



Pattern Of Suicidal Poisoning Of Patients Visiting Medicit Institute Of Medical Science – In Ghanpur Village, Hyderabad, India

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Abstract

Background Suicide is a global social problem. Voluntary self poisoning is a common method of suicides in many countries. Pattern of self poisoning differs from country to country and even in the same country.

Aim And Objective :This study is designed to identify the methods used by the patients visiting Mediciti Institute of Medical Science hospital for a duration of one year. I.e. from may 2021 to april 2022.

Methods: Study included 65 patients who were hospitalized as a result of deliberate poisoning. Data was obtained from the medical records. Statistical analysis was carried out.

Results : Among 65 patients 43% were males and 57 % were females. 58.46% are in the age group of 21 to 30 years and 69.23% live in rural areas. 66.15% self poisoning is by using pesticides. Conclusion: Suicidal poisoning with pesticides is a serious social problem in young individuals and there is an urgent need for prevention plan.

Keywords: Pattern, Suicidal, Poisoning, Medicit Institute of Medical Science hospital

Introduction

Suicide is defined as a life-threatening action that starts intentionally by someone who knows the outcome. Close to 800 000 people die due to suicide every year, which is one person every 40 seconds. Many more attempt suicide. Suicide occurs throughout the lifespan and is the second leading cause of death among 15-29 year olds globally (1). Suicide is one of the main causes of death in the world. It is the 7th major cause of death in men and the 15th major cause of death in women. One million people throughout the world die due to suicide every year (2, 3). In developing countries the situation is quite different. (5) The substances most commonly used for self-poisoning are agricultural pesticides. (5)

Overall case fatality ranges from 10% to 20%. (6) For this reason, deaths from pesticide poisoning make a major contribution to patterns of suicide in developing nations, particularly in rural areas. (6) In rural China, for example, pesticides account for over 60% of suicides. (7) Similarly high proportions of suicides are due to pesticides in rural areas of Sri Lanka (71%), (8) Trinidad (68%), (9) and Malaysia (>90%). (10) There is, however, no evidence that levels of suicidal intent associated with pesticide ingestion in these countries are any higher than those associated with drug overdose in industrialized countries, where the drugs taken in overdose are less toxic.

Materials and Methods:

Study population: This was a descriptive and analytical cross-sectional study in which all cases of voluntary self-poisoning visit to Medicit Institute of Medical Science hospital Hyderabad, India during 1 year period from may 2021 to april 2022. There were no people with incomplete information and 12 people were excluded from this study that had left the hospital against medical advice. Diagnosis of voluntary self poisoning is based on medical reports.

Study included demographic profile of patients, toxic agent used, time of exposure , interval between poisoning and hospitalization (This is from the time the patient was identified and not the time when the patient has consumed the poison), duration of hospital stay, outcome and circumstances of poisoning, Data Analysis and results are presented as frequency and percentage with charts and tables.

Results :

TABLE NO1 SHOWING THE CASES RECEIVED FROM MAY 2021 TO APRIL 2022

MAY	JUN E	JUL	AUG		SEP	OCT	NOV	DEC	JAN	FEB	MAR	APRI L
5	4	3	5		6	6	3	6	4	10	8	5

TABLE NO 2 SHOWING THE POISONING AGENTS AND THE DEATHS.

	Pesticides	Supervasmol (Hair dye)	Pharmaceutical products	Others
	43	5	9	8
Deaths	6	2	0	0

Table No: Age wise and sex wise distribution.

5 -10		11 -20		21 – 30		31 – 40		41 – 50		More than 50	
0		6		38		11		8		2	
M	F	M	F	M	F	M	F	M	F	M	F
0	0	2	4	18	20	6	6	1	6	0	2

Table No 4: Showing demographic profile

Variable		Number of cases (n)	percentage %
Gender	Male	28	43.08
	Female	37	56.92
Age Group	5 to 10	0	0.00
	11 to 20	6	9.23
	21 to 30	38	58.46
	31 to 40	12	18.46

	41 to 50	7	10.77
	above 50	2	3.08
Marital status	Single	27	41.54
	Married	38	58.46
	Divorce / widowed	0	0.00
Household employment background	Agriculture	52	80.00
	Non Agric	13	20.00
Socio economic	BPL	24	36.92
	Middle	41	63.08
	Upper middle	0	0.00
Education	Below Primary	41	63.08
	Graduation and above	24	36.92

Results:

Between may 2021 to april 2022 from 4630 patients who were hospitalized in Medicit Institute of Medical Science hospital 83 were poisoned (1.79% of total individuals) and 77 are due to voluntary poisoning (92.77% of all poisoned patients visited) 12 patients are excluded from the study as they have left against medical advice. Of the total 65 patients 37 patients (56.92%) are females and 28 patients (43.08%) are males. Of the total 38 patients (58.46%) are married and 27 patients (41.54%) are not married. The mean age was 28.98 (SD = 9.86) in which the youngest and the oldest were 13 years and 63 years. As per the gender of the patients mean age for males 27.78 (SD = 6.61) and for females 29.89 (SD = 11.87) years. Majority of the patients are females with a male to female ratio of 1:1.32 According to the present study there is a significant gender difference showing more vulnerable to female sex. Majority of the patients are in the age group of 21 to 30 years (58.46%) followed by the age group of 31 to 40 years (18.46%). This indicates most patients are between adult ages ($p < 0.001$). Also shows that 58.6% are married and are more susceptible to voluntary self poisoning. 69.23% lived in the rural areas which indicate agriculture as main profession and easily availability of pesticides. Voluntary poisoning is seen more in the people with less than high school education and

people from middle class and below poverty line. We have not noticed people from the affluent societies during this period (this can be various factors which are beyond this study). Most of the patients are unemployed and house wives. Average time taken to reach the hospital is 47 min. Average hospital stay is 8.6 days. Agents of poisoning; most common agent (Table No 2) is pesticide poisoning (66.15%) of which Organo phosphates are pre dominant. Supervasmole (Hair dye) (7.69%), Pharmaceuticals (13.84%) and other poisons (12.3%). A total of 8 (12.3%) death were reported. If we consider as per the percentage supervasmole death amounted to (40%). Death due to pesticides is (13.95%) of total cases of deliberate poisoning by pesticides. No deaths were reported due to pharmaceutical poisoning or others. In all cases (100%) the route of poison is oral. 80% of the poison cases have occurred in the residence and in the absence of any individual in the house. All the cases (100%) occurred during 6:00 AM to 10:00 PM and there were no cases reported from 10:00 PM to 6:00 AM. As per the seasonal distribution April and May witnessed the highest number.

Discussion:

In the present study rural population is predominant because of the proximity of hospitals and

approachability to the nearby villages. There are no patients from upper socio economic status as this hospital is attached to a medical college and serves the mass population. In the study, Voluntary self poisoning is higher in women when compared to men. This is same in the studies Mashhad (11), west of Iran (12), India (13), Malaysia (14), Turkey (15), and Norway (16), and this can be attributed to the fact of easy vulnerability of women to self poisoning than males. Majority of them in the study were in the age group of 21 to 30 years similar to studies of India (13). No mortality was recorded below the age of 20 years. This shows that young adults are more vulnerable to this health problem which might be due to emotional and social disharmony. Age group of voluntary self poisoning is similar to that of the studies in other places like Sir Lanka (17), India (13) and Norway (16). The rate of voluntary consumption of poison is high in the people with low education levels when compared with people having graduation and high. This can be due to high maturity levels noted in the higher qualifications. Preventive interventions must be initiated from school. These interventions should include training in life skills (problem-solving ability, decision making ability, the ability to cope with stress and excitement, and so forth), so that the person would be prepared to face daily life problems. Parents and societies need to take an active role in continuous monitoring and behavior of their children. Timely counseling by friends and peer groups will help in prevention (18, 19, 20). In this study most cases appear to be married, exact reasons were not known but in the process of interview it has been appeared to be due to marital disharmony. Number of cases in the present study is higher from the rural background than the urban. This can be due to proximity of the hospital and easy approachability and absence of proper care in the rural areas.

Voluntary consumption of poison has occurred mostly in the daytime and in the residence. This shows that they were left alone in the house and the act was performed in the absence of people at home. Rural areas are far from hospitals. So, the lowest intoxication numbers are expected for rural areas. The major causative agent is pesticides as they are readily available at home in rural areas of India and are freely sold in the market. Among the pesticides, organophosphate compounds predominated with few

cases of organic carbonates, organo chlorides and two cases of bio pesticides. Second single causative agent is super vasmol (Hair dye) and this was mostly noted in the cases coming from the urban background. 40% of the cases who had consumed supervasmole have died during the course of treatment. There were cases of pharmaceutical agents which included over the counter drugs and two cases of benzodiazepines. None of the cases with pharmaceutical poisoning were lethal as all the cases had consumption of sub lethal doses which required less intervention. All the cases of pharmaceutical poisoning were more of a threatening warning to the household member for domestic arguments. There is seasonal variation showing more cases in the early summers. However the reasons may not be explainable.

Conclusion:

At risk patients are summarized based on the demographic profile. Some of the reasons were for voluntary consumption of poison. Given the high rate of self poisoning it is necessary to identify the risk factors and prevent them. More in-depth study including the social, economical causes to be obtained. Government may initiate procedures for safe sale of pesticides as this is the leading cause of voluntary consumption.

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