EDITORIAL

ERAS: IMPROVING PATIENT OUTCOME BY EVIDENCE-BASED MEDICINE

Lack of standardization in perioperative care can negatively impact patient outcome and inflate the cost burden of surgical care. ERAS is an acronym for Enhanced Recovery After Surgery. ERAS protocols are multimodal, multidisciplinary, patient-centric, perioperative care pathways designed to accelerate patient recovery after surgery by standardizing perioperative care. Initially employed for open colorectal surgery, tailormade ERAS protocols for each surgical stream are now available. ERAS Society guidelines (19 in number; available free from http://erassociety.org website) are now available for pancreaticoduodenectomy, rectal/pelvic surgery, hepatic resection, head and neck surgery with free-flap reconstruction, oesophageal, gastric and lung cancer surgery, radical prostatectomy, gynaecological surgery, breast reconstruction and bariatric surgery. Reports of ERAS protocol implementation for neuro-surgical procedures, especially spine surgery have also appeared. The key ERAS elements form a seamless continuum from hospital-arrival to return of baseline function on hospital discharge and are clubbed as preoperative, intraoperative and post-operative bundles.

Preoperative patient counselling, fluid and carbohydrate loading, optimization of nutrition and prehabilitation, avoidance of prolonged fasting, no/selective bowel preparation, antibiotic prophylaxis, thromboprophylaxis, and no premedication comprise the preoperative elements. Emphasis on short acting anaesthetic agents, thoracic epidural catheters wherever applicable, opioid-sparing multimodal analgesia, no drains, goal-directed fluid therapy to avoid fluid and salt overload, maintenance of intraoperative normothermia (convective warming blankets; warm intravenous fluids) and multimodal antimetics comprise the intraoperative elements. Opioid-sparing post-operative analgesia (thoracic epidural catheters (72h); oral NSAIDS; celecoxib; paracetamol; gabapentin; ketorolac), no nasogastric tubes, early oral nutrition, early removal of catheters, avoiding postoperative nausea and vomiting, stimulation of gut motility (chewing gum), avoiding salt and water overload and early mobilization are the key postoperative elements. Opioids cause immediate adverse effects like nausea, vomiting, pruritus, constipation, sedation and respiratory depression.

An audit of compliance with ERAS-elements and outcomes is essential to complete the loop. A motivated ERAS-team comprising surgeons, anaesthesiologists, pre-admission staff, dieticians, nurses, physiotherapists, social workers, occupational therapists and administrators can reduce length of hospital stay and enhance recovery. Although ERAS embraces evidence-based medicine, it involves fundamental shifts in surgical and anaesthetic practice. Let us bust a few related myths now.

Myth-1: The practice of keeping patients nil per orris (NPO) after midnight is traditionally used to avoid pulmonary aspiration or regurgitation during/after anaesthesia for elective surgery. This, however, lacks supporting scientific evidence, as reported conclusively by a review of 22 RCTs comparing different perioperative fasting regimens and perioperative complications. Preoperative fasting actually increases the metabolic stress, hyperglycemia, insulin resistance, protein loss and reduces muscle function. If patients are allowed to take solids up to 6 hours preoperatively and clear fluids up to 2 hours, there is no increase in complications. (Royal College of Anaesthetists and the American Society of Anaesthesiologists guidelines). Carbohydrate loading attenuates postoperative insulin resistance, reduces nitrogen and protein losses, preserves skeletal muscle mass and reduces preoperative thirst, hunger and anxiety, facilitates early return of bowel function and shorter hospital stay and an improved perioperative well-being. Carbolohd (Hexagon Nutrition) is a clear, complex-carbohydrate drink, exclusively designed to support the ERAS protocol. Chief ingredients include Maltodextrin 47.5g and minerals (zinc, selenium, sodium, potassium). On the evening prior to surgery, at 10PM, 2 sachets dissolved in 400 ml water each are orally administered to the patients followed by another sachet (50g), dissolved in 400 ml of water, 2h before surgery.

Myth-2: Preoperative mechanical bowel preparation (MBP) has traditionally been the custom in colorectal surgery and other surgery involving bowel segments (radical cystectomy with ileal conduit /neobladder). The aim of MBP is to rid the large bowel of solid faecal contents and to lower the bacterial load, thereby reducing the incidence of postoperative complications. However, MBP liquefies solid faeces, which may increase the risk of intra-operative spillage of contaminant, and it is almost impossible to reduce the bacterial load in the bowel due to the vast number of micro-organisms present in the digestive tract. MBP causes metabolic and electrolyte imbalance, dehydration, abdominal pain/bloating and fatigue, accompanied with an increased incidence of anastomotic leaks, wound infections, intra-abdominal abscesses and extra-digestive complications as evidenced by a (Slim et al) which included 14 randomised controlled trials and nearly 5000 patients.

Myth-3: Traditionally, it has been our constant endeavour to schedule surgery as soon as possible after a patient presents with a resectable pathology. Nutritional deficiency, particularly for onco-surgical patients, is an independent risk factor for complications and prolonged hospital-stay and costs and is a strong predictor of 90-day mortality and poor overall survival. Overall half the cancer patients and three quarters of oral and GI-cancer patients are malnourished. The prevalence of pre-operative malnutrition is 65.3% for all surgical patients combined and 84.9% for gastrointestinal cancer patients. European Society of Parenteral and Enteral Nutrition defines “severe” nutritional risk as weight loss >10-15% in 6 months, body mass index <18.5 kg/m² or a serum albumin of <30 g/L occurring singly or in combination. Prehabilitation and optimization of the patient prior to surgery cannot be overlooked.

Finally, despite awareness and sufficient evidence to prove the superiority of ERAS versus conventional methods, implementation of ERAS protocols in day-to-day practice faces several barriers and limitations and there exists a huge variation in the pattern of clinical practice followed in the perioperative period in our Indian setups. Adopting ERAS requires unlearning the established practices and adopting new techniques by all the team members. The difficulty in accomplishing necessary compliance to all protocol items calls for new implementation strategies. A good institutional setup that affords access to the necessary resources, a good multidisciplinary team familiar with ERAS components, with a good team leader to coordinate the efforts, and a procedure-specific ERAS design is required for breaking the barriers to implementing ERAS.

To conclude, elements of the ERAS pathways for different surgical subgroups are essentially the same with minor modifications. These seemingly small little changes are doable and weave magic into a patient's surgical experience.

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(Guest Editor)
CANCER CARE FOR THE ELDERLY

An elderly, healthy gentle man, Mr. Rajan Maini, comes in the OPD with his son and wife. Dressed in casual attire, he looks cheerful and content. He has no complaints at all, but he has been diagnosed with a carcinoma, which is curable and in its early stages. He does have some comorbidities, COPD being one. How familiar is this scene in any clinic? How often have we seen the dilemma among the family members and probably among doctors too, for whether to treat him or let him be on his own? Afterall, how long a life does he have? Will he be able to tolerate the ruthless anticancer treatment?

Mr. Maini received cancer directed treatment personalized to his morbidities and health assessment. (Adequate permission taken for using Photo, name and facts)

We are in an era when life expectancy has increased significantly due to improved lifestyle, better health care and medical support. According to the United Nations, by 2050, the world population of 60 years and older would reach 2 billion, from 900 million in 2015. Today 125 million people are aged 80 year or older.

With advancing age, the incidence of cancer too has been increasing. More than 12-23% of all cancers occur after the age of 65 years (NCCP 2002, NCRP 2001). Yet this group of patients have been under-represented in our clinical practice. They have also not been studied well in any research and have been customarily considered unsuitable for treatment, hence denying them of the chance of a curative approach.

Barriers to Optimum Cancer Care in the Elderly

There is probably some truth in the concerns raised. Treating older patients for cancer may be quite challenging most of the times; not only because of their advanced age, but also because they are more likely to suffer from chronic health conditions, such as diabetes or heart or kidney disease. Apart from the fact that, they may respond in a different way than their younger counterparts, to the various modalities of cancer treatment offered to them, they may also bear some unique challenges:

Increased financial burdens, lack of support at home and sometimes the stress of being under the care of someone else. Our elderly patients may need extra support for their non-medical needs too, which may be financial, psychological, social.

But should age be the only factor to be considered during treatment decisions?

Chronological Age vs. Physiological Age

Advancing age comes with varied challenges which may be cognitive, allied health conditions, decrease in physiologic reserve. Physiologic reserve is the ability to recover from something that’s difficult, whether it’s cancer and its symptoms or cancer treatment. But this is far from being a rule.

We have seen elderly octogenarians going through cancer treatment successfully with some extra care and support. At the same time there have been younger patients who failed to continue through the treatment.

One size does not fit all. Some treatment adjustments, if needed should be considered to reduce the side effects. Fortunately there are several treatment options available today for avoiding or minimizing drug interactions, for personalising treatment for the older patients. Hence there are no reasons to deny any form of cancer treatment to them.

Biomarkers of Ageing

The words sound appealing. This conceptualizes identification of biomarkers of ageing that would assess the physiological reserves of the patient, guiding medical interventions. The big epidemiological ageing studies, NHANES III, and the Dunedin study, determine the physiological age of an individual. Geriatric research has identified several biological markers potentially able to reflect the physiological age of a person. The diagnostic and prognostic value of these markers has yet to be prospectively proven.

Geriatric Assessment Tools

Geriatric Assessments Tools can potentially identify those older adults who are at higher risk of serious side effects from cancer treatment. Studies show that people who received assessment-guided care, not only fared fewer side effects, but they were also less likely to experience falls in their homes during treatment when compared with people who didn’t receive Geriatric Assessment-guided care. However, no differences in survival were seen between the two treatment groups in this particular study. The results were published in The Lancet in November 2021. They concluded that a “geriatric assessment intervention for older patients with advanced cancer reduced serious toxic effects from cancer treatment. Geriatric assessment with management should be integrated into the clinical care of older patients with advanced cancer and age‑related conditions.”

A Geriatric Assessment Tool collects all health-related information, comorbidities, and impairments that otherwise may not be captured as part of routine cancer care and evaluates them to identify patients who are likely to experience serious side effects. The table below is an example.

Components of A Geriatric Assessment

Comprehensive Geriatric Assessment CGA probably originates way back in the 1940s by Dr. Marjory Warren in the United Kingdom, who noticed a need to better manage older patients in the hospital who were bedridden and chronically ill. This has been considered as the “Gold Standard” for evaluating older adults.

Today, there is a rising need for designing innovative health care models to synchronize geriatric principles with oncology care. Multidisciplinary geriatric oncology clinic can be created where a detailed description of our geriatric oncology practice can be outlined, taking into consideration the various barriers, challenges associated with the advanced age and provide practical solutions. Competent geriatric nursing education is also an essential part of management of care in older adults with cancer.
Survivorship in Elderly Cancers

Our Responsibility as Oncologists does not end here. For any cancer treatment, managing post treatment adverse effects is equally imperative. While a decision is being made whether or not to treat an elderly patient, it is important to consider his quality of life that we impart after curing his cancer. Among the elderly survivors, physical and psychological issues like, fatigue, pain, osteoporosis, cardiac toxicity, weight and nutritional changes, cognitive changes, depression, anxiety, and neuropathy, may be more perplexing. Over time, diminished social and economic resources may also impact the survivorship experience. Addressing survivorship among older adults requires a comprehensive approach considering recommended follow-up care, managing multi-morbidity and medications, deciphering between age- or cancer-related physical and mental symptoms, and coordinating care from multiple physicians.

Ending Thought

For now, chronological age alone is not the best indicator to determine responses to treatment among older cancer patients. When carefully selected, older patients can benefit from both curative treatment and palliation. It has been proved that Geriatric Assessment tools do help selecting a patient for Cancer treatment. A complete assessment of the elderly patient covers each of the domains: like physical condition, cognitive function, functional status, nutritional status, psychosocial health, economic status, physical environment, caregiver support, and spirituality.

We need to work diligently to understand which group of older adults would benefit most from the assessment. More studies are required to determine the components of the assessment which would be most useful in a particular patient or Cancer type. The assessment tools also have to be made more accessible and streamlined so that both the patients and Physicians benefit from it.

An extra support to the patients and their caregivers with psychological training assist, emotional counselling, nutrition advice and guidance in transportation for appointments would help more Geriatric patients avail treatment for Cancer.

Mr. Rajan Maini completed his entire treatment very successfully with personalization of care, with lots of support and encouragement from his family members, notwithstanding multiple admissions, multiple treatment. But the treatment allowed him a happy fruitful life with his dear ones, doing everything he always loved to do.

Acknowledgement - We are grateful to Mrs. Maini and her family for sharing their thoughts and photographs.

Dr. Swarupa Mitra
Chief of Gynecological and Genitourinary Radiation Oncology Services

CME WITH MATHURA MEDICAL ASSOCIATION (IMA MATHURA) & MATHURA SOCIETY OF ANAESTHESIOLOGY

RGCIRC organized a CME in association with Mathura Medical Association (IMA Mathura) & Mathura Society of Anaesthesiology on Saturday, 07th May 2022 at Hotel Madhuvan, Krishna Nagar, Mathura, UP.

Dr. Sunny Malik, Consultant – Incharge Anesthesia, Pain & Palliative Medicine, RGCIRC, Niti Bagh delivered a lecture on Pain and Palliative Care Management in Pancreatic Cancer.

Dr. Seema Singh, Consultant - Surgical Oncology, RGCIRC, Niti Bagh spoke on Myths in the Treatment of Breast Lump and Dr. Payal Malhotra, Consultant - Paediatric Oncology, RGCIRC, Rohini spoke on Importance of General Practitioners in Early Diagnosis of Cancer in Children: Clinical Clues.

CONGRATULATIONS!!!

In continuation of our efforts to maintain high standards for OT, RGCIRC has been recertified for “Final Green OT Certificate: Platinum Grade” for a period of 3 years.

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