

Commentaries

Elderly patients for cancer surgeries: How much to investigate!

Improved patient outcome after cancer surgeries in elderly patients not only requires advancement in surgical technique but also patient-centered integrated approach from multidisciplinary participation. The appropriate preoperative assessment remains the key to optimal perioperative outcome for elderly patients undergoing major onco-surgeries.^[1-3] This reflects the “perioperative physician” tag for anesthesiologists and reciprocates

the duty for anesthesiologists for an appropriate assessment using history, clinical examination, and relevant investigations including imaging. Among the plethora of tests (blood, urine, imaging, etc.), it is essential to choose appropriate tests as deemed necessary based on clinical assessment.^[4] However, selection of these tests remains a difficult task in elderly with cancer as many of the clinical assessment would be altered by the impact of cancer itself and administration of preoperative treatment like chemotherapy or radiotherapy. Also, at times, various tools like assessment of functional capacity may be difficult to assess due to age-related changes and limited mobility due to joint morbidities. These all issues create a dilemma for the extent of investigations required in elderly patients undergoing major onco-surgeries.

In this issue of the journal, authors publish a retrospective study in which they have evaluated the usefulness of routine blood investigations, requirement of further specialty consultations, and delays in management of oncosurgical patients.^[5] The authors have addressed a very important dilemma we as anesthesiologists come across. However, it is desirable that the concerned issue is handled correctly keeping in mind the current era of evidence-based medicine.

The onco-surgeries have been labeled as “time sensitive surgeries.” This envisages the need of avoiding undue delay for the surgery as it would affect the prognosis. Simultaneously, it is to be emphasized for the need of appropriate assessment, optimization, and incorporating the concept of prehabilitation for better outcome after major onco-surgeries. Patients presenting for onco-surgeries may have undergone preoperative chemotherapy or radiotherapy and may be associated with various adverse effects on various body systems. It would be prudent to evaluate the patients further based on symptomatology and initiate the treatment for the overall benefits not only for perioperative period but also for good outcome in long term for the patient. As most of the chronic diseases have long-term effects, any prolonged delay for optimization would affect the body systems like untreated hypertension and/or diabetes mellitus would have effect on renal/cardiac function which deteriorates as the disease duration increases.^[1,2]

We need to understand certain issues in Indian context. In Indian scenarios, many a times, previous medical record may not be available. Also, absence of unified maintenance of the medical records and routine medical checkup in many scenarios makes it difficult to understand the gravity of the present clinical status. It is also observed that the disease or its complications is diagnosed for the first time in preanesthetic clinic. The present study being published also documents the diagnosis of new illnesses during preanesthetic evaluation.^[5] This remains an alarming situation. The authors reported that almost 25% of patients are diagnosed for the first time for their comorbidities during preanesthetic assessment.^[5] The need of investigations varies in the absence of previous medical records with comorbidities. Of the 300 patients studied, around 37% of the patients had at least 2 medical comorbidities and 16% had >2 comorbidities.^[5] The outcome in single comorbidities versus more than comorbidities varies. It is well-known fact that with more number of comorbidities, the risks of complications increase, especially if these are not optimized and require intense monitoring in the perioperative period. In this study, comorbidities included hypertension ($n = 206$), diabetes mellitus ($n = 80$), coronary artery disease ($n = 38$), and cerebrovascular accidents ($n = 14$).^[5] Only 60 patients out of 300 studied had no comorbidities. Authors reported an alarming high incidence of asymptomatic patients with thyroid abnormalities (12%).^[5] These figures are much higher in

elderly patients that younger population as was reported in another recent report from India. In a similar study on relatively younger population from India, the comorbidities reported were 32% patients had at least one comorbidity. The comorbidities like hypertension (11%), diabetes mellitus (6.7%), and renal diseases (6.7%) were with lesser incidence in this population as compared to elderly.^[5,6] This information mandates careful assessment for the elderly patients with higher incidence of comorbidities and its impact on body function in addition to impact of cancer therapy and physiological changes.

Though with better perioperative care and monitoring, majority of comorbidities are not contradictions to surgery but affect an optimal outcome in short and long term. It is well understood that the chronic diseases would affect the long-term impact on various body systems. So, dilemma remains whether to start the optimization of these diagnosed medical conditions and its end point of optimization. The appropriate timing of initiating the therapy needs to be judged. It appears that the attempt to optimize any diagnosed medical condition in the preoperative period should be initiated at the earliest but without undue delay in the cancer surgery. Patients should be explained for the need of the optimization of the medical condition and to continuation of the treatment in the postoperative period as well.

The reported overall complication rate in the present study was around 13%.^[5] This was in spite of number of tests and appropriate specialist referrals as disclosed in the manuscript. The authors observed that complications reported in their study were not related to preoperative blood investigations but was found to be associated with age, comorbidities, and physical status. This requires introspect for such a large percentage of complications in present era with better drugs, techniques, and monitoring. We also need to understand the implications of abnormal investigations even if it is not going to change to overall anesthetic plan. In the reported study, authors reported 29% patients with abnormal echocardiography reports, 48% patients with abnormal pulmonary function tests, and 29% patients with abnormal random blood sugar values.^[5] The authors reiterate that these abnormal findings did not significantly alter the perioperative management. It is unclear why no appropriate action for perioperative management was taken in spite of these abnormal findings. This may be the reason for significant number of complications. It needs to be emphasized that whatever time is available in preoperative period needs to be utilized for optimization for the patient without delaying the surgery unnecessarily. The goal may be trends toward optimization rather than absolute normalization.

Authors have recommended certain useful statements which remains of significance.^[5] However, it must be emphasized that this remains a very small retrospective single center to

make recommendations for a focus group of elderly undergoing cancer surgeries. There are not many conclusive studies for the extent and need of investigations in elderly patient undergoing cancer surgeries in Indian population or otherwise as well. There is utter need of an prospective multicentric study for accepting or refuting the battery of tests that may be considered as “routine” and required as per need assessment based on available information from clinical history and examination. What all should be a part of “routine investigations” in this group of patients also needs to be investigated further.

Other issues relate to frailty in elderly and its impact on the perioperative outcome in cancer patients requiring surgery, chemotherapy, and radiotherapy.^[7,8] Frailty is associated with increased risk of perioperative complications and poorer outcomes. Recent data related to appropriate use of preoperative Cardiopulmonary exercise testing (CPET) and frailty indices along with approaches for prehabilitation have shown an improved perioperative outcome.^[9] However, further studies are required for its usefulness in elderly patients for cancer surgeries. More literature is required for appropriate validated tools to be used in preoperative period for predicting postoperative outcomes, with focus on onco-geriatric group. Elderly population gave additional concerns related to frailty, nutrition, cognitive dysfunction, etc. The screening tools assessing both physiologic and cognitive reserves are also relevant for elderly population.

Presently, many validated scoring systems and risk indices tools such as Katz Activities of Daily Living Index, National Surgical Quality Risk Calculator Exits, Surgical Outcome Risk Tool, The American College of Surgeons Mortality and Morbidity Risk Calculator, the Physiology and Operative Severity Score for Enumeration of Mortality and Morbidity (POSSUM) and Portsmouth POSSUM (P-POSSUM), and the Lee’s Cardiac Risk Index; Goldman Cardiac Risk Index, Charlson Comorbidity Index, Acute Physiological and Chronic Health Evaluation, etc., have been used. Their incorporation in preassessment needs to be emphasized as per their utility.^[10]

To conclude, the preoperative assessment does not merely include investigations and specialty referrals. It should include detailed history and clinical examination for the need of further investigations and referrals. The aspects peculiar to elderly patients such as frailty, cognitive function, nutritional status, etc., also need to be part of preoperative assessment. Also, focus should be on holistic assessment as majority of tools focus on single system assessment and elderly patients usually have multiple comorbidities in addition to declining physiologic function and reserves in multiple systems. The use of validated tools would help in predicating the outcome and prognostication and needs to be part of preoperative assessment for oncosurgical patients.

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References

1. Kim S, Brooks AK, Groban L. Preoperative assessment of the older surgical patient: Honing in on geriatric syndromes. *Clin Interv Aging* 2015;10:13-27.
2. Ramesh HS, Boase T, Audisio RA. Risk assessment for cancer surgery in elderly patients. *Clin Interv Aging* 2006;1:221-7.
3. Parsons DP. Preoperative evaluation and risk management. *Clin Colon Rectal Surg* 2009;22:5-13.
4. Czoski-Murray C, Lloyd Jones M, McCabe C, Claxton K, Oluboyede Y, Roberts J, *et al.* What is the value of routinely testing full blood count, electrolytes and urea, and pulmonary function tests before elective surgery in patients with no apparent clinical indication and in subgroups of patients with common comorbidities: A systematic review of the clinical and cost-effective literature. *Health Technol Assess* 2012;16:i-xvi, 1-159.
5. Ramesh B, Pillai V. Role of preoperative investigations in elderly patients undergoing oncosurgical procedures – A retrospective review. *J Anaesthesiol Clin Pharmacol* 2018;66:535-9.
6. Karim HM, Yunus M, Bhattacharyya P. An observational cohort study on pre-operative investigations and referrals: How far are we following recommendations? *Indian J Anaesth* 2016;60:552-9.
7. Degani-Costa LH, Faresin SM, dos Reis Falcão LF. Preoperative evaluation of the patient with pulmonary disease. *Braz J Anesthesiol* 2014;64:22-34.
8. Ethun CG, Bilen MA, Jani AB, Maithel SK, Ogan K, Master VA, *et al.* Frailty and cancer: Implications for oncology surgery, medical oncology, and radiation oncology. *CA Cancer J Clin* 2017;67:362-77.
9. Saxton A, Velanovich V. Preoperative frailty and quality of life as predictors of postoperative complications. *Ann Surg* 2011;253:1223-9.
10. Cui HW, Turney BW, Griffiths J. The preoperative assessment and optimization of patients undergoing major urological surgery. *Curr Urol Rep* 2017;18:54.

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