Critically Ill Cancer Patients: Indications for Concurrent Palliative Care

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1 Background

Although significant advancement in early diagnosis and effective cancer treatments have been made within the past several decades, mortality rates of cancer patients in the intensive care unit is greater than 50% (Freedman & Hansen-Flaschen, 2013). Despite promising improvements, limited research targeting the physical and psychosocial aspects of living with advanced cancer has been done (Greer et al., 2013) There has been growing recognition in the need for supportive services such as palliative care concomitantly with life-prolonging treatments for critically ill patients and families (Greer et al., 2013). According to World Health Organization (2013), the approach of palliative care is to promote quality of life for patients and their families during life-threatening illness by reducing pain and suffering. Carey et al. (2013) suggests chaplaincy involvement and collaboration with clinical staff in pain management can be a beneficial approach.

The Sequential Organ Failure Assessment (SOFA) is one prognostic tool researchers utilize to predict mortality in critically ill patients (Neumann et al., 2007). Main components of the tool include measures of respiratory, coagulation, liver, cardiovascular, central nervous system, and renal systems, which reflect major organ systems affected during life-threatening illness. A previous study in 2010 used the SOFA score as a mortality predictor for critically ill patients with cancer at The Sidney Kimmel Comprehensive Cancer Center and to identify the need for palliative care for these patients. Results from the 2010 study suggests the SOFA tool may be a poor predictor of outcomes for this population. The aim of this quality improvement study is to reassess the SOFA tool and its application to critically ill cancer patients in 2012, to assess changes in integration of palliative care for these patients, and the potential of palliative care referral through pastoral care.

2 Methods

A retrospective electronic medical record review of critically ill cancer patients who required admission at The Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins inpatient units was conducted for 2010 and 2012 using Sunrise Prescriber Order Entry (POE) and Electronic Patient Record (EPR).

SOFA scores for year 2012 were obtained at the initial time of critical illness and subsequently at 24 and 48 hours. The initial time of critical illness was marked when there was a need of supplemental oxygen through the use of mechanical ventilation or implementation of continuous veno-venous hemodialysis (CVVHD).

Information on platelet count, bilirubin and creatinine levels, the Glasgow Coma Scale score, hypotension, and PaO2/FiO2 ratio were collected at each time period and scored using the SOFA tool. Date of death or date of discharge were also recorded.

Documentation of patients receiving palliative care, goals of care notes, family discussion, and pastoral care were noted for years 2010 and 2012.

3 Results

SOFA Score

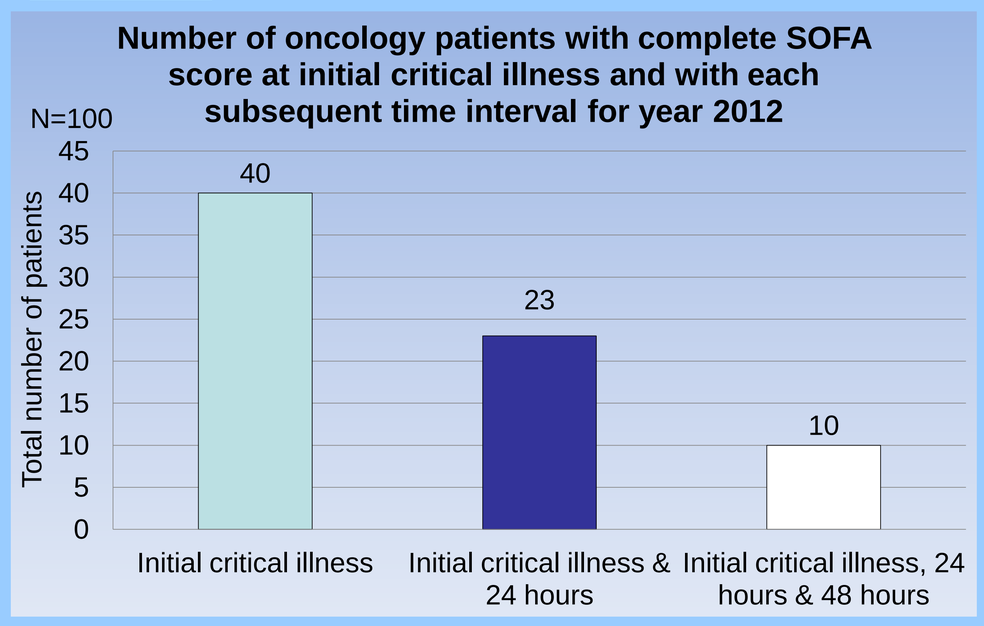

Fig 1. The number of 2012 oncology patients having completed SOFA scores declined beginning with initial critical illness and with the addition of each subsequent time interval. Only 10% of the patients had completed SOFA scores for initial critical illness, 24 hours, and 48 hours, making analysis not possible.

Palliative Care

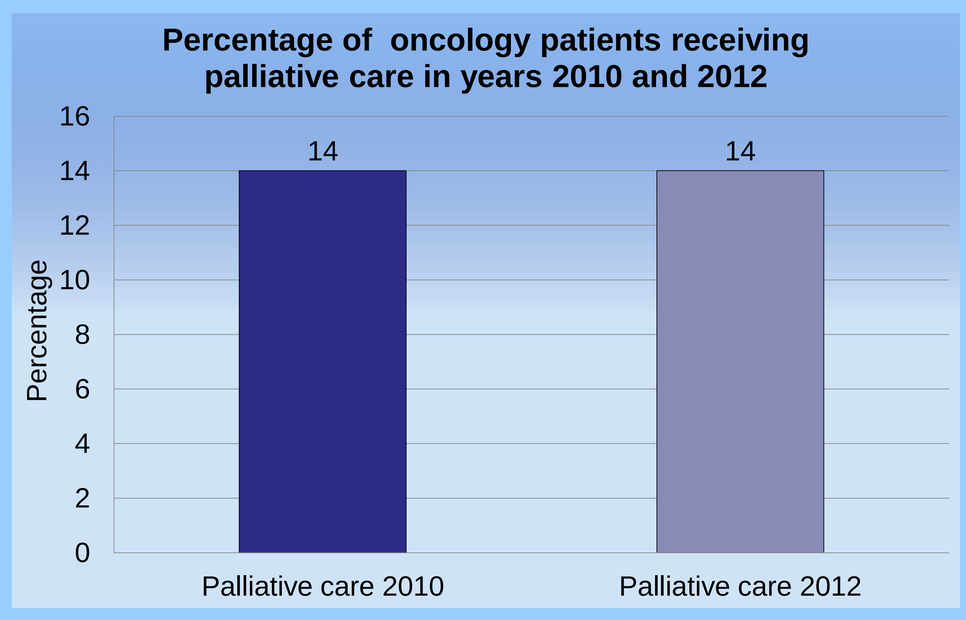

Fig 2. No differences were seen in the percentages of oncology patients receiving palliative care in years 2010 and 2012.

Pastoral Care

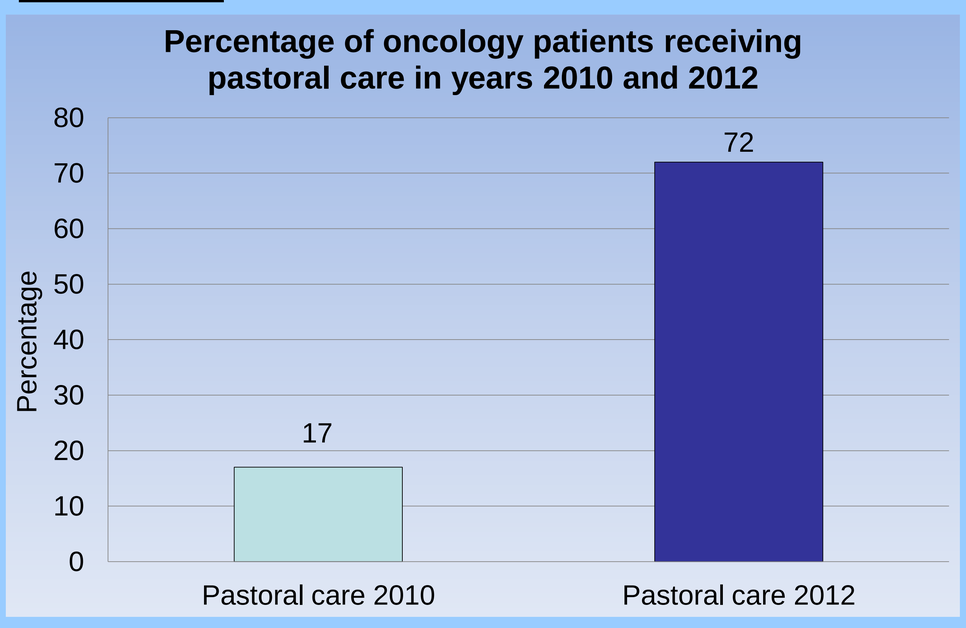

Fig 3. The percentage of oncology patients receiving pastoral care for year 2012 was higher than year 2010.

4 Conclusions

Problems encountered during data collection, resulting in incomplete data included 1) induced chemical sedation preventing Glasgow Coma Scale scoring and 2) patient death within 48 hours of onset of critical illness resulted in absent 24 and 48 hours SOFA scores. These issues suggest SOFA scores may be inadequate for assessing mortality risk in critically ill cancer patients.

This population of critically ill cancer patients in 2012 experienced a mortality rate of 55%, yet a low percentage of patients received palliative care, suggesting more palliative care referrals would be beneficial in this setting.

Pastoral care was not assessed in the previous study. Retrospective analysis of the 2010 data demonstrated improvements in pastoral care referrals in 2012, signaling an opportunity to integrate palliative care information-sharing or referral by pastoral care.

Only 10% of these 2012 patients had documented goals of care discussions or family conferences. Given the high mortality and low palliative care consultation among this group, it is possible to greatly improve upon these objectives.

5 Future Directions

- Consider alternative assessment tools not reliant on Glasgow Coma Scale score to predict mortality.
- Recognize the need for early implementation of palliative care concomitant with life prolonging and curative measures in all critical care patients.
- Examine the benefits of incorporating palliative care referrals into pastoral care discussions, allowing pastors to educate patients and their families about palliative care.
- Consider combining 2010 and 2012 data and conduct an analysis.
- Analyze the need for more goals of care and family conferences for critically ill patients and their families.

6 References

1. Carey, L. B., Polita, C., Marsden, C. R., & Krikheli, L. (2013). Pain control and chaplaincy in Aotearoa New Zealand. *J Relig Health, 52*(209).
2. Freedman, N. & Hansen-Flaschen, J. (2013). Intensive care for oncology patients: Short-term prognosis. Retrieved from http://www.uptodate.com/contents/intensive-care-for-oncology-patients-short-term-prognosis
3. Greer, J. A., Jackson, V. A., Meier, D. E., & Temel, J. S. (2013). Early integration of palliative care services with standard oncology care for patients with advanced cancer. *CA: A Cancer Journal for Clinicians, 63(5)*, 349-363.
4. Neumann, F., Lobitz, O., Fenk, R., Bruns, I., Kostering, M., Steiner, S., Hennersdorf, M., Kelm, M., Struer, B., Ferming, U., Hinke, A., Haas, R., & Kobbe, G. (2007). The sepsis-related organ failure assessment (SOFA) score is predictive for survival of patients admitted to the intensive care unit following allogenic blood stem cell transplantation. *Ann Hematol, 87*, 299-304.
5. World Health Organization. (2013). WHO definition of palliative care. Retrieved from http://www.who.int/cancer/palliative/definition/en/

Funding Source:
The Helene Fuld Leadership Program for the Advancement of Patient Care Quality and Safety