

Improving Nutritional Management in Surgical Intensive Care.

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Accepted on 30 December, 2021

Introduction

Nutritional supplementation is crucial in the treatment of surgical critical care patients. Malnutrition and prolonged catabolism during surgery can have a number of negative consequences, including delayed or aberrant wound healing, secondary infections, muscular atrophy, and a longer hospital stay. Early Enteral Nutrition (EN) assists in meeting metabolic needs during the acute phase of surgery-related critical illness, rebuilds nutritional stores during recovery, and lowers hospital mortality. When oral feeding isn't an option, it's more physiologic to supply nutrients through the gut, which helps to maintain the gut's barrier function. EN is preferable to Parenteral Nutrition (PN) since it has been found to maintain GI integrity and function while also improving blood flow and peristalsis.

It also reduces the risk of systemic infections by preventing bacterial translocation. In comparison to medical patients, surgical patients are less likely to receive EN and more likely to receive PN, according to the research. Following both elective and urgent surgery, tube feeding is frequently delayed, and patients are less likely to achieve nutritional adequacy. Without explanation, patients undergoing gastrointestinal and cardiovascular surgery receive the least quantity of EN. Despite the benefits, providing appropriate nourishment early in the Surgical Intensive Care Unit (SICU) can be difficult due to frequent pauses from surgery and test scheduling, reported discomfort of tube feeding, ventilator weaning trials, and normal nursing care.

These lengthy, and sometimes unnecessary, breaks result in poor nutrition administration. Furthermore, special rules for contentious activities like as measuring Gastric Residual Volume (GRV) can result in frequent and extended feeding interruptions. The current literature on routine GRV monitoring debunks the link between GRV and the risk of ventilator-associated pneumonia, ICU-acquired infections, mechanical ventilation duration, ICU length of stay, or mortality rates; however, completely abandoning this long-standing practice remains a challenge. Given the challenges to providing appropriate EN support for SICU patients, it is clear that more structured methods are needed to guide practitioners and standardize practice. Our study is the second largest single-centre study showing the EN protocol's benefits in a SICU, to our knowledge. Before and after implementing the EN protocol, we compared the timeliness to accomplish goal rate, the volume of EN received.

Among numerous specialists, including anesthesiologists, surgeons, and intensivists, there is a general lack of agreement on the length of time to hold EN in preparation for a procedure. Despite the overwhelming evidence of improved outcomes, physicians are often hesitant to initiate EN in hemodynamically unstable patients. Establishing guidelines for when to stop tube feeding and, more critically, when to resume feeding could help with total nutrition support administration. We discovered that 65 % of patients on EN support did not attain goal rate on the seventh day of administration and received less than half of the daily-recommended volume after completing a QI project on enteral feeding in our SICU.

According to the research on designing EN administration protocols, defining criteria for the commencement and progression of EN support may improve nutrient delivery. Furthermore, protocols are a useful tool for physicians in training, registered nurses, and other support personnel. Several strategies have been adopted in different sections of critical care medicine in recent years, leading to better outcomes (ventilator weaning, spontaneous breathing and awakening trials, sedation and analgesia). Despite the longer hold durations, our findings support the adoption of an EN strategy to reduce the time to reach goal rate and increase the volume of tube feeding provided on a daily basis.

Though data on interruptions differed between the pre- and post-intervention periods, it revealed that disruptions lasted a long time for a variety of reasons. One of the most difficult aspects of implementing the feeding protocol during the post-intervention phase was overcoming established nurse and medical practices on holding tube feeding and inconsistent documentation. The improvement in correct documentation was due to increased understanding of enteral feeding techniques among physicians and nursing staff. Future study should concentrate on patient outcomes and quality indicators to encourage the implementation of EN administration procedures in the SICU, which may then be expanded to other ICUs throughout the institution.

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Citation: Harald S. *Improving Nutritional Management in Surgical Intensive Care. J Trauma Crit Care* 2021;5(6):18.