

PREVENTION OF DROWNING AND ITS SOCIETAL IMPLICATIONS

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ABSTRACT

Death by drowning is not an uncommon phenomenon when stresses of the modern day life compel the person to end the life. In the regions where water sources are in abundance, e.g. rivers, canals, lakes, ponds and places near sea, these are readily available for such persons to end their lives. Homicides may also effected by pushing a person into well or canal. Accidents do occur when a person is walking or driving along a water source. We have to find out the reasons, by doing proper epidemiological studies, to find out ways to prevent such unnatural deaths. Daily we read some person committing suicide by one mean or other. In this ongoing study conducted in mortuary of Govt. Medical College, Patiala, relation of various factors like marital status, sex, age, etc with drowning were studied.

Key Words: Drowning, Sucides

INTRODUCTION

Suicides are getting daily news in our life. With increasing stress in the life of the person, some yield to these pressures and end their life. Various modes are adopted for suicides and depending upon the availability of these modes, the method is different in different region. In region like ours, most common type of living is by agriculture and water being fed by canal like Bhakra canal and other natural and artificial rivers. This water source is uncovered and quite near the habitat of the people thus becoming adopted mode of suicide in this region. This study was done to find out the factors, which are responsible for death by drowning and what measures can be suggested to decrease this rate of drowning. This study was done with a view to address wide ranging issues such as injury prevention, waterways safety promotion, suicide prevention, leisure related and sport safety, disaster management, etc [1,2].

MATERIAL AND METHODS

This is an ongoing study done from January 2001 to September 2005. All the cases brought for postmortem examination in the mortuary of Govt. Medical College were studied. Details of the case facts were noted which had an implication on the drowning and its prevention. Study group consist of total 2780 autopsies conducted in department

of Forensic Medicine, Govt. Medical College, Patiala, Punjab. Deaths due to drowning cases were noted and all the relevant data needed were collected from the nearest relative.

RESULTS

A total of 2780 cases were studied, out of which in 121 cases cause of death was due to drowning.

Table1

No. of drowning cases in various age groups	
Age group	No. of cases
0-10	3
11-20	22
21-30	30
31-40	38
41-50	19
51-60	5
61-70	3
71-80	1
Total	121

Table 2
Year wise distribution of cases

Year	Autopsies conducted	Drowning cases	
		Identity known	Unknown
2001	567	18	4
2002	550	21	5
2003	634	21	3
2004	627	34	6
2005	402	27	7
Total	2780	121	25

Table 3
Sex distribution of cases

Year	Autopsies conducted	Sex of the person	
		Male	Female
2001	567	15	3
2002	550	18	3
2003	634	16	5
2004	627	24	10
2005	402	19	8
Total	2780	92	29

Table 4
Showing Marital Status of the person

Year	Marital Status				
	Married		Un-married		
2001	Male	7	5	Male	5
	Female	2		Female	-
2002	Male	11	2	Male	2
	Female	3		Female	-
2003	Male	6	10	Male	7
	Female	2		Female	3
2004	Male	14	12	Male	7
	Female	2		Female	5
2005	Male	8	8	Male	4
	Female	4		Female	4
Total	Male	46	37	Male	25
	Female	13		Female	12

Table 5
Showing the distribution of death in different quarter of year

Months	Deaths due to drowning
1 st January to 31 st March	20
1 st April to 30 th June	50
1 st July to 30 th September	39
1 st October to 31 st December	10

Table 6
Showing distance of the water source from their habitat

Distance of water source from their habitat	Death due to drowning
Less than 10 km	58
10 to 20 km	26
More than 20 km	12

In total 2780, cases were studied out of which we encountered 121 cases (4.35%) of drowning. Males (76.03%) were more prone to drowning as compared to females (23.96%). Marital status of 96 persons was known out of which 61.45% were married and 38.5% were unmarried. Distance of water source from residence was within 10 km in 58 cases, within 10- 20 km in 26 cases and in 12 cases; it was more than 20 km. It is more in rural areas 54 cases as compared to urban areas 42 cases. Age group of 21 - 40 years was more prone to drowning (56.2%). Out of all these cases, 10 were accidental and one was homicidal case. 41.32% deaths were in the post-harvesting quarter of year.

CONCLUSIONS

Males were more prone to die by drowning and married persons had more deaths by drowning [3,4]. Females did not prefer to die by drowning. Distance of water source from the residence mattered a lot in deaths due to drowning. Those living near the water source had more deaths as compared to persons who lived at distance from water source. Percentage age of deaths decreased as the distance of water source from the residence [5,6] increased. We suggest that water sources near residences should have barricades so that there is not an easy access to water sources when an impulse arise to commit suicide Automatic Sensors be installed or guards should be posted along the water sources near the populated areas. Psychiatric help should be readily available to people in stress. Mass education should be provided so that seeking of psychiatric help should not be considered a taboo. It should be preferable if water conduits are covered rather than open canal system particularly near the inhabited areas. On the bridges there should be adequate lighting so that accidental drowning may be avoided. Modern guard/guide rail, traffic barrier w-beam, appurtenances and impact attenuators should be installed which enhances the road safety and causes diversion of the vehicle away from waterways. Bridge railing crash tests should be conducted before inaugurating bridges. Modern in-vehicle warning systems should be mandatory to prevent such accidents. Most of rural deaths were from agricultural background, and deaths were in post-harvesting season, with some relation to

monetary problems, so steps are necessary from the governments to ease loans and benefits to such communities.

Following conclusion were found from the study done

1. Most of the person dying due to drowning was from age group 21 to 40, which is most active age and exposed to external pressures.
2. Male opted for suicide with drowning as compared to females.
3. Married person found to commit suicide more as compared to unmarried person and that too males opted for drowning as mean of suicide
4. Maximum number of death due to drowning was in second quarter of the year i.e. from 1st April to 30th June.
5. Death due to drowning was found maximum in person whose residence was within 10km from the water source.

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