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Enteral Nutrition Post-gastric Cancer Surgery: Recent Developments

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Introduction

Gastric cancer surgery often necessitates significant alterations to the gastrointestinal tract, potentially impacting patients' ability to consume and absorb essential nutrients. Adequate nutritional support is crucial in the postoperative period to optimize recovery, mitigate complications and improve long-term outcomes. Enteral nutrition, delivered directly into the gastrointestinal tract, has emerged as a cornerstone of post-gastric cancer surgery care, offering numerous advantages over parenteral nutrition, including enhanced gastrointestinal function, reduced infection risk and improved nutrient utilization. Recent developments in enteral nutrition strategies, including the utilization of specialized formulations, novel delivery methods and tailored nutritional support protocols, hold promise for optimizing postoperative nutritional management in patients undergoing gastric cancer surgery. This review aims to explore the latest advancements in enteral nutrition post-gastric cancer surgery, focusing on their potential benefits, challenges and implications for clinical practice [1].

Description

Enteral nutrition plays a critical role in supporting gastrointestinal recovery and meeting the nutritional needs of patients following gastric cancer surgery. Traditional enteral nutrition formulations, such as polymeric or oligomeric formulas, provide a balanced mix of macronutrients and micronutrients but may be associated with challenges such as intolerance, malabsorption and delayed gastric emptying, particularly in patients with gastrectomy or altered gastrointestinal anatomy. Recent developments in enteral nutrition have sought to address these issues by introducing specialized formulations designed to optimize nutrient delivery, enhance tolerance and promote postoperative recovery. One notable advancement is the development of immunonutrition formulations enriched with specific nutrients, such as arginine, omega-3 fatty acids, nucleotides and antioxidants, which have been shown to modulate immune function, attenuate inflammation and support tissue healing. Immunonutrition has demonstrated potential benefits in reducing postoperative complications, enhancing wound healing and improving clinical outcomes in patients undergoing gastrointestinal surgery, including gastric cancer resection. Emerging evidence suggests that perioperative administration of immunonutrition may help mitigate the systemic inflammatory response associated with surgery and improve postoperative immune function, thereby reducing the risk of infectious complications and accelerating recovery [2,3].

In addition to specialized formulations, novel enteral nutrition delivery methods have been developed to overcome anatomical and physiological challenges in patients post-gastric cancer surgery. These include the use of jejunal feeding tubes, nasojejunal tubes, or endoscopically-placed enteral access devices to bypass the duodenum and deliver nutrients directly into the jejunum or beyond. Jejunal feeding allows for more rapid nutrient absorption, minimizes the risk of reflux or aspiration and may be better tolerated in patients with gastric resection or impaired gastric motility. Moreover, enteral feeding protocols incorporating early initiation of nutrition, gradual advancement of feeding rates and individualized adjustment based on patient tolerance and clinical status have been shown to improve nutritional outcomes and reduce complications in the postoperative period [4].

Despite these advancements, challenges remain in optimizing enteral nutrition support post-gastric cancer surgery. Patient-specific factors, such as surgical anatomy, comorbidities, gastrointestinal function and nutritional status, must be carefully considered when designing enteral nutrition regimens. Close monitoring and interdisciplinary collaboration between surgeons, dietitians, nurses and other healthcare providers are essential to ensure timely initiation, appropriate selection and effective management of enteral nutrition in this patient population. Further research is needed to elucidate the optimal timing, composition and delivery methods of enteral nutrition post-gastric cancer surgery and to evaluate their impact on long-term outcomes, including nutritional status, quality of life and survival [5].

Conclusion

Enteral nutrition plays a pivotal role in optimizing postoperative recovery and nutritional status in patients undergoing gastric cancer surgery. Recent developments in enteral nutrition formulations, delivery methods and support protocols offer promising opportunities to enhance the efficacy and safety of nutritional management in this patient population. Specialized immunonutrition formulations enriched with bioactive nutrients may help modulate the inflammatory response, promote wound healing and reduce complications following surgery. Novel delivery methods, such as jejunal feeding tubes, offer advantages in patients with altered gastrointestinal anatomy or impaired gastric function, facilitating the delivery of nutrients directly into the small intestine. Individualized enteral nutrition protocols incorporating early initiation, gradual advancement and close monitoring are essential for optimizing outcomes and minimizing complications post-gastric cancer surgery. Continued research and clinical innovation are needed to further refine enteral nutrition strategies and improve the long-term nutritional and clinical outcomes of patients undergoing gastric cancer surgery.

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Conflict of Interest

There are no conflicts of interest by author.

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