The Issue of Nutrition in an Aging Society

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Summary Viewed from a global perspective, Japan is often considered a country where the progression towards a low birthrate and longevity has been prominent. In 2007, the ratio of the aged population reached 21.5%, propelling Japan into the classification of a super aging society. The long-term care insurance system in Japan was initiated in the year 2000, as a general long-term care service system for the whole society, covering the nutrition, medical care, and welfare fields. The goal of nutrition in an aged society is the extension of healthy life expectancy. The ratio of elderly citizens with malnutrition is high. Due to the loss of teeth, and a decrease in digestive and physical functions, there is often a decrease in appetite, and the inability to obtain enough nutrition for physical homeostasis is related to such conditions as frailty and the partial loss of physical functions due to sarcopenia, as well as a decrease in the quality of life (QOL). The elderly can easily fall into a state of protein and energy malnutrition (PEM), due to a variety of causes. Accordingly, it is important to adopt an appropriate approach that ensures a correct understanding of the causes of malnutrition and the special characteristics of malnutrition in the elderly.

Key Words long-term care insurance system, longevity, malnutrition, frailty, sarcopenia

This symposium was coordinated by the Japanese Society of Nutrition and Dietetics and planned as a forum designed to stimulate and deepen the content of discussions on the subject of Nutrition for Longevity. Experts in their respective fields, four research scientists, Dr. Kazuko Ishikawa-Takata (National Institute of Health and Nutrition, Japan), Dr. Masafumi Kuzuya (Nagoya University Graduate School of Medicine, Japan), Dr. Miguel A. Ramos, Jr. (The National Center for Geriatric Health-Malacanang, Philippines), and Dr. Haeng-Shin Lee (Korea Health Industry Development Institute, South Korea), will lead discussions on a variety of related issues, encompassing nutrition in an aging society.

1. Transitions in the Japanese Population

Recently, the population in Japan has been leveling off, but facing a stage where there will be a decrease in the total population. By the year 2060, it is predicted that the total population will fall below 90 million, and that the ratio of aged citizens will reach a level of 40%.

Viewed from a global perspective, Japan is often considered a country where the progression towards a low birthrate and longevity has been prominent. In 2007, the ratio of the aged population reached 21.5%, propelling Japan into the classification of a super aging society. In 2013, the number of elderly citizens aged 65 or older accounted for 25.1% of the total population, and furthermore, included in that figure, the number of advanced elderly citizens aged 75 or older exceeded more than 10%.

According to the World Health Statistics 2014 report (WHO), in 2012 the average life expectancy in Japan was 80.0 y for men and 87.0 y for women, ranking No. 8 for men and No. 1 for women worldwide. While an extension of the average life expectancy for the citizens of the country is certainly desirable, the vital point here is an extension of the healthy life expectancy, the period in the later years of life where the elderly are not bedridden or physically impaired. In order to achieve an extension of the healthy life expectancy, it is important to improve the quality of life (QOL) for the elderly and reduce the cost of medical care. The healthy life expectancy in Japan is now 70.42 y for men and 73.63 for women, ranking top worldwide.

2. The Long-Term Care Insurance System in Japan

Along with the trend towards an aged society, there has been a rapid increase in Japan in the number of bedridden elderly citizens and dementia cases. In addition, the increase in the number of separate families and other factors has led to changes in the care of the elderly in families. The issue of nursing care for the elderly has become a cause of anxiety during old age. The goal of nutrition in an aged society is the extension of the healthy life expectancy. The ratio of elderly citizens with malnutrition is high. Due to the loss of teeth, and a decrease in digestive and physical functions, there is often a decrease in appetite, and the inability to obtain enough nutrition for physical homeostasis is related to such conditions as frailty and incomplete physical functions due to sarcopenia, as well as a decrease in the QOL.

The long-term care insurance system in Japan was initiated in the year 2000, as a general long-term care service system for the whole society, covering the nutrition, medical care, and welfare fields. The types of nursing services available can be divided into nursing care benefits, prevention benefits and community-based support organizations. The nursing care benefits are provided as facility-based services, in-home services, com-
community-based nursing care and prevention services. The community-based services are conducted as nursing care and prevention services and municipality-based services. According to the “Nursing Care Insurance Business Advisory” bulletin published by the Ministry of Health, Labour and Welfare, there were 5.64 million people who were approved for nursing care (support) at the end of April, 2013, and that figure amounts to a 2.5-fold increase compared to the year 2000, when the long-term care insurance system was initiated in Japan. In regard to the increase in the number of persons receiving benefits under the long-term care insurance system, the increase in the number of persons receiving in-home service benefits was especially large.

3. The Issue of Nutrition in an Aging Society

In regard to the issue of nutrition in a super aging society, from the viewpoint of attaining an increase in healthy life expectancy, as well as the nursing care and prevention viewpoint, there is the rising importance of responding to the needs of the advanced elderly citizens (75 y old or older) who are prone to fall into not only overnutrition, but also undernutrition. Placing importance on the prevention of the processes leading to a poor nutritional state requiring nursing care, a variety of research programs have been initiated, aimed at proper nutrition and the prevention of frailty and the related sarcopenia, as well as dementia and cognitive dysfunction (1) (Fig. 1). The elderly subjects of that research include patients requiring only light nursing care and subjects with a number of chronic diseases. However, those subjects are somewhat self-reliant and capable of leading an independent life without requiring nursing care.

The elderly can easily fall into a state of protein and energy malnutrition (PEM), due to a variety of causes. Accordingly, it is important to adopt an appropriate approach that ensures a correct understanding of the causes of malnutrition and the special characteristics of malnutrition in the elderly. Taste preferences are especially strong in the elderly, leading to the repeated intake of the same food products and the skipping of meals, as well as a trend for an increase in eating between meals. Fact-finding studies conducted to determine the actual food products eaten by the elderly have shown a tendency for the intake of dishes featuring plant-based food products rather than those based on oils and fats or animal-based food products. Thus, there is a decrease in the frequency of the intake of food products based on oils or fats, meat and dairy products, and an associated high risk of a deficiency in protein, calcium, iron, and fat-soluble vitamins. In particular, as the presence of vitamin D controls bone metabolism, vitamin D deficiency can cause osteoporosis, and furthermore, this deficiency has a heavy influence of muscular and knee extension power as well as a person’s walking speed. In addition, the decrease in the total intake observed in the elderly causes a decrease in the volume of water intake, making it easy for the elderly to fall into a state of dehydration.

In the elderly, we often observe a decrease in masticatory ability, a decrease in digestion and absorption ratios, and a decrease in food intake associated with a decrease in the amount of exercise they perform. The large differences observed between individuals are a special characteristic. Furthermore, it can be considered that another characteristic is the fact that many of the elderly have one or a number of diseases. Accordingly, it is important not only to pay sufficient attention to the age of an elderly subject, but also their individual special characteristics.

REFERENCES