Journal of Cardiovascular Disease Research

ISSN: 0975-3583, 0976-2833 VOL11, ISSUE 01, 2020

An Extended Evaluation of Appetite Loss and Nutritional Support in Post-Operative Patients at a Tertiary Care Hospital

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ABSTRACT

Background: Malnutrition is prevalent among hospitalized patients, especially those undergoing surgical procedures, and is linked to increased morbidity, prolonged hospital stays, and elevated healthcare costs. This study evaluates the impact of nutritional support on post-operative appetite, length of hospital stays, and complication rates in surgical patients at Rajendra Institute of Medical Sciences (RIMS), Ranchi.

Methods: An observational study was conducted over six months, including 60 post-operative patients. Data were collected using structured questionnaires and medical records. Nutritional support, consisting of oral supplements, enteral, or parenteral nutrition, was provided according to clinical guidelines. Appetite was assessed using a standardized score from 0 (no appetite) to 10 (excellent appetite). Statistical analysis was performed using SPSS version 26.

Results: The mean age of patients was 45.3 years. Most patients underwent abdominal (46.7%), orthopaedic (30%), and cardiovascular surgery (23.3%). The mean appetite score on the first post-operative day was 3.2, improving to 6.8 by discharge. Nutritional support was provided to 80% of patients, significantly enhancing appetite scores and reducing hospital stays and complication rates. Supported patients had a higher discharge appetite score (7.1 vs. 5.5, p=0.01), shorter hospital stays (7.5 vs. 10.2 days, p=0.03), and fewer complications (10% vs. 25%, p=0.04).

Conclusion: Nutritional support significantly improves post-operative outcomes, including appetite, hospital stay duration, and complication rates. Integrating nutritional interventions into standard post-operative care can enhance patient recovery and clinical outcomes.

Keywords: Malnutrition, nutritional support, post-operative care

INTRODUCTION;

Malnutrition is a critical issue among hospitalized patients, particularly those undergoing surgical procedures, and is associated with increased morbidity, prolonged hospital stays, and elevated healthcare costs. Surgical patients are at heightened risk of developing nutritional deficiencies due to pre-operative fasting, increased metabolic demands, and post-operative complications affecting nutrient intake and absorption 1.

Research indicates that timely nutritional support can enhance recovery, improve clinical outcomes, and reduce the incidence of complications in surgical patients 2. Nutritional interventions, including oral nutritional supplements, enteral nutrition, and parenteral nutrition, have positively impacted patient outcomes by supporting the body's increased nutritional demands during the recovery period 3. Despite these benefits, nutritional support is often underutilized or delayed in clinical practice due to a lack of awareness, insufficient resources, or other barriers 4.

This study aims to evaluate the impact of nutritional support on post-operative appetite, length of hospital stay, and complication rates in surgical patients at Rajendra Institute of Medical Sciences (RIMS). By assessing the effects of oral, enteral, and parenteral nutrition, this research seeks to provide evidence for the importance of integrating nutritional support into standard post-operative care and to highlight its role in improving clinical outcomes for post-operative patients 5.

Materials and Methods

Study Design

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This observational study was conducted at Rajendra Institute of Medical Sciences (RIMS), a tertiary care hospital, over a period of 12 months from April 2019 to March 2020. 60 post-operative patients were recruited for the study, with informed consent obtained from each participant.

Inclusion and Exclusion Criteria

- Inclusion Criteria: Patients aged 18 years and older, who underwent elective surgery and were expected to remain hospitalized for at least five days post-operatively.
- Exclusion Criteria: Patients with pre-existing nutritional disorders, those requiring intensive care, and individuals who were unable to provide consent.

Data Collection

Data were collected using a structured questionnaire and patient medical records. Information collected included demographic data, type of surgery, pre-operative nutritional status, and post-operative complications. Appetite was assessed using a standardized appetite score ranging from 0 (no appetite) to 10 (excellent appetite).

Nutritional Support Interventions;

Patients were provided with nutritional support based on clinical guidelines, which included oral nutritional supplements, enteral nutrition, or parenteral nutrition as deemed appropriate by the clinical team.

Statistical Analysis;

Data were analyzed using SPSS software version 26. Descriptive statistics were used to summarize patient characteristics and appetite scores. The chi-square test and t-test were used to assess associations between variables. A p-value of <0.05 was considered statistically significant.

RESULTS AND OBSERVATION;

Table 1: Patient Demographics and Surgical Information

Variable	**n (%)**
Age (years)	45.3 ± 12.7
Gender	
- Male	35 (58.3)
- Female	25 (41.7)
Type of Surgery	
- Abdominal	28 (46.7)
- Orthopedic	18 (30.0)
- Cardiovascular	14 (23.3)

The study included 60 patients, with a mean age of 45.3 years (SD ± 12.7). The majority of patients underwent abdominal surgery (n=28, 46.7%), followed by orthopedic (n=18, 30%) and cardiovascular procedures (n=14, 23.3%).

Table 2: Appetite Scores and Nutritional Support Interventions

Post-Operative Day	**Mean Appetite Score (SD)**	**Nutritional Support (%)**
Day 1	3.2 (± 1.8)	80
Day 3	5.1 (± 1.6)	80
Day 5	6.8 (± 1.5)	80

The mean appetite score on the first post-operative day was 3.2 (SD ± 1.8), indicating significant appetite loss. Appetite scores improved over the course of hospitalization, with a mean score of 6.8 (SD ± 1.5) by discharge. Nutritional support was provided to 80% of patients, with 50% receiving oral supplements, 20% enteral nutrition, and 10% parenteral nutrition.

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Table 3: Clinical Outcomes Based on Nutritional Support

Outcome	Supported (n=48)	Not Supported (n=12)	p-value
Mean Appetite Score	7.1 (± 1.4)	5.5 (± 1.6)	0.01
Length of Hospital Stay (days)	7.5 (± 2.3)	10.2 (± 3.1)	0.03
Post-Operative Complications (%)	10	25	0.04

Patients receiving nutritional support had significantly higher appetite scores at discharge compared to those who did not receive support (p=0.01). Additionally, supported patients demonstrated shorter hospital stays and reduced rates of post-operative complications.

DISSCUSSION;

The results of this study demonstrate the crucial role of nutritional support in enhancing post-operative recovery and outcomes for surgical patients. The findings align with previous research that highlights the detrimental effects of malnutrition on surgical outcomes and the benefits of nutritional interventions 1. The study underscores that timely and appropriate nutritional support, encompassing oral supplements, enteral nutrition, and parenteral nutrition, can significantly improve appetite, reduce hospital stay duration, and decrease complication rates among post-operative patients.

Appetite Improvement

The improvement in appetite scores observed in patients receiving nutritional support reflects the effectiveness of these interventions in addressing post-operative appetite loss. The standardized appetite score, which increased from a mean of 3.2 on the first post-operative day to 6.8 by discharge, indicates a substantial enhancement in patients' nutritional status 2. This aligns with findings by Green and Taylor 3, who reported that early nutritional interventions positively affect recovery and patient outcomes.

Reduction in Hospital Stay and Complications

The significant reduction in hospital stay duration for patients receiving nutritional support (7.5 days versus 10.2 days) is consistent with the literature, indicating that adequate nutrition can expedite recovery and reduce healthcare costs 4. Additionally, the lower complication rates among supported patients (10% versus 25%) highlight the protective role of nutrition against post-operative complications 5. These findings are supported by previous studies, such as those by Zhao et al. 6 and Rodriguez and Stevens 7, which emphasize the importance of integrating nutritional support into post-operative care protocols.

Barriers to Nutritional Support

Despite the clear benefits, barriers to implementing nutritional support in clinical practice remain. These include a lack of awareness among healthcare providers, insufficient resources, and logistical challenges 8. Addressing these barriers is essential to ensure that all patients receive the necessary nutritional support to optimize their recovery and clinical outcomes.

CONCLUSION

This study reinforces the need for healthcare systems to prioritize nutritional support as a standard component of post-operative care. By doing so, hospitals can improve patient outcomes, reduce the burden of prolonged hospital stays, and minimize the risk of complications. Future research should focus on identifying effective strategies to overcome barriers to nutritional support and exploring the long-term benefits of these interventions on patient recovery.

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