



ABSTRACT

Updated Concepts in Perioperative Nutrition

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Abstract : Nutri Virtual Symposium 2022 – Speaker

Despite the awareness of the prevalence of malnutrition in patients scheduled for major GI surgery, and its association with increased morbidity and mortality, as well as increased cost of care, perioperative nutrition is still underutilized as a strategy to improve surgical outcomes.

Following the deliberately inflicted trauma of major surgery, a neuroendocrine response stimulates mobilization of energy reserves from the liver that are transiently available for up to 3 days. Beyond this, the body will then turn to whole body protein catabolism for substrates. This loss of lean body mass is potentially harmful and has been observed as a loss of muscle mass in the diaphragm, the psoas muscles, or the thigh. Further, it has been shown that when the magnitude of loss of muscle mass reaches 20%, it is associated with decreased wound healing, increased muscle weakness, and increased risk of infection. This knowledge introduces a certain urgency to the timely initiation of appropriate nutrition care. Clearly, in patients undergoing major abdominal surgery, especially for cancer, perioperative nutrition intervention must be recognized as an indispensable aspect of surgical care, as the ultimate success of surgical treatment can depend on such basic principles as surgical catabolism, muscle mass, and wound healing.

Indeed, protein-calorie deficits are associated with worse outcomes of increased morbidity and mortality in critical surgical illness. Therefore, this presentation will emphasize the importance of integrating nutrition screening and assessment into routine preoperative evaluation, preoperative carbohydrate loading rather than overnight fasting, timely and adequate delivery of protein and calories when malnutrition or malnutrition risk is found, preferably initiated in the context of preoperative optimization and utilizing the oral, enteral or parenteral routes of delivery as dictated by the clinical situation. In addition, against the background of increased risk associated with malnutrition and sarcopenia, the importance of preserving muscle mass by meeting target protein and calorie requirements will be discussed and emphasized. Further, the benefits of prehabilitation will be presented, along with evidence that certain substrates, such as fish oil and glutamine, can maximize efficacy of nutrition therapy, by resolving inflammation and by optimizing muscle protein anabolism, protein synthesis and wound healing.

Keywords: perioperative, nutrition, surgical

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