JPAFMAT, 2001, Vol.: 1

PATTERN OF POISONING IN PUNJAB

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ABSTRACT

In this paper trends of poisoning in different parts of Punjab were studied. It is a 2-year study of postmortem cases at Amritsar and it is compared with a 6-year study of postmortem cases at Faridkot with a gap of 5 years. This shows a change of trend with the change in time. These changes of trend along with the postmortem findings are discussed in the present paper, so that preventive steps can be taken to minimize the fatalities.

KEY WORDS: Poisoning, Organophosphorous, Aluminium phosphide.

INTRODUCTION:

In all unnatural deaths, when the cause of death is not apparently clear, poisoning remains the utmost important thing in the minds of investigating officers as well as in the minds of the doctors who are conducting the postmortem examination. Even when death is by some other means, as in homicidal and suicidal cases, poisoning is an important associated feature, in some cases [1]. Since the origin of the mankind, in this world, poisoning always remained associated with it, though it was mostly accidental in nature in the earlier times. The crooked people then started using it for homicidal purposes and a few desperate people used it for suicidal purposes. If we read the history names of Lord Shiva, Meera, Socrates, General Rommel, Ala-u-din Khilji, and Cleopatra cannot be overlooked. In Punjab like other parts of India, there is no strict control over the sale and storage of poisons. Cases of poisoning go on occurring or rather it is increasing.

MATERIAL AND METHODS:

This study was conducted in the mortuaries of medical colleges of Amritsar and Faridkot. In Amritsar this study was done from February 1985 to January 1987 and in Faridkot from January 1992 to December 1997.

RESULTS

TABLE - 1

DISTRIBUTION OF CASES PLACE WISE

Place	Total Cases	Number of Cases Per year
AMRITSAR	44	22
FARIDKOT	163	27.16

TABLE - 2

DISTRIBUTION OF CASES AGE WISE

Place	Decade of Life							Total
	1	2	3	4	5	6	>6	
AMRITSAR	0	3	13	9	4	1	3	44
FARIDKOT	4	31	79	31	13	4	1	163
TOTAL	4	34	92	40	17	5	4	207

Table-2 depicts poisoning to be more common in second, third, and fourth decades of life and is commonest in third decade of life (44.44%)

TABLE - 3

DISTRIBUTIONS OF CASES SEX WISE

Place	Male		Female		Total
	No.	%	No.	%	
AMRITSAR	32	72.7	12	27.2	44
FARIDKOT	103	63,1	60	36,8	163
TOTAL	135	65.2	72	34.7	207

Table-3 depicts poisoning is more common in males (65.22%)

TABLE - 4

DISTRIBUTION OF CASES AREA WISE

Place	Urban		Rural		Unknown	
	No.	%	No.	%	No.	%
AMRITSAR	13	29.54	25	56,81	6	13.63
FARIDKOT	39	23.92	122	74.84	2	1.22
	52	25.12	147	71.01	8	3.86

Table-4 depicts poisoning is more common in rural area (77.01 %) as compared to urban area (25.12%)

TABLE - 5

DISTRIBUTION OF CASES POISON WISE

Poison	Amritsar		Faridkot		Total	
	No.	%	No.	%	No.	%
Organo phosphorus	21	47.7	87	53.3	108	52.17
Chloro compound	2	4.54	9	5.52	11	5.31
Carbamate	1	2.27	1	0.61	2	0.96
Aluminium phosphide	4	9.09	41	25.5	45	21.73
Zinc phosphide	-	-	2	1.22	2	0.96
Alcohol	36	81.8	11	6.74	47	22.70
Snake bite	-	-	2	1.22	2	0.96
Opium	3	6.81	-	-	3	1.44
Mandrax	1	2.27	-	-	1	0.48
Reports awaited	-	-	10	6.13	10	4.83

Table-5 depicts insecticides are responsible for (58.44%) of cases and most common is organophosphorous (52.17%) and is followed by alcohol (22.70%) and Aluminium phosphide (21.73%)

TABLE - 6

HISTOPATHOLOGY OF CASES

POISON	LUNGS	KIDNEYS	LIVER
Organo phosphorus	Pulmonary oedema	Cloudy swelling of tubular cells and tubular necrosis	Fatty changes
Aluminium phosphide	Pulmonary oedema and congestion	Acute tubular necrosis, congestion & RBC cysts	-
Chloro compound	Pulmonary oedema & congestion	Necrosis of tubular epithelial cells & tubular necrosis	-

DISCUSSION:

Trends in poisoning change. Earlier it was arsenic which had the prime status and it shifted to opium and barbiturates [2]. With green revolution insecticides became number one [3] and due to plenty of grains it had to be stored for longer periods Aluminium phosphide being used for these purposes, either it is following organophosphorous in some places or is leading at other places 42.11 % [4].

Poisoning cases are more common in rural areas because of farming background 71.01 % and similar trends are in the study of Sinha et el [4] 61.75%.

Poisoning remains male dominated as shown by Sinha et el 69.47% [4] and is corresponding to this study 65.22%.

CONCLUSIONS AND RECOMMENDATIONS

When we know from different studies that rural males are most prone to poisoning probably due to occupational hazard being one of the factors, extension education should be

focused on this group for prevention. Aluminium phosphide should be marketed as single or double tablets pack instead of big pack or in special perforated packs [5] so that leftover tablets are not consumed for suicidal purposes.

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