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Short Communication

Top Major Traumas in Benghazi

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Abstract

This work is done to study different aspects of the topic; in any case, during our assortment and investigation of the information, we observed the presence of other shocking issues sharing largely the road traffic accident's increasing frequency and heavy impacts that need collective efforts of everyone, individuals and authority. In spite of the fact that street car crashes stay a significant issue compromising lives and assets in Benghazi, we are additionally encircled by other upsetting awful mishaps generally sharing the recurrence, genuine effect and expanding occurrence of street auto collisions.

Therefore, our enthusiasm against RTA should not overshadow such painful, dangerous events including AFD and VT.

Keywords

Road Traffic Accident; Accidental Falls; Interpersonal Violence; Trauma-Related Injury; Trauma-Related Death

Abbreviations:

RTA: Road Traffic Accident; AF: Accidental Falls; IPV: Interpersonal Violence; TTRI: Total-Trauma-Related Injury; TTRD: Total-Trauma Related Death

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Introduction

In line with the public enthusiasm for the problem of road traffic accidents that claim the lives of many, estimated about 1.3 million people annually worldwide and result in several temporary or permanent functional disabilities with consequent socioeconomic and psychological impacts [1-6].

We decided initially to study the different aspects of the topic; however, during our collection and analysis of the data, we noticed the presence of other shocking issues sharing largely the road traffic accident's increasing frequency and heavy impacts that need collective efforts of everyone, individuals and authority.

Through this full-year descriptive analysis, we are trying to measure the real magnitude of the overall traumatic events among the total hospital work and to shed light on the harmful immediate physical effects of the most frequent and most dangerous types of traumas, calculating the number of their related injury and death rates.

Our data, obtained from the emergency room and the department's admission records of Aljala Teaching Trauma Hospital at Benghazi, the second city in Libya, of (650,629) population within a period between (1/1/2009 and 31/12/2009), as a sample reflecting the situation in the whole country [7].

Aiming to draw the public and authority attention, for better management and prevention planning.

Patients and Methods

The total cases of trauma that were exposed to severe injuries necessitated hospitalization, whether for conservative or surgical treatment in the various specialties available in the Al-Gala Teaching Trauma Hospital in Benghazi, as well as those who died due to trauma between (1/1/2009 and 12/31/2009), identified as a field and time limits for our work.

Through which the real magnitude of the trauma out of the total hospital's emergency work assessed and the most common traumatic events with the greatest impact among the total trauma determined.

Considering the need for hospitalization for conservative or surgical management as the dividing line to distinguish between significant and nonsignificant injuries.

The resulted immediate physical effects recorded under the following five broad headings, Skeletal Injuries. Head and spine injuries. Blunt chest and abdominal injuries. Skin and soft tissue injuries. Maxillofacial and dental injuries trauma-related injury and trauma-related death reported for each.

Suicide attempts and self-assault have been included among violent injuries, based on the World Health Organization's definition of violence as "the intentional use of physical force or a tool that leads to threat or harm against him or another person, group or community, leading to a high probability. To cause injury, death, psychological harm, impaired growth or deprivation".

Excluded are the sports-related injuries, for the difficulty of classification, if they were intentional injuries that should be considered as violent injuries or spontaneous injuries that were unintentional.

Noting that we deliberately did not include the period of conflict and the variables accompanying it, so that the results of the study were far from the influence of those, in order to reach results that reflect the normal situation of Benghazi society.

Results

In the period between (January-December 2009), the number of new trauma registered in the emergency department of Al-jala Teaching Trauma Hospital / Benghazi, reached 18813 out of a total 26058 emergency visits (Fig. 1).

The significant trauma demanded admissions for conservative or surgical treatment were 7282, representing (38.7%) of the total trauma and resulting in 98 trauma-related deaths, of which 12 received dead (12.2%) (Fig. 2).

Among these, the reported significant RTA related injuries were 1361, involving 1229 victims, 132 (10.7%) were multi-injured and lead to 73 deaths, (74.4%) of the total trauma-related death.

Eight cases, received dead (10.9%) of the RTA-related deaths and (8.1%) of the TTRD (Table 1).

The mean age of the RTA significantly injured and deaths victims was 28 years, (range 1-65 years).

With an unfortunate increasing number of the RTA related injuries, from (908) in the year 2001 to (1127) in 2006 and (1229) the year 2009.

While the significant AF related injuries are 1548 in 1391 victims of which 157 were multi injured (11.2%) and lead to 11 deaths, (11.2%) of the total trauma-related death.

Two received dead (18.1%) of the AF related deaths and (2.0%) of the TTRD (Table 1).

With 2 peak incidence ranging (3-11 and 25-75).

With an increased number of the AFD related injuries and death, from: (1061) in the year 2001 to (1367), 2006 and (1548), the year 2009.

The significant IPV related injuries were 924, in 867 victims, of whom 57 (6.5%) were multi-injured and resulted in 7 deaths (7.1%) of the total trauma-related death.

Tow received dead, (28.5%) of the IPV related deaths, (2.0%) of the TTRD.

With obvious male sex prevalence and mean age incidence of 27 years, ranging between (11 and 50) (Table 1).

With an increased number of the IPV related injuries and death, from (647) during the year 2001 to (812) 2006 and (924), the year 2009 (Fig. 3).

Figure 1: The percentage of trauma cases out of the hospital's total work.

Figure 2: The ratio of significant cases to total trauma.

Figure 3: The magnitude of the RTA, AF and IPV trauma out of the total significant trauma.

Trauma	Trauma-Related Injury				Sex			Trauma-Related Death		Sex	
RTA	Skeletal	Head and Spinal	Skin and Soft tissue	Dental and Maxillo facial	Chest and Abdominal	M	F	Died at Hospital	Received Dead	M	F
1361	679	203	241	113	135	1013	216	65	8	57	16
%	49.8%	14.9%	17.7%	8.3%	9.9%	4.6:1		73		3.5:1	
AF											
1548	714	329	134	41	320	978	413	9	2	11	0
%	46.1%	21.2%	8.6%	2.6%	20.6%	2.3:1		11		11	
IPV											
924	215	109	325	202	73	773	94	5	2	7	0
%	23.2%	11.7%	35.1%	21.8%	7.9%	8.2:1		7			

Table 1: Detailed trauma-related injuries and deaths.

Discussion

Trauma makes up the main bulk (72.1%), of the hospital's total work (Fig. 1).

Fortunately, of these traumatic events only (38.7%) result in significant injuries that require hospitalization for either conservative or surgical management (Fig. 2).

According to the available data, the highest rates in terms of frequency, severity of injuries caused, mortality rates, as well as the progressive prevalence rates, were confined to three types of trauma.

That are collectively account for (52.6%) of total significant trauma-related injuries and (92.8%) of the total trauma-related deaths (Fig. 3).

These are the Road Traffic Accidents (RTA), Accidental Falls (AF) and the Interpersonal Violent (IPV) Trauma. Where, Road traffic accidents, made up (18.6%) of total significant trauma-related injuries, in 1229 victims, (10.7%) of them were multi injured. Responsible for 73 deaths, (74.4%) of the total trauma-related deaths, (10.9%) of them received dead. With obvious prevalence among males in a ratio of (4:1).

The accidental falls trauma (AF), represented (21.2%) of the total trauma-related injuries, in 1391 victims, (11.2%) of them were multiply injured. Responsible for (11.2%) of the total trauma-related death, (18.1%) of these received dead.

With a clear prevalence also among males in a ratio of (2:1). While the violence trauma-related injuries reached (12.6%) of the total trauma-related injuries in 867 victims, (6.5%) of them were multiple injuries and the cause of death for (7.1%) of the total trauma-related deaths, all were males, (28.5%) of them arrived dead.

With significant prevalent among males in a ratio of (8:1). Quoting the WHO reports that acknowledged that the RTA was the cause of more than 1.2 million deaths and between 20-50 million related injuries annually worldwide and that AF trauma is responsible for between 341,000-556,000 deaths each year and that more than 1.3-1.6 million die and many suffer physical and mental problems from interpersonal violence IPV [8-14].

Based on the above, taking into account some of the differences between countries and societies, our results support the RTA as the leading cause of trauma-related death (74.4%). However, while the RTA is the leading cause of trauma-related death, the AF remains the leading cause of trauma-related injury (21.2%) and fortunately, the rate of violence trauma remains low compared to the international reports, which make it ranks third as a cause of trauma-related injury as well as a trauma-related death (12.6%) and (7.1%) respectively, in Benghazi [15,16].

Although our results are somewhat consistent with what has been reported elsewhere, the striking in our situation about these three traumatic events are [17-19]:

1. The higher death rate due to these traumas especially with the RTA (74.4%). Which is clearly exceeded the reported rates (32.8% and 50-60%) in other regions indicating the unfortunate aggressiveness of these traumatic events in our case, that can be attributed to several factors including; the unsafe driving habits of unsafe vehicles on unsafe roads, the lack of standards and deterrents and the worn-out infrastructure. Also regarding the AF trauma-related death

that was (11.2%), exceeding the reported (4-8.6%) rate in Europe and some Asian areas including Raissa, Kazakhstan, Moldavia and Qatar [20-23]. Although no incidents were recorded from high altitudes, as most of cases were from heights less than 10 meters, which we believe is a matter of the availability and adherence to safety measures at work and in or outdoor, the lack of training programs for fall prevention and work experience especially among construction workers. However, the mortality rate during or after treatment (1.2%) of the total significant trauma in line with the average reports of (1.18-3.7%) in-hospital mortality in other regions indicates an acceptable level of management in this hospital [24-26].

2. The sustained upsurge occurrence of the three traumas, especially for the IPV are indicating looseness of the taken preventive measures and ringing bells for the increasingly aggressive behavior in our society.
3. We have observed, in our case and perhaps elsewhere, a clear underestimation of the leading cause of trauma-related injuries and the second cause of trauma-related deaths that evidenced by insufficient clinical documentation [27,28]. Where a large proportion of cases (61.5%) 851 cases were recorded as (history of fall) only and (28.7%) 397 documented as (history of falling from a height) only, without mentioning the mechanism of falling, nor its level or location.

Figure 4: The RTA, AF, IPV trauma-related injuries and deaths.

Figure 5: The RTA, AF, IPV trauma increasing rate of occurrence.

Deficiencies

First, we think that these numbers are below realistic, especially about the falls and violence trauma, where only those who attended or were brought to the hospital for treatment and those who provided a true history were included in the study. Second, this study investigated only the immediate impact of traumatic events.

Conclusion

Although road traffic accidents remain a major problem threatening lives and resources in Benghazi, we are also surrounded by other distressing traumatic events widely sharing the frequency, serious impact and increasing incidence of road traffic accidents.

Therefore, our enthusiasm against RTA should not overshadow such painful, dangerous events including AFD and VT.

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