

Prebiotics for Chemotherapy-Induced Lower Intestinal Mucositis (CIM) With Moderate Protein Energy Malnutrition: A Case Report

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Objectives: Chemotherapy-induced mucositis (CIM) is the most common side effect of chemotherapy. In addition, it reduces quality of life and leads to a reduction in chemotherapy doses, and eventually increasing mortality rate. CIM can cause malnutrition. Chemotherapy disrupts the symbiotic relationship between the microbiota and the patient. Various modalities are able to simulate colonization of probiotic bacteria in the intestine that have potential to be a strategy to restore healthy gut microbiota. Such as prebiotic.

Methods: A 42-years old male with moderately malnourished (Subjective Global Assessment score B, Unintentional weight loss for 5 months ($\pm 7\%$) and body mass index was about 22.94 kg/m²) with diagnosis of Non-Hodgkin Malignant Lymphoma, Sinonasal Carcinoma and chemotherapy induced acute kidney injury. He had

Leukopenia (2800/ul), decrease of kidney function (ureum/creatinine 28/1.5 mg/ul) and lymphopenia (926.8 ul).

Results: The administration of nutrition therapy was initiated from 1000 kcal and increased gradually with total energy expenditure target of 2500 kcal via oral and parenteral nutrition, protein 1.2–1.5 g/Ideal Body Weight/day (15,3%) using high protein formula and amino acids parenteral nutrition. We administered prebiotics with a dose 5 gr/day for 6 weeks. Multivitamin, minerals and nutrition supplementations were administered; which were vitamin A, B1, B2, B6, B12, C, Folic acid, Zinc, Snakehead fish extract, Curcuma extract. During 13 days of nutritional therapy treatment, he achieved an average of 93,6% and 74% of energy and protein target, respectively. His clinical, functional capacity, laboratory were improved. Gastrointestinal symptoms such as nausea, vomiting, sore throat and constipation were improved and chemotherapy dose continued.

Conclusions: Clinical improvement such as increased oral intake after the prebiotics had given. Therefore, prebiotics had a potential benefit for CIM.

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