

Critical care of elderly in India: Coming of age?

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India ranks 150th in the International order of life expectancy with Japan at the top with an average of 84.6 and International average at 71.0.^[1] As anywhere else in the world, the expectation of life has improved in India as well. The average life expectancy, which was 42 in 1960, has now improved significantly. It was 62.3 years for males and 63.9 years for females in 2001–2005, and is expected to further go up to 67.3 years and 69.6 years respectively by 2011–2015 (Union ministry of health and family welfare statistics).^[2] The rate of rise of life expectancy in our country is attributed to better nutrition, universal vaccination and effective birth control. While it is a welcome health indices change, it also raises a few issues regarding its impact on health system in general and Intensive Care Unit (ICU) management in particular. With better and modern health care systems, their easier reach and changing socioeconomic and lifestyle statuses of our communities, birth and death have shifted substantially from the community to institutions. It is very rare to see anybody demising at their homes nowadays. The expectations of patient groups have also changed considerably. These factors have two implications: One, the disease burden on the healthcare system has risen steeply, and two, the burden on the medical community to prognosticate and optimize the treatment options to contain mortality has also risen. The disease burden in general in India is 63.20 with International average being 67.50 and Japan being at 79.30. These disease burdens are proportionate to the average age in these communities.

Communicable diseases, maternal, peri-natal and nutritional disorders constitute 38%, noncommunicable diseases account for 42% and injuries and ill-defined causes constitute 10% of all deaths in the society. However, majority of ill-defined causes are at older ages (70 or

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higher years) and likely to be from noncommunicable diseases.^[2] All these entities have the potential to land up in ICUs and pose a challenge to critical care community to choose modalities of management best suited to optimize the chances of survival. In the environment of ever increasing awareness and demanding attitudes of our stakeholders, predictability of outcome also has become a vital tool.

Performance and outcome of critically ill geriatric population and their outcome are not a very vastly researched topic across the world and in our country. Moreover, an 80-year-old patient in India is very different from an 80-year-old patient elsewhere in the west. There is considerable need to understand this aspect of critical care management in our setup.

In this setting the robust retrospective study^[3] conducted by **Sodhi's** group regarding geriatric critical care in India attains significance for obvious reasons. At the outset, it is heartening to note the lack of bias on the basis of age in offering ICU treatment modalities that were shown in this study. These investigators compared the effect of various ICU interventions in patients below and above the age of 65 years. The overall mortality was 19.6% with no difference between the comparators. There is a lack of agreement between various studies from western countries in this aspect.^[4-6] It was further suggested that it is not the age, but the premorbid status of the aged that determines mortality,

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raising the question whether admission criteria for this group be redefined.^[7] In the current Indian study, though mechanical ventilation and inotropic support proved to increase mortality in geriatric patients, it is only the latter that withstood multivariate analysis as a predictive factor for mortality.^[3] It has to be noted at this point that the APACHE scores and ALOS of geriatric age group were higher than their younger cohort.^[3] Both in this study^[3] and in studies from abroad mechanical ventilation in very aged (>85 years) groups proved to be reducing survival profoundly.^[8] The Indian authors have differed from authors of DOPP study and with Romão *et al.* observation that dialysis and acute kidney injury were negative predictors for survival in geriatric age group.^[9,10] Sodhi *et al.*^[3] found no relationship between tracheostomy and survival in elderly ICU patients, for which again there is disagreement among studies from other countries.^[10,11] Boumendil *et al.* argue^[7] that, since it is impossible to develop evidence-based admission criteria for elderly, further work is warranted to examine the effect of various peri-admission factors to come to an assessment. Using multivariate logistic regression analysis Vosylius *et al.*^[4] determined that impaired level of consciousness, infection either on admission or ICU-acquired, and severity of illness score are the independent risk factors of hospital mortality for the patients aged 75 years.

This study^[3] is a single center, retrospective, observational study concerned with ICU mortality only. Since some studies^[12] point out greater long-term mortality and limited functional outcome in very elderly population, this area too need to be looked into. The predictors pointed out in this study may be utilized for planning and counseling the concerned families, but not wholesome enough to solely depend upon. Nevertheless, it opens up vistas in an increasingly common area of critical care services in our country and brings up many hitherto unanswered questions. These questions need to be answered through more such studies, preferably prospectively structured and taking long-term outcomes into account. We owe this not only to the critical care community, but also to the senior citizens of our country.

Finally, government of India has launched National Program for the Health Care for the Elderly, in June, 2010 with the main objective of providing preventive, curative and rehabilitative services to the elderly persons at various level of health care delivery system of the country.^[2] The data from the current study and any future study stimulated by this one will significantly aid in executing such programs.

References

1. WHO. Life expectancy data by country. Manila: World Health Organization; 2012.
2. Annual Report to the People on Health. Government of India. Ministry of Health and Family Welfare; December, 2011.
3. Sodhi K, Kumar MS, Shrivastava A, Bansal N. Do Intensive Care Units treatment modalities predict mortality in geriatric patients: An observational study from an Indian Intensive Care Units. *Ind J Crit Care Med.* 2014;789-95.
4. Vosylius S, Sipylaite J, Ivaskevicius J. Determinants of outcome in elderly patients admitted to the intensive care unit. *Age Ageing* 2005;34:157-62.
5. Rosenthal GE, Kaboli PJ, Barnett MJ, Sirio CA. Age and the risk of in-hospital death: Insights from a multihospital study of intensive care patients. *J Am Geriatr Soc* 2002;50:1205-12.
6. de Rooij SE, Abu-Hanna A, Levi M, de Jonge E. Factors that predict outcome of intensive care treatment in very elderly patients: A review. *Crit Care* 2005;9:R307-14.
7. Boumendil A, Somme D, Garrouste-Orgeas M, Guidet B. Should elderly patients be admitted to the intensive care unit? *Intensive Care Med* 2007;33:1252-62.
8. Rellos K, Falagas ME, Vardakas KZ, Sermaites G, Michalopoulos A. Outcome of critically ill oldest-old patients (aged 90 and older) admitted to the intensive care unit. *J Am Geriatr Soc* 2006;54:110-4.
9. Canaud B, Tong L, Tentori F, Akiba T, Karaboyas A, Gillespie B, *et al.* Clinical practices and outcomes in elderly hemodialysis patients: Results from the Dialysis Outcomes and Practice Patterns Study (DOPPS). *Clin J Am Soc Nephrol* 2011;6:1651-62.
10. Romão Junior JE, Haiashi AR, Vidonho Junior AF, Abensur H, Quintaes PS, Araújo MR, *et al.* Causes and prognosis of acute renal failure in elderly patients. *Rev Assoc Med Bras* 2000;46:212-7.
11. Frutos-Vivar F, Esteban A, Apezteguía C, Anzueto A, Nightingale P, González M, *et al.* Outcome of mechanically ventilated patients who require a tracheostomy. *Crit Care Med* 2005;33:290-8.
12. Roch A, Wiramus S, Pauly V, Forel JM, Guervilly C, Gaimnier M, *et al.* Long-term outcome in medical patients aged 80 or over following admission to an intensive care unit. *Crit Care* 2011;15:R36.

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