Assessment of Nutritional Status of Elderly Hospitalised Patients According to Their Co-Morbid Conditions and Educational Levels Using Mini Nutrition Assessment Tool

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Elderly patients suffering from various age specific and other diseases and vulnerability to those diseases increase with a higher risk of them being nutritionally deprived .Mini nutrition assessment tool (MNA) has been developed for rapid assessment of the nutritional status of geriatric patients. Data on prevalence of malnutrition in various disease conditions is not available in Sri Lanka. This present study applied the MNA tool to find the prevalence of malnutrition in hospitalised elderly patients according to their co-morbid conditions and educational level. A cross-sectional hospital based study was conducted at the Medical wards 07 and 08, Teaching Hospital, Peradeniya in August to September 2011 using an interviewer administered questionnaire. All patients > 65 years old were included in the study. Maximum circumference of the left calf was measured. A total score of 0-7 points was considered 'malnourished', 8-11 'at risk of malnutrition' and 12-14 'normal nutritional' status.

A total of 175 patients were included in the study. Thirty three patients had chronic obstructive pulmonary disease (COPD) and two of them (6%) had normal nutritional status, nine (27.27%) were at risk of malnutrition and 22 (66.66%) were malnourished. Numbers of hypertensive patients were 82 and 12 (14.63%) had normal nutritional status, 37 (45.12%) were at risk of malnutrition and 33 (40.24%) were malnourished. Diabetes mellitus group included 36 patients and six (16.66%) had normal nutritional status, 19 (52.77%) were at risk malnutrition and 11 (30.55%) had malnutrition. Twenty two patients had ischemic heart disease and three (13.63%) had normal nutritional status, ten (45.45%) were at risk of malnutrition, nine (40.90%) had malnutrition. Fourteen patients had bronchial asthma and one (7.14%) had normal nutritional status, ten (71.4%) were at risk of malnutrition, three (21.4%) had malnutrition. Thirty eight patients had no identified co-morbid conditions and three (7.8%) had normal nutritional status, 17 (44.73%) were at risk of malnutrition, 18 (47.36%) were malnourished. In the study population, 27 patients have not gone to school and none of them had normal nutritional status. Of them, 13 (48.14%) were at risk of malnutrition and 14 (51.85%) were malnourished. Out of 55 patients who were educated from grade 1-5, two (3.63%) had normal nutritional status, 18 (32.72%) were at risk of malnutrition, 35 (63.63%) were malnourished. Of 67 patients educated up to grade 6-11, 11 (16.41%) were at normal nutritional status, 31 (46.26%) were at risk of malnutrition, 25 (37.31%) were malnourished. Out of 26 patients with educational level at grade 12, seven (26.92%) had normal nutritional status, 12 (46.15%) were at risk of malnutrition, seven (26.92%) were malnourished.

This study shows different co-morbid conditions affect nutritional status in different ways. COPD patients had the highest prevalence of malnutrition (66.66%). COPD leads to the development of malnutrition and *vice versa*. Bronchial asthma patients were at highest risk of malnourishment (71.4%). Diabetes and hypertension affect nutritional status in a more complex way because almost all were type 2 diabetes patients and a significant percentage of them were obese. As the educational level of patients increase, the prevalence of malnutrition decreased and normal nutritional status increased. Therefore, planning of nutritional intervention of patients should differ according to different disease conditions and educational levels.