of poisoning such as snake bite, scorpion bite,bee sting etc were also higher among young adults, probably because of their occupational exposure and most of them were accidental in nature.

Most cases of poisoning were of organophosphorous compound poisoning and were because of suicidal tendency[11]. This was probably because of easy availability of the OP compound and increased stress of social, cultural, academic & financial problems[12].

So it is important to recognise early & immediately shift the patients to hospital for better survival rate

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There was no seasonal variation seen among organophosphorous poisoning, but seasonal variation was seen with snake bite & scorpion bite which was more during rainy season. This could be probably because of exposure to these animals vowing to their living condition.

Since hospitalization of patients will cause economical, physical and mental stress to both patient & is family members[13], it is important to reduce the incidence of poisoning. This can be done by preventing easy availability of these compounds. Once they are exposed immediate shifting of the victim to well equipped hospital, careful resuscitation by trained personnel, improvement in medical management, and provision of antidotesshould be done. After all these it important to create awareness, and education to public[14,15].

Conclusion

Poisoning is a medical emergency that needs rapid diagnosis and treatment. Early recognition, careful monitoring, and appropriate management will decrease the complication and the mortality rate. The present study contributes substantial information regarding the epidemiology of various poisoning and acute organophosphorous poisoning has a major share among them. There is a further need for prospective studies to understand underlying socio-economic factors responsible for organophosphorous poisoning in our population and, accordingly, address the problems to reduce the incidence of organophosphorous poisoning cases.

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