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Sarcopenia: An Upcoming Challenge for Elderly Health

Md Monoarul Haque[1,*], Mominul Islam[2]

[1]Associate Professor, Department of Public Health, German University, Bangladesh

[2]Bachelor of Public Health Student, Department of Public Health, German University Bangladesh

[*]Correspondence should be addressed to Md Monoarul Haque, monoarmunna@yahoo.com

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Editorial

Ageing is known to be a natural process but is associated with significant decline in neuromuscular function and performance [1,2]. Sarcopenia is an age related disease described by progressive loss of skeletal muscle mass and function [3]. In addition, sarcopenia is a major clinical problem in public health of older people; with some adverse outcomes such as disability, poor quality of life, and increased risk of death [4,5]. The known causes for sarcopenia are usually age related, changes in tissue secretions or response to hormonal factors, changes in dietary intake, protein metabolism, and disuse atrophy [6–8]. Sarcopenia is significantly associated with age, morbidity, obesity, self-reported physical disability, independent of ethnicity, income, and health behaviors [3]. The prevalence of sarcopenia is rising, which is as a result of population aging all over the world. The prevalence of sarcopenia can be estimated at 6–12% from the large-scale studies [9]. In Asia, it was reported to be relatively high. As such, whether sarcopenia can be particularly prevalent in Asia remains unclear [10,11]. Shafiee G, *et al.* concluded that the prevalence of sarcopenia was higher among non-Asian than Asian individuals in both genders [12]. The prevalence of sarcopenia in Japan was estimated to be between 11 and 24% [9]. The prevalence of sarcopenia among Chinese people was 11% [13]. In a cross sectional study conducted in Kalinga Institute of Medical Sciences, India, it was found that the relative muscle mass is significantly lower among the elderly population, and the prevalence of sarcopenia was found to be 15.3% among the elderly males and 20.5% in females [14]. Bangladesh is currently undergoing a demographic transition and the proportion of the population 60 years and older is rapidly increasing. Bangladesh's elderly population is one of the largest in the world in terms of absolute numbers. Currently, older people account for around 7% of the country's total population, amounting to roughly 10 million people. By 2050, the ≥ 60 population will account for 20% of the total population — a fourfold increase from the present time. The increase in elderly population in Bangladesh during the period 1990–2025 is projected to be much faster (219%) than that of European countries such as Sweden (33%), UK (45%), and Germany (66%) [15]. But unfortunately, there is no clear idea or research about the prevalence of sarcopenia in Bangladesh. The exponential increase of elderly people is mainly due to a rise in life expectancy, especially in the developing countries. Along with the rise in life expectancy there is also a rise in the incidence of non-communicable chronic conditions which again leads to increasing morbidity and disability. Normal ageing is responsible for the finite lifespan of the human race. It is important for the medical/health professional treating the elderly to know the difference between changes secondary to normal ageing and changes which occur as a result of disease [16,17]. From a health care perspective, the rising proportion and burden of older people demands that health care professionals increase their awareness of the health and disability of this particular population. The problems of aged is not merely medical, it is physical, mental, economical & socio-cultural. Many things about geriatric health and health problems depend upon individual desire & endeavor, socioeconomic & environmental factors, which are changeable and preventable. Geriatric health problems are making a greater demand for the health services of a community [18]. With aging, two things occur. There are a physiological decline and an increase in the prevalence of diseases. Although these processes influence each other, physiological decline does not occur independent of diseases. In healthy geriatric peoples, many physiological functions are maintained in the basal resting state, but decrements are seen

in most organ systems & homeostatic mechanisms, when these systems are challenged or stressed [19]. The geriatric population suffers from health problems i.e. senile cataract, glaucoma, nerve deafness, musculoskeletal changes affecting locomotion, failure of special senses, and poor reflexes (resulting in accident proneness) and enlargement of prostate in males. Sarcopenia is closely linked to age-related losses in bone minerals, basal metabolic rate, and increased body fat content. Through physical exercise and training, especially resistance training, it may be possible to prevent sarcopenia and associated abnormalities like hypertension, obesity, osteoporosis, coronary artery disease, and type-2 diabetes [20]. Common preventive measures for all geriatric population are promotion of physical activity and regular exercise, good and healthy diet, smoking cessation, vaccination (influenza vaccination, pneumococcal vaccination), screening test, routine medical checkup, treatment of chronic diseases, and adequate social support. For the elderly, prevention focuses on diseases, frailty, accident, iatrogenic complications, and psychosocial problems. Not all elderly people benefit from every preventive measure. Choice of preventive measures depends on the general condition of them. None of us wants to grow old. During childhood we often wished to get older but after reaching adulthood, we wish to slow down the aging process. Early scientists (philosophers) agreed that we are born with predetermined amount of vital substance and once it is consumed, we die [21]. Aging is a biological reality, which has its own dynamic and is largely beyond human control. We must meet the challenge of aging, but we cannot stop it. Rather we can protect, promote and preserve the better quality of elderly health. Living to a healthy and happy ripe old age may not be a matter of genetic predisposition or just dumb luck. Moderate alcohol use, no smoking, a stable marriage, regular exercise, appropriate weight, positive coping mechanisms, and no depressive illness are the seven factors that give us longevity [22]. It is time to screen for sarcopenia and provide treatment for it at a minimum resistance exercise and protein and vitamin D supplementation [23]. Taylor J. Marcell stated that even those individuals who maintain their fitness through exercise do not appear to be immune to sarcopenia [24]. However, sarcopenia is a consequence of the ageing progress, early diagnosis can prevent some adverse outcomes [25]. Sarcopenia is one of the most important health problems in elderly with a high rate of adverse outcomes. However, several studies have investigated the prevalence of sarcopenia in the world, and the results have been inconsistent [12]. Locally, there is no literature on prevalence of sarcopenia. The rapidly increasing elderly population is a new and important group in terms of social economic and changing cultural context. The older persons, in Bangladesh, are passing their days amidst the tender care and support mostly provided by their extended families without any remarkable backing from the national level. However, the situation is in transition as the family pattern gradually shifting towards nuclear type due to the change in values, migratory tendency of their offspring and poverty. By 2050 it is assumed that size of the senior citizens will be around 20 percent of the total population in our country. It is predicted that high portion of older age group will be a biggest challenge to the country's social, economic, and healthcare in the future. However, they are prone to suffer with the problems of dependency and disability followed by increased burden of disease. Elderly people are usually vulnerable. Moreover, degenerative changes take place as age grows. Geriatric problems are ignored in medical education and profession. There is a lack of information and research on elderly in health sector.

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