Symptom assessment in elderly cancer patients receiving palliative care

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Background: Elderly cancer patients (those over 60 or 65) have a disproportionate cancer incidence and mortality, and a multitude of symptoms from their cancer, other illnesses, and treatments. We reviewed the literature to find some practical advice for health care professionals to do symptom assessments in routine practice.

Patients and methods: Systematic and directed literature review.

Results: The available symptom assessment tools are useable, well validated, and in common use but not in the older patient population. Several studies show that if a symptom assessment tool is used, more symptoms will be uncovered and that these tools can be used in routine practice, comparative clinical trials, and to show clinical benefit for new drug approval. Data are not sufficient to choose one tool over another, but all of them work and can uncover symptoms that can be fixed. We believe that it is important to have predetermined best practices for preventing and fixing common symptoms.

Conclusion: Symptom assessments and geriatric assessments are useful tools in everyday practice.

introduction

‘If you’re not a pediatric oncologist, you’re a geriatric oncologist’ [1]. Elderly cancer patients have long been recognized to have a disproportionate cancer burden, with 60% of cancer incidence and 70% of cancer mortality occurring after age 65 in the USA [2]. Elderly patients also have been recognized to have multiple symptoms from their cancer, concurrent illnesses, and treatments [3]. Older patients may or may not tolerate treatments as well as younger people, but it has been hard to define beforehand who will tolerate treatment. Given competing issues, underlying vulnerabilities, and atypical symptom presentation, symptom detection and management in this population is imperative to maintaining functional independence, improving quality of life, anticipating side-effects, and developing care plans for maximal clinical benefit. Nevertheless, there is a paucity of available literature to guide interventions in the clinic [4, 5]. Validation of existing or development of new gerocentric symptom assessment tools combined with elements of the comprehensive geriatric assessment (CGA) might improve care in this patient population. This review will ask the following questions: How can oncologists measure symptoms in a practical way? And what is the evidence that more complex geriatric assessments improve care?

available tools

multidimensional symptom assessment tools

The available symptom assessment tools are useable, well validated, and in common use but not in the older patient population (Table 1).

Several studies show that if a symptom assessment tool is used, more symptoms will be uncovered and that these tools can be used in routine practice, comparative clinical trials, and to show clinical benefit for new drug approval [6]. This makes obvious sense that one will find more symptoms if one asks specifically. We have been unable to find randomized, controlled trials of use of a symptom assessment versus regular practice without one, and the impact of such a tool on symptom control or quality of life. A systematic review of 21 different instruments concluded that most were valid, reproducible, and useful, but that none was recommended for all-purpose use [7]. Direct comparisons show similar usefulness of all the common scales [8].

The ‘absence of evidence’ should not prevent us from practicing good medicine. In our own practice, we use a simple ‘Rounding Tool’ to ask about common symptoms, with a simple and consistent approach—the same questions each day: ‘Are you bothered by (symptom)?’ If yes, is it bothering you a little bit, somewhat, quite a lot, or very much?’ (Table 2). With this ‘tool’, we were able to show symptoms reduced in a cohort of patients from day 1 to day 2 [9]. We have continued to audit about 30 charts a year to ensure that our results are holding. One practical advantage of using this simple approach is that interventions can be tailored to the reported symptoms, such as...
metoclopramide, haloperidol, or olanzapine for cancer-related nausea [10]; ginger 0.5–1.0 g/day for nausea [11]; American ginseng 1–2 g/day to improve fatigue [12], and dexamethasone for both intestinal obstruction [13] and to improve fatigue and quality of life [14]. We will not know about fatigue unless we ask about it (Table 2).

Just as important as the ‘tool’ is knowing what to do when a symptom is detected. Several excellent sources are available to search for symptom management guidelines, including a paper addressing this specific issue [15], Up to Date™, and End-of-Life/Palliative Education Resource Center Fast Facts (http://www.eperc.mcw.edu/EPERC/FastFactsandConcepts). This website has over 260 well-researched, easy-to-read reviews that give practical ways to address symptoms, and it is completely free. These make excellent teaching tools when working with other oncologists or health care providers.

Neuropathic pain is extremely common in cancer patients with 40%–70% of patients reporting it [16, 17]. The incidence may be even higher in the geriatric patient population with more common use of bortezomib for hematologic malignancies. The history and physical examination are the most valuable tools in diagnosing and monitoring peripheral neuropathy, augmented by more extensive tests [18]. There is no specific geriatric assessment tool or proven treatment. Some neuropathy can be prevented: venlafaxine prevents or delays chemotherapy-induced peripheral neuropathy (CIPN) associated with oxaliplatin [19], and subcutaneous bortezomib causes much less neuropathy than intravenous while maintaining effectiveness [20]. There is only one treatment proven effective in randomized trials for the treatment of CIPN, duloxetine [21]. Neurocutaneous stimulation appears to be useful [22, 23] but requires more evaluation.

**Table 1. Commonly used symptom assessment tools**

<table>
<thead>
<tr>
<th>Tool</th>
<th>Adapted for geriatrics</th>
<th>Used in practice</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memorial Symptom Assessment Tool (MSAS) [44]</td>
<td>No</td>
<td>Yes, especially the Memorial Symptom Assessment Tool—Condensed (CMSAS [45])</td>
<td>The CMSAS takes 2–4 min to do</td>
</tr>
<tr>
<td>Edmonton Symptom Assessment Tool [46, 47]</td>
<td>No</td>
<td>Yes</td>
<td>When used, symptoms can be meaningfully improved [48]</td>
</tr>
<tr>
<td>The MD Anderson Symptom Inventory (MDASI) [49]</td>
<td>No, but has been used successfully [50]</td>
<td>Yes, with multiple submodules such as for brain or spinal cancers [51]</td>
<td></td>
</tr>
<tr>
<td>European Organization for Research and Treatment of Cancer’s Quality of Life Core Questionnaire [52] (EORTC QLQ-C30)</td>
<td>No, but has been used successfully</td>
<td>Yes</td>
<td>Symptom assessments correlate with survival [53] and complement physician assessments [54]</td>
</tr>
</tbody>
</table>

**Table 2. The Condensed Memorial Symptom Assessment Scale Rounding Tool**

<table>
<thead>
<tr>
<th>MSAS-C:</th>
<th>0 = none, 1 = a little bit, 2 = somewhat, 3 = quite a lot, 4 = very much, 7 = refused</th>
</tr>
</thead>
<tbody>
<tr>
<td>Report</td>
<td>Patient</td>
</tr>
<tr>
<td>Unable to respond:</td>
<td>Yes</td>
</tr>
<tr>
<td>Delirious:</td>
<td>Yes*</td>
</tr>
<tr>
<td>Pain</td>
<td>Tiredness</td>
</tr>
<tr>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

*If Yes, use haloperidol or Quetiapine, NOT BENZODIAZEPINE.

Neuropathic pain assessment in the elderly
Neuropathic pain is extremely common in cancer patients with 40%–70% of patients reporting it [16, 17]. The incidence may be even higher in the geriatric patient population with more common use of bortezomib for hematologic malignancies. The history and physical examination are the most valuable tools in diagnosing and monitoring peripheral neuropathy, augmented by more extensive tests [18]. There is no specific geriatric assessment tool or proven treatment. Some neuropathy can be prevented: venlafaxine prevents or delays chemotherapy-induced peripheral neuropathy (CIPN) associated with oxaliplatin [19], and subcutaneous bortezomib causes much less neuropathy than intravenous while maintaining effectiveness [20]. There is only one treatment proven effective in randomized trials for the treatment of CIPN, duloxetine [21]. Neurocutaneous stimulation appears to be useful [22, 23] but requires more evaluation.

**Geriatric depression screening assessments**
A systematic review of many of the available depression screening instruments showed that there was not sufficient evidence to recommend any one of them specifically for geriatric assessments [24]. We recommend a simple one- or two-question screen, essentially ‘Are you depressed?’ [25] or ‘During the past month, have you been bothered by feeling down, depressed or hopeless?’ [26]. While not perfect, such simple assessments are easily done in the office during a single visit. Geriatric patients respond well to the usual measures used to treat depression, including antidepressants, with no best choice based on efficacy, counseling, and the combination. Tricyclic anti-depressants have similar efficacy as selective serotonin reuptake inhibitors (SSRIs) but the SSRIs have fewer side-effects requiring withdrawal of therapy [27].
the available geriatric assessment tools and their use

CGA plans make intuitive sense—screen patients to recognize those who may and may not tolerate standard treatment, identify and address remediable issues, and design special help for those who need it. Nevertheless, much like intuitively obvious Survivorship Care Plans [28], CGAs have been hard to realize in actual practice due to the burden on patients and providers. Rodin and Mohile [29] did one of the first reviews of CGAs in oncology in 2007 and recommended that all patients >70 undergo some form of geriatric assessment including the ‘Get up and go’ (GUG) (how far can the person walk in 4 s, arising from a chair) or a similar test, the Vulnerable Elder’s Survey-13, and a baseline cognitive screen. Those who score abnormally do not need referral to a CGA team, but those who score normally should be referred.

More recent attempts to detect vulnerability in elderly cancer patients have shown more promise. The group in Leuven screened 1967 patients ≥70 at 10 hospitals with the G8 tool [30], and if there was an abnormal score (≤14 out of 17) the group did a CGA. Nearly 71% had an abnormal screen, and this assessment found previously undetected geriatric problems in 51% of patients; the treatment decision was influenced in 25% of patients [31]. A smaller pilot showed that if the original treatment decision was already decided before referral for CGA, then the treatment decision was only changed in 1 of 24 patients, but if the treatment had not been decided, 5 of 6 patients who underwent CGA had their treatment changed [32].

Attempts to discern which parts of the CGA tool are necessary and sufficient have been unsuccessful. Hamaker et al. [33] reviewed all the available tools used to predict ‘frailty’ so that treatment could be modified for those unfit to standard treatment. The G8 and TRIST had the highest sensitivity for frailty but poor specificity and negative predictive value. Even the tools with the highest sensitivity had negative prediction value of only about 60%, meaning 40% of patients could be triaged wrongly. A systematic review concluded that CGAs had value but more research was needed to enhance usefulness in the clinic [34].

physical function

The simplest test of function is the GUG test [35]. Poor performance on the GUG test was a strong predictor of 2.5-fold increased mortality in patients >70 who were treated with first-line chemotherapy [36].

specialized geriatric intervention units

Specialized geriatric evaluation and management units (GEMU) may play an important role in the management of older patients, giving ready access to social work, home care services, consultants in psychology, geriatrics, pain management. In a multicenter study of 1110 patients at 11 Veteran’s Association medical centers, Cohen et al. [37] randomized patients to usual care versus usual care plus a GEMU concurrent care. There was no difference in survival, but there were significant improvements in the prevention of functional decline, and in mental health, with no increase in costs even counting the cost of the GEMU [38].

how to use this information

Symptom assessments are a critical component of cancer clinical trials but have not yet become commonplace in practice; nevertheless, the availability of short instruments such as the CMSAS that take 2–4 min makes it very practical to use them. CGAs will be used more frequently in the future as evidence accumulates that treatment decisions will be changed in those for whom the treatment decision (treat in the same way as a younger person, or not) is not obvious.

The available data suggest that when symptoms are discovered or expected, elderly cancer patients can benefit from the same interventions used in younger patients. In a prospective study of 408 cancer patients undergoing treatment, the older patients who exercised had better self-reported health, and less shortness of breath [39]. The oldest in the cohort who exercised reported better self-reported health, less fatigue, and less memory loss during treatment. While not a randomized trial, these results fit with those from younger cohorts. Of note, only ~40% of patients reported exercising during treatment and only ~60% after treatment, suggesting that older patients need an ‘exercise prescription’. All the available data suggest that exercise improves tolerance of chemotherapy in all patients, with less fatigue and weight gain among those randomized to structured exercise such as walking [40].

Care of cancer patients is not just about what dose of chemotherapy people can tolerate, but about helping people to adapt to what is a changed and usually shortened life. There are good tools, such as the Outlook intervention [41], that improve functional status, anxiety, depression, and preparation for end of life. Outlook consists of three sessions: Session 1, Life story, asks ‘Tell me about your life’; Session 2, Forgiveness, asks about what they might have done differently, or for which they need forgiveness; Session 3, Heritage and legacy, asks what the person wants to pass on to the next generations. Other tools include Chochinov’s ‘Dignity Therapy’ [42] and Breitbart’s ‘individual meaning-centered psychotherapy’ [43], which have both been shown to benefit more advanced cancer patients in randomized clinical trials.

disclosure

The authors have declared no conflicts of interest.

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Get up and go

Assessment of physical function

Specialized geriatric intervention units

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