

Critical care for cancer patients

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It gives me immense pleasure to edit this special issue of the Indian Journal of Critical Care Medicine on care of critically ill cancer patients.

Three decades ago, cancer and critical care were viewed as dichotomous terms. However, the paradigm has shifted and today cancer is considered to be just another chronic illness. Most cancer patients in the intensive care unit (ICU) die with cancer, rather than from cancer.

Clinical outcomes in critically ill cancer patients have clearly improved over the last decade.^[1-4] This is probably related to better selection of cancer patients for intensive care. In addition, early referral, better management and non-invasive ventilation have also played a significant role.^[5] However, despite clear data supporting the beneficial effects of critical care in cancer patients, personal biases and preferences, inadequate knowledge and lack of understanding of the recent advances in therapy result in a wide variation in clinical practice. While oncology-dedicated ICUs are options for academic medical centers with large volumes of critically ill cancer patients, the majority of critical care for patients with cancer is performed in general critical care units across the country. Clinicians in these settings need to have a sound understanding of oncological emergencies and the current guidelines for their management.

Modern, aggressive treatments for cancer combining surgery, chemotherapy and radiotherapy have resulted in improved survival and functional outcomes, but may

result in serious, life threatening complications requiring treatment in the ICU. It is imperative that intensivists support the oncology team in their effort to improve meaningful outcomes. In this issue, Dr. Atul Kulkarni from the Tata Memorial Hospital, Mumbai gives a broad overview of the problems in cancer patients that may necessitate ICU admission and outlines the multisystem problems that may arise directly as a result of cancer chemotherapy.

One of the major issues is whether cancer patients should be admitted at all to ICUs and how aggressively they should be treated. Clinical decision making at the bedside is often fallacious in identifying patients suitable for ICU admission. In one study, 26% cancer patients considered to be too sick to benefit from intensive care survived, while 30-day mortality was 42.5% in patients considered too well for ICU admission.^[6] Knowledge of prognostic factors will enable the intensivist to arrive at a rational decision. In this issue, we have two articles by authors who are leaders in this field. Dr. Thierry from Prof. Azoulay's group in Paris writes on the factors that go into deciding on admission of a cancer patient to the ICU. They emphasize that duration and severity of neutropenia and long-term prognosis of malignancy should no longer be considered as major prognostic factors. Dr. Marcio Soares from Brazil also discusses the influence of various prognostic factors including age, comorbidities, renal dysfunction, mechanical ventilation and quality of life on outcome. Both authors suggest that it may be inappropriate to deny admission to cancer patients across the board; several patients should be given a trial of ICU care and progression of organ failure and response to therapy are most important determinants of outcome.^[7] Azoulay recommends^[5] that patients with terminal disease, those who are bedridden

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and those who are candidates for palliative care should not be admitted to ICU. Patients undergoing diagnostic workup for cancer, those who have organ failure due to cancer as the first presentation and are receiving first line chemotherapy must receive full treatment for as long as is necessary in the ICU. Indeed, patients presenting with organ involvement by hematological malignancy may benefit from chemotherapy started in the ICU.^[8,9] All other patients should be considered for an ICU trial, where full support is given for a limited period (5 days).^[7] At the end of this period, the response is evaluated and a better-informed decision to continue or withhold/ withdraw support can be made.

Respiratory failure requiring mechanical ventilation is probably the most common reason for ICU admission.^[10,11] Non-invasive ventilation (NIV) has been one of the major advances in the field of mechanical ventilation in the last decade and its application has special significance in cancer patients.^[1,2,12,13] Dr. Shruti Nagarkar from the Bombay Hospital, Mumbai, deals with this important aspect of management. Selection of patients for NIV is critical; early recognition of respiratory failure is helpful. It is also important to realize the limitations of NIV, as well as recognise failure of NIV early and avoid unnecessary delay in intubation.^[14]

The tumour lysis syndrome is a common treatable metabolic emergency in cancer patients. Dr. Darmon and his colleagues from Paris lucidly review the pathophysiology and the clinical and biological consequences of this syndrome and to provide up-to-date guidelines for prevention and prompt management.

Airway obstruction due to various tumours in the region of the head and neck and thorax is a life-threatening emergency. If diagnosed rapidly and managed appropriately, the outcome is rewarding; inappropriate management can have disastrous consequences. Dr. Vijaya Patil from the Tata Memorial Hospital, Mumbai, provides a detailed review of this important problem.

One aspect that is not included in this supplement is the ethical and moral dilemmas that confront the intensivist when caring for cancer patients and the end-of-life-care-related issues in the ICU. This is not to minimize their importance, but only because this aspect has been recently reviewed extensively in this Journal. Readers are

referred to the ISCCM position statement on end-of-life care that appeared in this Journal.^[15]

Patients entrust their lives to oncologists and intensivists. Today we are obligated to give them the best clinical service based on sound evidence. In this special issue of the Indian Journal of Critical Care Medicine, we have gathered together leading authors and thinkers in the field of critical care for cancer patients. We believe that this issue will help intensivists to have a greater understanding of the challenges involved in the care of the critically ill cancer patient and that the oncology and ICU teams will treat critically ill patients based on science and evidence, rather than on personal opinion and dogma.

References

1. Azoulay E, Alberti C, Bornstain C, Leleu G, Moreau D, Recher C, *et al.* Improved survival in cancer patients requiring mechanical ventilatory support: Impact of non-invasive mechanical ventilatory support. *Crit Care Med* 2001;29:519-25.
2. Azoulay E, Recher C, Alberti C, Soufir L, Leleu G, Le Gall JR, *et al.* Changing use of intensive care for hematological patients: The example of multiple myeloma. *Intensive Care Med* 1999;25:1395-401.
3. Benoit DD, Vandewoude KH, Decruyenaere JM, Hoste EA, Colardyn FA. Outcome and early prognostic indicators in patients with a hematologic malignancy admitted to the intensive care unit for a life-threatening complication. *Crit Care Med* 2003;31:104-12.
4. Larche J, Azoulay E, Fieux F, Mesnard L, Moreau D, Thiery G, *et al.* Improved survival of critically ill cancer patients with septic shock. *Intensive Care Med* 2003;29:1688-95.
5. Azoulay E, Afessa B. The intensive care support of patients with malignancy: Do everything that can be done. *Intensive Care Med* 2006;32:3-5.
6. Thiery G, Azoulay E, Darmon M, Ciroidi M, De Miranda S, Levy V, *et al.* Outcome of cancer patients considered for intensive care unit admission: A hospital-wide prospective study. *J Clin Oncol* 2005;23:4406-13.
7. Lecuyer L, Chevret S, Thiery G, Darmon M, Schlemmer B, Azoulay E. The ICU Trial: A new admission policy for cancer patients requiring mechanical ventilation. *Crit Care Med* 2007; [Epub ahead of print].
8. Darmon M, Thiery G, Ciroidi M, de Miranda S, Galicier L, Raffoux E, *et al.* Intensive care in patients with newly diagnosed malignancies and a need for cancer chemotherapy. *Crit Care Med* 2005;33:2488-93.
9. Benoit DD, Depuydt PO, Vandewoude KH, Offner FC, Boterberg

- T, De Cock CA, *et al.* Outcome in severely ill patients with hematological malignancies who received intravenous chemotherapy in the intensive care unit. *Intensive Care Med* 2006;32:93-9.
10. Azoulay E, Schlemmer B. Diagnostic strategy in cancer patients with acute respiratory failure. *Intensive Care Med* 2006;32:808-22.
11. Azoulay E, Thiery G, Chevret S, Moreau D, Darmon M, Bergeron A, *et al.* The prognosis of acute respiratory failure in critically ill cancer patients. *Medicine (Baltimore)* 2004;83:360-70.
12. Azoulay E, Alberti C, Bornstain C, Leleu G, Moreau D, Recher C, *et al.* Improved survival in cancer patients requiring mechanical ventilatory support: Impact of non-invasive mechanical ventilatory support. *Crit Care Med* 2001;29:519-25.
13. Hilbert G, Gruson D, Vargas F, Valentino R, Gbikpi-Benissan G, Dupon M, *et al.* Noninvasive ventilation in immunosuppressed patients with pulmonary infiltrates, fever and acute respiratory failure. *N Engl J Med* 2001;344:481-7.
14. Depuydt PO, Benoit DD, Vandewoude KH, Decruyenaere JM, Colardyn FA. Outcome in non-invasively and invasively ventilated hematologic patients with acute respiratory failure. *Chest* 2004;126:1299-306.
15. Mani RK, Amin P, Chawla R, Divatia JV, Kapadia F, Khilnani P, *et al.* Limiting life-prolonging interventions and providing palliative care towards the end-of-life in Indian intensive care units. *Indian J Crit Care Med* 2005;9:96-107.

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