Cancer Fatigue: The Way Forward

GREGORY CURT, PATRICK G. JOHNSTON

aNational Cancer Institute, Bethesda, Maryland, USA; bAll Ireland Fatigue Coalition, cQueen’s University Belfast, and dBelfast City Hospital, Belfast, Northern Ireland

ABSTRACT

Research in cancer-related fatigue lags far behind research in cancer-related pain and is astonishingly underdeveloped given the magnitude of the problem among cancer patients. This was recently recognized at the State-of-the-Science Conference on Symptom Management in Cancer: Pain, Depression, and Fatigue, held at the U.S. National Institutes of Health in July 2002. The results of patient surveys on fatigue being conducted in Ireland by the All Ireland Fatigue Coalition (AIFC) closely mirror results from similar surveys conducted in the U.S., in some regards, with 53% of patients experiencing significant fatigue at least daily, and 80% at least monthly on both sides of the Atlantic. In other respects, such as duration of bouts of fatigue, how much and with whom patients discuss their fatigue symptoms, and economic impacts of fatigue, there are significant differences between survey findings in the U.S. and in Ireland. But in both places, the condition is underreported and undertreated and takes an enormous toll. Work by the AIFC to document the problem in Ireland, expand public awareness, and conduct research on which to base guidelines for diagnosis and treatment is an excellent beginning to tackling this long understudied condition that afflicts the overwhelming majority of cancer patients. The Oncologist 2003;8(suppl 1):27-30

INTRODUCTION

The All Ireland Fatigue Coalition (AIFC), like the U.S. Fatigue Coalition that came before it, was formed for three reasons. First, cancer-related fatigue is the most important untreated symptom in cancer patients today. Second, we cannot understand what we do not measure; being able to measure the prevalence and degrees of fatigue in cancer patients and the perspectives of both caregivers and patients regarding fatigue is a necessary prerequisite for understanding and responding to the symptom. Third, if those of us in cancer medicine and oncology nursing do not recognize cancer fatigue, we cannot prevent or treat the condition.

STATE OF THE SCIENCE

Research in cancer-related fatigue lags more than a decade behind research in cancer-related pain, as evidenced by a review of peer-reviewed publications on both topics (Fig. 1). Indeed, papers recognizing cancer-related fatigue as a distinct syndrome have not appeared until very recently. A search of MEDLINE, using PubMed through the National Library of Medicine’s web site, shows 1,283 publications from 1980 to 1996 in the English language recognizing cancer-related pain as a distinct syndrome. During the same period, there was one article on cancer-related fatigue. In 1997, there were 268 articles on cancer-related pain and two on cancer-related fatigue. By the year 2000, there were nearly 300 articles on cancer-related pain and two on cancer-related fatigue. The disparity between the state of the science and the magnitude of the problem was recently recognized at the U.S. National Institutes of Health (NIH) during the July 2002 State-of-the-Science Conference on Symptom Management in Cancer: Pain, Depression, and Fatigue. The consensus conference brought together national experts in the areas of...
palliative care and symptom management to address key questions regarding the occurrence, assessment, and treatment of fatigue symptoms; barriers to effective treatment; and directions for future research in the area. The panel called for more resources to be devoted to studying the occurrence, causes, and impediments to effective treatments of fatigue symptoms [2].

The panel enumerated potential treatments drawn from the world’s literature. They noted two interventions that appear to have some benefit in treating fatigue. There is some evidence, based primarily on observation in nursing literature, that exercise interventions are of benefit in women with breast cancer. The panel noted that this intervention had not been adequately studied. They also noted that erythropoietin alpha can be effective as an intervention for treating chemotherapy-related anemia and its related fatigue. These two observations are the sum total of what we know today about the management of cancer-related fatigue.

The panel made important recommendations, some of which are prescient in light of the goals of the AIFC. The first recommendation is somewhat generic: that new treatments for fatigue should be developed and evaluated. But the next two recommendations go to the heart of what the AIFC is doing. Recognizing that both pharmacologic and nonpharmacologic treatments can be useful in the management of cancer-related fatigue, the panel suggested that studies be designed and implemented to investigate the effectiveness of both the combinations and sequencing of pharmacologic and nonpharmacologic interventions in managing cancer-related fatigue.

Another of the panel’s recommendations was to support public-private partnerships among academia, government, and business to implement fatigue research. This is precisely what the AIFC represents. The AIFC is the first public-private partnership to be sponsored as part of the Ireland-Northern Ireland-National Cancer Institute Cancer Consortium, a consortium operating under a Memorandum of Understanding signed by the health ministers of Ireland and Northern Ireland and the Secretary of Health and Human Services of the U.S.

The final recommendation of the panel was to investigate the relationship between symptom management and adherence to cancer treatment. That is, if cancer-related fatigue is carefully monitored and managed, will patients adhere to protocol medicine better and have better treatment outcomes [3]?

**U.S. Fatigue Coalition Surveys**

A multidisciplinary group that was put together with the support of Ortho Biotech Products, L.P., the U.S. Fatigue Coalition, initially included experts in oncology, HIV (because HIV-related fatigue is also important), neurology, psychometrics, psychiatry, patient advocacy, and cancer nursing. The mission of this group of people was very simple: A) to study the importance of cancer-related fatigue to patients and their caregivers, including both the primary caregiver at home and the clinical team taking care of the patient, and B) to develop guidelines for the diagnosis and treatment of cancer-related fatigue.

The U.S. Fatigue Coalition conducted two surveys to understand the incidence, prevalence, and functional consequences of fatigue for patients with cancer. Fatigue 1, published in 1997, was a telephone survey designed to determine the perceptions of patients and oncologists regarding the impact of fatigue [4]. The database was very large: 375,000 families agreed to be interviewed by telephone, and 419 patients, 200 caregivers, and 197 oncologists were actually contacted. In Fatigue 2, the objective was to confirm the prevalence demonstrated in Fatigue 1 and to assess the emotional, social, physical, and economic impacts of cancer-related fatigue and the duration of cancer-related fatigue as well [5]. This survey was restricted to patients; oncologists and caregivers were not part of the survey.

Both studies had the same weakness, even though they were peer-reviewed and published. This weakness involves the time lapse between treatment and the survey. In Fatigue 1, approximately half of the patients (49%) had been treated more than 1 year prior to being interviewed by telephone. Fatigue 2 had an even greater time disparity in that 60% of patients were recalling their cancer-related fatigue on the telephone 2 years to more than 5 years after treatment.
AIFC SURVEY

The AIFC was established in September 2001. Its initial objectives were to determine the perceptions of cancer-related fatigue among physicians, nurses, and patients and to examine the current clinical management of this symptom in cancer patients in Ireland. A large health care professional survey elicited responses from 109 physicians and 160 nurses. In an ongoing patient survey, researchers recruited cancer patients who were attending day hospital clinics throughout Ireland, North and South. One of the important advantages of the AIFC survey is that it is being conducted with active clinic patients. The investigators are not obtaining data through retrospective telephone calls, but through interviews during the course of treatment. Importantly, the survey goes beyond surveying patients and their physicians to include interviews with oncologists and nurses, adding new information on this disease syndrome and its perception among patients, caregivers, and the care team. The AIFC survey instrument uses the best elements of the U.S. Fatigue 1 and Fatigue 2 survey instruments and adds provocative questions.

In addition, the AIFC survey is likely to have a greater population base. The projected accrual onto this study is 1,000 patients, as opposed to the earlier, smaller studies. This larger base will allow more robust statistical analyses of the data. A unique feature of the surveys conducted in Ireland is that these will capture data from a significant proportion of caregivers. This is truly a national survey, which would be very difficult, if not impossible, to do in a place as large as the U.S. For that reason, it will be useful to government agencies both in Northern Ireland and in the Republic of Ireland for determining priorities in research and clinical care for the future.

Survey Findings

One of the questions asked in both U.S. surveys and in the AIFC survey is, “While undergoing your most recent treatment, how often did you feel fatigued?” The answer was every day or most days for 53% of U.S. patients and for 53% of Irish patients. The concordance among the Fatigue 1, Fatigue 2, and AIFC prevalence data of patients in treatment experiencing fatigue at least monthly is right on target (Table 1). These patients experienced significant fatigue at least monthly 80% of the time.

Another question in the Fatigue 2 survey, which included patients who were sometimes recalling their treatments many years before, was, “How long do your bouts of fatigue last?” In the U.S., 45% of patients said that their fatigue lasted 1 or more weeks, compared with 20% of the Irish patients. In addition, Irish patients were more likely to say that their fatigue lasted less than 1 day (15% versus 6%). The percentage of patients who experienced fatigue from 1 to 7 days was essentially the same in surveys from both countries.

The surveys have addressed the difficulties that fatigue creates for cancer patients, with an emphasis on the physical constraints, the emotional effects, and the psychological toll of cancer-related fatigue. These difficulties were very similar in both the Irish and U.S. populations. Perhaps the most remarkable finding is the proportion of those who have cancer-related fatigue so severely that they say they have an urge to die; 19% of U.S. patients and, so far, 10% of Irish patients have made such comments. Clearly, this is not the common fatigue of everyday life.

One area of difference that may have an impact on the AIFC is the answer to the question, “With whom do you discuss your cancer fatigue?” Overwhelmingly, U.S. patients talked to their physician (79%); far fewer (28%) spoke to their nurse. In Ireland, the participation of the nurse and the oncologist is much more balanced: 46% of Irish patients discussed their cancer-related fatigue with their physician, and 44% discussed it with their nurse. Another important point, suggested by the data gathered to date, is that Irish patients were much more likely not to discuss their fatigue with anyone. Twenty-six percent of patients in Ireland did not discuss their cancer fatigue with anyone, compared with 8% of patients in the U.S.

Irish and U.S. physicians were similar in their response to cancer-related fatigue. In the U.S., physicians either did nothing or prescribed rest 77% of the time; in Ireland physicians did likewise 87% of the time. The use of diet or nutrition, prescription drugs, and exercise was not a common practice in either country.

In order to define the economic impact of cancer-related fatigue, the Fatigue 2 survey also addressed patient employment status at the time of cancer diagnosis. There appear to be some differences between the U.S. and Irish populations. Patients were almost twice as likely to be working full time in the U.S. Irish patients were more likely to be self-employed or retired. Overall, 59% of U.S.

<table>
<thead>
<tr>
<th>Table 1. While undergoing your most recent treatment, how often did you feel fatigue?</th>
<th>U.S.</th>
<th>Ireland</th>
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<tbody>
<tr>
<td>Every day</td>
<td>32%</td>
<td>24%</td>
</tr>
<tr>
<td>Most days</td>
<td>21%</td>
<td>29%</td>
</tr>
<tr>
<td>At least once/week</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Only a few days/month</td>
<td>11%</td>
<td>16%</td>
</tr>
<tr>
<td>Hardly ever</td>
<td>20%</td>
<td>12%</td>
</tr>
<tr>
<td>At least monthly</td>
<td>78%</td>
<td>82%</td>
</tr>
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patients and 36% of Irish patients were actively working at the time of diagnosis. However, the impact of cancer-related fatigue on Irish patients was greater (Table 2).

From these surveys (the complete U.S. survey and the AIFC survey in process), it is possible to draw at least some preliminary conclusions. The first is that cancer-related fatigue is highly prevalent in both populations. Cancer-related fatigue has significant physical, emotional, and psychological effects in both populations. It is underreported, particularly in Ireland, and undertreated equally in Ireland and the U.S. In both countries, the syndrome has a significant economic impact that extends not only to the patient, but also to the primary caregiver.

**Recommendations for the Future**

Some recommendations are obvious. The first is to publish the results of the AIFC survey. Although this group has only come to exist in the past year, it already has data that are significant and unique. The survey provides new perspectives that will be of interest to cancer physicians, oncology nurses, and patient advocacy groups.

Expanding public awareness will be a very important part of the AIFC’s strategic plan. Publishing survey results in multiple venues to reach medical oncologists, oncology nurses, and patient advocates will be important. In the U.S., awareness-building programs have been very useful. The Oncology Nursing Society in the U.S. sponsored a Fatigue Day with a toll-free number that patients could call to discuss cancer-related fatigue. Educational seminars and a virtual reality exhibit created by Ortho Biotech have allowed health care providers to put themselves in a patient’s shoes and learn what it is like to have cancer-related fatigue.

Establishing cancer-related fatigue as a medical condition by developing guidelines for diagnosis and treatment is also key. As multidisciplinary treatment centers develop, there will be resonant expertise. The overall goal of this effort, now a year old, is to improve the quality of life for patients with cancer in Ireland. But there is a greater vision at stake here, too: to provide the blueprint for expanding awareness, research, and patient care elsewhere.

### Table 2. Change in patient employment status as a result of cancer-related fatigue

<table>
<thead>
<tr>
<th>Status</th>
<th>U.S.</th>
<th>Ireland</th>
</tr>
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<tbody>
<tr>
<td>Accepted fewer responsibilities</td>
<td>35%</td>
<td>63%</td>
</tr>
<tr>
<td>Reduced working hours</td>
<td>34%</td>
<td>52%</td>
</tr>
<tr>
<td>Took additional leave</td>
<td>42%</td>
<td>44%</td>
</tr>
<tr>
<td>Stopped working altogether</td>
<td>28%</td>
<td>48%</td>
</tr>
</tbody>
</table>

**References**


