

ORIGINAL

PATTERN OF INTOXICATION IN POISONING CASES; REPORTED IN THE CASUALTY OF BAHAWAL VICTORIA HOSPITAL BAHAWALPUR

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ABSTRACT

The cases of poisoning reported to the casualty department of Bahawal Victoria Hospital Bahawalpur were included in this study so as to ascertain the pattern of the causative poisonous agent. A total number of 27254 patients were included in this prospective study, which was carried out from the year 1996 to 1999. The study revealed a striking preponderance of intoxication with Organo phosphorus compounds, in Bahawalpur region.

Key words: Poisoning, Organo phosphorus Compounds

INTRODUCTION

A poisonous or toxic substance is any chemical that is capable of producing a detrimental effect on a living organisms¹. In its broadest sense, toxicology traditionally involves all aspects of adverse effects of chemicals on biological systems. This includes their mechanisms of harmful effects and conditions under which these harmful effects occur, socio-economic considerations and legal ramifications².

Accidental and intentional poisonings are among the major causes of morbidity and mortality in the United States³.

5000 - 10000 Americans die every year of poisonings. This figure depicts the reported cases and it is estimated that an equal number of cases go unreported⁴. Approximately 40% of all serious intoxications are caused by a variety of household products i.e. soaps,

cleaners, detergents, furniture polish, fuel and gasoline⁵.

Acute poisonings by an organo phosphorus compound insecticide is frequently observed in Morocco⁶. Organo phosphorus nerve agents are still widely in use today, as pesticides, in warfare and as a terrorism compound⁷.

Pakistan is an agricultural country and especially Bahawalpur area is one of its most fertile agricultural regions and is prone to excessive use of insecticides. Therefore the need for this study arose to scrutinize the prevalent pattern of poisoning cases.

MATERIALS & METHODS

The casualty department of the Quaid-i-Azam Medical College and Bahawal Victoria Hospital Bahawalpur caters for all the emergencies including poisonings cases. Patients suffering from food poisonings and snakebite cases were excluded from this study. The

patients were given life saving treatment and simultaneously all the vital data of the patients was recorded in the register.

This data included the personal details including the name age gender, parentage, address, as well as the pertinent details as to the history of the presenting complaints, any investigations under taken, the details of medico-legal samples taken and dispatched for analysis, the suspected poison, the provisional diagnosis as regards the manner of poisonings, psychiatric diagnosis and psychosocial stressors.

All the patients were scrupulously monitored and followed up till their stay in the hospital, with a view to confirm the initial findings and to co-relate the reports of the Chemical examiner, and other laboratory investigations.

The relevant data was then transferred on to a data base, which was prepared by the authors and was than analyzed with the perspective of the aims of the study.

RESULTS

Table-I. Year wise breakup of poisoning cases

Year	Male	%age	Female	%age	Total
1996	3430	54%	2875	46	6305
1997	3911	57%	2939	43	6850
1998	3753	54%	3179	46	6930
1999	3886	54%	3281	46	7167
Total	14980	-	12274	-	27254

Table-II. Type wise breakup of poisoning cases

Type	Male	%age	Female	%age	Children	%age	Total
Organophosphorus	10141	61%	4988	30%	1496	9%	16625
Neurotropics	3033	53%	2118	37%	572	10%	5753
Toilet products	123	15%	490	25%	1840	75%	2453
Kerosene, coppers	191	10%	954	50%	763	40%	1908
Cosmetics	-	-	38	7%	507	93%	545
Total	13488	-	8588	-	5178	-	27254

Table-III. Mannerwise breakup of poisoning cases

Accidental	Suicidal	Homicidal	Total
16352	9539	1363	57254
60%	35%	5%	100%

Table-IV. Gender wise breakup of poisoning cases

Male	Female	Total
14980	12274	27254
55%	45%	100%

casualty total number of poisoning cases every year. This conclusion is in tandem with the increase in the population of the country every year. This study carried out in Bulgaria also shows a high percentage of poisonings being reported there and worldwide⁸.

The inference gathered from table II show that organo phosphorus compounds are the major type of poisons found in 61% cases of poisoning in Bahawalpur region. Our conclusion goes hand in hand with the findings of Senanayake N, University of Peradeniya, Sir Lanka, where OPI are the commonest cause of poisoning⁹.

This prospective study which was carried out in the

The pharmacological development of the organo

phosphorus compounds is a matter of the last two centuries; this development has reached exponential character, in the last fifty years¹⁰. The applied use of anti chE's as insecticides, which coincided with the historical development of OP anti chE's was and is of major significance for the agricultural economy of both advanced and under developed countries, as this employment may mean the difference between life and starvation¹⁰.

Table 111 of this study shows that the most common manner of poisoning in this region is accidental, i.e. 60% as compared to suicidal, which was found to be 35% of all cases. On comparison with the study of department of professional diseases and toxicology Bulgaria the figure for deliberate self poisoning is 64%. The reasons for this difference can be explained on the basis of our religion Islam, wherein suicide is strictly prohibited. Moreover law, in our country, also prohibits it. Another factor, which affects this aspect, is the closely knit and combined family set up, which helps in avoiding frustrations and taboos.

As regards table IV, it shows a male preponderance in cases of poisoning, being 55% as compared to 45% for the females. It has been documented that women attempt suicide three times more often than men, but men are more successful by aratiofo3:1¹¹.

In our circumstances and social set up, the males are usually the bread earners of a family, they are exposed to the external environments and accidents, in the pursuit of their professions. In contrast women are relatively less exposed to harmful environment.

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