ABSTRACT

Introduction: Poor nutrition is not a natural concomitant of aging. Older adults are at risk for malnutrition due to physiological, psychological, social, dietary, and environmental risk factors. Weight loss in older adults is often associated with a loss of muscle mass and can ultimately impact their functional status. Malnutrition in older adults is associated with complications and premature death. The progression to malnutrition is often insidious and undetected. Objectives: (i) To find out the nutritional status of geriatric adults in an Old age home and to assess the prevalence of malnutrition among them. (ii) To explore the reasons for malnutrition in the inmates. Materials and Methods: The Mini Nutritional Assessment (MNA) scale was used to assess the nutritional status among the inmates in an old age home in Urban Varanasi. There were total 95 inmates (males and females both) in the old age home out of which 89 inmates agreed to be the part of the study. All the individuals of age greater than 65 yrs, were included in the study. Statistical Analysis: Data analysis was done by using Microsoft excel 2007. Results: 40.44% inmates were malnourished and about 17.97% were at risk of malnutrition. The p value (0.27) shows that there is no significant relationship between gender and the status of malnourishment. Conclusion: Older people are at an increased risk of inadequate diet and malnutrition. Therefore the rise in the older population will put more patients at risk. The MNA Scale has been well validated and is easy to use and screening can be vital in identifying and monitoring patients before complications arise.

Key words: Nutrition, Malnourished Elderly, MNA scale, Geriatric Adults

INTRODUCTION

Global aged population will rise from 595 million (2000) to 2 billion – a four fold rise-by 2050 (United Nations). Today elderly population in India constitutes about 8% (101 million, India census, 2011) and it is projected to rise to 143 million by 2021 and 301 million by 2051, almost 20% of total population.

Older persons are particularly vulnerable to malnutrition. Biological ageing leads to inadequate nutritional intake leading to malnutrition and in some it results in impaired body functions like the bone health, immune function, sensory aspects like vision and hearing. It further leads to sarcopenia and reduced cognitive performance.1

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All the impaired body functions affect day to day activities of the individual, reducing their quality of life and making them dependent on health care system. Moreover, attempts to provide them adequate nutrition encounter many practical problems as their nutritional requirements are not well defined. Both lean body mass and basal metabolic rate decline with age, an older person’s energy requirement per kilogram of body weight is also reduced. Moreover, the process of ageing also affects other nutrient needs. For example, while requirements for some nutrients may be reduced, the requirements for other essential nutrients may in fact rise in later life. Degenerative diseases such as cardiovascular and cerebrovascular disease, diabetes, osteoporosis and cancer, which are among the most common diseases affecting older persons, are all diet-affected. Micronutrient deficiencies are often common in elderly people due to a number of factors such as their reduced food intake and a lack of variety in the foods they eat. Inadequate nutritional intake and a fragile condition in elderly people may lead to increases morbidity and mortality.

**Objectives:**

(i) To find out the nutritional status and prevalence of malnutrition in geriatric people aged 65 years and above in an old age home

(ii) To explore the reasons for malnutrition in the inmates.

**MATERIAL AND METHODS**

This cross sectional study was conducted at a reputed old age home in urban Varanasi near Assi ghat where old age people come voluntarily for kashiwas (salvation after death) for two months i.e. January and February 2015. The study was approved by the Ethical Committee of the Institute of Medical Sciences. The Mini Nutritional Assessment (MNA) scale was used to assess the nutritional status among the inmates. There were total 95 inmates in the old age home, out of which 89 (47 males and 42 females) inmates agreed to be the part of the study. The inclusion criterion was age greater than 65 yrs. The MNA is a well validated nutrition screening and assessment tool that can identify geriatric patients age 65 and above who are malnourished or at risk of malnutrition. The scale was developed in the early 1990’s by Guigoz Y at the Nestle nutrition institute, Switzerland. It comprises of 18 questions related to the various aspects of health.

The schedule was filled by face to face personal interview. The calf and mid arm circumference were measured using a standard inch tape. On the basis of the scores obtained the people were characterized as malnourished, at risk of malnourishment or normal.

The MNA (Mini Nutritional Assessment) has been an extensively used method to identify risk of malnutrition in the elderly and in those that may benefit from early intervention. The MNA is a simple, low cost and non-invasive method that can be done at bedside. Added MNA scores allow one to screen the elderly who have an adequate nutritional status, those who are at risk of malnutrition and those who are malnourished. Thus, it is a cost effective, easy to use, tool that can identified monitor patients before complications arise. The MNA consists of anthropometric and global indicators, including information on eating patterns and self-perception of health, such as: reduced food intake; weight loss of >3 kg body weight; mobility, bed- or chair-bound; psychological stress; neuropsychological problems; body mass index; inability to live independently; taking >3 prescription drugs; having pressure sores or skin ulcers; number of full meals eaten per day; consumption of high-protein foods; consumption of fruits and vegetables; amount of liquids consumed per day; inability to feed self; self-view of nutritional status; self-view of health status; mid-arm circumference <21 cm; and calf circumference <31 cm. The tool has been successfully used to assess the nutritional risk of elderly who live independently, receive home care services or are institutionalized, and of patients who are chronically ill, frail, have Alzheimer's disease or cognitive impairment.
It has been demonstrated that the sensitivity of this scale is of 96%, the specificity is of 98% and the prognostic value for malnutrition is of 97%. This method has been broadly used among the geriatric population and a higher prevalence of malnutrition has been associated with the elderly most in need of care.

RESULTS AND DISCUSSION

There were 89 inmates who agreed to be the part of the study. Around 45% were in the age group of 60 to 75 yrs while 21.3% were above 85 years (Table-1).

If we see the distribution of various variables in the MNA scale, loss of appetite was found in 40% inmates, mobility was affected from mild to severe degree in 35% individuals, neuro-psychological issues were not a major concern with only 4-6% inmates complaining such problems (Table-2).

About 40% inmates had weight loss more than 3 kgs in the last three months. BMI less than 19 was found in 42% inmates.

Although mid upper arm circumference could be reliably measured, it has poor validity and is thus unlikely to be a good predictor of clinical outcome (Table-3).
Almost 41.57% inmates had normal nutritional status according to the MNA examination; about 40.44% were malnourished (Table 4). Literature review also shows similar findings regarding malnourished/ at risk population (57.97%) in institutionalized elderly.

The p value (0.27) shows that there is no significant relationship between gender and the status of malnourishment (Table 5).

The main reason for malnutrition could be lack of adequate nutritional knowledge (66%). The inmates were given good food and taking the diet full stomach but they were still malnourished as they were not taking a balanced diet (Table 6).

**CONCLUSION AND RECOMMENDATIONS**

With over 40% malnutrition prevalence in this study, a periodic visit of a nutritionist is worthwhile to an old age home to suggest the dining menu to provide vital micronutrients and vitamins to the elderly Periodic nutritional assessment and counselling of elderly regarding the importance various food time should be done.

For nutritional assessment MNA scale may be used. The policy planners and civil society organisations should advocate the above recommendations so that the old age homes can improve their structural set up and provide better services.
BIBLIOGRAPHY