

Nutritional assessment in elderly institutionalized people: Comparison between Body Mass Index (BMI) and Mini Nutritional Assessment Short-Form (MNA[®]-SF)

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Introduction

Malnutrition is a common problem in long-term care units with prevalence between 20 and 60% depending on the screening tool used for determination. Although the MNA[®]-SF is recommended in clinical guidelines for nutritional screening in geriatrics, the BMI as a stand-alone measurement of nutritional status is frequently used. The objective of the study was to compare the MNA[®]-SF to BMI and its identification of nutritional status.

Methods

The BMI and the MNA[®]-SF were assessed in 3299 elderly residents by the nursing staff. Nutritional status was classified by the MNA[®]-SF into 4 categories: 12-14 points: adequate nutritional status; M1: 8-11points: risk of malnutrition without weight loss; M2: 8-11points: risk of malnutrition with weight loss; and M3 <8 points: malnourished. Using BMI as designated by the ESPEN guidelines, nutritional status was classified as follows: severe malnutrition <18.5, mild malnutrition 18.5-19.9, risk of malnutrition 20-22, normal weight 22-27, overweight 27-30, obese >30.

Results

BMI was measured in all 3299 residents and the MNA[®]-SF was obtained from 3293 residents. According to BMI criteria, 12% of the residents were at risk of malnutrition, 13% were malnourished (BMI<20), 37% had normal weight, 17% were overweight and 20% were obese. Using the MNA[®]-SF, 51% of the residents were at risk (M1+M2) and 17% were malnourished (M3). From residents with a BMI>22, 8% were found in M3, 16% in M2 and 34% in M1. The main reasons for lower MNA[®]-SF points were weight loss (94%), neurological problems (77%) and reduced food intake (55%).

Conclusion

A four-fold higher prevalence of at risk residents and a slightly higher prevalence of malnutrition were found when the MNA[®]-SF was used vs BMI alone. This higher rate of at risk and malnourished residents is mainly due to weight loss, neurological problems and diminished food intake. The early recognition of weight loss and neurological problems makes the MNA[®]-SF an especially valuable tool for early detection of both malnourished and at risk residents. Therefore the MNA[®]-SF is a more suitable tool for early detection of nutritional issues and allows for more timely intervention than the BMI alone.