Original Article

DEATHS FROM PRESCRIPTION DRUG ABUSE IN FAISALABAD

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ABSTRACT:

BACKGROUND: Prescription drugs are used to treat the humanity to reduce the ailments but these drugs when used irrationally either by the prescribing doctor or misused by the patient, may lead to death.
OBJECTIVES: To analyze the most common prescription drugs which are being abused in the society and to create a check or filter for the prescriptions having narcotics and addictive drugs. Also, to suggest a control over the abusive prescription drugs by reviewing already existing legislations regarding sale and storage of abusive drugs.
DESIGN: Non interventional (descriptive) study.
PLACE AND DURATION OF STUDY: This study was conducted over a period of three years from 1st January, 2014 to 31st December, 2016 at The Forensic Medicine & Toxicology Department, Punjab Medical College, Faisalabad.
SAMPLE SIZE: 43 cases
SAMPLING TECHNIQUE: Convenience Sampling.
METHODOLOGY: Study included 918 autopsies conducted in the postmortem unit of Forensic Medicine & Toxicology Department, Punjab Medical College, Faisalabad. Out of these, samples in 252 cases were sent for chemical analysis to the Punjab Forensic Science Agency, Lahore out of which death in 43 cases was declared to have been caused by known drugs.
RESULTS: Deaths from prescription drug abuse were 4.68% of the total autopsies done during this study period. Males were 81.39 % and female were 18.61%. The most affected age group was between 21 to 40 years which totaled 69.7%. The most common Prescription drugs of abuse were chlorophenramine, morphine and diazepam.
CONCLUSION: Among the most commonly prescribed drugs, chlorophenramine, morphine and diazepam were abused by the young generation. Prescribing doctor and pharmacist can play a key role to check and limitize the use of these drugs by proper counseling and making the person aware of the side effects of these drugs and especially the prescribing doctors must rationalize the prescription of these narcotics drugs.
KEY WORDS: Prescription drugs, narcotics pain killers, cold/allergy, toxicity.

INTRODUCTION:

A prescription drug also known as prescription medicine is a pharmaceutical drug that requires the medical prescription to be legally dispensed in contrast to counter drugs which can be obtained without prescription. The prescription

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drugs which are the drugs available on the sole prescription of qualified medical man include routine medicine along with dangerous drugs with certain limitations like opioids [1,2]. In addition to Morphine and its derivatives, antihistamine drugs like chlorophenramine are also included in the drugs that are misused. These antihistamines are used in the treatment of cold/allergy cases and in hypersensitivity reactions to counteract the released histamine in blood circulation reducing irritation and inflammation. Another group like tranquilizers drugs as diazepam which are used as sleep inducer and as anxiolytics are also misued. These prescription drugs which are not intended by the prescribing medical man to become addictive drugs are being abused in young generations all over the world as well as in Pakistan[3]. People having no access to expensive aphrodisiac, euphoric and stimulant drugs rely on relatively cheaper drugs like opioids and antihistamines which falls under prescription drugs.

Aims and Objectives

- To analyze the most common prescription drugs which are being abused in the society.
- To assess the most commonly affected age groups.

MATERIAL AND METHODS:

Total number of autopsies conducted in the last three years from 1st January 2014 to 31st December 2016 in the postmortem unit, Forensic Medicine and Toxicology Department of Punjab Medical College, Faisalabad were 918. Out of these, in 252 cases, viscera were sent for chemical analysis and out of these, 43 cases (17.06%) cases were declared as deaths due to poisoning. These 43 cases were studied as regards the type of poison, age group variation, gender-based distribution and seasonal effects. The data was collected from the record of postmortem unit, police documents and reports of the chemical examiner, Lahore.

RESULTS:

A total of 918 autopsies were performed in the postmortem unit of Forensic medicine & Toxicology department of Punjab Medical College, Faisalabad during the last three years. Out of these 918 cases, samples in 252 cases were sent for chemical analysis. From this, 43 cases were declared as deaths due to poisoning as shown in table-1.

Table-1
Year Wise Distribution of deaths due to poisoning.

Cases	2014	2015	2016	Total
Total Cases	323	307	288	918
Sent for chemical analysis	83	100	69	252
Drugs detected	14	20	9	43

Among these 43 cases, majority of cases showed the presence of chlorophenramine (34.88%). Benzodiazepine group like diazepam were detected in 23.26% and morphine took the third place with 18.60% (Table-2).

Table-2
Year wise frequency of deaths due to drugs.

Drugs Detected	2014	2015	2016	Total	%age
Morphine	4	4	0	8	18.60
Chlorophenramine	3	8	4	15	34.88
Diazepam	4	5	1	10	23.26
Phosphine	3	0	0	3	6.98
Chloroquine	0	1	0	1	2.33
Phenylbutazone	0	1	1	2	4.64
Nikethamide	0	1	2	3	6.98
Metoclopramide	0	0	1	1	2.33
Total	14	20	9	43	100

Most vulnerable age group was 21 - 40 years (69.77%) as shown in table -3 & Fig 1.

Table-3
Distribution of Age group involved in drug abuse

Age group	2014	2015	2016	Total	%age
10-20	0	2	0	2	4.65
21-30	5	5	6	16	37.21
31-40	5	8	1	14	32.56
41-50	2	3	1	6	13.95
50 & above	2	2	1	5	11.63
Total	14	20	9	43	100

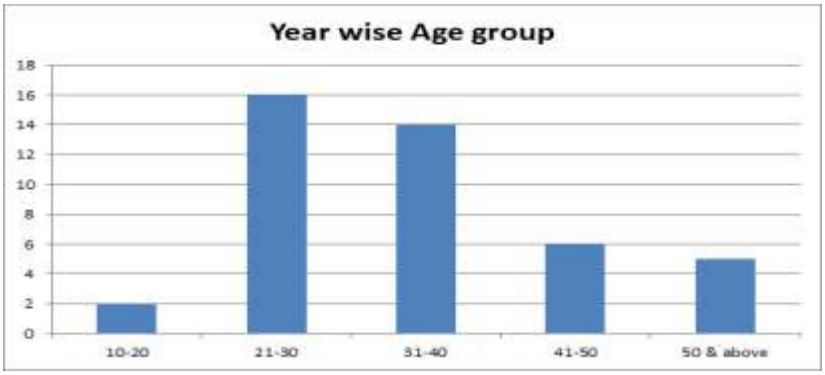

Fig.1
Distribution of Age group involved in drug abuse

Gender based division showed 81.4% male and 18.6% female as shown in table-4.

Table-4
Year Wise Gender distribution of deaths due to drugs.

Gender	2014	2015	2016	Total	%age
Male	13	15	7	35	81.4
Female	1	5	2	8	18.6
Total	14	20	9	43	100

Distribution of cases throughout the year was different as shown in table-5 and Fig 2.

Table-5 Year Wise Monthly Distribution of deaths due to drugs.

Month	2014	2015	2016	Total	%age
January	2	1	3	6	13.95
February	1	5	1	7	16.28
March	0	0	0	0	00
April	0	0	0	0	00
May	2	5	3	10	23.26
June	2	1	1	4	9.30
July	1	0	0	1	2.33
August	0	3	0	3	6.98
September	0	0	0	0	00
October	3	2	1	6	13.95
November	1	2	0	3	6.98
December	2	1	0	3	6.98
Total	14	20	9	43	100

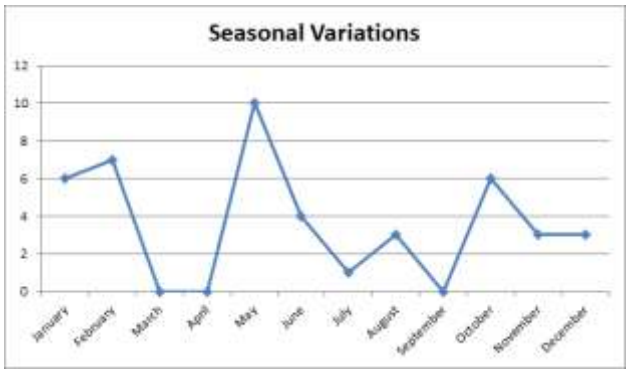

Fig.2
Seasonal Variations of deaths due to prescription drugs.

DISCUSSION:

Among the different leading causes of deaths globally, the share of deaths due to prescription drugs is enormously high[1]. In our study, the cases were viewed on the basis of autopsy record, police documents and chemical analysis reports from the Punjab Forensic Science Agency, Lahore. The most common prescription drugs of abuse in Faisalabad during this study period were 1st generation H1 antihistamines like chlorophenramine (34.88%), diazepam (23.25%) and morphine (18.60%) as shown in table 2. These drugs are generally used as a remedy in cold/allergy, as sleep inducing agents and as painkillers.

In these drugs, the surprisingly high percentage of Chlorophenramine (n=15, 34.88%) was alarming, as this drug is commonly used for

cold/allergy in day to day routine prescriptions. The side-effects of these first generation antihistamines are light headedness, muscle relaxation, mild to moderate hallucinatory experiences and euphoria [4,5]. This drug is most common in addicts due to its easy availability, cheaper prices and cost effectiveness .

Morphine and its derivatives like pethidine are available as injections and tablets and are used as a painkillers in emergency. This analgesic prescribing pattern is the same for all patients regardless of the pain intensity[1-3]. Prescription opioids are a major threat to public health in the United States[3,6,7] averaging 73.8% of total prescription drugs[8] which is much higher than Faisalabad (18.60%) .This vast difference may be due to easy availability and affordability of these drugs in the United States.

Deaths due to poisoning with Diazepam were 10 out of 43 (23.25%). This drug is generally used as a tranquilizer [8,9]. All these prescription drug abuse leads to respiratory depression due to their centrally acting effect. When we compare our results with Peshawar[1], percentage of prescription drugs abuse was almost the same.

Keeping in view the age group, comparison reveals that the most vulnerable group was 21 to 40 years (69. 77%) due to its major exposure to environment and society. Similar observations were made by Reetesh et al in India in 2011[10]. However, Bashir et al were of the view that the most vulnerable age group was 10-19 years[11]. On gender based comparison, 35 were males (81.39%) and 8 were females (18.60%) substantiating the findings of Anderson TL[13] that drug abuse is more common in the males.

CONCLUSION:

Deaths due to Prescription drugs abuse continue to be a major problem globally. There are several health and social factors that have contributed in its rise. As there is no singular contributory factor to this epidemic, there is no easy solution for proper containment and monitoring of prescription drugs[11].Prescribing doctor and pharmacist can play key role to check and limitize the use of these drugs by proper counseling and making the person aware of the side effects of these drugs and especially the prescribing doctors, must rationalize the prescription of these narcotics drugs.

The results of this study documents that the growing problem of the prescription drugs abuse places a substantial burden on society, especially in the domains of health care, criminal justice and lost place productivity[3].

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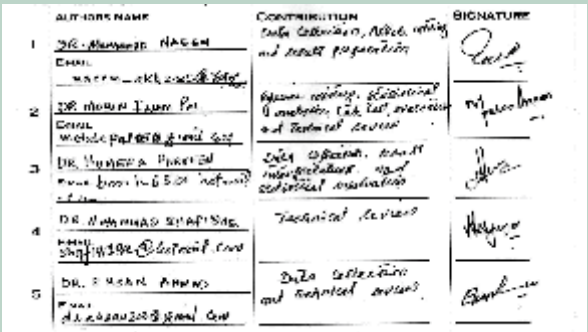

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O son of Adam, when you see that your Lord, the Glorified, bestows His Favors on you while you disobey Him, you should fear Him (take warning that His Wrath may not turn those very blessings into misfortunes).

Hazrat Ali (Karmulha Wajhay)