

Clinical Significance of Perioperative Immunonutrition for Patients with Esophageal Cancer

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Objective

This study was completed to see if postoperative complications could be reduced from use of perioperative or postoperative immunonutrition vs. standard postoperative nutrition in patients undergoing esophagectomy for thoracic esophageal squamous cell carcinoma (ESCC).

Methods

A retrospective comparison where 40 consecutive patients were divided into three groups:

- A. Control group (n=20) received standard enteral nutrition through POD 14 via jejunostomy.
- B. Postoperative study group (n=6) received IMPACT[®] formula, containing supplementary arginine, omega-3 fatty acids and nucleotides through POD 14 via jejunostomy.
- C. Perioperative study group (n=14) received IMPACT[®] by mouth*, 1500 calories/day for 5 days prior to surgery and via jejunostomy through POD 14.

Jejunostomy feeds started at 250 kcal/day and were advanced by this amount daily until the goal of 1500 kcal/day was achieved. There were no significant differences in preoperative or postoperative calorie or protein intake through POD 7 across groups. All surgeries were right transthoracic esophagectomies for the resection of the esophagus with extended 2-field or 3-field lymph node dissection and reconstruction using gastric conduit.

Results

- **Surgical site infection.** The incidence of incisional wound infection was significantly lower in group C than group A (0% vs 30%; p=0.031), but there were no significant differences in other postoperative complications such as pneumonia, anastomotic leakage or sepsis.
- **Mortality.** No differences were found, 0% mortality across groups.
- **SIRS.** The duration of postoperative SIRS days was shorter in group C than group A (Δ 1.0 days; p=0.046).
- **ICU LOS.** The length of ICU stay was shorter in group C than group A (Δ 1.5 days; p=0.047).

Conclusion

Administration of perioperative use of IMPACT[®] formula may further improve the perioperative management of ESCC patients, a population at significant risk for postoperative complications.

Summary prepared by Nestlé Healthcare Nutrition. To view the study abstract, please use the following link: <http://www.ncbi.nlm.nih.gov/pubmed/17876664>

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