Original Article

Acute Poisoning

Pattern of Acute Poisoning in Khyber Pakhtunkhwa

Abid Karim[1], Hassan Abid[2], Masood Uz Zaman[1], Hakim Khan Afridi[1], Muhammad Mohsin Abid[2] and Arshad Iqbal[3]

ABSTRACT

Objective: To determine Pattern of Acute Poisoning in KPK.
Study Design: Retrospective Study
Place and Duration of Study: This study was conducted at the Toxicology Laboratory at Forensic Medicine and Toxicology Department Khyber Medical College, Peshawar from January 2015 to December 2016.
Materials and Methods: The detection of poisons was conducted by chemical method and gas chromatographic method. A Performa was designed to record Age, Sex, Area, Substance of Poisoning and Medico- Legal type of poisoning. This Data was collected with the permission of ethical committee of the institute and analyzed for results by version SPSS 10.
Results: The incidence of acute poisoning was maximum (39.32%) 210 cases in the age group 16-30 years and minimum (9.36%) 50 cases in the age group 03-15 years as shown in table no.01. There were (53.37%) 285 cases of female patients and (46.62%) 249 cases of male as shown in table no.2. The incidence of acute poisoning in urban population was (56.17%) 300 cases and (43.82%) 234 cases belong to rural population as shown in table no.03. The incidence of homicidal poisoning (3.93%) 21 cases, suicidal poisoning (63.10%) 337 cases, accidental poisoning (16.10%) 86 cases, poisoning due to addiction (16.10%) 86 cases and therapeutic poisoning (0.74%) 4 cases were recorded as shown an table no.04. It was observed that benzodiazepine poisoning (29.58%) 158 cases, phosphine poisoning (15.91%) 85 cases, morphine poisoning (11.79%) 63 cases, heroin poisoning (8.05%) 43 cases, tricycle antidepronats (6.74%) 36 cases, ethyl alcohol poisoning (5.99%) 32 cases, organophosphate poisoning (5.61%) 30 cases, methane phetamine (4.49%) 24 cases, cannabis poisoning (2.80%) 15 cases, arsenic poisoning (1.12%) 6 cases, nitric acid poisoning (0.93%) 5 cases, carbon monoxide poisoning (4.11%) 22 cases, chloroform poisoning (1.87%) 10 cases and mushroom poisoning (0.93%) 5 cases recorded as shown in table no.5.
Conclusion:
Key Words: Poisoning, Toxicology Laboratory and Retrospective Study

Citation of articles: Karim A, Abid H, Zaman M, Afridi HK, Abid MM, Iqbal A. Pattern of Acute Poisoning in Khyber Pakhtunkhwa. Med Forum 2018;29(12):44-47.

INTRODUCTION

Harming is characterized as introduction of a person to a substance that can cause side effects and indications of organ brokenness prompting damage or death.[1] Poisoning has been distinguished as one of the real reasons for the youth and youthfulness healing facility crisis introductions and confirmations in most created nations including the United States, United Kingdom, and Australia.[2,3]

[1.] Department of Forensic Medicine & Toxicology/Medicine[2], Jinnah Medical College Peshawar.
[3.] Department of Anatomy, Rawalpindi Medical College Rawalpindi.

Correspondence: Dr. Abid Karim, Assistant Professor of Forensic Medicine & Toxicology, Jinnah Medical College Peshawar.
Contact No: 0300-4363755 / 0333-9367545
Email: Wisdom_1786@hotmail.com

Received by: January, 2018
Accepted by: August, 2018
Printed by: December 2018

In creating nations, harming has additionally been perceived as a noteworthy medical issue among kids and adolescents.[4] Accidental harming is ensnared in around 2% of all damage passings in youngsters in creating countries.[5]

Harming might be intense or incessant. In intense harming side effects all of a sudden show up not long after the presumed sustenance, solution or liquid has been taken[19]. The individual, beforehand known to be healthy, is influenced with a gathering of manifestations which don't affirm to common disease. In unending harming, side effects grow guilefully and slowly. There is reduction or even total vanishing of side effects on the expulsion of the patient from his typical surroundings.[6]

Intense harming and concoction introduction is a developing issue the world over[7]. This can be credited in vast part because of an inexorably fast rate of industrialization and a concurrent increment in the number and sorts of synthetic concoctions accessible[8]. As per the Chemical Abstracts Service (CAS) Registry, in excess of 83 million compound substances are right now accessible and roughly 4000 new synthetic substances are presented on the planet consistently[9,10].

The bounty of such synthetic concoctions has imperative ramifications for wellbeing over the globe[11]. Harming is likewise in charge of a huge extent of deliberate wounds, especially those that are self-exacted. It is evaluated that 23% of self-dispensed wounds all around include the purposeful utilization of pesticides[12]. In any case, the kind of toxin utilized for conscious self-harming changes altogether by locale. In LMICs, pesticides, for example, organophosphate, carbamate, organochlorine, paraquate and aluminum phosphide are the significant harms utilized, particularly in country territories, and are related with high mortality, while in urban zones, pharmaceuticals are more typical operators and for the most part connected with low mortality[13]. Generally mortality because of self-harming in LMICs (10-20%) is substantially higher than in high-wage nations (0.5-1%) because of poisonous quality of accessible harming specialists and absence of crisis therapeutic administrations[14].

MATERIALS AND METHODS

This retrospective study includes 534 Patients of Acute Poisoning from KPK during January 2015 – December 2016. A Performa was designed to record Age, Sex, Area, Substance of Poisoning and Medico- Legal type of poisoning. The detection of poisons was conducting by chemical method and gas chromatic method. This Data was collected with the permission of ethical committee of the institute and analyzed for results by version SPSS 10.

RESULTS

The incidence of acute poisoning was maximum (39.32%) 210 cases in the age group 16-30 years and minimum (9.36%) 50 cases in the age group 03-15 years as shown in table no.01. There were (53.37%) 285 cases of female patients and (46.62%) 249 cases of male as shown in table no.2. The incidence of acute poisoning in urban population was (56.17%) 300 cases and (43.82%) 234 cases belong to rural population as shown in table 3.

Table No. 1: Age distribution in Acute Poisoning

Sr. No.	Age (Years)	No of Patients	Percentage (%)
1	03-15	50	9.36%
2	16-30	210	39.32%
3	31-45	127	23.78%
4	46-60	73	13.67%
5	61-75	74	13.85%
	Total	**534**	**100%**

Table No. 2: Sex Distributions in Acute Poisoning

Sr. No.	Sex	No of Patients	Percentage %
1	Male	249	46.62%
2	Female	285	53.37%
	Total	**534**	**100%**

Table No. 3: Area Distributions in Acute Poisoning

Sr No	Area	No of Patients	Percentage %
1	Urban	300	56.17%
2	Rural	234	43.82%
	Total	**534**	**100%**

The incidence of homicidal poisoning (3.93%) 21 cases, suicidal poisoning (63.10%) 337 cases, accidental poisoning (16.10%) 86 cases, poisoning due to addiction (16.10%) 86 cases and therapeutic poisoning (0.74%) 4 cases were recorded as shown an table no.04. It was observed that benzodiazepine poisoning (29.58%) 158 cases, phosphine poisoning (15.91%) 85 cases, morphine poisoning (11.79%) 63 cases, heroin poisoning (8.05%) 43 cases, tricycle antidepronats (6.74%) 36 cases, ethyl alcohol poisoning (5.99%) 32 cases, organophosphate poisoning (5.61%) 30 cases, methane phetamine (4.49%) 24 cases, cannabis poisoning (2.80%) 15 cases, arsenic poisoning (1.12%) 6 cases, nitric acid poisoning (0.93%) 5 cases, carbon monoxide poisoning (4.11%) 22 cases, chloroform poisoning (1.87%) 10 cases and mushroom poisoning (0.93%) 5 cases recorded as shown in table 5.

Table No.4: Medico Legal Distribution of Acute Poisoning

Sr. No.	Medico Legal	No Of Patients (%)	Male (%)	Female (%)	Children (%)	Old Age (%)
1	Homicidal	21	11	8	-	2
2	Suicidal	337	110	227	-	-
3	Accidental	86	22	-	46	18
4	Addiction	86	82	-	-	4
5	Therapeutic	4	-	-	4	-
	Total	**534**	**225**	**235**	**50**	**24**

Table No.5: Pattern of Acute Poisoning

Sr. No	Type of Poison	Total cases	Male cases	Female cases	Children cases	Old age cases
1	**Benzodiazepine**	158	10 suicidal exhibitional	97 suicidal exhibitional	35 accidental	16 accidental
2	**Phosphine (Gandum wali Goli)**	85	18 suicidal	67 suicidal	-	-
3	**Morphine**	63	52 addicts	5 suicidal	4 therapeutic	2 addicts
4	**Heroin**	43	30 addicts	9 suicidal	2 accidental	2 addicts
5	**Tricycle antidepronats (TCA)**	36	8 suicidal	26 suicidal	2 accidental	-
6	**Alcohol**	32	24exhibitional suicidal attempts	6 exhibitional suicidal attempts	-	2 accidental over dose
7	**Organophosphate**	30	15 suicidal	15 suicidal	-	-
8	**Methan Phetamine**	24	24 suicidal	-	-	-
9	**Cannabis (THC)**	15	11 suicidal	2 suicidal	2 accidental	-
10	**Arsenic**	6	6 homicidal	-	-	-
11	**Nitric Acid**	5	3 homicidal	2 homicidal	-	-
12	**Carbon Monoxide**	22	22 accidental	-	-	-
13	**Chloroform**	10	2 homicidal	6 homicidal	-	2 homicidal
14	**Mashroom**	5	-	-	5 accidental	-
	Total	**534**	**225**	**235**	**50**	**24**

DISCUSSION

This is the first study to determine the pattern of acute poisoning at KPK. It showed that acute poisoning also contributes to morbidity and mortality in human beings. The proportion was higher in teenagers and young adults as compared to other age groups. The incidence of poisoning was higher in female as compared to male. The patients of acute poisoning were at higher proportion from urban population as compared to rural area. Suicidal poisoning was at the top among homicidal and accidental poisoning. It was also observed that benzodiazepine poisoning was at higher incidence than other dugs of poisoning. The tendency of suicidal poisoning was maximum in female patients. The trend of accidental poisoning was found in children and old people. Morphine and heroin poisoning was at top among poisoning of drug of addiction.

Our results of acute poisoning correlate with the study of Adil et al,[8] Syed Kashif Abbas et al,[9] Murad Moosa Khan et al,[10] Nadeem Ullah Khan et al.[11]

CONCLUSION

.

Author's Contribution:

Concept & Design of Study:	Abid Karim
Drafting:	Hassan Abid, Masood Uz Zaman
Data Analysis:	Muhammad Mohsin Abid, Arshad Iqbal
Revisiting Critically:	Hassan Abid, Masood Uz Zaman, Hakim Khan Afridi
Final Approval of version:	Abid Karim

Conflict of Interest: The study has no conflict of interest to declare by any author.

REFERENCES

1. Osterhoudt KC, Shannon M, Henretig FM. Toxicological rises. In: Fleisher GR, Ludwig S, editors. Reading material of Pediatric Emergency Medicine. 4th ed. Philadelphia: Lippincott William and Wilkins; 2000.p.887-97.
2. Litovitz TL, Klein-Schwartz W, Rodgers GC. Yearly report of the American Association of Poison Control Centers Toxic introduction Surveillance System. Am J Emerg Med 2002;20: 391-452.
3. Reith DM, Pitt WR, Hockey R. Youngsters harming in Queensland: and investigation of introduction and affirmation rates. J Paediatr Child Health 2001;37:446-50.
4. Parikh CK. Clinical and Forensic Toxicology: In Parikh's Textbook of Medical Jurisprudence, Forensic Med Toxicol 2006;8:1-10.77.
5. London L, Baillie R. Difficulties for enhancing reconnaissance for pesticide harming: arrangement suggestions for creating nations. Int J Epidemiol 2001;30:64-70.
6. Binetti R, Costamagna FM, Marcello I. Exponential development of new synthetic concoctions and advancement of data significant to hazard control. Ann Ist Super Sanita 2008; 44(1):13– 15.

7. Eddleston M. Examples and issues of intentional self harming in the creating scene. QJM 2000; 93(11):715– 731.
8. Adil, et al. Harms involved in desperate, self-destructive and Accidental cases in north-west Pak J Ayub Med Coll Abbottabad 2016;28(2).
9. Abbas SK, Tikmani SS, Siddiqui NT. Incidental harming in kids. JPMA 201;62:331.
10. Khan MM, Reza H. Benzodiazepine Self-Poisoning in Pakistan: Implications for Prevention and Harm Reduction. JPMA 2012;62: 331.
11. Khan NU, Núñez RP, Shamim N, Khan UR, Naseer N, Feroze A, et al. Intentional and accidental harming in Pakistan. JPMA 201;62:331.
12. Jamil H. Intense harming: A survey of 1900 cases. J Pak Med Assoc 1990;40(6):131– 133.
13. Noor N, Qazi N, Chaudhry G, Masood M, Hashmat M, Asif A. Intense harming in grown-ups in Multan. J Pak Med Assoc 1988;38(11): 305– 306.
14. Shaikh MA. Mortality in patients giving organophosphorus harming at Liaquat University of Medical and Health Sciences 2011.