ORIGINAL ARTICLE

Poisoning Trend In Militancy Occupied State of India

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Abstract

Morbidity and mortality due to poisoning is a world wide problem. The study was conducted to evaluate the various epidemiological pattern involved in poisoning . The present retrospective study was conducted in the Forensic Medicine Department of a Govt Medical College, Jammu a tertiary care institute over the period of five years (w.e.f 2005 to 2009) on autopsy cases. Out of total 3253 autopsies, 80, 83, 59, 66 and 96 autopsies conducted were of the alleged cause of death as poisoning cases in the year 2005, 2006. 2007, 2008 and 2009 respectively. The years wise age group between 21-30 years was found to be the most vulnerable victims of death due to poisoning. Males were found to be more vulnerable to death with poisoning than females. Majority of the victims (69.87%-78.78%) were of the rural back ground . Alluminium phosphide (Fumigant Insecticide) was found to be the most commonly used poison followed by other insecticides. In majority of cases manner of poisoning was suicidal [303(78.90%)] and in 80 (20.83%) cases mode of poisoning was not known. Early detection, diagnosis and prevention of these poisoning cases could serve as an important tool in bringing down the mortality numbers.

Key Words

Poisoning, Postmortem, Mortality, Alluminium Phosphide, Insecticide

Introduction

Morbidity and mortality due to poisoning is a world wide problem. The pattern of poisoning varies from country to country, place to place and changes over a period of time due to various reasons. Poison consumption accounts for substantial numbers of deaths throughout the world, in the form of suicide, accident or homicide. Variety of factors, like availability and access of poison, socio-economic status of the individual, cultural and religious influences etc influence the pattern of poisoning. Poisoning was found to be the most common mode of suicide (2.93%), followed by burns , hanging, railway trauma cases and gunshot in our setup (1). Hence, we conducted the following study to evaluate the various epidemiological pattern involved in poisoning in our set up on autopsy cases with the alleged cause of death as poisoning over the period of five years.

Materials and Methods

All the autopsy cases (3253) with the alleged cause of death as poisoning conducted in the Forensic Department of a tertiary care institute over the period of five years (w.e.f 2005 to 2009) were analysed for various study variables like; sex, age, rural or urban origin of the patient, type of poison and manner of poisoning. The data sources were the statements of patients (dying declaration), history from relatives and friends and police investigation reports. All the parameters were expressed in percentage and numbers.

Results

Out of total 3253 autopsies, 80,83, 59, 66 and 96 autopsies conducted were of the alleged cause of death as poisoning cases in the year 2005, 2006. 2007, 2008 and 2009 respectively (*Table-1*). Through out the years age group between 21-30 years was found to be the most vulnerable victim of death due to poisoning, followed by 31-40 years and 11-20 years. Males were found to be more vulnerable to death with poisoning than females (*Table-1*). Majority of the victims (69.87%-78.78%) were of the rural back ground (*Fig-1*). Aluminium phosphide was found to be the most commonly used poison followed by other insecticides (*Table-2*). In 117 cases

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reports of forensic science laboratory were pending , hence nature of poison was unknown. In majority of cases mode of poisoning was suicidal [303(78.90%)] and in 80(20.83%) cases mode of poisoning was not known.

Discussion

In the present study males were found to be more vulnerable to poisoning than females in the age group of 21-30 years. Similarly, in earlier studies from India ,West Indies and Oslo, male predominated females with majority belonging to 21-30 yrs age group (2-5). The commonest poison observed in our study was aluminium phosphide ,whereas organophosphate was reported earlier as the commonest type of poisoning (2,3,6-8). However, a recent study from north India also reported aluminium phosphide as commonest poison in use with predominant age group between 20-29 years (9). Suicide was the commonest manner of poisoning with rural population being the major victims in our study as reported earlier (2,5,6). Illiteracy and poverty of the agricultural farmers residing in rural parts lead to frustration and they resort to suicide by these agricultural insecticides, pesticides or weed killers which are easily available to them. Hence,

Fig 1. Year wise distribution of Rural \ Urban poisoning cases

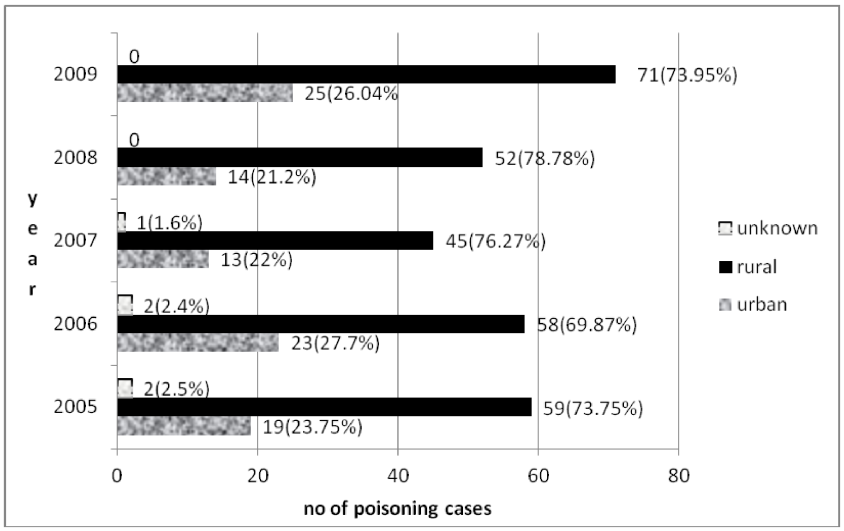

Table 1. Age, Sex and Year Wise Distribution of Poisoning Cases

Distribution of poisoning cases N(%)	Year 2005 Total PM=636 80(12.57%)			Year 2006 Total M=604 83(13.74%)			Year 2007 Total PM=513 59(11.5%)			Year 2008 Total PM=709 66(9.3%)			Year 2009 Total PM=791 96(12.13%)		
Age(yrs)	M	F	T	M	F	T	M	F	T	M	F	T	M	F	T
0-10	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0
11-20	5	3	8	3	8	11	8	6	14	4	7	11	6	11	17
21-30	26	14	40	29	13	42	13	12	25	12	11	23	28	17	45
31-40	15	4	19	12	3	15	6	1	7	15	6	21	16	6	22
41-50	6	2	8	8	3	11	4	1	5	4	1	5	6	2	8
51-60	3	1	4	1	0	1	2	2	4	3	1	4	3	0	3
>60	0	0	0	2	1	3	4	0	4	1	1	2	0	1	1
Total %	55 *68.75*	25 *31.25*	80	55 *66.26*	28 *33.74*	83	37 *62.71*	22 *37.29*	59	39 *59.09*	27 *40.91*	66	59 *61.45*	37 *38.55*	96

PM= postmortem

Table 2. Type and Manner of Poisoning Cases

Year	2005 N=80	2006 N=83	2007 N=59	2008 N=66	2009 N=96	Total
Type of poisoning	N(%)	N(%)	N(%)	N(%)	N(%)	N(%)
Aluminium phoshate	48 (60)	34 (40.96)	16 (27.11)	9 (13.63)	8 (8.33)	115 (29.95)
Insecticide	24 (30)	42 (50.60)	31 (52.54)	25 (37.87)	11 (11.46)	133 (34.63)
Alcohol	4 (0.5)	3 (3.61)	2 (3.38)	4 (6.06)	1 (1.04)	14 (3.64)
Corrosive/irritant	0	1 (1.20)	0	0	1 (1.04)	2 (0.52)
Benzodiazipine drugs	0	0	0	1 (01.51)	O	1 (0.26)
Cyanides	0	0	0	0	O	0
Nitrobenzenes	1 (1.25)	0	1 (1.69)	0	O	2 (0.52)
Unknown	3 (3.75)	3 (3.61)	9 (15.25)	27 (40.90)	75 (78.12)	117 (30.46)
Mode of poisoning						
Suicide	58 (72.5)	68 (81.92)	45 (76.26)	58 (87.87)	74 (77.08)	303 (78.90)
Homicide						
Accidental					1 (1.04)	1 (0.26)
Unknown	22 (27.5)	15 (18.92)	14 (18.92)	8 (12.13)	21 (21.88)	80 (20.83)

there is urgent need to implement strict vigilance over the sale and distribution of insecticides. Special programmes must be conducted to educate people regarding safety measures while handling poisons. Moreover, frequent meditation camps should be organized by NGO's and government to prepare people to face stress and challenges in today's materialistic world.

According to WHO (1999) more than three million poisoning cases has been reported world wide annually and about 99% of fatal poisoning occurs in developing countries (10). In India mortality due to poisoning varies between 15% to 30% and it accounts for the fourth most common cause of mortality in rural India (11). Early detection, diagnosis and prevention of these poisoning cases could serve as an important tool in bringing down these mortality numbers in developed as well as developing countries. With increase in population, militancy and unemployment in our setup youths in the urban areas are also fighting emotional and physical threats and frustrations. However, predominance of rural population as poisoning victims in our study could be because of lack of fist aid and other medical facilities in the rural setup as the study was conducted in the postmortem cases. Nevertheless there is need to train the health workers (paramedics and doctors) in the rural setup to handle and treat the poisoning cases , so that precious lives could be saved.

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