
The Pattern of Fatal Head Injuries in Beirut: A Retrospective Medico Legal Study**Khodor Haidar Hassan****Abstract**

Traumatic brain injury (TBI) is a serious public health problem with potentially devastating effects and far-reaching consequences. These injuries occur following a blow or jolt to the head or a penetrating head injury that disrupts the normal function of the brain. TBI can cause death or lasting disability that can significantly impact victims, their families, their communities and the whole country as well.

The study aimed to investigate the incidence and the pattern of fatal head injuries in victims admitted to different hospitals in Beirut and its suburbs during 1st January 2010 to 31st December 2013. The study included all victims with fatal head injuries admitted to different hospitals in Beirut and its suburbs during the study period. The study approached the literature as a multi-dimensional phenomenon which addressed both theoretical and applied research. The significance of this recent study is the first, to the author knowledge which dealt with this theme which in turn encourages other researchers to work on further research on this important issue. The collected data was statistically analyzed using the statistical package for social sciences (SPSS).

The overall surveyed population composed of 770 victims. They represented (29.49%) of all other injury related to deaths admitted during the same period. The highest number of victims was admitted during 2013 (224) while the lowest was during 2011 (174). Additionally, the percentage of those victims in relation to all different traumatic deaths was the highest during 2010 (30.30%) and the lowest was during 2011 (27.70 %).

The study showed that males (67.92%) outnumbered females (32.08%) with a gender ratio of 2.11: 1. Victims were between 1 month and 76 years of age (M 27.75 SD 13.54); two third of the victims (63.25%) were in the age group 10- 40; while (4.93%) were below 10 years of age.

The findings revealed that the majority of victims with fatal head injuries were injured outdoor (73.89%). Nearly half of the victims died at hospital (49.74%) while only (7.41%) died during transportation; and the rest of them died at the scene of injury. Besides, the majority of the victims were having closed injuries (77.12%).

Furthermore, the study explored demography breakdown over fatal head injuries among the victims with the aim of identifying any differences. Findings show that type of injury, gender, and place of death are significant variables. However, no statistical significant differences were found in the rest of the study variables. In relation to type of injury and gender of victims, the differences favored females, the percentage of females with blunt injuries outnumbered males, and the percentage of males with penetrating injuries outnumbered females. As for type of injury and place of death, the differences favored hospital injuries, about two third of the victims with penetrating injuries died at the hospital (60.44%). Additionally, the percentage of victims with closed injuries who died during transportation (8.6%) was higher than those with opened injuries (3.4%).

Additionally, nearly (57.01%) of the injuries among the victims were accidental, while the lowest were suicidal or undetermined. Males outnumbered females regarding homicidal and accidental injuries, while in suicidal injuries the numbers of both genders are nearly equal.

In light of the current study and its discussions, the following is recommended: education of medical personnel and the institution of trauma hospital systems can achieve further improvements in outcome for patients with traumatic brain injuries; proper and exact documentation of TBI patient information is important aspect that the emergency physician, the subsequent treating neurosurgeons and nursing staff should complete. This is important to avoid the lack of TBI databases and help policy makers on the proper, needed, and adequate measures that are required to face the TBI epidemic; establishing a solid monitoring system that prevents misconduct and mishandling of medical files and documentation; policy interventions are urgently needed to reduce the burden of TBI in Lebanon, primarily through the development of a better surveillance system; and further studies in the field of TBI to establish a clearer understanding of the gap areas presented in the study is recommended.

Keywords: Pattern, fatal head injuries, victims, medico legal, Lebanon.

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