Original article:

Prevalence of war vıctıms ın Madına Hospıtal Mogadıshu Somalıa

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Abstract:

Background: The resultant effect of a gunshot injury is mostly severe bleeding which leads to hypovolemic shock;a condition that is characterized by inadequate delivery of oxygen to vital organs. ***Objective:*** Present study had focused on the prevalence of gunshot wounds, alsoclinical consequencesdepending on differences in anatomical sites, age, gender with management strategies accordingly. ***Materials and Methods:*** The study design is retrospective in nature with quantitative approach and the study reviewed the data in the registers beginning from January to December 2017. Demographic data of the patients, anatomical sites of injuries, and findings of clinical outcomes had been retrospectively evaluated. ***Results:*** 1145 patients having gunshot wounds (GSW)had been included in the study (M/F= 1067 (93%)/78 (7%)). Average incidence of head injuries had been found as 8,75% which had showed a peak rate during May with a percentage of 11%. Thoracic injuries which had an average incidence of 11,3% had the highest rates during May, January, February and June. Abdominal injuries had showed a steady decline beginning from January (24%) till June (20%) with having least percentage of injury during May (13%).Only 10% of healthcare workers were among educated first aiders who transported the patients. Meanwhile,the majority had consisted of non-educatedones who took the patients to the hospital at the largest proportion of the casualties which include families, friends and close relatives. Mortalities (n=87 (8%)) were attributed mostlyto abdominaln=18 (21%), thoracic n=16 (18%), lower limbn=16 (18%)) and head n=14 (16%) injuries withdecreasing frequency. ***Conclusions:*** Deaths due to gunshot wounds (GSW) had been reported highestamong young aged population who are between 21 and 40 years of age. Considering that only 10% of rescue teams were among educated health care givers, this actual rate of mortality given in the present study can be lowered much more if the state can provide more educated staff, and also more fundamental first-care educations could be given for the public as well.

Keywords: gunshot wound (GSW); trauma; mortality; first-care; education

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Introduction

Trauma constitutes a challenge for the surgeons, and the outcomes depend on multiple factors including initial care, characteristics of the wounds, and surgical management.[1-3] A gunshot wound (GSW) targetting a solid organ such as heart, lung, liver, etc or a component of nervous system may cause devastating effects on human body which mostly end up withserious clinical results.[4-6]

Socioeconomic characteristics and differences have great influence on the management of trauma. Specifically; since the collapse of the former government, the country has lost its public infrastructure including the healthcare system. This

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has led the different war categories to be observed and the country to experience many war causalities on monthly and weekly periods which are based on gun shots and blasts that claimed the life of thousands of people,

Thousands of war injuries had been presented to Medina General Hospital Somalia since the collapse of the former government in 1991, and so far nobody knows the prevalence of certain injury types in the region.

Inadequate attention had been given to the care and management of wounded people. No laws exist against any medical malpractices in the case of death since then. So, most of the deaths had occured before the patients could reach the medical facilities.

Therefore, the present study aimed to find out the prevalence of war casualties in Mogadishu, Somalia and to propose management strategies to lower morbidity and mortality rates in the territory.

Materials and Methods

Medical database of the institute had been reviewed retrospectively between January - December 2017. Study population had been selected of those whom were registered and hospitalized due to war casualties including all age groups.

The study was conducted at Medina General Hospital which is a multidisciplinary (Intensive Care Unit (ICU), Surgery, Orthopedics, Obstetrics&Gynecology, Emergency Unit, and Radiology) community based hospital located at the center of Mogadishu, Somalia.

All injured patients due to gunshot wounds (GSWs) on different anatomical sites (Head, neck, chest, limps etc.) had been included in the study. Exclusive criterias were of those whom had co-morbidities before the injury, the ones whom could not reach the Medina General Hospital or whom were transferred to another medical center, and the ones whom were injured due to different causes other than GSWs like explosion, traffic accident, knife injuries, etc.

The study variables of the study were mainly independent such as demographic properties of the patients (Age, gender, anatomical site of injury), management before admission and clinical outcomes (Cured, disabled, deceased). The only dependent variable was the war victims which had been intentionally selected.

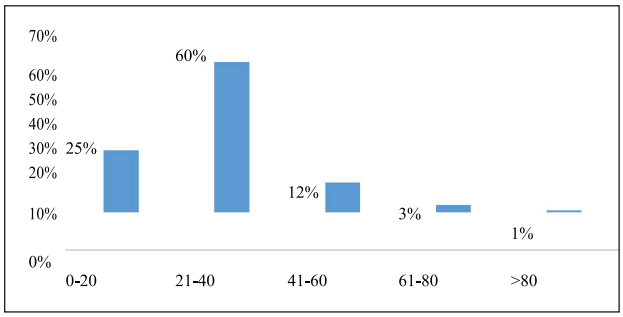
Ethical clearance: This study was reviewed and approved by the Ethics Committee of the Hospital.

Results

1145war victims injured due to GSWs had been included in the present study. The majority of the study group had beenconsisted of male victims (n=1067 (93%)), and the restwere female (n=78 (7%)).

Based on the findings; 25% of the patients were between 1 and 20 years of age, the rest majority of which constitutes60% of the study population were between 21 and 40 years of age. 12 % of patients were between 41 and 60 years of age, while the rest 4% was the elderly group of whom were older than 61 years of age (Table).

Table : Distribution of war victims according to age



Lower limbs injuries were the leading type of injuries among others (head injury, neck injury, thorax injury,abdominal injury, genitelia inury, upper limbs injury) whom were admitted to emergency department (ED) of Medina Hospital having an average incidence of 29% (n=355) throughout the year. Especially, this rate had showed a high trend during March and August, though it was found lowest during February and May. The average incidence ofneck, head, thorax,upper limp, abdominal and lower limbs injuries were 6%, 7%, 12%, 14%, 18%, and 29% respectively.

Only 10,5% (n=120) of patients had been provided first-care by skilled health employee before being transferred to the hospital. The majority (n=1025 (89,5%)) had received first-care from non-skilled or non-educated first-aiders also from other people whom were mostly relatives or friends of the victims.

According to the results; 1028 (90%) patients had been discharged by cure,30 (2%) patients had been disabled due to different causes of trauma, and 87 (8%) patients had deceased.

Discussion

According to Alkhuzai et al, estimated prevelance of deaths due to injuries of armed conflict in Iraq are

highest amongst men between ages of 15 and 59.[7] Another study conducted by Coghlan et al had stated similar results which had presented the high mortality rates considering male population.[8]

The majority of war victims for the present study had been found as male victims (n=1067 (93%))that had consisted of mostly young population between 21 and 40 years of age. These findings may be attributed to socioeconomical and geographical feautures of this region.

In a study conducted by Eisenburger P et al, less than 30% of resuscitation attemps before being transferred to the hospital had been performed by skilled health employess.[9] Thus, the number of lives saved had remained suboptimal mostly due to inadequate number of educated people in the life support chain.

Findings of this study had presented similar results such as only 10% of the resuscitation attemps had been performed by skilled health employees. Though, mortality rate (8%) had been found less unlike most other relevant studies. This can be attributed to different percentages of anatomical site of injuries as well. Although highest percentage of mortality were due to abdominal trauma,the majority of injuries had been foundas lower limb injuries.

Conclusion

This study is highly significant as it will enhance the awareness towards management of such injuries that could be preventable byincreasing the awareness of community by giving educations which can done through public training campaigns about first-care. Also, establishing rehabilitation centers for victims and disabled peoplewill provide psychological relief as well that will bring these people back to society.

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