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RESEARCH

HOMICIDE AND SUICIDE IN THE ELDERLY: DATA FROM AYDIN

ABSTRACT

Introduction: Homicide, the most unacceptable way of abuse, is increasing especially among elderly who have insufficient self-defense. Besides, elderly who have no family or social support, commit suicide. Since they are preventable, homicide and suicide are very important for people above 65 years old.

Materials and Method: The autopsy records between 01.01.2003-31.12.2007 of the cases above 65 years old were reviewed and findings of the 148 homicide-suicide cases were assessed.

Results: During five-year-period, 10.9% (148) of the total 1347 autopsies were elderly. Among total, suicide rate was 11.5% and homicide rate was 7.4%. The death cause of the half of the homicide-originated elderly women was suffocation. The common features of these cases were; living alone, unknown perpetrator and found decayed. Of suicide cases, 13 were under drug therapy. Two of the cases under psychiatric therapy had previous suicide attempt. Among suicide cases, two of three female cases and six of 14 male cases used hanging method. Of the total homicide-suicide-originated cases, 64.3% were found dead at home. Conclusion:Lack of social and psychological support, which can lead to homicide and suicide, is increasing day by day.

Key Words: Aged; Homicide; Suicide; Autopsy.



ARAŞTIRMA

YAŞLILARDAKİ İNTİHAR VE CİNAYETLERİN AYDIN VERİLERİ

Öz

Giriş: İstismanın en kabul edilemez şekli olan cinayet özellikle kendilerini savunamayacak düzeyde olan yaşlılar arasında artmaktadır. Bunun yanında, aile ve toplum desteği olmayan yaşlılar kendi canlarına kıymaktadır. Özellikle intihar ve cinayet kaynaklı ölümler, önlenebilir olmaları nedeniyle 65 yaş üstü bireyler açısından çok önemlidir.

Gereç ve Yöntem: Aydın'da 01.01.2003-31.12.2007 yılları arasında yapılan, 65 yaş ve üzerindeki tüm olguların otopsi kayıtları incelenmiş, cinayet ve intihar orijinli 148 olgunun bulguları değerlendirilmiştir.

Bulgular: Beş yıllık süreç içinde yapılan 1347 otopsinin %10.9'u (148) yaşlılardır. Bu olguların %11.5 intihar, %7.4 cinayet olarak saptanmıştır. Cinayet orijinli yaşlı kadınların %50'sinin ölüm nedeni ağız-burun tıkanmasıdır. Bu olguların yaygın özellikleri; yalnız yaşamaları, failin meçhul olması ve çürümüş olarak bulunmalarıdır. İntihar olgularından 13'ü ilaç tedavisi almaktaydı. İki psikiyatrik tedavi alan olgu daha önceden intihar girişiminde bulunmuştur. İntihar orijinli olguların üç kadından ikisi ve 14 erkekten altısı asi yöntemini kullanmıştır. Cinayet ve intihar orijinli olguların %64.3'ü evlerinde ölü olarak bulunmuşlardır.

Sonuç: Cinayet ve intiharlara neden olabilen sosyal ve psikolojik destek yoksunluğu gün geçtikçe artmaktadır.

Anahtar Sözcükler: Yaşlı; Cinayet; İntihar; Otopsi.

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INTRODUCTION

Elderly population is increasing worldwide. In Turkey, between the years of 1985-2005, elderly population has increased by 3.7% and accounts for 7.9% of the whole population(1). Rise in the elderly population also causes a rise in the elderly forensic problems (2,3) and the elderly are probable victims for the communal violence. Because of their physiological characteristics, elderly encounter many difficulties and poor outcome (4), and also life can be considered as more difficult for the elderly because of their physical disabilities.

Deaths from homicide and suicide origins are considered as forensic deaths in our country. Suicide in the elderly produce a very important public health problem as suicide rates in the elderly have been reported to be higher than the other age groups (5). Although suicide behavior tends to decrease among Islamic populations (6), suicide rate in the elderly population was 8.9% in Turkey (1) between the years of 2003-2006. The global mean annual suicide rate per population of 100.000 is 22.5 in the elderly (7). This discordance may be due to religious beliefs.

Although there are many studies defining forensic deaths of the elderly, this study is one of the few studies which identify homicide and suicide rates in the elderly in Turkey.

The objectives of our study were to assess the data of forensic deaths of the elderly population and to define the causes and origins of these deaths in our district.

MATERIALS AND METHOD

Setting

Aydin is a city located in Western part of Turkey which is a more developed region of the country. Its population is one-million. Adnan Menderes University, School of Medicine, Department of Forensic Medicine is the only authorized forensic unit which serves all parts of the city.

In Turkey, district attorneys decide which deaths are forensic. All homicide and suicide cases are considered as forensic deaths and undergo autopsy, so in this study all homicide and suicide rates were specially evaluated. In Aydin, all autopsies are performed in the same day of the death by the staff of the Department of Forensic Medicine, under the observation of District Attorney. After autopsies, all are reported. In this study, these autopsy reports were used under the permission of Department of Forensic Medicine.

Cases

The expected life span in 1998 is about 69 in Turkey (8), so the population over 65 can be considered as elderly. During the period from 01.01.2003 to 31.12.2007 in Aydin, all the cases over 65 years old were included in this study. Information about sociodemographic features, origin, reason of death, crime scene, time of death, location, disease and drug history, trauma region were assessed.

Statistical Analysis

Results were given in numbers and percentages. Chi-square, Student T, Fisher's exact tests were used for the statistical analysis. A p value smaller than 0.05 was considered as statistically significant.

RESULTS

During this period, 1347 autopsies were performed. Among these, elderly population (over 65 years of age) accounted for 10.9% (148 cases). Thirty six of them were female (24.3%). Male/female proportion was 3/1. Mean age was 73 ± 6.2 (75.6 ± 7.5 for women and 73.2 ± 5.6 for men). Mean height of women was 156.8 ± 5.2 cm and 168.4 ± 6.8 cm for men. The differences between gender regarding age and height, were statistically significant ($p=0.041$ and $p=0.000$ respectively). Of them, 28 cases (18.9%) were homicide and suicide-originated (HSO). Seventeen of 28 (11.5%) were suicide-originated and 11 (7.4%) were homicide-originated. Nine of HSO cases were female. There was no statistically significance between gender and origin ($p>0.05$).

Autopsies were performed mostly in July and September (10.8% for both), and the least rate was in November (4.7%) but it was not statistically significant ($p>0.05$). Among the elderly cases, 44 (29.7%) were from urban and 104 (70.3%) were from rural parts. Of the total, 43 (27.7%) were living lonely and 105 (70.9%) were living with relatives. Among 11 homicide cases, 6 of them were female and in 3 of them, the cause of death was suffocation. The common features of these cases were: 1.living alone, 2.unknown perpetrator and 3.found putrefied. For the other two, the common feature was also living alone. All of the female cases, except one, were reported as living at a rural part of Aydin. There was no toxic substance in these bodies. There was no statistically significance in relation to gender or living alone ($p>0.05$). Also no significance was found in relation to origin and living alone ($p>0.05$).



Bodies were found outdoors (69 cases), inside the house (59 cases) and unknown places (20 cases). HSO cases were mostly found inside the houses (18 cases-64.3%) and this was statistically significant ($p=0.01$). Among 5 male homicide cases, three cases were living in rural parts. Four of males were living alone. In one case, 0.35 promiles of ethyl alcohol was found. 4 cases were found at home. Among the cases living alone, one case began to putrefy.

Among 17 suicide cases, 15 of them (88.2%) were living in rural parts. Only five of suicide cases were living alone. Among total suicide cases, seven of them had been under psychiatric treatment, five of them were under systemic disease treatment and one of them under cancer treatment. Two of the psychiatric cases had a previous history of suicide intervention. Of the three female suicide cases (17.6%), two of them used the method of hanging and in the other, organophosphate poisoning was detected. Of the 14 male cases, six of them used the method of hanging, three of them used a gun, two of them it jumped from a height, in two of them organophosphate poisoning was detected and in one of them the death cause was burning.

In 2006, although the number of autopsies was larger, HSO deaths were less; whereas in 2004, eight of 26 autopsies were HSO and this was statistically significant ($p=0.035$) (Table 1).

Of the 28 homicide and suicide originated bodies, 25 had findings which could explain the cause of death. In the other 120 bodies which were originated from miscellaneous causes, 84 showed findings in physical examination, but this was not statistically significant ($p>0.05$). 21 HSO bodies (75%) had findings that proved physical violence, while 60 due to other causes (50%) had findings of physical violence. This difference was statistically significant ($p=0.02$).

All the hanging deaths occurred during suicidal interventions and there was no poisoning among homicides. These findings were statistically significant ($p<0.0001$ and $p=0.011$ respectively). None of the HSO bodies had previous chronic disease history ($p<0.0001$).

Traumas were mostly encountered in the head region. There was no trauma finding in four homicide-originated cases, while in those due to other reasons this number was 58 ($p=0.001$). The most common trauma site was head-neck in the suicide-originated cases and this was statistically significant ($p=0.001$).

DISCUSSION

In our study, elderly autopsy cases accounted for 10.9% of the total. In the study by Haluk et al., this rate is 7.8% (9). Homicide and suicide origins accounted for 18.9% which can be considered as higher compared with the literature. In Osaka, during 1994-1998, this rate is 13.2% (10). In another study by Collins and Presnell, this rate is 12.4% (11). In our study, suffocation was the most common method in homicide cases, while gun shot is the most common method in other studies (12,13).

In our study, male/female proportion was 3:1 and this was concordant with other Turkish studies (3,9). In the literature, this rate is changing from 3:1 to close to one (10).

Psychiatric illnesses are associated with suicide tendency. In our study, among suicide cases, 63.3% of them had been under psychiatric treatment and this was concordant with other studies (14-16). In the elderly, 19% of the female and 9% of the male victims had a history of previous suicide attempts (7).

In our study, hanging was the most common method among suicide cases (47.1%). In another study held in Aydin

Table 1— The Dispersion of the Medicolegal Autopsies of the Subject 65 Years and Older to Sex and Annual Medicolegal Autopsy Count

Years	Total Autopsy Number	Elder Autopsy		Total
		Female n	Male n	
2003	240	7	1	8
2004	275	6	20	26
2005	295	4	30	34
2006	274	5	40	45
2007	263	14	21	35
Total	1347	36	112	148



this result was similar (17,18). Hanging is the most frequently suicide method used by the elderly also in Austria (19) and many other countries (9,18). Using poisoning and chemicals was very rare in our study and this was contradictory to Pritchard and Hansen's study (18).

Most of our suicide cases (88.2%) were living in rural parts and this was concordant with other studies (7,18). Of the elderly suicide victims, 82.4% were males and this result was similar to other studies (7,18, 20,21).

While some studies report an increased risk of suicide among cancer patients (22,23), only one of the cases was under cancer therapy in our study. In our study, 13 of 17 suicide patients (76.5%) were under some treatment. This may be due to patients with especially psychiatric diseases who have a tendency to suicide more easily as suggested by Pritchard and Hansen's study (21).

In our study, bodies were mostly found in their houses while in other studies (9,24), outdoor is more common in homicide cases and houses are more common in suicide cases.

The most common wound site was the head region and this is concordant with other studies (18,24).

As elderly abuse could be regarded as public health issue in the following years, sociological and psychological studies must be conducted considering family dynamics (9). Therefore, it is obvious that authorities should make every effort to cut down on violence in all its forms at all ages (20). Family physicians must be aware of the concomitant presence of depressive symptoms. Several life events (loss, loneliness, and physical illness) should be considered warning signs for suicidal behavior. Clearly we can do better to reduce the rate of deaths in elderly populations, but it will require more focused effort by custodial authorities and ongoing public scrutiny and concern.

In conclusion, homicide and suicide rates are high in the elderly group. More studies are needed in the future to search for effective precautions to decrease these rates.

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