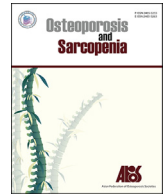




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Editorial

More research and education of osteoporosis should be focused on the oldest old and men



Hip fracture is a major public health problem worldwide, especially due to increased aging population and life expectancy. It is known to be associated with increased dependency, institutionalization, morbidity, immobility, and mortality. Thus, it is a condition not only affecting the patient per se, but also family members, social welfare, and socioeconomic system.

Probably due to increased public awareness and advanced research in the field, there have been reported decreasing or stabilizing trend of incidence of hip fracture in many developed countries, including Sweden [1], France [2], and Japan [3]. In the last issue of *Osteoporosis and Sarcopenia*, Hong and Han [4] reported the incidence of hip fracture in Korea. Like many other studies [2], absolute number of hip fracture increased in both women and men. For standardized incidence rate (Std. IR) of hip fracture, it was stabilized in men from 2006 (112 per 100,000 person-years) to 2015 (114.1 per 100,000 person-years). However, the Std. IR of hip fracture in women increased from 212.2 per 100,000 person-years in 2006 to 255.2 per 100,000 person-years in 2015. By investigating the effect of age, it was clearly demonstrated that the Std. IR was stabilized in the age group of 50–59 and 70–79, decreased in the age group of 60–69, but significantly increased in the age group of 80 or above.

This study is of public health importance. United Nations projected that life expectancy will reach 83 years in the more developed regions of the world by 2045–2050 [5], implying that majority of the population will live exceed the age of 80 in the developed regions. Thus, more research should be focused on the osteoporotic fracture prevention in the oldest old (defined as age of 80 or above). Recently, the first hip fracture prediction score for the oldest old was developed by the Hong Kong Osteoporosis Study, such prediction score may help to identify oldest old who are at high risk of fracture [6].

Another important data reported in the study of Hong and Han [4] was the trend of hip fracture-associated mortality. It was reported that the mortality rate after hip fracture decreased by 10% and increased by 13% in women and men, respectively. Osteoporosis is often under-diagnosed in men, probably due to a lower incidence of hip fracture is observed in men. However, the absolute number of hip fracture is indeed comparable between men and women in Korea [4], as well as other countries [7]. It is well documented that hip fracture associated mortality rate is higher in men than in women. The increased hip fracture-associated mortality

rate in men observed in the study could be due to the fact that older men usually know little about osteoporosis [8]. Even healthcare professionals caring for patients with fragility fracture were reported to have limited knowledge on osteoporosis and fracture [9]. Thus, more education should be done to promote the awareness of osteoporosis not only among carers and patients, but also among healthcare professionals.

Conflicts of interest

No potential conflict of interest relevant to this article was reported. **ORCID.** Ching-Lung Cheung: 0000-0002-6233-9144.

References

- [1] Karampampa K, Ahlbom A, Michaëlsson K, Andersson T, Drefahl S, Modig K. Declining incidence trends for hip fractures have not been accompanied by improvements in lifetime risk or post-fracture survival: a nationwide study of the Swedish population 60 years and older. *Bone* 2015;78:55–61.
- [2] Briot K, Maravic M, Roux C. Changes in number and incidence of hip fractures over 12 years in France. *Bone* 2015;81:131–7.
- [3] Orimo H, Yaegashi Y, Hosoi T, Fukushima Y, Onoda T, Hashimoto T, et al. Hip fracture incidence in Japan: estimates of new patients in 2012 and 25-year trends. *Osteoporos Int* 2016;27:1777–84.
- [4] Hong S, Han K. The incidence of hip fracture and mortality rate after hip fracture in Korea: a nationwide population-based cohort study. *Osteoporos Sarcopenia* 2019;5:38–43.
- [5] World population ageing 2013 [internet]. New York: United Nations; 2013 [updated 2013 Dec; cited 2019 Aug 15]. Available from: <https://www.un.org/en/development/desa/population/publications/pdf/ageing/WorldPopulationAgeingReport2013.pdf>.
- [6] Lam MT, Sing CW, Li GHY, Kung AWC, Tan KCB, Cheung CL. Development and validation of a risk score to predict the first hip fracture in the oldest old: a retrospective cohort study. *J Gerontol A Biol Sci Med Sci* 2019. <https://doi.org/10.1093/geron/glz178> [Epub ahead of print].
- [7] Cheung CL, Ang SB, Chadha M, Chow ES, Chung YS, Hew FL, et al. An updated hip fracture projection in Asia: the Asian Federation of Osteoporosis Societies study. *Osteoporos Sarcopenia* 2018;4:16–21.
- [8] Gaines JM, Marx KA. Older men's knowledge about osteoporosis and educational interventions to increase osteoporosis knowledge in older men: a systematic review. *Maturitas* 2011;68:5–12.
- [9] Giangregorio L, Fisher P, Papaioannou A, Adachi JD. Osteoporosis knowledge and information needs in healthcare professionals caring for patients with fragility fractures. *Orthop Nurs* 2007;26:27–35.

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