

# A study of personal habits and associated addictions in suicides and para suicides at tertiary health care center

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## Abstract

**Introduction:** Our eating habits have changed a lot during the evolution of mankind. What one eats will influence the lipid levels. Especially cholesterol in particular. Cholesterol is an important steroid of the body. It is found in the brain and other nervous tissues. Adrenals and pancreas. It is derived equally from the diet and biosynthesis. **Aims and Objectives:** To Study of Personal habits and associated addictions in suicides and Para suicides at tertiary health care center **Materials And Methods:** The present study was undertaken in patients admitted, in the department of medicine, Krishna hospital and research centre, Karad, with the history of attempted suicide during the period of jan 1995 Dec 1996. Eighty consecutive patients with history of attempted suicide during the period of 1995-1996 were included in the study. The patients with attempted suicide included: Organochloride poisoning, Organophosphorus poisoning (opp), Sleeping pills, Unknown poisoning, Hanging Miscellaneous Out of these, Control groups consisted of 41 patients. They were either healthy controls or those were admitted for illnesses other psychiatric illnesses. **Result:** The mean age of the parasuicides was slightly lower than that of the controls and suicidal cases. This difference was however not significant ( $t=2.0p> 0.5$ ) The distribution of males was higher in all the groups. The dietary habits of the study subjects were not significantly different amongst the three study groups. Proportion of smokers was low in all the study groups. Due to the small number of smokers, no statistical inference could be drawn. The prevalence of alcohol consumption was low among all the 3 groups. A crude analysis showed that a small amount of alcohol consumption was not significantly associated with the risk for suicides or parasuicides. **Conclusion:** The Personal habits and Addictions like dietary habits, Smoking and Small amount of alcohol consumption was not significantly associated with Suicides or Para-suicides **Keywords:** Suicides, Para suicides, Personal habits.

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## INTRODUCTION

Our eating habits have changed a lot during the evolution of mankind. What one eats will influence the lipid levels. Especially cholesterol in particular. Cholesterol is an important steroid of the body. It is found in the brain and

other nervous tissues. Adrenals and pancreas. It is derived equally from the diet and biosynthesis. Virtually all tissues. That contain nucleated cells, are capable of synthesizing cholesterol. The microsomal and cytosol fraction of the cell is responsible for the cholesterol synthesis. Cholesterol, one of the most important substances in the body, is the precursor of a large number of biological substances, e.g. bile acids, adrenocortical hormones, sex hormones, vit D, cardiac glycosides etc. its association with atherosclerosis is well known<sup>1</sup>. It has been proved beyond doubt that the increased levels of cholesterol are associated with coronary heart disease, hypertension etc. medical profession in particular and modern health services in general, world over, have been trying to reduce the mortality and morbidity from coronary heart disease, during the last five decades. The

primary prevention trials were aimed at lowering serum cholesterol level by means of diet and or drugs<sup>2</sup>. This resulted into significant reduction in deaths due to coronary heart diseases. But simultaneously mortality rates due to causes other than ischaemic heart disease were found to be increased. An important observation in these studies was that there was an increase in the number of suicides and violent deaths<sup>2</sup>. Suicide is a major health and social problem and is now included amongst the first ten causes of deaths in adults. It is estimated that, in the worlds, 1000 persons attempt or commit suicide everyday<sup>3</sup>. In united states alone, it has been estimated that there are over 75 suicide per day i.e. one suicide every 20 minutes. And more than 25.000 per year. In India, according to available data there is one suicide every six minutes<sup>4</sup>. Total suicidal deaths have increased by 5.9% in 1994. In all 89195 suicidal deaths were reported during 1994<sup>4</sup>. West Bengal has the highest suicide rate. Suicidal deaths have increased at a compound growth rate of 6.2% against population growth of 2.1% the rate of suicides grew at a compound rate of 4% during the last 6 years<sup>4</sup>. The magnitude of growth in the incidence in the rate of suicides is quite alarming when we compare them against the backdrop of compound growth of 2.1% population. As more and more trials for lowering cholesterol have, and are being undertaken with an aim to reduce the incidence of coronary heart disease, it has been clearly observed that there is an increase in deaths due to suicides. We therefore thought it worthwhile to look into the hypothesis that there is likelihood of association between the levels of cholesterol and other lipids and tendency to attempt or commit suicide or parasuicide. Suicide is a major heaths problem and is now included in the first ten causes of aduit deaths. It is estimated that in the world about 1,000 person commit suicide each day. In united states, there are approximately 75 suicide/day. One every 20 minutes, more than 25,000/years. The number one suicide site in world is golden. more bridge, in san Francisco with more than 800 suicides since it was opened<sup>3</sup>.

**MATERIALS AND METHODS**

The present study was undertaken in patients admitted, in the department of medicine, Krishna hospital and research center, Karad, with the history of attempted suicide during the period of Jan 1995 Dec 1996. Informed consent was taken from all the participants in the study - Eighty consecutive patients with history of attempted suicide during the period of 1995-1956 were included in the study. The patients with attempted suicide included: Organochloride poisoning. Organophoshorus poisoning (opp), Sleeping pills, Unknown poisoning, Hanging

Miscellaneous Out of these, 14 patients were subsequently excluded from analysis because of the associated conditions which were likely to have affected cholesterol levels like diabetes mellitus, heavy alcoholism and ischemic heart disease etc. Control groups consisted of 41 patients. They were either healthy controls or those were admitted for illnesses other psychiatric illnesses. All the individuals with conditions which were likely to affect levels of cholesterol were excluded (diabetes mellitus, alcoholism, etc.) from the analysis. Obese individuals were excluded from the study excluded from the study. Subjects on medical dieting and on drugs that were likely to the have an effect on lipid metabolism were also excluded. The following investigations were done in all cases on the first and the fifth days of admission. Controls had only one estimation, Serum total cholesterol, Serum Triglycerides, Serum HDL, Serum LDL, and Serum VLDL.

**RESULTS**

**Table 1:** Age distribution in the cases of suicides, parasuicides and controls

	Range(years)	Mean
Suicides	20-75	35-8±14.62
Parasuicides	15-65	26.72±10.17
Controls	17-70	38.07±15.81

The mean age of the parasuicides was slightly lower than that of the controls and suicidal cases. This difference was however not significant (t=2.0p> 0.5).

**Table 2:** Sex distribution of the cases of suicides, parasuicides and controls

	Sex	Number(%)
Suicides	Females	3(10)
	Males	10(76.9)
Parasuicides	Females	22(41.5)
	Males	31(58.5)
controls	Females	10(24.4)
	Males	31(75.6)

The distribution of males was higher in all the groups.

**Table 3:** Distribution of the dietary habits of the study subjects

	Diet	Number (%)
Suicides	Mixed	10(76.9)
	Vegetarian	3(23.1)
Parasuicides	Mixed	43(81.1)
	Vegetarian	10(18.9)
Controls	Mixed	29(70.7)
	Vegetarian	12(29.3)

The dietary habits of the study subjects were not significantly different amongst the three study groups.

**Table 4:** Distribution of smoking among the study groups

	Status	Number (%)
Suicides	Non-smoker	13(100)
	Smoker	0(0)
Parasuicides	Non-smoker	51(96.2)
	Smoker	2(3.8)
Controls	Non-smoker	40(97.6)
	Smoker	1(2.4)

From the above table it is seen that the proportion of smokers was low in all the study groups. Due to the small number of smokers, no statistical inference could be drawn.

**Table 5:** Alcohol consumption within the study subjects

	Status	Number (%)
suicides	Non-alcoholic	13(100)
	Alcoholic	0(0)
Parasuicides	Non-alcoholic	47(88.7)
	Alcoholic	6(11.3)
Controls	Non-alcoholic	36(87.8)
	Alcoholic	5(12.2)

The prevalence of alcohol consumption was low among all the 3 groups. A crude analysis showed that a small amount of alcohol consumption was not significantly associated with the risk for suicides or Para suicides. Heavy alcoholics were excluded from the study as they also had evidence of live cell damage affecting lipid metabolism.

## DISCUSSION

The peak rate of parasuicidal acts is recorded between the ages of 15 and 34 years, with the minimum incidence being reached after 55 years<sup>7,9</sup>. Similarly, the incidence of drug self-poisoning attempts peaks at the age of 15–25 years<sup>8,10</sup>. At least half of the patients making suicidal gestures do so using prescription drugs<sup>11</sup>. The most frequently involved are psychotropic medications, which are used in 80% of the cases of fatal deliberate self-poisoning and 68% of Para suicides<sup>12,13</sup>. Over the last few decades, there has been a considerable change in the types of drugs more frequently responsible for self-poisoning: barbiturates were the principal cause in the 1960s but, since the 1980s, the benzodiazepines have been the most frequently involved<sup>14</sup>. The data of McLoone and Crombie<sup>10</sup> indicate an increase in the number of cases of paracetamol intoxication for parasuicidal purposes as from the 1980s, followed by analgesics, antirheumatics, antidepressants and antipsychotics. These data were confirmed by Bialas *et al.*<sup>8</sup>, who found that paracetamol was used for parasuicidal acts in 43.3% of the cases in 1992–1993, as against 31.3% in 1987–1988. The involvement of antidepressants increased from 11.3% in 1987–1988 to 17.6% in 1992–1993<sup>8</sup>, whereas there has been a trend

towards a decrease in the parasuicidal use of benzodiazepines, particularly among women<sup>10,15</sup>. The data of Alsen *et al.*<sup>13</sup> indicate that there is no significant difference in the distribution of the drugs used for parasuicide and completed suicide but, according to Michel *et al.*<sup>12</sup>, only barbiturates are significantly associated with fatal self-poisoning, whereas there is no significant difference in the case of tricyclic antidepressants, which are involved in 13% of deaths due to self-poisoning and 10% of parasuicidal acts<sup>12</sup>. The estimated annual incidence of parasuicides in Europe is between 300 and 800/100,000 inhabitants aged more than 15 years, with significant inter-country differences<sup>16</sup>. Meehan *et al.*<sup>17</sup> suggest that more than 75% of non-fatal suicidal gestures are not included in the official figures. Current knowledge of the real incidence of parasuicides in Italy is particularly limited by the lack of official statistics, which almost exclusively relate to fatal cases. Parasuicidal behavior is one of the most significant risk factors for death due to suicide, given that 30–60% of such deaths are the outcome of a series of characteristically repeated attempts<sup>18,19</sup>. Over the last few decades primary preventive trials have been conducted all over the world to decrease the mortality from coronary heart disease and predisposition to atherogenesis. The results are well known. The primary prevention studies showed that with reduction of cholesterol, although the mortality from coronary heart disease was substantially decreased, there was no significant decrease in the total mortality<sup>5</sup>. It was further observed that there was a significant increase in the mortality from other causes such as accidental deaths, suicides and violent behavior. Association of low cholesterol and suicides and parasuicides has been reported in recent years<sup>5</sup>. Effect of smoking: In this study, we observed that the proportion of smokers among all study groups was low. In suicides, 13 (100%) patients were nonsmokers. In parasuicides, 51(96.2%) were nonsmokers while 2 (3.8%) were smokers. In controls, 40 (97.6%) were non-smokers and 1 (2.4%) was a smoker. However, we did not observe any effect of smoking on the cholesterol levels either in the suicides or the Para suicides. In quantitative comparison of six trials by Mathew Muldoon, the prevalence of smoking ranged from 36% to 79%<sup>5</sup>. Alcohol consumption: In this study we observed that there was no effect of alcohol consumption (mild to moderate) on cholesterol levels. In Para suicides, 47 (88.7%) were non-alcoholics. While 6 (11.35%) were alcoholics. In suicides all the 13 (100%) patients were non-alcoholic, whereas in the controls, 36 (87.8%) were non-alcoholic and 5(12.2%) were alcoholics. Heavy alcoholics were excluded from this study as they also had evidence of liver cell damage affecting lipid metabolism. Alcoholic increases

triglyceride levels and also raises HDL levels but it has little effect on LDL metabolism. However, in a few studies it has been found that levels of total cholesterol are low in patients with alcohol dependence syndrome<sup>1</sup>Diet: The dietary habits amongst the study group were studied. Diet was classified into mixed diet which included both a vegetarian and non-vegetarian items and a purely vegetarian diet. In suicides, 10 (76.9%) patients were on mixed diet, while 3 (23.1%) were with purely vegetarian Para suicides 43 (81.1%) had mixed dietary habits while 10 (18.9%) consumed a purely vegetarian diet. In the controls, 29 (70.7%) were on a mixed diet while 12 (29.3%) were purely vegetarian. The study showed that there was no significant association between risk of suicide, Para suicide and diet. Although the risk is slightly higher for those who were on vegetarian diet, it was not statistically significant (or: 2.76.  $p=0.1235$ ). Diet affects cholesterol levels<sup>6</sup>. Three types of saturated fatty acids lauric acid, myristic acid and palmitic acid raise serum cholesterol levels the influence of dietary cholesterol is variable and is enhanced when the cholesterol is consumed as saturated fatty acids.

## CONCLUSION

The Personal habits and Addictions like dietary habits, Smoking and Small amount of alcohol consumption was not significantly associated with Suicides or Para-suicides

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