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Nutritional and Psychological Intervention Improving Survival and Quality of Life in Terminal Cancer Patients with Pre-Cachexia: A Prospective Clinical Study

Kao Hui Shan

Nutrition Director, Taiwan

***Corresponding author:** Kao Hui Shan, Nutrition Director, Taiwan.

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Abstract

Background: *Cancer-related cachexia syndrome (CRCS) is highly prevalent in terminal cancer patients, characterized by skeletal muscle loss, anorexia, and fatigue, leading to poor prognosis. Once cachexia becomes irreversible, nutritional interventions are often ineffective. This study aims to evaluate the efficacy of early multidisciplinary intervention (nutrition and psychology) in patients with pre-cachexia.*

Methods: *We conducted a prospective study at Kaohsiung Municipal Ta-Tung Hospital from January to December 2022. Stage IV cancer patients with a BMI $\le$ 20 were recruited3. The intervention included personalized nutritional counseling, dietary supplements, and psychological support. Outcomes were measured by weight changes, survival rates, and patient satisfaction.*

Results: *A total of 48 patients were enrolled55. Baseline assessment revealed that 72% and 78% of patients had insufficient protein and calorie intake, respectively6. Following intervention, 61.9% of patients achieved weight gain, and 4.76% maintained stable weight. The 1-year survival rate for the intervention group was 63.7%, compared to a historical control of 50.8% (2018-2019 data)88. Patient satisfaction with the nutritional education was 100%9.*

Conclusion: *Early identification and multidisciplinary intervention in pre-cachectic terminal cancer patients significantly improved nutritional status and 1-year survival rates.*

Keywords: Cancer Cachexia, Nutritional Support, Palliative Care, Multidisciplinary Team, Pre-Cachexia.

Introduction

Cancer-related cachexia syndrome (CRCS) is a debilitating paraneoplastic syndrome that affects approximately 50% of all cancer patients, particularly those in terminal stages. It is characterized by progressive weight loss, lipolysis, and skeletal muscle depletion, which are often driven by systemic inflammation and metabolic abnormalities caused by the tumor. CRCS leads to reduced physical function, poor tolerance to chemotherapy and radiotherapy, emotional distress, and accelerated death.

Clinically, cachexia is often overlooked until it reaches an irreversible stage (refractory cachexia), at which point nutritional or pharmacological interventions become ineffective. Therefore, identifying patients in the "pre-cachexia" stage—defined by early clinical signs such as anorexia or minor weight loss—is crucial. Nutritional support at this stage can potentially stabilize weight and improve outcomes14141414.

This study established a standardized care model at Kaohsiung

Municipal Ta-Tung Hospital to identify Stage IV cancer patients with a BMI $\le$ 20 (indicating pre-cachexia risk). We aimed to evaluate whether a combined intervention of personalized nutritional care and psychological support could improve weight stability, quality of life, and survival time in this vulnerable population16161616.

Materials and Methods

Study Design and Participants

This prospective clinical study was conducted between January 1, 2022, and December 31, 202217. The inclusion criteria were: (1) patients diagnosed with Stage IV cancer (terminal stage), and (2) Body Mass Index (BMI) $\le$ 20 kg/m², which was used as the threshold for pre-cachexia intervention in this study18.

Intervention Protocol

A multidisciplinary team comprising oncologists, case managers, dietitians, and psychologists was established. The care flow included:

- Screening System: An automated flag was added to the cancer case management system to identify eligible patients (Stage IV + BMI $\le$ 20)19. Weight monitoring stations were set up in outpatient areas to facilitate data collection20.
- Nutritional Care: Dietitians provided comprehensive assessments based on dietary recall. Interventions included personalized diet designs, food portion recommendations, and the provision of suitable nutritional supplements in collaboration with vendors. A specialized "Cancer Nutrition Manual" was published and distributed to patients.
- Psychological Care: Psychologists provided counseling to alleviate emotional distress and family conflict regarding feeding difficulties. Support was also extended to caregivers to reduce anxiety surrounding the patient's decline.

Outcome Measures

The primary outcomes were body weight changes and 1-year survival rates. Secondary outcomes included nutritional intake adequacy (protein/calories) and patient satisfaction measured via a structured questionnaire24. Historical survival data from the hospital (2017-2018) for terminal cancer patients were used as a control group.

Results

Patient Characteristics and Baseline Nutritional Status

A total of 48 patients were enrolled during the study period. The most common cancer types were lung cancer, followed by colorectal cancer. Nutritional assessment upon enrollment indicated severe inadequacy: 72% of patients consumed less than 90% of their recommended protein intake, and 78% consumed less than 90% of their recommended calories.

Effect on Body Weight

Following the multidisciplinary intervention, body weight outcomes were positive. Among the participants:

- 61.9% achieved weight gain.
- 4.76% maintained stable weight.
- 33.33% experienced weight loss.

This suggests that the intervention effectively reversed or halted weight loss in nearly two-thirds of the cohort.

Survival Analysis

The 1-year mortality rate for the enrolled group was 22.91%3232. The calculated 1-year survival rate was 63.7%3333. This was significantly higher compared to the historical 1-year survival rate of 50.8% observed in all terminal cancer patients at our institution during 2017-20183434. Subgroup analysis showed no significant difference in survival between patients who used anti-cachexia medication (56.7%) and those who did not (53.5%) ($p=0.607$), highlighting the independent value of nutritional care.

Patient Satisfaction

41 valid questionnaires were collected. The results showed 100% satisfaction with the service. All respondents reported that the nutritional education was "very helpful" in guiding food choices and increasing protein/calorie intake3.

Discussion

Cancer cachexia is often considered an inevitable consequence of terminal cancer, but our results challenge this view by demonstrating that early intervention in the pre-cachexia phase (BMI $\le$ 20) is effective.

The high baseline prevalence of inadequate intake (78% for calories) underscores the critical need for professional dietary guidance. By providing personalized plans and convenience store menus, we addressed practical barriers to eating.

Psychological support proved vital. Patients in the pre-cachexia stage often experience "anorexia-cachexia" related conflicts with family members. Our psychologists acted as bridges for communication, transforming mealtime conflicts into expressions of care, which likely improved compliance with nutritional advice.

The survival benefit observed (63.7% vs. 50.8%) aligns with literature suggesting that stabilizing weight preserves physical function and treatment tolerance.

Conclusion

The implementation of a structured, multidisciplinary nutritional and psychological care program for terminal cancer patients with pre-cachexia at Kaohsiung Municipal Ta-Tung Hospital was successful. The intervention significantly improved nutritional intake, stabilized body weight in the majority of patients, and extended 1-year survival compared to historical data. We recommend integrating this care model into standard oncological practice.

References

1. Fearon, K., Strasser, F., Anker, S. D., Bosaeus, I., Bruera, E., Fainsinger, R. L., ... & Baracos, V. E. (2011). Definition and classification of cancer cachexia: an international consensus. The lancet oncology, 12(5), 489-495.
2. Vazeille, C., Jouinot, A., Durand, J. P., Neveux, N., Boudou-Rouquette, P., Huillard, O., ... & Goldwasser, F. (2017). Relation between hypermetabolism, cachexia, and survival in cancer patients: a prospective study in 390 cancer patients before initiation of anticancer therapy1, 2. The American journal of clinical nutrition, 105(5), 1139-1147.
3. Nicolini, A., Ferrari, P., Masoni, M. C., Fini, M., Pagani, S., Giampietro, O., & Carpi, A. (2013). Malnutrition, anorexia and cachexia in cancer patients: a mini-review on pathogenesis and treatment. Biomedicine & Pharmacotherapy, 67(8),

807-817.
4. Balstad, T. R., Solheim, T. S., Strasser, F., Kaasa, S., & Bye, A. (2014). Dietary treatment of weight loss in patients with advanced cancer and cachexia: a systematic literature review. Critical reviews in oncology/hematology, 91(2), 210-221.