ORIGINAL ARTICLE

Physical violence among elderly: analysis of admissions to an emergency department

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ABSTRACT

BACKGROUND: Physical violence is defined as deliberate use of physical force likely to result in trauma, bodily injury, pain, or impairment. Present study is pioneering effort to evaluate mechanisms and sociodemographic features of physical violence targeting the elderly in Turkey and to investigate preventive measures.

METHODS: Database records and forensic reports were analyzed in this retrospective study of 54 elderly patients with trauma as result of physical violence who were admitted to emergency department of Şanlıurfa Training and Research Hospital between January 2012 and July 2013.

RESULTS: Of the 54 patients evaluated, 50 (92.4%) were male. History of experiencing previous violence was described by 55.6% (n=30) of the patients. Instances of repeat violence and firearm injuries most often occurred in the home (p=0.006, p=0.007). Need for surgical treatment was also greater among cases that occurred in the home (p=0.016).

CONCLUSION: Firearm injury, recurrent violence, and surgical treatment rates were higher among cases that occurred in the home. Urgent preventive measures are especially needed for the elderly who have already been victims of physical violence.

Keywords: Geriatric; injury; neglect; preventive health care; trauma.

INTRODUCTION

Elder exploitation is a worldwide problem of human rights and public health. According to data of World Health Organisation, European population aged 65 years and over may reach 25% by 2050. Currently at least 2.7% of older adults worldwide experience physical violence, and that percentage is expected to increase annually.[1] In our country, elder population is estimated to reach 12 million by 2050.[2] It has also been reported that 1 in 10 individuals over 60 years old faces some form of abuse based on statistics from different countries.[3,4]

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According to the literature, abuse lowers life expectation for elderly victim. Abuse concept includes 5 types: physical, psychological, and sexual abuse, neglect, and financial exploitation.[5,6] Physical violence may result in bodily injury, pain, and function loss in the victim.[7] What makes the problem more profound is that those inflicting physical violence are most often relatives of the victim.[8–10] In such cases, the victim often keeps the violence a secret and refuses to talk about it, which makes resolving the problem more difficult, and may eventually lead to the death of the victim.

In order to avoid elder abuse and exploitation, it is stressed that an older person be removed from an abusive situation during conflict, that care and support be provided, and furthermore, that medical professionals often have the obligation to report instances of abuse.[11]

Literature review revealed that 19% of admissions to emergency department are for diseases related to old age.[12] Another study indicated that 3.8% of geriatric patient admissions to emergency department were due to trauma.[13] Unfortunately, we have limited epidemiological data about unknown and unidentified trauma, and thoroughly investi-

gated data collected from detailed studies occupies a limited place in the literature.

In the present study, which is a first in our country, the aim was to investigate precautions to prevent elder abuse by evaluating the physical assault mechanisms and sociodemographic features of geriatric patients admitted to emergency department due to physical violence/assault.

MATERIALS AND METHODS

In this retrospective, sectional study, hospital database and juridical reports of patients 65 years of age and older who were admitted between January 1, 2012 and July 1, 2013 to emergency department of Sanlıurfa Mehmet Akif Inan Training and Research Hospital with complaint of physical assault or abuse were reviewed.

Ethical approval was granted by the ethics committee of Tepecik Training and Research Hospital and permission for the study was given by the management of Şanlıurfa Mehmet Akif İnan Training and Research Hospital. Data including sociodemographic features (age/sex) of the individuals, means of admission (private vehicle/ambulance), trauma mechanism, injured body area, perpetrator identified by the patient, diagnosis, past history of violence, severity of trauma, treatment result, and place where injury took place, were collected and entered into spreadsheet. Injuries to the abdomen or thoracic organs caused by blunt or sharp objects were identified as internal organ injury. The following result criteria were applied to separate patients into 2 groups: patients discharged from emergency after simple treatment (intervention) and patients who had to be hospitalized due to serious injuries. Descriptive statistics, chi-square and Fisher's exact test were used for the statistical analysis of the data. P<0.05 was considered statistically significant.

RESULTS

Of 54 elder patients evaluated due to physical violence, 50 (92.4%) were male, and 4 (7%) were female. Total of 48.2% (n=26) patients were between 65 and 69 years of age, 37% (n=20) were between 70 and 74 years of age, and 14.8% (n=8) were between 75 and 79 years of age. Most, 88.8% (n=48), were admitted to emergency department in the afternoon or evening, between 12:00 pm and 8:00 pm. Elders brought to emergency department by private vehicle represented 70.4% (n=38) of study group. Most frequent sites of injury were face/head neck (38.9%; n=21), thoracic region (33.8%; n=18), and abdominal area (14.8%; n=8). When 8 cases of intra-abdominal injuries were studied, isolated organ injury of liver (n=2), intestine (n=2), and splenic injury (n=1) were found, and 3 cases were multi-organ injury.

In 26 cases (48.1%), there was internal organ injury, and in 11 cases (20.4%) there were skin lacerations. According to patient's statement, 63% (n=34) of the injuries happened outside the home, while 37% (n=20) happened in the home. Member of immediate family was identified by patients as perpetrator of physical assault in 14 (25.9%) cases, other relative in 33 (61.1%) cases, and a stranger in 7 (13%) cases. Past history of experiencing violence was described by 55.6% (n=30) of cases (Table1). There was no statistically significant relationship between history of violence and age, gender, hospitalization requirement, or type of perpetrator described by the victim. History of repeated violence was observed more often when violence took place at home (p=0.006). Number of injuries due to firearm was significantly higher in cases where violent incident took place at home compared with those that took place outside the home (p=0.007) (Table2). Rate of need for surgical treatment was also higher in cases where violence occurred at home (p=0.016) (Table3). No early mortality occurred during the investigation, treatment, and observation of cases in emergency department.

Table 1. Main features of the cases

	n	%
Injured body part		
Thorax	18	33.3
Head or neck	12	22.2
Face	9	16.7
Abdomen	8	14.8
Upper extremities	6	11.1
Lower extremities	1	1.9
Diagnosis		
Internal organ injuries	26	48.1
Skin laceration	11	20.4
Soft tissue injury	6	11.1
Upper extremity fracture	6	11.1
Isolated head trauma	3	5.6
Maxillofacial injury	1	1.9
Lower extremity fracture	1	1.9
Treatment applied		
Major surgery	29	53.7
Primary suture	11	20.4
Pharmaceutical treatment	8	14.8
Plaster splint	6	11.1
Wounding implement		
Stick or similiar object	26	48.1
Firearm	25	46.3
Any limb (hand. foot)	3	5.6

DISCUSSION

In all age groups, trauma is still a leading cause of death.[14,15]

Table 2. Reationship between location of crime, mechanism, and result of violence

		Home		Outside		Total	p
		n	%	n	%	n	
Mechanism	Stick/Hand/Foot	6	30	23	67.6	29	0.007
	Firearm	14	70	11	32.4	25	
Surgical treatment	No	5	25	20	58.8	25	0.016
	Yes	15	75	14	41.2	29	
Total		20	100	34	100	54	

Table 3. Factors related to recurrence of violence

		Recurrent		First instance		Total	p
		n	%	n	%	n	
Perpetrator	Immediate family member	10	71.4	4	28.6	14	
	Other relative	15	45.5	18	54.4	33	0.173
	Stranger	5	71.4	2	28.6	7	
Crime scene	Home	16	80	4	20	20	0.006
	Outside	14	41.2	20	58.8	34	
Result	Discharge	7	41.2	10	58.8	17	0.149
	Hospitalization	23	62.2	14	37.8	37	

According to 2015 report using data obtained from National Trauma Data Bank in the USA, 29.7% of trauma cases were observed in patients aged 65 years and over.[16] From medicosocial point of view, among geriatric age groups, which are considered to be highly vulnerable, trauma as result of physical violence (physical assault) is second to traffic accidents.[17,18]

Tanrıkulu et al. reported on importance of falls among cases of geriatric trauma, and it was noted that cases of geriatric violence were 1% of total in their study.[19] This low percentage may be related to regional and cultural differences in 54 cases from 1½ year period included in present study, or may also be related to fact that all of cases of geriatric violence may not have been identified as such. Articles available in the literature indicate that 1 in 10 elders faces abuse but only 1 in 5 or fewer reports the mistreatment.[20] Even minor injuries may increase mortality risk among elderly patients.[21] In unreported cases of violence, patients may recover with simple treatments performed at home or may be too disabled to go to hospital or police by themselves. In the literature, while evaluating data concerning frequency of geriatric assault, it must be kept in mind that the matter is still almost taboo.[19,22,23] Social mores surrounding family and privacy contribute to low rate of reported assault cases. Furthermore, doctors may not suspect assault in case of fall or other injury seen in elder patient.

Santos et al. reported negative correlation between abuse and aging, with exception of financial abuse. However, though prevalence declined with age, high incidence of injury to head and neck was observed.[8] Martins et al. noted primacy of financial abuse before 75 years of age, and physical or emotional abuse and neglect after 75.[22] Though no significance was found between physical violence and age or gender in this study, larger series are needed to investigate these relationships.

In the literature, most common form of geriatric trauma is traffic accident, most injured areas are head/neck and extremities, and most frequent diagnosis is soft tissue trauma.[17,19] In our study of geriatric trauma, primarily face, head, and neck injuries were seen, followed by thoracic and abdominal areas. Use of wooden sticks, sharp or penetrating tools, and firearms often cause such injuries in assault cases, and may be related to large number of patients who required surgical treatment after internal organ injuries.

Need for hospitalization of the patients in this group was determined to be 68.5%. This is higher rate than reported by Kandiş et al., 17%, and higher than that of Tanrıkulu et al., at 12.4%.[17,19] This difference may be due to regional and cultural reasons or severity of trauma and necessity for surgical treatment.

Another important issue is means of arrival to emergency department. In the study of Kaldırım et al., it was reported that 37.45% of patients reached emergency department via ambulance, and 16.1% of these were trauma cases.[12] Another study determined that 70.5% of geriatric patients arrived at emergency department by private car.[17] Present study results indicated 70.4% of elderly emergency department admissions arrived by private vehicle.

In this study, 92.4% of the geriatric violence cases were male. This data is similar to results of Tanrıkulu et al., but differs from other studies in the literature.[8,17,19] Studies conducted in Turkey indicate high rate of male trauma. Larger social role of male population may be good partial explanation.

Another observation was time of admission to hospital: most were between hours 12:00 pm and 8:00 pm, coinciding with likely hours many family members or caregivers return home from work. No other study was found in the literature with data about admission time, making this valuable preliminary information. Many other factors may also influence time of admission, including climate and environmental conditions, efforts to earn money and get by, and various other elements of daily life; additional studies that examine timing of admission to hospitals are needed.

Literature indicates in majority of geriatric assault cases, perpetrator is child of the victim.[8,9] In our study, in addition to children, spouse or sexual partner was commonly seen. Undoubtedly, in such a complicated and multifaceted matter, more studies are needed. However, we believe that our study is a pioneer and highlights gap in research of this field.

This study made clear that 55.6% of cases of physical violence had gone to hospital previously as result of violence. This data is important result indicating recurring nature of physical assault. When compared with data in the literature, rate of recurring cases in our study is remarkably higher and evidences necessity to increase social awareness.[23,24] Keeping this truth hidden from view by burying our head in the sand will lead to destructive results. Study conducted by Fisher et al. also draws similar attention to internal family (domestic) violence.[25] Social ignorance and perpetrators often not being appropriately punished in such cases make the problem worse. Our results in this study indicated that geriatric violence at home even includes injuries from firearms, and sending elders back to such an environment without resolution of causes is worrisome.

Conclusion

It is noteworthy that true number of cases of physical violence against the elderly is almost certainly much greater than the number of reported cases. In cases of abuse and physical violence, the perpetrator is usually a member of the immediate family member or other relative, and majority of recurring cases occurred at home, including firearm injuries. Factors influencing reporting include fears of facing violence again, harming relations with family members, and anxiety about being sent to protective government institution and legal procedures. New, broad investigations taking these factors into consideration will contribute to increased social awareness.

Emergency service doctors are of key importance in geriatric violence cases, and they, as well as general practitioners who are familiar their patients and relatives, should keep this problem in mind. Sensitive questioning of the patients could be the first step toward resolution. General Practitioners often get to know their patients well and can evaluate many aspects of a case. Family doctors are well positioned to shed light on violence cases.

In order to keep elders from violent circumstances and to avoid recurrence, shelters for the elderly, similar to those for women, could be established. Furthermore, education of nursing staff and having the means to initiate legal proceedings in such shelters would reduce the number of offenses and contribute to individual safety.

Conflict of interest: None declared.

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ORİJİNAL ÇALIŞMA - ÖZET

Yaşlılarda fiziksel şiddet: Acil servise başvuruların analizi

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AMAÇ: Fiziksel şiddet kurbanda travma, yaralanma, ağrı ve işlev kaybına yol açmaya yönelik güç uygulama sonucu oluşan ve en sık görülen şiddet türüdür. Türkiye için bu alanda öncü nitelikteki çalışmada fiziksel şiddete uğrayan yaşlıların sosyodemografik özelliklerin ve şiddet mekanizmasının incelenerek Türk toplumunda yaşlıya yönelik şiddetle savaş için alınabilecek önlemler araştırıldı.
GEREÇ VE YÖNTEM: Geriye dönük çalışmada Ocak 2012 ve Temmuz 2013 tarihleri arasında Şanlıurfa Eğitim ve Araştırma Hastanesi Acil Servisi'ne darp nedeniyle başvuran 54 hastanın veri tabanı ve adli rapor kayıtları değerlendirildi.
BULGULAR: Darp tanılı 54 yaşlı hastanın 50'si (%92.4) erkekti. Olguların %55.6'sında (n=30) mükerrer darp tanımlandı. Mükerrer darp ve ateşli silah yaralanma sıklığı evde gerçekleştiği belirtilen olgularda anlamlı yüksek bulundu (p=0.006, p=0.007). Cerrahi gerektiren yaralanma sıklığı evde gerçekleşen darp olgularında daha sık görüldü (p=0.016).
TARTIŞMA: Ateşli silah yaralanması gibi ciddi yaralanmalar ve mükerrer darp olgularının hane içinde gerçekleşmesi darp nedeniyle başvuran yaşlıların koruma altına alınması gerektiğini göstermektedir.
Anahtar sözcükler: Geriatri; istismar; koruyucu sağlık hizmeti; travma; yaralanma.

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