



Recurrent Human Tragedy During Hajj

Shahram Manoochehry¹, Hamid Reza Rasouli^{1*}

¹Trauma Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran

Corresponding Author: Hamid Reza Rasouli, M.Sc, Trauma Research Center, Baqiyatallah University of Medical Sciences, Tehran, Iran. Tel/Fax: +982188053766, Email: hr.rasouli64@gmail.com

Received February 5, 2017; Accepted February 14, 2017; Online Published February 21, 2017

Citation: Manoochehry S, Rasouli HR. Recurrent human tragedy during Hajj. Int J Travel Med Glob Health. 2017;5(1):36-37. doi:[10.15171/ijtmgh.2017.07](https://doi.org/10.15171/ijtmgh.2017.07).

Dear Editor

Hajj, a unique yearly mass gathering pilgrimage of more than 2 million Muslims from around the world, presents enormous challenges to the Saudian Arabia government.¹ The potential for deadly epidemic outbreaks of bacterial and viral diseases leading to upper respiratory infection and meningitis and human stampedes call for prompt attention from both pilgrims and the ministry of health.²

Trauma during Hajj is a real surgical dilemma that deserves special attention.³ Stampede during Hajj presents the most dreaded trauma risk. In 2006, the Hajj stampede led to pilgrims crossing over fallen down pilgrims and ended up with 289 injured and 380 deaths.

Fatalities are caused by head injury and asphyxiation, that cannot be attended to in huge crowds.⁴ Every year, because of overcrowding and population density, numerous pilgrims, are traumatized or killed during the Hajj rituals.

The deadliest human disaster of the annual Hajj took place in 2015 in which at least 2431 pilgrims were crushed to death of which 465 were Iranians and an additional 427 were reported as missing in a stampede at Mina just outside Mecca.⁵ Unfortunately, this was not the first time and we are witnessing a recurrence of fatal tragedy in the Hajj especially in Mina every year.

These events mandate appropriate attention and effective action from the ministry of health. Better and preemptive disaster planning can help in the prevention of deaths and injuries as well as psychological trauma to the Hajj pilgrims.

Mass gatherings like Hajj continue to present advanced and complex public health challenges that can be best addressed through health and disaster management teams of experts from different countries comprising of healthcare professionals and trauma specialists.

The rate of injuries can be reduced by training pilgrims before leaving for Saudi Arabia. Pilgrims should meanwhile be cautioned to avoid overcrowded places. They should also be trained regarding basic preventive measures related to

infectious diseases and outbreaks. Additionally, the timing of the rituals during Hajj and crowd management can reduce these disasters.⁶

Deployment of computerized software systems and camera monitoring, which can identify lost pilgrims, update their locations, alert their group guide and the use of digital maps such as Google maps can further reduce human suffering. Also, using GPS systems and telemedicine can further prevent deaths from injuries or any other untoward event. It is recommended that health workers and EMS medical teams work in coordination with the ministry of Hajj officials. Headquarters for disaster management comprising of experts from different countries need to be established. Triage systems including rescue helicopter that can reduce morbidity and mortality in such crises are also suggested.

Authors' Contributions

All authors contributed equally to this study.

Conflict of Interest Disclosures

We declare that there is no conflict of interests.

Ethical Approval

Not applicable.

Funding/Support

This study did not have any grants.

Acknowledgements

We would like to thank Dr. Shaban Mehrvarz for contributing to the idea and for his helpful advice in the preparation of this letter. Also, we are grateful for all those who helped us in this study, especially the researchers and staff of the Trauma Research Center, Baqiyatallah University of Medial Sciences due to their collaboration.

References

1. Shafi S, Booy R, Haworth E, Rashid H, Memish ZA. Hajj: health

- lessons for mass gatherings. *J Infect Public Health*. 2008;1(1):27-32. doi:[10.1016/j.jiph.2008.08.008](https://doi.org/10.1016/j.jiph.2008.08.008).
2. Hsieh Y-H, Ngai KM, Burkle FM, Hsu EB. Epidemiological characteristics of human stampedes. *Disaster Med Public Health Prep*. 2009;3(4):217-223. doi:[10.1097/DMP.0b013e3181c5b4ba](https://doi.org/10.1097/DMP.0b013e3181c5b4ba).
 3. Al-Harathi AS, Al-Harbi M. Accidental injuries during muslim pilgrimage. *Saudi Med J*. 2001;22(6):523-525.
 4. Ahmed QA, Arabi YM, Memish ZA. Health risks at the Hajj. *Lancet*. 2006;367(9515):1008-1015.
 5. Ganjeh M, Einollahi B. Mass Fatalities in Hajj in 2015. *Trauma Mon*. 2016;21(5):e43253. doi:[10.5812/traumamon.43253](https://doi.org/10.5812/traumamon.43253)
 6. Razavi S, Ardakani HZ, Rajai S, et al. Trends in prevalent injuries among Iranian pilgrims in Hajj. *Iran J Public Health*. 2011;40(2):110-5.

Archive of SID