International Journal of Surgery 68 (2019) 163–164

Contents lists available at ScienceDirect

International Journal of Surgery

journal homepage: www.elsevier.com/locate/ijsu

Letter to the Editor

Letter to editor: Risk factors and complications contributing to mortality in elderly patients with fall-induced femoral fracture: A cross-sectional analysis based on trauma registry data of 2,407 patients

ARTICLE INFO

Keywords:
Femur
Fracture
Trauma
Fall
Age
Elderly
Mortality
Respiratory complication

Dear Editor,

We would like to thank Chou et al. for their study investigating the risk factors and complications associated with mortality in elderly patients with femoral fracture after a fall from the ground level [1].

In their study, they identified age, pre-existing end stage renal disease (ESRD) and subarachnoid haemorrhage (SAH) as significant risk factors for mortality in elderly patients with femoral fractures after a fall. They also identified respiratory complications such as pneumonia, sepsis, respiratory failure and pulmonary embolism to contribute greatly to mortality.

Our comments on this article are:-

First, important risk factors that affect bone mineral density (BMD) should be included as bone mineral density has been shown to affect mortality in elderly patients with femoral fractures after a fall [2]. Other factors include body mass index (BMI), endocrine diseases, smoking, alcohol misuse, previous falls, history of osteoporosis, steroid use, pathological fractures secondary to bone metastases and hormone replacement treatment.

Second, since respiratory complications were cited as main causes of mortality, factors that increase the risks of these complications including Chronic Obstructive Pulmonary Disease (COPD), bronchiectasis, immunocompromised status and thrombophilia should be included in the data collection.

Moreover, it might be useful to compare the risk factors and post-fall management in patients who suffered from respiratory complications and survived with those who died.

Third, the mental health status of the patients should be explored as it can result in poor outcomes, with prolonged hospital stay and high mortality rates [3].

Fourth, as mortality is also affected by post-fall recovery, factors like nutritional status [4] and multidisciplinary team involvement [5] should also be included in the data collection.

Last, the authors identified SAH to be a significant and independent risk factor for mortality. However, they need to clarify whether SAH was previously diagnosed, caused the fall, or due to the fall.

Understanding the risk factors and complications contributing to mortality in elderly patients with femoral fractures after a fall are useful to improve identification of high-risk patients. Early and aggressive measures to prevent respiratory complications should be used in patients with signs of cardiopulmonary compromise or infection.

Ethical approval

None.

Sources of funding

None.

Author contribution

None.

Conflicts of interest

Not applicable.

Research registration number

None.

Provenance and peer review

Not Commissioned, internally reviewed.

https://doi.org/10.1016/j.ijsu.2019.05.021
Received 10 May 2019; Received in revised form 14 May 2019; Accepted 21 May 2019
Available online 02 July 2019
1743-9191/ © 2019 IJS Publishing Group Ltd. Published by Elsevier Ltd. All rights reserved.

Data statement

Not Applicable.

CRediT authorship contribution statement

Bennett Choy: Formal analysis, Writing - original draft. **Krishanth Ganesan:** Formal analysis, Writing - original draft.

References

[1] S. Chou, C. Rau, Y. Tsai, S. Hsu, H. Hsieh, C. Hsieh, Risk factors and complications contributing to mortality in elderly patients with fall-induced femoral fracture: a cross-sectional analysis based on trauma registry data of 2,407 patients, Int. J. Surg. 66 (2019) 48–52.

[2] M. Mussolino, R. Gillum, Low bone mineral density and mortality in men and women: the third national health and nutrition examination survey linked mortality file, Ann. Epidemiol. 18 (11) (2008) 847–850.

[3] J. Holmes, A. House, Psychiatric illness predicts poor outcome after surgery for hip fracture: a prospective cohort study, Psychol. Med. 30 (4) (2000) 921–929.

[4] K. Miu, P. Lam, Effects of nutritional status on 6-month outcome of hip fractures in elderly patients, Ann. Rehabil. Med. 41 (6) (2017) 1005.

[5] A. Riemen, J. Hutchison, The multidisciplinary management of hip fractures in older patients, Orthop. Traumatol. 30 (2) (2016) 117–122.

Bennett Choy*, Krishanth Ganesan
University of Sheffield Medical School, Beech Hill Rd, Sheffield, S10 2RX, UK
E-mail addresses: jkbchoy1@sheffield.ac.uk (B. Choy), kganesan1@sheffield.ac.uk (K. Ganesan).

* Corresponding author.