

Factors associated with malnutrition among head and neck cancer in-patients before radiotherapy in National Cancer Institute, Putrajaya

ABSTRACT

Introduction: Head and neck cancer (HNC) patients are often malnourished during diagnosis and before treatment. This study determined the prevalence of malnutrition and factors associated with malnutrition among HNC patients. **Methods:** A crosssectional study among HNC in-patients before radiotherapy was conducted. Malnutrition status of the patients was determined using scored Patient Generated Subjective Global Assessment (PG-SGA). Nutritional parameters of muscle mass, fat mass, albumin, energy and protein intakes were collected. Nutrition impact symptoms (NIS) of the patients were assessed using a validated Head and Neck Symptoms Checklist© (HNSC©). **Results:** Fifty HNC patients were recruited in this study and the age range of patients was 21 to 78 years old, with gender distribution of 78% males and 22% females. More than half of the patients were malnourished, with 20% severely malnourished before radiotherapy. The lack of dietitian referral before treatment was found to significantly affect nutritional status ($p=0.027$). There was a significant negative relationship between energy intake ($r=0.342$, $p=0.015$) and protein intake ($r=0.386$, $p=0.006$) with PG-SGA, indicating lower energy and protein intakes related with poor nutritional status. The result showed a significant positive relationship between NIS score ($r=0.731$, $p<0.001$) and PG-SGA, indicating the lower the NIS, the better the nutritional status among HNC patients. More than half of the HNC patients had difficulty chewing. **Conclusion:** A strong association between nutritional status and NIS showed the importance of dietary management in HNC patients. Early identification of the nutritional status of HNC patients can ensure optimal nutritional status to improve treatment outcomes.

Keyword: Head and neck cancer; Nutritional status; Nutrition impact symptoms; Energy intake; Protein intake