

Enhancement in Quality of Life in Advanced Head & Neck Cancer Patients After Nutritional Supplementation

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Abstract: Advanced head & neck cancer patients undergoing chemoradiation as palliation are emaciated and respond poorly to treatment. Nutritional supplementation with available resources enhanced the quality of life and helped the patient enduring the treatment.

Keywords: Advanced head and neck cancer, nutritional supplementation, quality of life.

Date of Submission: 26 -08-2017

Date of acceptance: 09-09-2017

I. Introduction

Incidence of Head & Neck cancer is increasing in our country, Patients present very late and many are at an advanced stage of disease. Nutritional deficiency is as high as 72% in Head & Neck cancer patients. In the state of Tamilnadu annually about 4000 patients are diagnosed with head & neck malignancy. About a quarter of these patients present in stage III/ stage IV cancers. Many succumb to the disease. They suffer painful deaths and cachexic. By maximizing the benefits of nutritional therapy the potential complications of Head & neck malignancy can be minimized. Majority of the Head & neck Malignancy patient seek medical attention in advanced stage with all kind of nutritional deficiencies due to illiteracy, ignorance and poor socio economical status. Incidence of protein and caloric malnutrition in advanced head & neck malignancy patients are high, therefore nutritional supplementation is essential to overcome the ill effects of malnutrition.

Reduced intake of food is also due to cancer cachexia causing various biochemical changes in the body.

II. Materials And Methods

A Prospective study was conducted in the department of ENT, GMKMCH, Salem from July 2011 to Jan 2017. Study comprising of 100 patients in advanced stage of upper aero digestive tract malignancy.

This study groups were both men and women the age between 32-75yrs. Those patients who were not suitable for oral or parenteral modalities of nutrition are excluded in this study.

Complete medical history:

Pattern of food intake, food aversion, nature of weight, change, physical limitation swallowing difficulty, vitamin supplementation, Bowel habits, social support and social economical factors. Consumption of food rich in protein and fat should be encouraged to meet their metabolic demands at terminal stage of malignancy.

Subjective global assessment:

A clinical method for Evaluation nutritional stats, termed the subjective global assessment. Encompasses historical, symptomatic and physical parameters. This approach defines malignancy as those who are at increased risk for therapeutic complications and who will presumably benefit from nutritional therapy.

In this study following parameters are used to evaluate the nutritional status of selected groups of patient before and after chemo radiation.

1. Physical Examination
2. Laboratory tests

Physical Examination

Anthropometry :- weight for height, Evidence & fat and muscle wasting, skin fold thickness, mid arm circumference, bony outlines, presence of subcutaneous fat, hollow cheeks, muscle wasting – temporalis, deltoid and Quadriceps.

Caloric Value Of Oral Feed Used In This Study

Content	Quantity	Energy	Protein	Fat	Carbohydrates	Calcium	Iron	Vit A	Vit B
Milk with sugar	2 cups	180	3.3	3.3	4.4	100		160	50
Health my kanji	2 cups	656	7.3	1.3	72				
Ragi Kanji	2 cups	656	7.2	1.4	74				
Ragi kanji dhal	2:1	696	6.9	0.4	79	10	1		50
Green grant Jaggery	1 cup	334+38	24	1.3	54	140	8.4	158	
Tomato Soup	2 cups	112			12	23		86	
Black gram kanji	2 cups	700	24	1.3	60	190	9.8	316	300
Barley kanji	2 cups	710	11.5	1.3	60.3	190	9.8	316	450

Adequate nutrition plays an important role in maintaining, optimal health in advanced head and neck cancer patients, The consequences of malnutrition in head and neck cancer patients have been well documented and contribute significantly to morbidity and mortality.

Incidence of various cancer at Salem District

Tumour site	Incidence
Oral cavity Excluding tongue	19.4%
Tongue	9.7%
Hypopharynx	9.2%
Oesophagus	7.1%
larynx	4.9%
Non Hodgkins lymphoma	4.2%

Nutritional complication associated with radiotherapy

Site	Early effects	Late effects
Head and neck	Odynophagia, Xerostomia, mucositis, Anorexia, hypoguesia Dysomia	Ulceration, Xerostomia Dental Caries, Osteonecrosis, Trismus, Hypoguesia

III. Discussion

In our study 100 patients were selected in which hypopharyngeal malignancy were 60 in number, larynx invading hypopharynx 20 in number, oropharyngeal malignancy were 09 in number, oral cavity 09 nasopharynx 02, all were with moderate to severe degree of dysphagia with or without feeding gastrostomy and jejunostomy.

In our study constant use of oral feeding preparation with a well balanced nutritional homemade diet showed a significant improvement in weight and nutritional status. Out of those patients , 47% of patients were with oral feeding, 33% of patients are with NG tube, 16% are with gastrostomy and 04% are with jejunostomy tube. In this , 18 % of patients have not shown any changes in weight gain and in biochemical parameters.

IV. Observation

Following nutritional supplementation of 82% individuals had weight gain. In this 62% of individuals had up to 3.5kgs increase in weight. Remaining 20 % maintained their weight in spite of aggressive chemo radiation. All patients had an improved albumin globulin ratio, prior to nutritional supplementation. All patients had very low serum triglycerides, following intervention most of the individuals had an increase in serum triglyceride levels.

V. Conclusion

Advanced head and neck cancer patients had an enhancement in the quality of life and outlook towards life and death too was altered in a positive way. Developing country like India, with limited resources requires , proper planning and execution. Economical and locally available nutritional supplements should be offered to cancer patients for tolerating the harmful side effects of chemo radiation. Nutritional intervention significantly reduce the morbidity & mortality of advanced head & neck cancer patients.

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Dr.M.Kavidha(M.S.,Ent). "Enhancement in Quality of Life in Advneced Head & Neck Cancer Patients After Nutritional Supplementation." IOSR Journal of Dental and Medical Sciences (IOSR-JDMS) 16.9 (2017): 52-54