

Suicide attempts by self-poisoning in elderly

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BACKGROUND: Suicide is a major public health concern. This investigation assessed elderly patients treated for self-intoxication in a poisoning referral center. **METHODS:** A retrospective and descriptive study was performed from the point of view of demographic, psychiatric and clinical factors related to the self-poisoning for suicide attempts in subjects aged over 65 years. **RESULTS:** The examined population consisted of 43 subjects including 30 males and 13 females with an age of 65 to 83 years (mean age = 72.5 years in males and 73.5 years in females). The majority of subjects were retired [35(81.4%)] and, many cases lived with their family [39(90.6%)]. 27.9% of subjects had been undergoing psychiatric treatment. Depressive disorders (reactive) and endogenous depression (affective) were recognized in 8 subjects (66.7%). 51% suffered from chronic diseases including hypertension (33.3%), coronary artery disease (30.4%), chronic obstructive pulmonary disease (15.9%) and diabetes (10.1%). Two cases had a history of previous suicidal attempt. The most frequently used substances in the attempts were medications (58%), opioids (23.2%), pesticide (11.6%) methanol (4.6%) and hair remover (2.3%). The mean duration of hospitalization was 1.3 days. **CONCLUSIONS:** The high rate of depression and chronic diseases in elderly with suicidal attempt necessitates preventive interventions.

KEYWORDS: Poisoning, Elderly, Suicide, Chronic Diseases

BACKGROUND

The world's population has experienced a magnificent growth in the number and proportion of the elderly. One in every ten people is now 60 years or above; by 2050, one in five will be 60 years or older.^[1] Suicide is a major public health matter. Suicide rates increase with aging in many countries and the study of self-harm in the elderly may provide an advantageous insight into suicide.^[2] The elderly have the highest rate of suicide and they make more lethal suicide attempts.^[3] Furthermore, crises often associated with increasing age, such as deteriorating health, loss of independence, death of a spouse, and retirement may be contributing or precipitating factors to suicide in the elderly population.^[1]

It is believed that a better understanding of the methods used by older people for suicide may lead to the development of targeted preventative strategies.

Although the elderly form a relatively small proportion of those admitted to hospital for acute self-poisoning, the poisoning which ensues is often more serious, complications are more frequent and a fatal outcome is more common. The physiological changes of aging process, the presence of concomitant and often multiple physical, psychiatric, and social problems, in conjunction with possible diffi-

culties in the diagnosis of poisoning may all make the management of the elderly more complicated than that of younger poisoned patients.^[4]

There are three main difficulties in diagnosing acute poisoning in the elderly. Firstly, it may not be easily obvious that the patient has taken an overdose; secondly, the presence of pre-existing physical illness may obscure the clinical picture; and thirdly, the drug may cause physical signs that fail to differentiate with common problems of old age.^[4]

Poisoning have become one of the most common causes of acute medical illness in many developed as well as developing countries.^[5] Self-poisoning accounts for over 100,000 acute hospital admissions per year in the UK^[6] and poisoning is the commonest form of fatal self-harm in Asia, accounting for over 60% of all deaths.^[7] Although there are some articles on specific aspects of poisoning in the elderly, such as suicidal poisoning, adverse drug reaction, medication mistakes and inappropriate prescribing, studies focusing on self-poisoning as a suicidal attempt in the elderly as a whole are limited.^[4,8-13]

This study aimed to present suicidological problems on self-poisoning as a suicidal attempt in the elderly.

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METHODS

A retrospective and descriptive study was performed from the point of view of demographic, psychiatric and clinical factors related to suicide attempts by self-poisoning in patients aged 65 years and older attended to the emergency department of the Noor Hospital in 2007. Noor teaching hospital is the only referral center for poisoned patients in the province of Isfahan, and gives not only medical but also psychological attention to a wide range of patients.

All cases that were diagnosed with self-poisoning (aged 65 years or above) were included. The diagnosis was recognized by history, physical examination, and routine and toxicology laboratory evaluation. Data were collected by physicians using a standardized questionnaire. Information was obtained from the medical records. Study variables included demographic characteristics, general health status before intoxication, quality of life, the toxic agent, history of psychological disease, previous suicidal attempts and drug abuse, length of hospitalization and outcome. All patients underwent psychiatric counseling before discharge.

RESULTS

The examined population consisted of 43 subjects including 30(69.7%) males and 13(30.3%) females.

The mean age were 72.5 in male and 73.5 in female (ranging from 65 to 83). The majority of subjects were retired [35(81.4%)] and many cases lived with their family [39(90.6%)]. 27.9% of subjects had been undergoing psychiatric treatment [12(27.9%)] (Figure 1). Depressive disorders (reactive) and endogenous depression (affective) were recognized in 8 subjects (66.7%). 13.9% of them were smoker, 11.6% were opium addict and 2.3% were alcohol drinker. 51% had suffered from chronic diseases; the most frequently determined somatic diseases were hypertension (33.3%) and coronary artery disease (30.4%), chronic obstructive pulmonary disease (15.9%) and diabetes (10.1%).

For 41 of the subjects (95.3%), it was the first suicide attempt and in 2 cases there was a history of previous suicidal attempt and 2 cases (4.6%) had threatened suicidal attempts. The toxic agent that was most frequently used in the attempts were drugs [25(58%)] including (psychotropic, antidepressant, cardioactive and mixed-type drugs), opioids [10(23.2%)], pesticide [5(11.6%)] methanol [2(4.6%)], hair remover [1(2.3%)] (Figure 2). Three patients died (7%); one before arriving into the hospital and the others within the hospital. The main agents in fatal cases were the mixed drug. 7 cases (16%) recovered with complication and 33 patients (77%) without complications. Nine (21%) of hospitalized patients were admitted to Intensive Care Units. The duration of hospitalization was more than 24 hours in 13 cases and less than 24 hours in 20 cases.

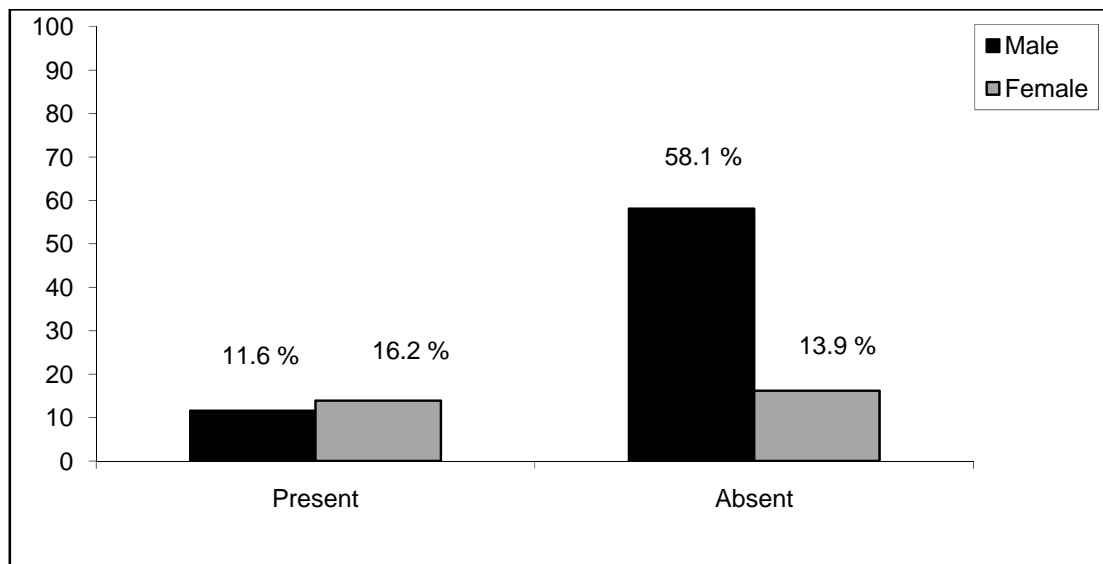


Figure 1. The distribution of frequencies of presence or absence of psychiatric problem

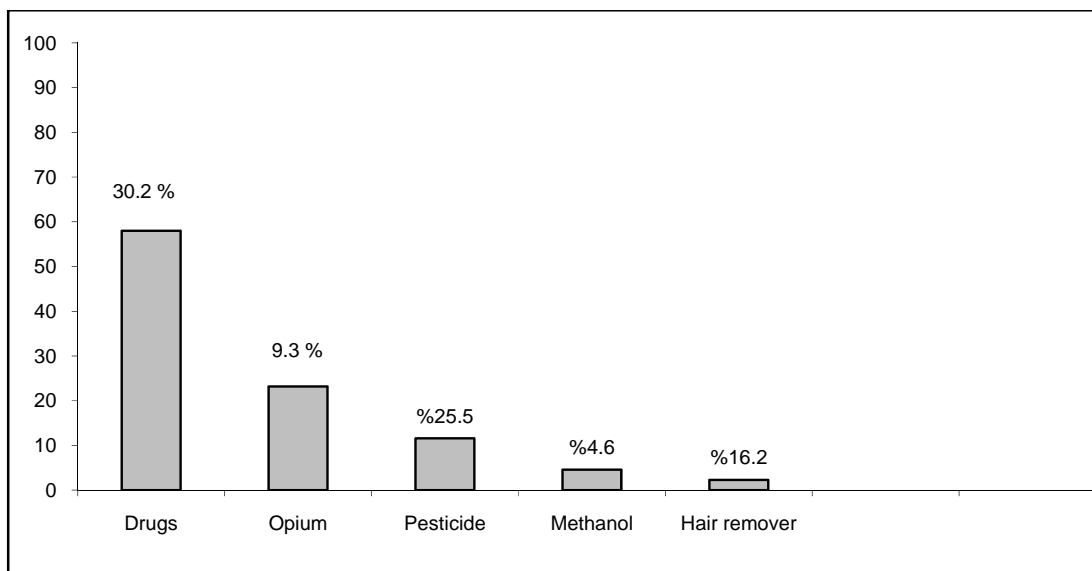


Figure 2. The distribution of frequencies of toxic agents

DISCUSSION

Self-poisoning is an attempted suicide in the elderly; however, relatively little attention has been made and it is only in the past few years that the scientific community has begun to show an increasing interest in this topic. The elderly are a high-risk population for suicide and poisoning may be a common method for suicidal attempt.^[1] The changes in culture and family resulting from industrialization and urbanization over the last century have altered the social role of the aged, leading to an increase in the suicide rate of the elderly.^[2] In addition, simultaneous use of different drugs, comorbidities, age related differences in drug metabolism and altered psychological status were resulted in both increased risk of poisoning and complications of self-intoxication. In Asia, despite the high number of suicides, very few studies have been conducted in this topic. In many of these countries, the suicide rate in the elderly is very high compared with the younger age groups with a higher ratio of suicide attempts in men, which is unlike our findings.

In Italy, 6.75% of geriatric hospital admissions by suicidal attempts were due to poisoning, (67% female, 77% more than 70 years old), in which 66% were hospitalized, 62% of all self-intoxications were drug overdoses, in which 83% were due to oral ingestion and incidental ones.^[14]

In a 10 years survey, showed that 7.7% of all intoxications cases were older than 60. The rate of geriatric intoxication was increased from 4.8% in 1992, to 8.8%

in 2003. At all, 53% of geriatric self-intoxications were intentional ones.^[15]

In Italy, 61% of intoxications were due to drug intoxications and 16% were intentional. In Ireland, intentional intoxications were 37.2%. Intoxicated old males were 67% in Ireland and 57% in Italy, while it was 69.7% in our study. On the other hand, male-to-female ratio was 3.6/1 in Italy and 0.75/1 in Ireland, in WHO report, while it was 2.3/1 in our study. These differences may be, somehow, due to the different socioeconomic and cultural status of the population under the study. The average hospital length-stay was reported to be 8.7 day in USA,^[15] but it was only 1.3 day in our study, perhaps it is due to differences of access to medical facilities.

This study indicates that there is a higher rate of suicide attempts among patients with previously diagnosed psychiatric problems and this was compatible with other study, but unlike Karbakhsh and colleagues study,^[1] past history of suicidal attempts in these patients was not significant. These findings refer to the importance of psychiatric consultation and follow up in elderly patients with a history of mental illness or threatened or attempted suicide.

Hence, intentional intoxications are preventable causes of death, which targeting its risk factors is a good intervention with great benefits. This needs paying attention to elders especially whom are suffering from an underlying medical disease and simultaneous use of different drugs, granting their spiritual petitions

and seeking their psychological needs. Therefore, opportunistic screening of suicidal thoughts, in mass or at risk patients screening strategies in specific groups, is highly recommended. At risk patients are summarized as those suffering from depression, previous suicidal attempts, medical disease and social isolation. Multiplicative role of risk factors is obvious. Some life style modifications and improvement in elders' psychosocial-spiritual needs will result in decrease in geriatric suicidal attempts. It needs thinking to elderly as aging process.

CONCLUSION

Up sloping trends toward suicide in elderly by potential toxic agents, draws our attention toward this point that selection of death type is becoming an option among elders. Keeping familiarity with its own risk factors and meeting them needs great commitment, while depression, chronic diseases and previous suicidal attempts, are walking through the same line. Identification of regional and global risk factors for self-intoxication and setting some preventive programs among elders seem to be a critical need.

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