

Assessment of fatigue in cancer patients

Editorial

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During the last decade, there has been a growing recognition of the high prevalence of fatigue among cancer patients, its adverse effect on their quality of life, and the need to develop effective interventions to prevent or relieve it [1, 2]. This increased attention can be attributed, in part, to the development of instruments for the assessment of fatigue and their validation with cancer patients. These instruments have provided researchers with the tools necessary for quantifying and characterizing fatigue and exploring its etiology and treatment.

Over the last few years, various methods of evaluating and measuring fatigue have been proposed or introduced.

The Brief Fatigue Inventory is one of the methods developed to study fatigue [3]. This instrument evaluates fatigue over 24 h using a scale from 1 to 10 (1 indicates absence of, and 10 the worst imaginable fatigue). Studies have shown that values of 7 or above are strongly correlated with a clinically relevant level of difficulty.

Another instrument for evaluating fatigue is the MFI-20, a 20-item questionnaire which examines the following parameters: 'general', 'physical' and 'mental' fatigue, decreased motivation and reduced activity, through five subscales of five items each [4]. Using this method, Holzner et al. recently confirmed the correlation between hemoglobin levels, fatigue and quality of life in cancer patients [5].

The National Comprehensive Cancer Network (NCCN) Fatigue Practice Guidelines Panel reviewed the available evidence and the consensus of doctors managing fatigue to produce guidelines for clinical practice. Five factors were identified as being associated with fatigue: anemia, pain, emotional stress, sleep disturbances and hypothyroidism [6].

Using the Functional Assessment of Cancer Therapy-General (FACT-G) questionnaire, which measures overall quality of life (QoL), as a basis, 20 new questions have recently been developed concerning the impact of fatigue and other symptoms associated with anemia in cancer patients. Thus two new instruments have been constructed: FACT-Fatigue (FACT-F), made up of FACT-G and an additional 13 questions on fatigue (the 'fatigue' subscale) and FACT-Anemia (FACT-An), comprising FACT-F and a further seven questions on other aspects relevant to anemia but not to fatigue.

Given the number and variety of multidimensional measures of fatigue currently available for use with cancer patients, selecting which measure to use in a research study can be a challenge. Several issues can be identified that may aid researchers in selecting among these measures.

One issue to consider is whether or not the individuals to be assessed are experiencing fatigue. Some measures, such as the Revised Piper Fatigue Scale, are worded such that they are only appropriate for use with individuals currently experiencing fatigue. Other measures, such as the FSI and the Brief Fatigue Inventory, are suitable for use with individuals who may or may not currently be experiencing fatigue [7].

A second issue is the time frame covered by the assessment. Some measures, such as the FSI, are keyed primarily to the past week, whereas others, such as the Brief Fatigue Inventory, are keyed primarily to the last 24 hours. Researchers should consider how well these different time frames correspond to the periods they wish to assess. For example, in a study of fatigue during radiotherapy that featured multiple assessments per week, a measure keyed to the past 24 hours would be preferable to a measure keyed to the past week in which the time intervals covered by the assessments would overlap [7].

A third issue to consider is the measure's psychometric properties. In choosing a measure, researchers should consider the strength of the evidence for the measure's reliability and validity and the quality of the methods used to derive the measure's multidimensional format. A related issue involves consideration of the population on which the psychometric data are based. For example, some measures, such as the Revised Piper Fatigue Scale, have been validated primarily on women with breast cancer. This feature would be an advantage for a study of fatigue in breast cancer patients but may be a potential disadvantage for a study of fatigue in other patient populations [7].

A fourth issue to consider is the correspondence between the var-

ious multidimensional measures and the research questions being asked. For example, a study focusing on possible cognitive manifestations of fatigue (e.g., perceived problems with memory and attention) should consider use of a measure that includes a mental or cognitive scale such as the Multidimensional Fatigue Inventory or the Multidimensional Fatigue Symptom Inventory [7].

In conclusion, although fatigue is now an increasingly considered aspect of the cancer therapy, in part because of its impact on patient's quality of life, it remains difficult to establish what standard should be used for the quali-quantitative evaluation of this symptom.

More efforts, in the form of randomized clinical trials, are necessary so that in the near future the best strategies for tackling this important problem can be indicated.

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