

Guest Editorial

Perioperative Nutritional Support—A Third World Perspective: How Relevant and How Much?



Surgery, like any other injury, brings forth a series of reactions including release of stress hormones and inflammatory mediators with major impact on body metabolism. Surgery induced catabolism of glycogen, fat and proteins releases glucose, free fatty acids and amino acids in circulation to perform a task of raising an adequate healing response. The traditional guideline to subject such patients to overnight fasting before elective surgery is highly questionable.¹ As evidence of benefits and no harm when free intake of clear fluids allowed until 2 hours before anesthesia is substantially stronger,² many anesthesiology societies have changed their guidelines regarding overnight fasting.³ The change in guidelines was prompted by absence of evidence that fasting reduces the risk of aspiration. The metabolic effects of undergoing surgeries in overnight fasted state have been studied extensively and compared to fed state.⁴ The fed state induced prior to surgery provides sufficient carbohydrate load to elicit insulin response to meet the stress of the surgical trauma. Several studies have reported positive effects in the post surgery recovery period, such as improved protein balance, improved preservation of lean body mass and muscle strength, and reduced length of hospital stay.⁵⁻⁸

The goal of modern surgical practice is to manage patients with enhanced recovery protocol so as to enable them to eat normal food within 1 to 3 days. The main goal of perioperative artificial nutrition support is to minimize negative protein balance by avoiding starvation, with purpose of maintaining muscle, immune and cognitive function and to enhance postoperative surgery.

Normally, there is a little scope for routine perioperative artificial nutrition support. In western world only a minority of patients may benefit from such therapy. However, in third world countries patients with meager resources are deprived of proper nutrition (malnourished) and often suffer from very low body mass index and substantial weight loss. The surgery being one of the last options, these patients are often put on heavy antibiotics dosages, reducing their pro-biota mediated immune defense. Added to this is the problem of long preoperative wait for patients; sometimes prolonging to 6 months to 1 year due to over crowding of third world hospitals. This, along with high microbial counts of operation theatres and recovery rooms of third world hospital set up, make these patients exhibit high inflammatory activity. The malnutrition has been shown to be an independent risk factor for the incidence of infectious complications as well as increased mortality, length of hospital stay, and cost.⁹ Therefore, the potential benefits of perioperative nutritional support may assume significance in formulating recovery protocols for patients undergoing surgery in third world countries. However, several aspects need to be taken into consideration. They include prolonged waiting period, poor sanitary conditions, low pro-biota counts and already ensued drug/antibiotic resistance. In this connection, it should be noted that significant improvement in postoperative outcome has been reported by using preoperative oral nutritional supplements enriched with specific immune modulating substrates regardless of baseline nutritional status.^{10,11} Since studies are lacking on the energy, protein, lipids, carbohydrates and micronutrients requirements in chronically malnourished patients compared to well-nourished patients, the case of carrying such multicentric studies is of paramount importance. The lack of interactive clinical nutrition department and infection control machinery in majority of third world hospitals even in tertiary care centers is a grim reality. Recognition of this lack of interventionist expertise in clinical nutrition and infection control will go a long way in reducing the morbidity and mortality associated with elective surgery as well as critically ill patients in third world. In such situations, it is recommended that each center should carry out an agreed protocol-based study before formulating guidelines for parental nutrition during pre-and postoperative surgeries. Till that time it will be prudent to follow such guidelines emanating from European Society for Clinical Nutrition that have been succinctly put forward by their team experts.¹²⁻¹⁴

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