

Eva Flores-Cabeza
Manuel Sánchez-Sánchez
Intensive Care Service, Burns Unit, University Hospital La Paz,
IdiPaz, Madrid, Spain

E-mail address: kapillaxman.nanwani@salud.madrid.org
(K. Nanwani-Nanwani).

* Corresponding author at: Servicio de Medicina Intensiva,
Hospital Universitario La Paz, Paseo de la Castellana 261, 28046,
Madrid, Spain.

<http://dx.doi.org/10.1016/j.burns.2020.11.021>
© 2020 Elsevier Ltd and ISBI. All rights reserved.

Comparison of severity and mortality among burn only, burn with non-TBI, TBI only, and combined burn/TBI patients



Dear Editor,

Martin et al. evaluated comprehensively the mortality of patients with burn, burn with non-TBI trauma, and combined burn/TBI who enrolled at the National Trauma Data Bank (NTDB) [1]. Hereby, I intend to present some of our TBI patients characteristics from a non-burn related trauma registry to give better understanding the subject.

The Sina Trauma Registry is a hospital based cohort study affiliated to Tehran University of Medical Sciences, Tehran, Iran which has been launched since August 1, 2016. All patients with one or more traumatic injuries in a defined diagnostic international classification of diseases have been assessed based on inclusion criteria [2–4] and more than 4700 cases have been reviewed so far.

We registered 449 TBI patients for more than 51 months. The patients had mean (SD) age of 41.74 (19.72), 402 individuals were male (89.5%), and their means of GCS and ISS were 13.84 and 6.14. Furthermore, we had 53 (11.8%) deceased among them. Considering our information, the mean age was close to the above mentioned three groups at the NTDB, the male gender was higher, and the GCS was lower compared to those groups. Based on ISS, the severity of our cases was more than burn only and burn with trauma/no TBI groups and it was less than burn with TBI group. Likewise, our registry had more mortality compared to burn only and burn with trauma/no TBI groups and it had less mortality than burn with TBI group.

In conclusion, although our patients from a non-burn related trauma registry have some similar specifications with the NTDB, it seems that the severity and mortality following TBI may be higher than burn only and burn with non-TBI trauma. More analytical research is needed to compare the four groups precisely.

Authors' contributions

Dr. Payman Salamati designed the idea, revised the paper critically and approved the version to be published.

Ethics committee approval

The paper has been prepared in accordance with the rules of the ethical review board of Tehran University of Medical Sciences.

The previous manuscript number

Martin R, Taylor S, Palmieri TL. Mortality following combined burn and traumatic brain injuries: An analysis of the national trauma data bank of the American College of Surgeons. *Burns*. 2020 Sep 1;46(6):1289-96.

The corresponding author of the original article

Palmieri T.L.
E-mail: tlpalmieri@ucdavis.edu.

Role of the funding source

None.

Conflicts of interest

None.

REFERENCES

- [1] Martin R, Taylor S, Palmieri TL. Mortality following combined burn and traumatic brain injuries: an analysis of the national trauma data bank of the American College of Surgeons. *Burns* 2020;46(September (6)):1289–96.
- [2] Ghodsi Z, Rahimi Movaghar V, Zafarghandi MR, Saadat S, Mohammadzadeh M, Fazel M, et al. The minimum dataset and inclusion criteria for the National Trauma registry of Iran: a qualitative study. *Arch Trauma Res* 2017;6 (April (2)):1–7.
- [3] Sharif-Alhoseini M, Zafarghandi MR, Rahimi-Movaghar V, Heidari Z, Naghdi K, Bahrami S, et al. National Trauma Registry of Iran: a pilot phase at a major

trauma center in Tehran. *Arch Iran Med* 2019;22(June (6)): 286–92.

- [4] Khaleghi-Nekou M, Moradi A, Zafarghandi M, Fayaz-Bakhsh A, Saeednejad M, Rahimi-Movaghar V, et al. Epidemiology of fatal injuries among patients admitted at Sina Hospital, the National Trauma Registry of Iran, 2016-2019. *Adv J Emerg Med* 2020 (August).

Payman Salamati

Sina Trauma and Surgery Research Center, Sina Hospital, Tehran University of Medical Sciences, Hassan Abad Square, Imam Khomeini Avenue, Tehran, Iran

E-mail address: psalamati@tums.ac.ir (P. Salamati).

<http://dx.doi.org/10.1016/j.burns.2020.11.021>

© 2020 Elsevier Ltd and ISBI. All rights reserved.

Epidemiological trends of personal mobility devices and power-assisted bicycles-related fires and injuries in Singapore



Worldwide, there is a rapid growth in the popularity and use of electric personal mobility devices (PMDs) such as motorised scooters (e-scooters) and power-assisted bicycles (PABs) [1,2]. These alternative modes of transportation typically operate on electricity, powered by rechargeable lithium-ion vehicle batteries and are thought to be ‘cleaner’ and convenient for personal use. However, there have also been increasing reports of trauma injuries and fire incidents associated with PMD/PAB use [2,3]. Although incidents and trauma injuries resulting from PMD/PAB use are well-documented, little is known about injuries sustained due to PMD/PAB-related fires despite the inherent fire risks.

This study thus aimed to investigate the impact of PMD/PAB-related fires on the health of users in Singapore over a 3-year period, from January 2017 to December 2019.

We analysed nationwide data collected between January 2017 and December 2019 by the Fire Investigation Unit of the Singapore Civil Defence Force (SCDF). The SCDF is a national emergency service in Singapore that provides firefighting, technical rescue, and emergency medical services (EMS). All EMS-attended fire incidents attributed to PMDs or PABs were reviewed. Where the fires resulted in injuries, the EMS paramedic records were studied, including patient demographics, injury type, severity, and injured body region(s), and collated for analysis (Table 1).

As seen in Table 1, there were a total of 178 incidents of PMD/PAB-related fires and 101 casualties from January 1 st,

2017 through December 31 st, 2019. In most cases of PMD/PAB-related fires, the circumstances surrounding incident were unclear (55.0%, n = 98), or the devices were being left to charge overnight (33.7%, n = 60).

The majority of the persons involved in these incidents were male (64.4%, n = 65), median age 31.5 years (interquartile range 19–51 years) and 70.3% (n = 71) required conveyance to the hospital. In terms of the injuries sustained, majority of the casualties (54.5%, n = 55) sustained smoke inhalation injuries only, and the remaining sustained burn injuries only (27.7%, n = 28) or both (14.9%, n = 15). These burns were generally second-degree burns (60.5%, n = 26) and the affected region was commonly the upper extremities (42%), followed by lower extremities (29.0%), torso (17.4%) and head and face (11.6%).

As PMDs and PABs run on lithium-ion batteries, they do have inherent fire risks. Fires could result from faulty electrical circuitry in these batteries, short circuiting or overheating, and the risk of this increases with overcharging, illegally modifying the device or tampering with the vehicle’s electrical components [4]. Although in most cases, the casualties only sustained relatively minor injuries, users of PABs or PMDs should still be vigilant when charging and handling their devices, as these fire incidents endanger lives and damage property.

To guard against these risks, it is illegal to modify PMDs or PABs in Singapore and the government has mandated all