



NUTRITIONAL STATUS ASSESSMENT IN HEAD AND NECK CANCER, AND GASTROINTESTINAL CANCER PATIENTS USING SCORED PG-SGA TOOL IN A TERTIARY HOSPITAL

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ABSTRACT **INTRODUCTION:** Malnutrition and weight loss are prevalent among 20-80% in cancer patients. So nutritional assessment and timely intervention is necessary to decrease the mortality associated with cancer. The scored PG-SGA tool has been accepted by the oncology nutrition dietetic practice group of American Dietetic Association as the standard for nutritional assessment for cancer patients.

AIM: The aim of this study was to assess the nutritional status using scored PG-SGA score and to identify the level of nutritional intervention needed according to PG-SGA score.

MATERIALS AND METHOD: This study was a hospital based cross sectional study using a pretested questionnaire including the scored PG-SGA which was given to cancer patients attending surgical oncology department of tertiary care hospital. Data was collected after informed consent from patients and analysed using SPSS software.

RESULTS: Out of 443 patients, 324 head and neck squamous cell cancer patients and 119 gastrointestinal cancer patients were included in the study. Females were majority 65.8% and the rest 34.2% were males. The mean age of females was 49.3 years and that of males was 53.6 years. 45.6% were malnourished (deficit was 20.8% and excess was 24.8%). Only 12% of the study population needed no intervention, and the remaining 88% needed nutritional intervention. 15.8% of study population had score ≥ 9 and they required critical nutritional intervention, 42.2% had score 4-8 and they needed intervention by dietician, and 30% had score of 2-3 and they needed patient and family education.

CONCLUSION: Scored PG-SGA tool helps to identify malnourished cancer patients and allows triage for nutritional support.

KEYWORDS : Scored PG-SGA, Cancer patients, Malnutrition

INTRODUCTION

In the management of cancer patients, constant focus is maintained on the cancer remission and to reduce the mortality associated with it, but the level of nutritional assessment and intervention is often left unattended. Studies indicate that malnutrition and weight loss are prevalent among 20 -80% of cancer patients [1], hence assessment of nutritional status and timely intervention curbs the mortality associated with the malnourishment in cancer. The Patient Generated Subjective Global Assessment (PG-SGA) Score, which is adopted from the SGA score, was specifically developed for patients with cancer [2]. It is much more patient friendly and the patient can complete the score sheet up to the medical history, while the physical examination part can be done by the examiner. The total score from all the components will be summated, and depending upon the score obtained the level of intervention needed for the patient based upon his nutritional status can be attained. The scored PG-SGA has been accepted by the Oncology nutrition dietetic practice group of American Dietetic Association as the standard for nutritional assessment for patients with cancer [2].

AIM

The aim of this study was to assess the nutritional status of head and neck squamous cell cancer and gastrointestinal cancer patients attending surgical oncology department in a tertiary care hospital.

METHODS

This was a hospital based cross sectional study was done for 12 months in the year 2018 at department of surgical oncology, Mahatma Gandhi Memorial government hospital, Trichy. Only head and neck squamous cell cancer and gastrointestinal cancer patients attending the above department during the study period formed the sample size. A pre-tested questionnaire was administered and the study tools included scored PG-SGA tool for assessing nutritional status, measuring tape, and weighing scale. Data was collected after informed consent was taken. All data was analysed using SPSS software.

RESULTS

Total of 443 patients were enrolled in this study. 324 patients had head and neck squamous cell carcinoma and remaining 119 had gastrointestinal cancer. 65.7% were females and remaining 34.3% were male (Table 1). The age ranged from 26 to 75 years with mean age for male and female were 53.6 years and 49.3 years respectively. Majority of men were daily coolie laborers and majority of women were home makers. 76% were illiterates.

45.6% of cancer patients in this study were malnourished. 24.8% had BMI < 18.5 and 20.8% had BMI > 25 (Table 2). 61.6% of patients stated

that their weight was decreased during the past 2 weeks, and 37.9% of patients stated that their weight was unchanged (Table 3). Food intake was decreased in 69.5% patients, and increased only in 1.1% patients. Food intake remained unchanged in 29.3% (Table 4).

75.4% stated that they had pain during the past 2 weeks, 70% stated had no appetite, and 60.3% had fatigue which kept them away from eating. 37.9% stated that they had no eating problems during the past 2 weeks and 32.3% had depression (Table 5). When enquired about the general activity over the past month, 51.2% had fairly normal activities, 25.3% had no limitation in their activities, 15.6% stated that they were in the bed less than half the day, 5.4% stated that they were able to do only little activity and were mostly in bed, and only 2.5% stated they were bedridden (Table 6).

When PG-SGA score was calculated, only 12% of the study population needed no intervention, and the remaining 88% needed nutritional intervention. 15.8% of study population had score ≥ 9 and they required critical nutritional intervention, 42.2% had score 4-8 and they needed intervention by dietician, and 30% had score of 2-3 and they needed patient and family education (Table 7).

Table 1 - Distribution of study population based on gender and type of cancer.

Cancer	Male n (%)	Female n (%)	Total
Head and neck	104	220	324
Gastrointestinal	48	71	119
Total	152 (34.3)	291 (65.7)	443

Table 2 – Distribution of study population based on gender and BMI

BMI	MALE	FEMALE	TOTAL
<18.5	43	67	110 (24.8%)
to 24.9	74	167	241 (54.4%)
>25	35	57	92 (20.8%)
TOTAL	152	291	443

Table 3 - Distribution of study population based on gender and percentage of weight loss during last 2 weeks.

Weight	Male	Female	Total
Decreased	99	174	273 (61.6%)
Unchanged	52	116	168 (37.9%)
Increased	1	1	2(0.5%)
Total	152	291	443

Table 4 – Food intake among study population based on gender

Food intake	Male	Female	Total
< usual	106	202	308 (69.5%)
unchanged	44	86	130 (29.3%)
>usual	2	3	5 (1.1%)
Total	152	291	443

Table 5- symptoms among study population

Symptoms	Male	Female	Total
No problems eating	73	95	168 (37.9%)
No appetite	106	204	310 (70%)
Nausea	5	15	20 (4.5%)
Vomiting	9	16	25 (5.6%)
Diarrhea	2	9	11 (2.9%)
Constipation	3	2	5 (1.1%)
Dry mouth	13	13	26 (5.9%)
No taste	3	1	4 (0.9%)
Smells bother me	2	4	6 (1.4%)
Swallowing problem	17	43	60 (13.5%)
Feel full quickly	22	12	34 (7.7%)
Fatigue	69	198	267 (60.3%)
Pain	117	217	334 (75.4%)
Depression	54	89	143 (32.3%)
Dental problem	28	51	79 (17.7%)

Table 6 - Activities among the cancer patients

Activities	Male	Female	Total
Normal with no limitations	30	82	112 (25.3%)
Fairly normal activities	62	165	227 (51.2%)
In bed or chair < half day	43	26	69 (15.6%)
Able to do little activity, mostly in bed	11	13	24 (5.4%)
Bed ridden	6	5	11 (2.5%)
Total	152	291	443

Table 7- PG-SGA score and nutritional intervention

PG-SGA score	Total = 443	Nutritional intervention
0-1	53 (12%)	No intervention
2-3	133 (30%)	Patient and family education
4-8	187 (42.2%)	Intervention by dietician
≥ 9	70 (15.8%)	Critical nutritional intervention

DISCUSSION

In this study Scored PG-SGA was used to assess the nutritional status of cancer patients, which has been accepted as the standard for nutritional assessment for patients with cancer by the oncology nutrition dietetic practice group of the American dietetic association [2]. The scored PG-SGA offers several advantages over SGA tool which includes (1) the patient completes the medical history component, thereby decreasing the amount of time involved; (2) it contains more nutrition impact symptoms, which are important in cancer patients; and (3) it has a scoring system that allows patients to be triaged for nutritional intervention. Scored PG-SGA allows quick identification and prioritization of cancer patients with malnutrition. In this study 12% had PG-SGA Score 0-1, where no nutritional intervention was needed, 30% had score of 2-3 where patient and family education was needed, 42.2% had score 4-8, where intervention by dietician was needed, and 15.8% had score ≥ 9, where critical nutritional intervention. In this study 54.4% had normal BMI and the rest 45.6% had malnutrition (20.8% excess and 24.4% deficit). This study findings, are comparable to similar studies, which show malnutrition prevalence between 20-80% [1,2,3,4,5,6].

CONCLUSION

The scored PG-SGA is used internationally as the reference method for proactive risk assessment as well as for triaging interventions. As the major input is patient generated, the use of scored PG-SGA can streamline the work flow and improve the quality of interaction between the oncologist and the cancer patients. Scored PG-SGA tool helps to identify malnourished cancer patients and allows triage for nutritional support.

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