



Analysis of Adult Trauma Patients Admitted to Emergency Department

Acil Servise Başvuran Erişkin Travma Olgularının Analizi

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ABSTRACT

Purpose: Trauma is one of the most common reason of admissions to emergency departments. In this study, it was aimed to determine the demographic characteristics, etiology, morbidity and mortality rates and prognosis of adult trauma patients admitted to our emergency department (ED).

Materials and Methods: Patients over the age of 18 years, who admitted to ED between 01 March 2011 and 31 August 2011 were included in this retrospective study. Patient examination cards, hospitalization files and records entered with ICD 10 codes to hospital automation system were analyzed. Patients with inaccessible data were excluded from the study.

Results: During the study period, total number of 110495 patients admitted to ED, and 13585 (12,29%) of them admitted with trauma. Simple extremity injuries (38,28%) and falls (31,7%) were most common etiological factors. Glasgow coma scales of 99,71% of the patients were between 13 and 15. Of the patients with trauma, 9,6% had a Computed Tomography (CT) scan, and 84,5% of CT scans were evaluated as normal, and cranial CT was the most requested one. Only 6% of the patients were hospitalized, and 0,9% of the trauma patients died. Falls from height in females and traffic accidents in males were the leading causes of death.

Conclusion: Most of the patients with simple traumas admitted to ED can be discharged from the hospital with a complete history and careful examination. The rate of unnecessary medical tests, loss of time and waste money should be reduced, and the time and labor allocated to severe patients can be increased by this way.

Key words: Trauma, emergency, mortality, prognosis

ÖZET

Amaç: Travma acil servise en yaygın başvuru nedenlerinden birisidir. Bu çalışmada, acil servisimize başvuran erişkin travma hastalarının demografik özellikleri, etyolojileri, mortalite ve morbidite oranlarının belirlenmesi amaçlanmıştır.

Materyal ve Metod: Acil servise 01 Mart 2011 ile 31 Ağustos 2011 tarihleri arasında travma ile başvuran 18 yaş üzeri hastalar çalışmaya dahil edilmiştir. Hasta muayene kartları, yatış dosyaları ve hastane otomasyon sistemine ICD 10 kodları ile girilen kayıtlar incelenmiştir. Bilgilerine eksiksiz ulaşılabilen hastalar çalışma dışı bırakılmıştır.

Bulgular: Çalışma süresi boyunca 110495 hastanın acil servise başvurduğu ve bunların 13585'inin (%12,29) travmaya bağlı başvuru olduğu belirlenmiştir. Basit ekstremitte travması (%38,28) ve düşmenin (%31,7) en yaygın etyolojik nedenler olduğu, hastaların %99,71'inin Glaskow Koma Skalası skorunun 13 ile 15 arasında olduğu tespit edilmiştir. Travmalı hastaların %9,6'sına Bilgisayarlı Tomografi (BT) çekildiği, bunların %84,5'inin normal olduğu ve en sık Beyin BT çekildiği belirlenmiştir. Hastaların sadece %6'sının hastaneye yatırıldığı, %0,9'unun ise eksitus olduğu görülmüştür. Bayanlarda yüksekte düşmenin, erkeklerde ise trafik kazalarının en sık ölüm nedeni olduğu saptanmıştır.

Sonuç: Acil servise basit travma ile başvuran hastaların büyük çoğunluğunun ayrıntılı hikaye ve dikkatli fizik muayene sayesinde taburcu edilebileceği belirlenmiştir. Gereksiz tıbbi tetkikler, zaman kaybı ve para israfı azaltılmalıdır. Bu yolla ağır hastalara daha fazla zaman ve işgücü ayrılabilir.

Anahtar kelimeler: Travma, acil, ölüm, prognoz

INTRODUCTION

Today, in developed or developing societies, trauma is the most common cause of death, especially among the young population between 0 and 44 years^{1,2}. In our country, by the year 2010, 73,5% of the population is between the ages of 0-44 based on address-based population registration system³. In that respect, the majority of the population is at risk for trauma. Each year more than eleven million people die on the world, and 8% of these are related to trauma⁴.

Approximately 30% of deaths due to trauma occur in first hour after injury called as "golden hour". During this period, epidural or subdural hemorrhage, hemopneumothorax, rupture of the spleen, liver laceration, pelvic fractures or other injuries that cause significant blood loss is the result³. Reducing deaths in this period is possible with proper management of patients in pre-hospital, triage step and hospital emergency departments⁴⁻⁷.

Unfortunately, patient visits are very intense to emergency departments of hospitals in Turkey. This intension of emergency limits long-term observation of patients at emergency departments. For this reason, knowledge of demographic characteristics of the patients and organization of emergency departments regarding these characteristics will increase the functionality.

In this study, we aimed to determine demographic characteristics, etiology, morbidity and mortality rates and prognosis of adult trauma patients admitted to the emergency department.

MATERIAL and METHODS

Patients over the age of 18, who admitted to Department of Emergency Medicine of Adana Numune Education and Research Hospital with trauma between 01 March 2011 and 31 August 2011 were included in this retrospective study. Patient examination cards, hospitalization files and records entered with ICD 10 codes to hospital automation system were analyzed. Patients with inaccessible data were excluded from the study.

All patients included in the study were grouped as 18-44 years of age, 45-64 years of age, and over 65 years old. Patients' age, gender, application time, trauma type, event causing trauma (assault, stab wounds (SW), gunshot wounds (GW), falls, falls from height, traffic accidents (TA), burns, electric shocks, drownings, simple extremity injuries (SEI)), length of stay in the emergency department, outcome of patients in the emergency department (discharged, hospitalized, referred to another hospital, died) were recorded. Results of computed tomography (CT) scans performed in the emergency department were analyzed. Hits, strains, and sprains were evaluated as simple extremity injuries.

All the data obtained from the study was recorded to standard program named "Statistical Package for Social Sciences for Windows 16" and analysis was performed. As a method of analysis, frequency distributions and cross tabulations (crosstabs) were used. Later, these tables are transformed into charts with same package

program. According to the results, p -value $< 0,05$ was considered statistically significant.

RESULTS

A total of 110495 patients over the age of 18 admitted to emergency department. Of these patients, 13585 (12,29%) were with trauma. Of all patients with trauma, 8444 (62,16%) were male and 5141 (37,84%) were female. Male patients were found to be statistically significantly more than female patients. Of all patients included in the study, 10374 (76,36%) were between 18 and 44 years old, 2402 (17,68%) were between 45 and 64 years old, and 809 (5,98%) were over 65 years old. The mean age of all patients was $35,82 \pm 14,96$ years. Considering the causes of trauma in all age groups according to age, SEI (% 38) was in the first and falls were in the second place, and the third place was SW in the 18-44 age group, TA (% 9) in 45-64 years of age and 65 and older age group (Table 1).

Extremity traumas (61%) were detected mostly, and 24% of patients had multiple region traumas (Table 2).

Glasgow coma scales (GCS) of 13546 (99,71%) cases were between 13 and 15. Only 11 (0,08%) cases had GCS between 9 and 12, and 28 (0,21%) cases had GCS between 3 and 8.

Computed Tomography (CT) scan was requested for 1344 (9,6%) patients who admitted to the emergency department with TRAUMA, and a total of 1523 CTs were performed, and 135 (10%) patients had more than one CT scan. 1288 (84,5%) of the CTs were evaluated as normal, and cranial CTs were the most requested ones. The distribution of CTs was shown in Table 3.

Nine percent (n: 3210) of the patients had a head injury. 861 (26,8%) of these patients had a cranial CT scan, and 90,7% of those CTs were evaluated as normal. The distribution of cranial CTs was shown in Table 4.

Twenty percent (n: 2711) of the patients had thoracic trauma. 334 (12%) of these patients had a thoracic CT scan and 248 (74%) of those CTs

were evaluated as normal, 38 (44%) were diagnosed as pneumothorax, 30 (35%) as rib fractures, 15 (17%) as hemothorax and 3 (4%) as contusion.

Sixteen (n: 2215) percent of the patients had an abdominal trauma, and 170 (79%) of these patients had an abdominal CT scan. 153 (90%) of those CTs were evaluated as normal, 10 (6%) were diagnosed as intra-abdominal free fluid and 7 (4%) as an organ injury with intra-abdominal free fluid.

Sixteen (n: 2242) percent of the patients had a spinal trauma and 90 (4%) of these patients had a spinal CT scan. 73 (81%) of those CTs were evaluated as normal and 17 (19%) were diagnosed as fracture (Table 5).

Six (n: 871) percent of the patients had a pelvic trauma. 21 (2,4%) of these patients had a pelvic CT scan. 6 (28,57%) of those CTs were evaluated as normal and 15 (71,43%) were diagnosed as fracture. 8255 (61%) of the patients had an extremity trauma. 21 (0,25%) of these patients had an extremity CT scan and 6 (27,27%) of those CTs were evaluated as normal and 16 (72,73%) were diagnosed as fracture. Orbital fractures were present in 3 of orbit CTs. There were no fractures in maxillofacial CTs.

Of 13585 patients admitted to the emergency room with trauma, 823 (6%) were hospitalized, 12750 (93,8%) patients were discharged from the emergency department after treatment, 12 (0,2%) patients died in the emergency department. 690 (84%) of hospitalized patients were hospitalized to other departments and 133 (16%) were hospitalized to intensive care units, and hospitalizations were made on behalf of Orthopedics (47,87%) in the first place, followed by Neurosurgery (20%) and General Surgery (9,23%).

Analysis of reasons for hospitalization of patients were as follow; 25 (3%) GW, 23 (2,7%) assault, 271 (33%) falls, 4 (0,4%) electric shock, 156 (19%) SW, 213 (25%) TA, 18 (2,1%) burns, 113 (14%) fall from height.

Fifty eight percent of falls from height, 48,7% of SW, 34% of GW, 17,5% of TA, 9% of burns, 6% of simple falls and 2% of those who were beaten were hospitalized and 548 (76,75%) of hospitalized patients had undergone an operation. Of the hospitalized patients, 793 (95,8%) were discharged from the hospital, 2 (0,2%) were referred, and 28 (34%) died.

Of all patients with trauma, 40 cases (0,9%) died, 12 of these patients died in the emergency

department, while 28 died after hospitalization. SW (% 33) was the first cause of death in the emergency department, while TA (% 64) was the first in hospitalized patients. Falls from height in females and traffic accidents in males were the leading causes of death. Gender distribution and causes of trauma of patients who died in the emergency department and hospitalized services are given in Table 6.

Table 1. Trauma causes by age groups

	18 – 44 years n (%)	45 – 64 years n (%)	65 year and over n (%)
SEI	3804 (37)	1060 (44)	339 (42)
Falls	3441 (33)	610 (25,4)	265 (33)
SW	1077 (10.3)	227 (9,4)	85 (10,3)
TA	922 (9)	209 (8,7)	41 (5)
Assault	751 (7)	197 (8,3)	36 (4,4)
FFH	162 (1.6)	43 (1,8)	28 (3,5)
Burns	137 (1.3)	42 (1,7)	13 (1,6)
GW	57 (0.5)	14 (0,7)	2 (0,2)
ES	16 (0.2)	–	–
Drowning	7 (0.1)	–	–
Total	10374 (100)	2402 (100)	809 (100)

Number of patients (n), ratio (%), stab wounds (SW), gunshot wounds (GW), falls from height (FFH), traffic accidents (TA), electric shock (ES), simple extremity injuries (SEI)

Table 2. Trauma regions of the patients admitted to the emergency department due to general body trauma

Trauma Region	Number of patients	Ratio (%)
Extremity	8255	61
Multiple trauma regions	3288	24
Head	3210	23,6
Thorax	2711	20
Vertebral	2242	16
Abdomen	2215	16
Pelvis	871	6

Table 3. Distribution of the computed tomography in cases of general body trauma

	Number of patients	Ratio (%)
Cerebral	861	56,7
Thorax	334	22
Abdomen	170	11
Vertebral	90	6
Extremity	30	2
Pelvis	21	1,3
Orbital	15	0,9
Maxillofacial	2	0,1
Total	1523	100,00

Table 4. Cerebral CT findings in patients with trauma

	Number of patients	Ratio (%)
Hemorrhage	47	5,4
Epidural hematoma	3	6
Intracranial hemorrhage	10	21
Subdural hematoma	14	30
Subarachnoid Hemorrhage	20	43
Total	47	100
Isolated fracture	26	3
Soft tissue injury	7	0,9
No pathological findings	781	90,7
Total	861	100,00

Table 5. Vertebral CT findings in patients with general body trauma

	Fracture	No fracture	Total (%)
Lumbosacral	11	44	55 (61)
Cervical	2	27	29 (32)
Thorax	4	2	6 (7)
Total	17	73	90 (100)

Table 6. The gender of patients who died from trauma

	SW n=M/F	GW n=M/F	FFH n=M/F	TA n=M/F	Drowning n=M/F	Total
In emergency department	0/4	0/2	2/0	0/3	0/1	12
In other clinics of hospital	0/0	0/3	2/5	2/16	0/0	28
Total	0/4	0/5	4/5	2/19	0/1	40

Number of patients (n), male (M), female (F), stab wounds (SW), gunshot wounds (GW), falls from height (FFH), traffic accidents (TA)

DISCUSSION

Trauma, especially in young age group remains the most important cause of death. Trauma-related deaths are in 3rd -4th place regarding all deaths in the world and meanwhile in the first place in deaths between the ages of 20-40. In developed countries, trauma care developments are the reason of reduction in deaths despite the increase in the rate of trauma^{5,6}. This progress was made possible by creation of standard trauma protocols and management of within the framework of these protocols.

In our study, trauma patients accounted 12.29% of all the admissions to the emergency department. 62,16% of the patients were male ($p = 0.035$). The average age of the patients was 35,82 years. These findings were consistent with the literature⁸⁻¹⁶.

When mechanisms of trauma were analyzed, a study by Young et al. showed falls (37,2%) in the first place, TA (26,2%) as second and SW (7,3%) as third and in a study by Çıraklı et al. falls (39%) were observed in the first place followed by TA (28%) and falls from height (7,5%)^{10,11}. In our study, SEI (38%) was in the first place in all age groups, falls in the second and SW in third place in the 18-44 age group, and TA (9%) in 45-64 years age group and over the age of 65 groups. The reason for simple extremity injuries to be in the first place may be due to more frequent admission of simple traumas to our hospital as it is located in a central residential area.

In some studies, falls are first cause of trauma in the elderly population and motor vehicle

accidents are the second¹⁶⁻¹⁸. In another study, motor vehicle accidents (62%) is the first as a cause of injury in the elderly population and falls (31%) are the second¹⁹. In our study, SEI, falls, and TA are leading causes respectively. This situation can be explained by more frequent balance, gait disturbances, muscle weakness, underlying diseases, and other metabolic problems in the elderly.

In a study by Arslan et al. evaluating SWs, it was found that 93,5% of the patients were male, 15-19 years of age group was in the first place, number of cases decreased with the higher level of education, and 10,6% of cases had been exposed to life-threatening situation²⁰. In a study by Koksal et al, the vast majority of patients admitted to the emergency department was due to SW, and found to be young (50,7%, 19-30 years of age) and male (94%), abdomen (35,2%) was the first place, the majority of the cases were hospitalized, more than half of hospitalized patients underwent surgery, and the mortality rate was 5,63% with a mortality rate of 1,4% in the emergency department²¹. In our study, most of SWs were simple injuries. It accounted for 10% of all trauma patients, and was mostly observed in 18-44 years age group. 87.6% of patients had been discharged from the emergency department. Most of the patients were injured in the upper extremities and 11,6% of these were hospitalized. It was 4th leading cause of hospitalization, whereas ranked the first place in causes of death in the emergency department.

In a study by Salman and his colleagues, extremities were found to be the most common

trauma region¹³. In another study, extremity trauma was the first with 72%, head and neck in second place with 21%, thoracic trauma in third place with 3,7% and abdominal trauma ranked 4th with 3,4%¹⁴. In our study, extremity trauma was in the first place (55,58%) in accordance with the literature. Head trauma was in second place (18,17%) and thoracic trauma in third. In addition, 24% of patients had a multiple trauma.

GCS is the most widely used and first created trauma score for evaluation of patients with head trauma. In many studies, GCS were high in majority of head injuries²¹⁻²³. In one study, rates of mild, moderate, and severe head injury according to GCS were reported as 80%, 10% and 10% respectively and these rates were as 66%, 22%, 12% in a study conducted in our country and as 48%, 31%, 21% in another study^{22,24,25}. In our study, it was found as 99,71%, 0,08%, 0,21% respectively. In our study, the reason of low rate of moderate and severe head trauma may be related to the inclusion of not only the head-injured patients in the study but all trauma patients, simple injuries being the majority and assessment of GCS in all cases.

All body parts can be visualized with CT scans and data with high accuracy values about functions of most organs can be achieved with contrast agents. For this reason, in initial term of poly-traumatized patients, head, thorax, abdomen, and extremities CTs were argued to be used as a more advantageous and highly accurate non-invasive method. However, not allowing performing of other imaging procedures at the same order, need for specialized personnel, patient's exposure to radiation and usually non-localization of the device near the trauma room limit use of CT²⁶. In our study, 9,6% of patients with trauma had CT scan. Cranial CT was the most requested one. In addition, 270 (10%) had more than one CT scan. 2576 (84,5%) of CTs were evaluated as normal. The main reason for this higher rate may be the intensity of emergency department. Due to lack of staff and material to meet this intension, CT rates

increase to shorten duration of follow-up of patients. In addition, malpractice concept in the field of health has become more commonly used by large masses of people. This causes physicians to want to work with less risk taking and an increase in the rate of orders for the examination and imaging techniques. As a result, we concluded that there are increases in the rates of CT demand in emergency departments.

Almost all publications we examined related to head trauma were neurosurgery originated and in many of them only trauma-induced intracranial pathologies were discussed on the basis of patients requiring hospitalization or surgery and rates were determined according to those patients. According to the results of a study by Karasu and his colleagues, cranial fractures (25%) were the most common reason for the patients decided to be hospitalized regarding cranial CT scan results, followed by EDH (12%)²¹. In another study, the number of patients requiring emergency surgery after cranial CT scan was 177 (% 18,5), surgeries were mostly performed due to subdural (43%) and epidural (31,5%) hematoma, besides operations due to GW (12,5%), depressed fracture (8%), intracerebral hematoma (5%)²⁵. In our study, 3210 patients (9%) had head trauma and 861 (26%) of these patients had cranial CTs. 90,7% of cranial CTs were normal, fracture was detected in 3,31% of cases and intracranial hemorrhage in 4,5% of cases. Subarachnoid hemorrhage was found in the first place with a rate of 47% among the causes of hemorrhage.

Unilateral radiographs do not exclude the presence of spinal instability in patients without neurological deficit as well as especially in patients with cervical trauma. Because incidence of false-negative results is very high in unilateral radiographs. The reason for this is the difficulty in assessment of cervico-thoracic junction in especially unconscious patients. In these cases, fractures at the level of T1 and T2 may not be noticed. Although the initial clinical findings were normal in patients following spinal trauma, due to

the development of new neurological deficits in 10% of these patients in hours and days, it is important to make the correct diagnosis as early as possible. For this reason, especially in the cervical region, CT is used as an important complementary imaging method. By this method, craniocervical or cervicothoracic fracture up to 8% can be determined²⁷. In a study by Hu and colleagues, spinal fracture incidence in the general population was reported as 64 per 100000²⁸. In a study by Armagan et al, spine trauma was detected in 46 of 1632 trauma cases and neurological deficits developed in 23 of them²⁹. In our study, 2242 of the patients (16%) had spinal trauma, 90 of these patients (4%) had a spine CT scan. 73 (81%) of these spine CTs were normal and fractures were detected in 17 (19%). Lumbosacral region (61%) was the most evaluated region and most of the fractures were in this region. This may be due to deaths happening in the first minutes after injury due to cervical spine fracture before reaching the emergency department.

Ultrasonography is the most commonly used diagnostic method all over the world to evaluate abdomen in patients with trauma due to being radiation-free, portable and inexpensive. It is applied as "Focused abdominal sonography in trauma" (FAST) form in cases of emergency. The main objective is determination of the presence of intraperitoneal free fluid. However, ultrasonography has low value of detecting organ and retroperitoneal injuries. For these reasons, CT was begun to be commonly used in patients with abdominal trauma. Because with CT, all the abdominal organs, retroperitoneal and bone structures can be evaluated^{11,30}. In our clinic, abdominal CT is requested after consultation with the general surgery clinic and is done after intravenous contrast material injection. In our study, 16% of the patients had abdominal trauma and 170 (79%) of these had an abdominal CT scan. 153 (90%) of these abdominal CTs were normal, intra-abdominal free fluid was detected in 10 (6%) and intra-abdominal free fluid with organ

injury in 7 (4%). High CT demand rate might be due to exclusion of life-threatening situations, such as retroperitoneal bleeding and organ injury which cannot be determined by ultrasonography. Also it may be due to the physician feeling safer in terms of legal liability and shortening length of stay of patients without pathology in emergency department, and being faster and better than other imaging studies in detecting intra-abdominal injury level in patients requiring surgical intervention.

Chest trauma should be treated immediately for being major vital organ injuries and impaired cardiac and respiratory system dynamics must be corrected. They are usually not isolated organ injuries and associated with other system injuries. For this reason, other systems should not be neglected with paying attention to only thorax pathologies³³. In a study by Trupka and colleagues, they claimed that early thoracic CT is superior to routine chest radiograph in detecting contusion, pneumothorax and hemothorax in blunt chest trauma, and that it should be initial diagnostic study in multiple trauma patients and in patients with suspected chest trauma³⁴. In our study, thoracic trauma, which ranked third, was present in 2711 (20%) patients. The high number of thoracic trauma is may be due to chest surgery pool wards and referral of patients from other hospitals for consultation. 334 (12%) of patients with thoracic trauma had a thorax CT scan. 248 (74%) of these Thorax CTs were evaluated as normal. This result shows that unnecessary CT scan requests are made. High rate of CT demand may be due to physician's effort to terminate the consultations faster and unfortunately due to poor quality of chest radiographs in our hospital. In addition, pneumothorax was the most detected intrathoracic finding in our study with a rate of 44%. This result was consistent with the literature^{31,32}.

Pelvic fractures, constitutes only 3% of all fractures, are devastating injuries that require careful management in the emergency department (ED). Pelvic CT is an important diagnostic tool in determining pelvic injuries. It is helpful for

diagnosis and differential diagnosis in especially stable patients³⁵. Gurevitz et al reported CT rates as 71.8% (n: 56) in study including 78 pelvic fracture and no pathology had been found in 13 patients²⁷. 871 patients (6%) had pelvic trauma in our study. Of these patients, 21 patients (2,4%) had pelvic CT. 6 (28,57%) of these pelvic CTs were normal and fractures had been detected in 15 (71,43%)³⁶. In our department, pelvic and extremity CTs are requested after consultation with the orthopedic clinic. Pelvic CT is done if a fracture is suspected in direct radiograph and for the classification of fractures if a fracture is detected. For this reason, demand was lower for pelvic CT. In addition, the number of cases with detected pathology was higher than results of CTs of other regions for the same reasons.

In studies, trauma patients were discharged with a rate of 60% and 73.2%, respectively^{13,27}. In our study, this ratio was 93,8%. In our study, 6% of patients admitted to the emergency room because of trauma were hospitalized, of those patients 84% were hospitalized to services and 16% were hospitalized to intensive care units. Patients were hospitalized mostly on behalf of Orthopedics, followed by Neurosurgery. In other studies, hospitalization had been mostly to Orthopedics and Traumatology, Neurosurgery and General Surgery services^{12,13,15}. This is an expected result considering that extremity and head injuries are in the first place in areas of trauma.

Analysis of the reasons for hospitalization of patients revealed that falls were in the first place with a rate of 33%, followed by 25% TA, 19% SW, 14% falls from height. However, when hospitalization rates were evaluated, 58,8% of falls from height had been hospitalized, followed by 48,7% of SW, 34% of GW, 17,5% of TA, 9% of burns, 6% of falls and 2% of those who were beaten. Falls from height was in first place and SW was in second place regarding hospitalization rates. Due to the extreme heat in the summer in our region, sleeping habits on the roof and the balcony leads to falls from height and these being

resulted in severe clinics. High rate of hospitalization in SW may be due to more severe injuries. Hospitalization rate of traffic accidents have been reported as 14%, 15% in other studies^{37,38}. As a result, hospitalization rates in traffic accidents that we have obtained in our study are consistent with the literature. In addition, more system injuries happening in traffic accidents may increase prevalence of hospitalization.

In a study of patients admitted to the emergency room for trauma, mortality was 1,9%¹⁶. In our study, 40 patients (0,9%) had died. 12 of these patients had died in the emergency department and 28 had died after hospitalization. SW was leading causes of death (33%) in the emergency department, while traffic accidents (64%) were in the first place in hospitalized patients. Among causes of death, falls from height was first in women and traffic accidents in men. SW being the leading causes of death in the emergency department suggests that injuries are fatal and interventions in the first hour are inadequate.

CONCLUSIONS

Mostly simple traumas admitted to our hospital can be discharged from the hospital with a complete history and careful examination. The rate of unnecessary medical tests and loss of time and waste money should be reduced, and the time allocated to severe patients can be increased by this way. Transport of trauma patients is very important and transport of these patients should be done to appropriate hospitals with appropriate ambulances. By working in coordination with trauma centers and with an organized trauma system, morbidity and mortality rates can be decreased. In addition, traumas are socio-economic public health problems that cause severe economic burden and increase work load. Trauma should not be seen as a disease only to be treated, but also as a public health problem requiring preventive measures.

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