Perspective

Promotion of case management with coordinated care for fatigued patients with advanced cancer

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Since advanced cancer patients suffer from physical, psychosocial, and spiritual distress as a result of multiple organ failure, the symptom burden is so heavy that one of their main wishes is to be comfortable and symptom-free at the end stage of their lives (1). Thus, tailored symptom management is the basis to improve the quality of life in their last period of life. The overall prevalence of fatigue in patients with advanced cancer is 74% (2). It appears to be more severe in patients who have worse performance status or more extensive disease (3). Thus, fatigue is one of the most pervasive symptoms experienced by patients with advanced cancer. In addition, it has a great impact on cancer patients' quality of life, and may even increase the risk of suicide (4). Therefore, it is an urgent issue to alleviate fatigue of patients with advanced cancer.

Symptoms of advanced cancer patients do not result from physical deterioration alone. Fatigue has been known as a multidimensional phenomenon (5), a subjective sensation attributable to disease progression and a host of secondary psychosocial and spiritual stresses in advanced cancer patients (6). Cancer cachexia, malnutrition, muscle wasting and complications from cancer therapy are some of the biological factors resulting in fatigue (7). In addition, several lines of evidence demonstrate a variety of terminal symptoms associated with fatigue in cancer patients, such as pain, dyspnea, lack of appetite and nausea, which significantly limit patients' daily activities (8). Psychologically, prolonged stressful symptoms and sufferings result in exhaustion (9). Decreased social activities and poor family support and interpersonal relationship further aggravate the fatigue (10,11). Spiritual distress and needs, such as death fear and urgency to fulfill their will also raise the fatigue intensity (6). Therefore, physical deterioration and suffering, psychological distress, changes in interpersonal relationships, and needs to pursue the purpose and meaning of life may all be the underlying causes of their fatigue (12-14).

Fatigue is still a critical issue in the care of cancer patients; there are several guidelines developed for management of cancer-related fatigue. Treatment with dexmethylphenidate, exercise, and psychosocial interventions are reported to be significantly beneficial for fatigue relief in patients with cancer (15-17). In addition, optimizing management of associated symptoms of fatigue has also been recommended in the care of patients with cancer (18). However, evidence-based interventions have not yet established, especially for fatigued patients with advanced cancer.

A randomized controlled trial by de Raaf *et al.* suggests that nurse-led monitoring and protocolized management of physical symptoms is effective in alleviating fatigue in patients with advanced cancer. Although the participants in that study were patients with advanced cancer, they relatively had better performance status [Eastern Cooperative Oncology Group (ECOG) performance status ≥2] and longer survival (life expectancy ≥4 months). In addition, the study did not find the effect of the intervention on some essential components of patients' suffering, such as physical senses of tiredness, difficulties with concentrating, depressed mood, and other aspects of quality of life. However, the study is very important to demonstrate a case management with coordinated care model to alleviate fatigue of advanced cancer patients, consisting of symptom monitoring, protocolized treatment, patient education,

adjustment of symptomatic medication, nonpharmacologic interventions, referral to other specialists, and so on. In addition, the participants in the intervention group received extra attention from the health care providers, which should contribute to the positive results. Thus, such a comprehensive multidisciplinary care should be promoted to alleviate fatigue of advanced cancer patients, who have better functional performance and longer survival (19).

On the other hand, in the setting of hospice and palliative care, the symptom management for patients with far advanced cancer, with a mean life expectancy of 2-3 weeks, has certain identifiable patterns. A study shows that patients averaged 9.1 symptoms at the time of admission to a palliative care unit. While a majority of symptoms improved a week after admission, many symptoms worsened before passing (20). Disease progression will cause an increase in symptom intensity and the emergence of new symptoms (19). A prospective and longitudinal study has showed that the changes of subjective symptoms and objective signs are parallel to each other, indicating improvement during initial 1-2 weeks after admission and significant deterioration at 2 days before death. This finding suggests that physical distress may not improve for long due to the rapid progression of disease status near the end of life (6). In addition, at the advanced stage, severe psychosocial and spiritual distress will accelerate the symptom intensity, resulting in symptoms that are multiple, concurrent, moderate-severe in intensity, and very challenging to treat.

The management of fatigue in the care of patients with advanced cancer is also a complex problem. The study by de Raaf *et al.* demonstrates that the intervention is effective when administered frequently, whereas symptom scores start increasing again when the intervention is completed (19). Another study demonstrates the pattern of fatigue intensity during admission in a palliative care unit is stationary-increase, suggesting fatigue being a poorly controllable symptom in advanced cancer patients (21). Fatigue may be associated with the cancer anorexia-cachexia syndrome, which is an irreversible condition, and whose clinical manifestations include muscle wasting and other metabolic disturbances (22). This syndrome is caused mainly by pro-inflammatory cytokines, such as TNFα, IL-1, IL-6, and prostaglandins secreted by both cancer and inflammatory cells (23). As these mediators could not be completely blocked by therapeutic agents, especially in the far advanced stage, the associated symptoms progress with time (21).

It is very important to develop effective interventions for fatigue of advanced cancer patients. As defined by the World Health Organization, palliative care is to improve quality of life of patients and families who face life-threatening illnesses by providing pain and symptom relief, spiritual and psychosocial support to them from diagnosis to the end of life and bereavement. It has been proved that comprehensive palliative care can facilitate terminal cancer patients to have good quality of life and experience a good death (24). The palliative care team consists of members with medical, psychological, and spiritual backgrounds, including physicians, nurses, clinical psychologists, chaplains, and social workers. Once cancers become refractory to curative therapy, symptoms from multiple organ failures inevitably develop and physical conditions deteriorate. At the end stage of cancer patients' lives, palliative care provides total care to modify the natural course of symptom progression, leading to a peaceful death for them (21).

There are several tips on relieving fatigue and promoting their quality of life. Early referral to palliative care, optimal pharmacological and non-pharmacological management, quick establishment of warm emotional attachment among peer patients, family, and health professionals are some of those tips (21). Psycho-social-spiritual care should be given precedence, especially during the last a few days of life. Particularly, fatigue is a multidimensional phenomenon with different connotations in different societies and cultures (6). As hospice professionals, we have to understand the importance of psychological and spiritual support in promoting patients' quality of life, especially in the management of intractable fatigue (6).

Terminal patients may require different strategies of symptom control, even in the same stage in the dying process. Upon entering the palliative ward, patients with an estimated survival time of 3 weeks may find their physical symptoms alleviated due to the hospice care; in the middle stage, however, the symptoms aggravate as the organs and physical systems start to fail; psychological adjustments and social supports may help ease the symptom at this stage. By the end stage, since patients are literally at the door of death, only spiritual enlightenment, not medical treatment, can help them manage the fear of dying (25).

In conclusion, holistic care that encompasses physical, psychosocial and spiritual aspects represents a rational approach for the relief of incurable symptoms at the end stage of life for advanced cancer patients. So far, accumulated knowledge suggests that comprehensive care through a multidisciplinary team is the best intervention to relieve fatigue for these patients.

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References

1. Klinkenberg M, Willems DL, van der Wal G, et al. Symptom burden in the last week of life. J Pain Symptom Manage 2004;27:5-13.
2. Teunissen SC, Wesker W, Kruitwagen C, et al. Symptom prevalence in patients with incurable cancer: a systematic review. J Pain Symptom Manage 2007;34:94-104.
3. King MT. The interpretation of scores from the EORTC quality of life questionnaire QLQ-C30. Qual Life Res 1996;5:555-67.
4. Okuyama T, Akechi T, Kugaya A, et al. Development and validation of the cancer fatigue scale: a brief, three-dimensional, self-rating scale for assessment of fatigue in cancer patients. J Pain Symptom Manage 2000;19:5-14.
5. Potter J. Fatigue experience in advanced cancer: a phenomenological approach. Int J Palliat Nurs 2004;10:15-23.
6. Tsai JS, Chen SC, Chiu TY, et al. Correlates of fatigue phenomenon in palliative care patients with advance cancers in Taiwan. J Palliat Med 2012;15:737-43.
7. Barnes EA, Bruera E. Fatigue in patients with advanced cancer: a review. Int J Gynecol Cancer 2002;12:424-8.
8. Okuyama T, Tanaka K, Akechi T, et al. Fatigue in ambulatory patients with advanced lung cancer: prevalence, correlated factors, and screening. J Pain Symptom Manage 2001;22:554-64.
9. Winningham ML, Nail LM, Burke MB, et al. Fatigue and the cancer experience: the state of the knowledge. Oncol Nurs Forum 1994;21:23-36.
10. Plass A, Koch U. Participation of oncological outpatients in psychosocial support. Psychooncology 2001;10:511-20.
11. Cohen S, Wills TA. Stress, social support, and the buffering hypothesis. Psychol Bull 1985;98:310-57.
12. Blesch KS, Paice JA, Wickham R, et al. Correlates of fatigue in people with breast or lung cancer. Oncol Nurs Forum 1991;18:81-7.
13. Hickok JT, Morrow GR, McDonald S, et al. Frequency and correlates of fatigue in lung cancer patients receiving radiation therapy: implications for management. J Pain Symptom Manage 1996;11:370-7.
14. Akechi T, Kugaya A, Okamura H, et al. Fatigue and its associated factors in ambulatory cancer patients: a preliminary study. J Pain Symptom Manage 1999;17:42-8.
15. Lower EE, Fleishman S, Cooper A, et al. Efficacy of dexmethylphenidate for the treatment of fatigue after cancer chemotherapy: a randomized clinical trial. J Pain Symptom Manage 2009;38:650-62.
16. Cramp F, Daniel J. Exercise for the management of cancer-related fatigue in adults. Cochrane Database Syst Rev 2008;(2):CD006145.
17. Goedendorp MM, Gielissen MF, Verhagen CA, et al. Psychosocial interventions for reducing fatigue during cancer treatment in adults. Cochrane Database Syst Rev 2009;(1):CD006953.
18. Berger AM, Abernethy AP, Atkinson A, et al. Cancer-related fatigue. J Natl Compr Canc Netw 2010;8:904-31.
19. de Raaf PJ, de Klerk C, Timman R, et al. Systematic monitoring and treatment of physical symptoms to alleviate fatigue in patients with advanced cancer: a randomized controlled trial. J Clin Oncol 2013;31:716-23.
20. Chiu TY, Hu WY, Chen CY. Prevalence and severity of symptoms in terminal cancer patients: a study in Taiwan. Support Care Cancer 2000;8:311-3.
21. Tsai JS, Wu CH, Chiu TY, et al. Symptom patterns of advanced cancer patients in a palliative care unit. Palliat Med 2006;20:617-22.
22. Tisdale MJ. Tumor-host interactions. J Cell Biochem 2004;93:871-7.
23. Sanchez OH. Insights into novel biological mediators of clinical manifestations in cancer. AACN Clin Issues 2004;15:112-8.
24. Leung KK, Tsai JS, Cheng SY, et al. Can a good death and quality of life be achieved for patients with terminal cancer in a palliative care unit? J Palliat Med 2010;13:1433-8.
25. Chen CY. Principles of patient-centered care in control of terminal symptoms. J Clin Gerontol Geriatr 2012;3:87-8.

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