

ORIGINAL RESEARCH

Multimodal Nutritional Interventions in the Management of Patients with Upper Gastrointestinal Cancer During Chemotherapy: A Scoping Review

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Abstract

Background: Gastrointestinal cancers, especially the oesophageal, stomach and gastroesophageal junction (GEJ) cancers are a major health concern owing to their low survival rates and harsh treatment regimens. Patients undergoing chemotherapy for upper GIT cancers are reported to experience symptoms like early satiety, dysphagia, taste changes and appetite loss, which compromise their nutritional status. Chemotherapy, though central to treatment, further worsens nutritional status through side effects like nausea, vomiting, weight loss, and fatigue. Nutritional support is critical to improve treatment tolerance, recovery, and quality of life. However, evidence on nutritional support for this population is lacking specifically in LMICs. In order to develop evidence-based nutrition care protocols that address these challenges, there is need to evaluate the intervention types, delivery methods and duration and their impact on nutritional status, treatment outcome and quality of life (QoL). **Objective:** This scoping review aimed to map and evaluate multimodal nutritional interventions that have been applied on patients with upper GIT cancers while undergoing chemotherapy or chemoradiotherapy. **Methods:** This review included 16 studies, published between 2005 and 2023. The JBI Manual for Evidence Synthesis and the Preferred Reporting Items for Systematic Review and Meta-analysis extension for scoping review (PRISMA-ScR) guidelines were adhered to. **Results:** The included studies employed different multimodal intervention types including dietary counselling (individual and group), nutrition education, oral nutritional supplementation (ONS) and provision of medical food, food intake monitoring, enteral nutrition and parenteral nutrition. A range of delivery methods were applied including hospital-based interventions, telephone follow-ups, outpatient care and digital applications. Intervention durations varied across all the studies, lasting from weeks to months. Findings from all the studies reported significant improvements in nutritional status (measured by weight, serum albumin, and haemoglobin), reduced complications from treatment, improved treatment tolerance, and enhanced QoL. However, 94% of the included articles were from upper-middle- and high-income countries, pointing to a critical gap in low- and middle-income countries. **Conclusion:** Although the nutritional needs of patients with upper GIT cancer undergoing chemotherapy and chemoradiotherapy are complex, there is hope in multimodal nutritional interventions. Comprehensive multicomponent nutritional intervention programs integrating ONS, dietary modification, individualized meal plans, nutritional counselling and education can improve patient's nutritional status, treatment outcomes and QoL. There is an urgent need to apply and evaluate multimodal nutritional interventions in low- and middle-income countries to ensure context-appropriate, accessible, and effective support is integrated into routine cancer care.

Keywords: Upper GIT cancers, nutritional interventions, chemotherapy, quality of life, nutritional status