

Symptoms of palliative patients and their providers: depression, pain, nausea, and declines in quality of life

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The July 2016 issue of *Annals of Palliative Medicine (APM)* features an original article by Olagunju and colleagues examining if the symptom burden of a child with cancer correlates with depressive symptoms among caregivers (1). In this study, children were most commonly inpatients (83%) treated with chemotherapy alone or in combination with surgery or radiation therapy (81%). Based on questionnaires and assessment scales, children were found to most commonly suffer from lack of energy, pain, nausea, and worry, and they reported their most burdensome symptoms to be pain, lack of appetite, and feeling sad. In total, 38% of the parents of childhood cancer sufferers screened positive for significant depressive symptoms. Both the global symptom burden and individual symptoms in their children were correlated with depressive symptoms in caregivers. This study underscores the importance of additional investigation into supportive care for patients with pediatric cancers and early integration of palliative care for children with cancer, akin to the importance of early palliative care in adult oncology patients, as has recently been reported in *APM* (2,3).

Barriers to expanding palliative care, include limited financial resources, lack of staff training, and focus on curative rather than supportive care, have been reported to be most notable among low- and middle-income countries (4). A similar phenomenon exists in India, a country which has major disparities in access to palliative care (5). Encouragingly, however, a model for home-based care delivery in India has emerged. CanSupport, a non-governmental organization in India founded nearly 20 years ago, offers home-based services by a multi-disciplinary team trained in palliative care in and around the Delhi area.

Yeager *et al.* analyze the use of CanSupport in an attempt to raise awareness of the need for palliative care in developing countries (6). Interestingly, of the patients they analyzed, 71% were self-referred or referred from CanSupport's help line for pain, shortness of breath, emesis, loss of appetite, fatigue, becoming bed-ridden, or delirium, and they were not referred from healthcare providers or hospitals. Use of CanSupport was associated with good symptom management and reduced pain scores, emotional support for patients and their families, limited hospital visits and deaths that occur in hospitals, low costs at the end of life, and high caregiver satisfaction. Given the reliable and cost-effective palliative care provided by CanSupport, the authors suggest such a home-based care model can serve as a way to build palliative care capacity in developing countries.

Nausea and emesis remain among the most distressing symptoms experienced by patients with cancer who receive chemotherapy and are a cause for treatment noncompliance (7,8). Olanzapine, an antipsychotic medication that blocks multiple neurotransmitters implicated in nausea, has been shown to be highly effective in the prophylaxis of chemotherapy-induced nausea and emesis (9). However, treatment of active nausea has been more challenging. Chiu and colleagues report on a retrospective analysis of the use of olanzapine as a rescue medication for breakthrough chemotherapy-induced nausea and emesis (10). Over a 2.5-year period, 154 patients and 193 treatment cycles were treated with olanzapine for breakthrough nausea, of whom 88% experienced improvements in nausea at the expense of sedation in 43% and constipation in 32%. This work supports the use of olanzapine in both the prophylactic and

breakthrough setting, although additional investigation in the breakthrough setting to assess the efficacy and optimal dose schedule is needed.

This issue of *APM* next shifts to assessing quality of life in patients with brain metastasis. Options for patients with brain metastases include palliative measures alone or treatment with whole brain radiation therapy (WBRT), stereotactic radiosurgery (SRS), neurosurgery, or a combination of these therapies (11,12). The choice of treatment modality is dependent on factors such as performance status, primary tumor histology, number of brain metastases, extracranial disease status, and lesion resectability. While WBRT has been a standard treatment modality, concerns of neurocognitive toxicity following this treatment have given rise to increasing use of SRS (13,14). However, previous randomized studies have had strict performance status enrollment requirements and previous retrospective reports describing a difference in post-treatment neurocognitive outcomes between patients undergoing WBRT and patients undergoing local therapy alone with SRS and/or neurosurgical resection have been hampered by limited pretreatment assessments of neurocognitive function and quality of life.

Building on their prior findings that patients receiving WBRT have differences in baseline functional well-being (15), Chow *et al.* assess baseline characteristics of 172 patients with brain metastases (16). The authors found that patients treated at a large tertiary cancer center with WBRT alone had a worse baseline ECOG performance status ($P=0.0073$), a greater number of brain metastases ($P=0.0212$), and a higher extrathoracic disease burden ($P=0.0003$) compared with those treated with SRS or neurosurgery with or without WBRT. Additionally, WBRT patients had significantly higher mean symptom scores for headaches, dizziness, nausea, numbness, fatigue, physical strength, balance, vision, and memory (all $P\leq 0.005$), as well as lower mean function scores across all evaluated items in the validated Brain Symptom and Impact Questionnaire (BASIQ) (all $P<0.0001$). The analysis by Chow and colleagues was comprehensive, significantly advances the understanding of baseline characteristics of patients with brain metastases, and may represent a more generalizable patient population than previous reports of patients with brain metastases.

The fifth original article in this issue of *APM* is an adaptation and validation of the European Organization for Research and Treatment of Cancer Quality of Life Questionnaire—Bone Metastases 22 (EORTC QLQ-

BM22). While EORTC QLQ-BM22 has been widely validated in English-speaking countries and select non-English speaking countries in Asian and Europe to quantify the quality of life of patients with bone metastases, no instrument in Brazil has existed that could evaluate the quality of life of this patient population. Miki-Rosário *et al.* translated the quality of life tool from English to Brazilian Portuguese, adapted the instrument culturally, and administered the survey to 95 patients with bone metastases (17). Internal consistency and reliability were both high, and they validated the tool by demonstrating excellent correlation ($P<0.001$) with the Medical Outcome Study Questionnaire 36-Item Short Form Survey (SF-36). This analysis paves the way for EORTC QLQ-BM22 to be incorporated into future research in Brazil.

Pain remains among the most common symptoms experienced by patients with cancer and can result in depression, a sense of hopelessness, and declines in quality of life (18-20). However, numerous barriers to optimal pain management remain common (21). In this issue of *APM*, Bhatnagar and Gupta perform a highly comprehensive review in which they define the scope of the pain burden worldwide, discuss the need, logistics, advantages, and barriers of integration of pain and palliative medicine, make recommendations for and propose an integrated pain-palliative medicine model, and describe how such a model can be implemented and equitably delivered to those in need (22).

In the Palliative Radiotherapy Column, investigators in a multi-national collaboration describe the current limited access to radiotherapy in many low- and middle-income countries, as well as the barriers to more widespread adoption of radiotherapy that have led to poorer cancer outcomes and unnecessary patient suffering (23). They report on recent progress made in recognizing a need for palliative care and in advocacy for radiotherapy for palliation, but they put this into context of the rapidly growing cancer rates and continued unmet needs in developing countries (24). The authors make a call to policymakers, healthcare providers, institutions, private industry and others for a sustained and coordinated effort involving research, education, and advocacy to enhance and expand the capacity of radiotherapy delivery in low- and middle-income countries.

This issue of *APM* is concluded by a technical note, an editorial, an unusual case report, and an educational case series. In the technical note, Riffin *et al.* describe what community-based participatory research is, report how it can

be used to address specific gaps in palliative care research, and outline current barriers to applying community-based participatory research in palliative care (25). The editorial addresses discordance of prognosis between physicians and surrogates of critically ill patients unable to make decisions for themselves (26). Next, Barakat and colleagues describe a case report and review of the literature of a patient with prostate cancer who developed brain metastases. While intracranial brain metastases are a relatively rare presentation for prostate cancer, this patient was particularly unusual in that he presented with an isolated symptomatic brain metastasis (27). Lastly, Chan *et al.* chronicle a case series of women who developed pelvic insufficiency fractures following radiotherapy for rectal cancer (28), likely in part from radiotherapy-induced damage to osteoblasts, osteocytes, and/or osteoclasts and devascularization of the bone (29). The authors describe how pelvic fractures impact quality of life, detail several predispositions for pelvic insufficiency fractures, describe how radiotherapy parameters can influence the risk of fracture development, and highlight the need for healthcare providers to be aware of the risk of pelvic insufficiency fractures following radiotherapy.

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Footnote

Conflicts of Interest: The author has no conflicts of interest to declare.

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