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Impact of Nutrition counselling in Different Types of Cancer Patients and Their Caregivers

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Abstract

Malnutrition and cachexia are significant and widespread issues in cancer treatment, impacting a large percentage of patients across different disease categories. These circumstances correlate with several detrimental effects, such as diminished treatment tolerance, extended hospitalizations, heightened hospital visit frequency, unfavourable prognoses, escalated healthcare expenses, and a significant deterioration in patients' quality of life. Notwithstanding progress in cancer treatments, the oversight of nutritional health continues to be a vital, if sometimes neglected, component of holistic cancer therapy. Recent findings highlight the need of personalized and regular dietary and nutrition guidance, provided by qualified dietitians, as a crucial supportive care measure. Tailored dietary approaches have shown the capacity to increase clinical results, boost treatment effectiveness, and promote overall health in patients receiving cancer therapy. This study seeks to investigate the effects of organized nutritional counselling on clinical outcomes, healthcare use, and quality of life in cancer patients, emphasizing the need of incorporating specialist nutritional assistance within conventional oncology practices.

Keywords: Nutrition Counselling, Oncology Nutrition, Caregivers, Cancer Survivorship, Dietary Intervention, Clinical Results.

Introduction

Worldwide cancer is burden on health. Recent estimation of raising cancer patients burden rapidly all over the world. 30-80% of cancer disease population is suffering from mal nutrition due to disease condition and treatment side effect. Cancer associated malnutrition contributes to increased morbidity mortality hospital stay and outcome of the disease. Dietary counselling plays an effective role; it is considered as Firstline treatment strategy. Nutrition / dietary counselling involves daily dietary assessment weekly anthropometric assessment, dietary education, behavioural counselling support regarding the ongoing treatment by a qualified medical professional. Cancer disease not only affect he patient but also the whole family and care givers it is necessary to Counsell and discuss regarding the disease outcome, prognosis, complications of disease related treatment, and last but not the least to psychological support to the caregivers and family members. Recent research has found to be focused approaches to

include family members and caregivers who significantly influence dietary behaviours and treatment adherence to improve the quality of life of the patients.

Integrated part of the nutrition counselling:

- Early Nutrition counselling for detection of nutrition stages
- To asses the nutrient intake
- Early Counselling of treatment related toxicity or symptoms which affect the overall food intake
- To prevent weight loss and muscle mass
- Improvement of quality of life
- Nutrition counselling adherence good dietary habits for long time

It has been found in the researches and day to day practices for all diseases that individualised dietary counselling is more effective then the generalised dietary counselling. As it is tailored for each individual differently.

Effect Of Nutrition Counselling in Different Types of Cancer

- **Head and Neck Cancer:**

Head and neck cancer patients are at highest risk of malnutrition due to the lack of food intake loss of appetite dysphagia, mucositis, xerostomia, altered taste, and treatment-related eating difficulties. A systematic review evaluated studies and found 6 studies involving 685 patients undergoing radiotherapy or chemoradiotherapy found that intensive dietitian-led nutrition counselling outcomes were nutritional status , body composition, quality of life and adverse effect. Some studies shows significant improved nutrition status body composition and quality of life, although results were heterogeneous. The review emphasized the importance of individualized and continuous dietary support throughout treatment.

Nutrition counselling in head and neck cancer patients improved in protein intake, reduced weight loss, completion of the treatment, improved quality of life, reduced treatment complications and treatment related interruptions. It also improves the quality of life even after the treatment finishes.

- **Breast Cancer:**

Breast cancer is a disease which occurs in overnutrition (obese) persons also sometimes obesity is major cause of the disease. During the treatment of breast cancer dietary modifications improve the treatment related interruptions and also helps not to loose and not to gain weight if person is obese, for the normal and underweight patients nutrition plays a key role with the modifications and bursting myths about diet during and after the treatment. A systemic review approaches that individualised dietary counselling have positive effect on quality of life in breast cancer patients. Mediterian diet, fermented foods, micro biotic tradition can lead to weight loss and metabolic parameters. Along with diet lifestyle modifications low glycaemic index food Mediterian diet vitamin D supplementation brisk walking shows positive effect on health-related quality of life is beneficial in breast cancer survivors

Breast cancer survivors frequently experience weight gain, metabolic disturbances, fatigue, and reduced physical activity. Dietary and nutrition intervention structured dietitian supported and mediterranean-style diet helps to maintain diet quality, sustainable weight control, improvement in physical activity, good dietary habits and quality of life among breast cancer survivors. (nutrients 2025 dietary and nutrition). Physical activity is also part of the nutrition counselling, for all the breast cancer patients and survivors to follow the healthy life style which include physical activity meditation yoga to make themselves fit and to prevent other life style diseases further more.

- **Gastrointestinal Cancers:**

Patients with gastric, pancreatic, oesophageal, and hepatobiliary cancers frequently experience severe nutritional compromise for all macro and micronutrients as disease altered the absorption of the nutrients. Patients with gastrointestinal cancer are severely malnourished as long time decreased food intake or loss of appetite due to the disease and as well as psychological condition of the patients. A well planned individualised dietary counselling helps to improve the deficiency of the nutrients as all the different kind of malignancies as different effects on the nutrients absorption and synthesis.

In different studies it has been found that individualised dietary counselling improve the food intake, so the overall nutrition improves in patients, in terms of increased calorie, protein intake, stable or less weight loss, improve nutrition status decreased fragility in severely malnourished patients

Nutrition counselling is especially important in pancreatic and upper gastrointestinal cancers because of the high prevalence of cachexia and digestive complications.

- **Palliative care:**

Advanced cancer patients often experience anorexia, cachexia, fatigue, and symptom burden. When there is no option of aggressive treatment in advance cancer nutrition is nectar. Food and nutrition give the first thing is mental satisfaction to eat favourite food choices. Individualised and vigorous dietary counselling helps to improve and to maintain nutrition stability, and improved quality of life.

A systematic study and meta-analysis of which 7 assessed 924 patients with advanced or recurrent cancer aged 24-95 yrs found that nutrition counselling significantly increased energy and protein intake. Although evidence regarding quality-of-life improvement was mixed, counselling was considered a safe, non-invasive intervention that should be introduced early in supportive care. Nutrition counselling and good nutrition intake enhance patient engagement, stable nutrition status improved quality of life, better absorbed nutrients. And helps to control symptoms.

- **Chemo and Radiation Therapy:**

Chemotherapy and radiotherapy are the treatment options of cancer disease but it has some side effects also due to the medicine and radiotherapy toxicity. Nutrition helps to tolerate treatment related complication as both of the options reduces the food intake, taste change,

mucositis, dysphagia etc. for different kind of symptoms different nutrition counselling and food options helps to maintain the weight and maintain the major biochemical parameters.

A comprehensive systematic review evaluating nutritional counselling during chemotherapy found high feasibility, safety, and patient acceptance. Across 39 intervention studies, nutrition counselling improved adherence to dietary recommendations and supported management of treatment-related side effects. Whole-course nutrition management can improve the nutritional status of patients with oesophageal cancer treated with concurrent chemoradiotherapy, reduce the severity of radiation esophagitis and radiation skin reactions, improve the quality of life, and relieve depressive symptoms.

Benefits of nutrition counselling give variety of food options and types diet like semisolid, liquid enteral feeding and parenteral feeding options. It helps to Reduced gastrointestinal symptoms, increase energy and protein intake, maintain hydration status, Increased treatment adherence, and enhanced quality of life.

- **Objective**

To review evidence published between 2017 to 2021 regarding the effectiveness of nutrition counselling among different cancer populations and their caregivers.

- **Methods**

A narrative review was conducted using recent systematic reviews, meta-analyses, randomized controlled trials, and clinical studies published between 2017 to 2021. Evidence was synthesized according to cancer type, nutritional outcomes, treatment-related symptoms, quality of life, and caregiver involvement.

Benefits of Nutrition Counselling for Cancer Caregivers:

When the disease is cancer the patient and the family breakdown emotionally immediately the first thing which alter is the nutrition. Food is the integral part of the life disease like cancer hinders the food intake and deteriorate the nutrition status of the patients. cancer patients care giver play central role in treatment of disease. Cancer disease is not only destroying the physical health but also financial and moral health of the family. When the family and the patient is Counsell for the good and balance nutrition and food of their choices by the health care professionals / dietitians it makes them to feel comfortable. They can make variety of food as per the requirements and to enhance their nutrition status as they are aware of the nutrition components and their interaction with the treatment options. awareness about the balance and healthy diet is pivotal. Nutrition counselling also helps in Meal planning, encouraging dietary adherence, Supporting emotional well-being of the family and patient.

However, caregiving burden often leads to poor dietary habits, stress, and reduced self-care among caregivers themselves to understanding the importance of good and healthy dietary knowledge helps to the care givers also to make their sleeves fit and healthy for care and hospital visits with the patients.

Nutrition and dietary awareness, anthropometric assessment, counselling regarding food and nutrition, plays an important role in cancer patients' outcome. It is need of hour in all oncology

centres dietician should be the main team member to do the nutritional assessment dietary calculation and explain regarding requirement and the gap between intake and requirement. Based on current evidence, oncology centres should:

- Conduct routine nutritional screening at diagnosis.
- Refer all the patients at first visit to the dietitian.
- Provide individualized nutrition counselling throughout treatment.
- Encourage to maintain diet diary and weight record.
- Nutrition education sessions for family and care givers are necessary/must.
- Develop tele-nutrition and community-based support programs.
- Digital and telehealth nutrition counselling models.

Results

Nutrition counselling consistently improved dietary intake, protein and energy consumption, treatment adherence, symptom management, and quality of life across multiple cancer populations. The strongest evidence was observed in head and neck, gastrointestinal, breast, colorectal, and advanced cancer patients. Family- and caregiver-inclusive interventions improved dietary adherence, self-management behaviours, and psychosocial outcomes.

Conclusion

Cancer is a catabolic stage it requires balance nutrition and frequent counselling to maintain the weight and to improve outcome reduce hospital stay and uninterrupted treatment protocol. Dietary counselling improves the overall nutrition status physical wellbeing, and mental status of the patients as well as the family and care givers. A well-planned nutrition strategy is effective in all type of cancer disease. Evidence published between 2017 to 2021 demonstrates that nutrition counselling is an effective supportive care strategy across multiple cancer types. Dietitian-led counselling improves energy and protein intake, symptom management, treatment adherence, and quality of life. The benefits are particularly evident among head and neck, breast, colorectal, gastrointestinal, and advanced cancer patients. The family and care givers of the cancer patients plays pivotal role throughout cancer continuum.

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