This review article provides a comprehensive overview of the emerging and established trends in pre-operative management of patients for major cancer surgical procedures. These optimization procedures would, in my opinion, be applicable to any patient undergoing major surgery. This commentary is on how these strategies are applicable to patients undergoing major and cancer surgery in Sri Lanka. Pre operative risk assessment undoubtedly plays an important role in patient management. This allows for detection of risk factors, optimizing the patient, planning the anaesthetic and surgery and providing necessary information to the patient. In our setting, this mostly happens following admission to hospital, leaving little time for maximum optimization processes to occur. Establishment of Pre-operative Anaesthesia Clinics (PAC) is often a consideration in anaesthesia departments in major hospitals. The lack of trained personnel has prevented their existence. Increase in the number of trained anaesthetists who can be spared from theatre and intensive care duties would help us in establishing and sustaining PAC's in the future. Undoubtedly, these clinics would help in early detection of co-morbid risks and allow time for optimization prior to surgery.

We are limited by the non availability of dynamic tests for assessment of physiologic capacity or fitness levels in our patients. We use only static tests like 2-dimensional echocardiography, lung function tests and blood gas analysis for assessment of cardio pulmonary status. Dobutamine stress echocardiography is limitedly available in some centers. It is well established that reduced physiologic capacity leads to poor outcomes following major surgery. We lack the facility of the gold standard Cardio-Pulmonary Exercise testing (CPET) in Sri Lanka which would be an investment well worth. Not only would it assess risk and predict outcome, it would also give an idea of the post operative care pathway for a patient. It would be a valuable research tool too.

Timing of surgery in relation to neoadjuvant chemoradiation is practiced in our system as well, based on available evidence. This is done mostly in relation to colorectal surgery. As indicated in the review, there is a lack of data to identify the 'best' time for surgery and the interventions that would help the identification.

“Pre-habilitation” with individualized exercise therapy is a totally new concept to me. Obviously, increasing the 'fitness' of a patient would lead to better outcomes with major surgery. This concept would not be difficult to implement in our hospitals in collaboration with physiotherapy departments. We may have limitations regarding personnel resources available, patient compliance and the duration of exercise therapy needed to improve fitness. With malignancy, in particular, the time duration that can be spent prior to surgery would be important.

The prevalence of malnutrition with or without malignancy is high in Sri Lanka. Use of screening tools for detection of malnutrition is not well practiced here. We use a clinical assessment and serum albumin levels for such assessment. Provision of pre operative enteral or parenteral nutritional support for patients undergoing major gastro-intestinal surgery is practiced in some centers. We have not yet established uniform guidelines for this practice. Immunonutrition is used in selected patients and is limited by its availability and cost. Implementation of screening and nutritional optimization would need a multi-member team approach involving a dietician, medical teams, patient and the family. We, at the moment, are limited by the scarcity of trained dieticians, constraints in the supply to the state sector of nutritional formulae and the lack of applied knowledge of nutrition on the part of the medical teams. The current trend of education on nutritional management at medical undergraduate level would help in the future. We also need more specialist dieticians, training of doctors and nurses and protocols and guidelines on assessment and management of nutrition.

Enhanced Recovery After Surgery (ERAS) programmes have multimodal peri- operative care pathways which are evidence based in improving outcomes. The goals of reducing physiological stress, support of organ function and reduction of post-operative morbidity will result in low complication

rates and shorter hospital stays. The application of the different modalities involves a team effort on the part of the surgeons, anaesthetists, nursing staff and physiotherapists. Most modalities are easily applicable in our practice as they do not involve extra facilities or finances for their implementation. They are mostly protocol based modifications to our current practice. Anaesthetists should concentrate pre-operatively on counseling, appropriate nutritional optimization and fasting periods, intraoperatively on rational use of short acting anaesthetic agents, mid thoracic epidurals, control of hypothermia, optimal fluid management, and antibiotic prophylaxis and, postoperatively, on prevention of nausea and vomiting, early nutrition, early mobilization and good pain relief. Surgeons need to concentrate on counseling, limited bowel preparation, minimally invasive surgical techniques, limited use of drains and catheters and early mobilization and nutrition. Currently, we use most of these modalities in management of patients requiring colo-rectal surgery. These modalities are beneficial for all other major surgeries as well. In our country, though we do not cost for surgery performed in the government sector hospitals, it would be of over all benefit to reduce post operative complications and length of hospital stay. Early discharge from hospital following major surgery may not be realistic in our situation as our community services are yet not well established and a high rate of re admission therefore is a possibility.

In conclusion, early pre-operative assessment, optimization and evidence based peri operative management strategies for cancer patients undergoing major surgery would improve their outcome. It is within our remit to adopt most of these strategies to improve the perioperative course of patients.

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