Original Article

Symptom Prevalence of Patients with Cancer in a Tertiary Cancer Center in Jordan

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Abstract

Background: Prevalence of symptoms experienced by patients with cancer was studied in different parts of the world. In Jordan, to the best of our knowledge, there is no published data on the prevalence of symptoms among patients with cancer. The aim of this study is to estimate the prevalence of symptoms among patients with cancer in Jordan.

Method: This was a secondary analysis of cross-sectional survey that evaluate the psychometric properties of the Arabic version of the European Organization for Research and Treatment of Cancer Quality of Life 15 items Questionnaire for Palliative Care (EORTC QLQ-C15-PAL) among patients admitted to a tertiary cancer center in Jordan.

Results: A total of 175 patients with cancer participated in the study; 51.4% were males, 48.6 % were females, mean age of patients was 50 years. Median number of symptoms per patient was 6, interquartile range was 5–7. The majority of patients (143; 81%) had more than 3 non–pain symptoms each. The most frequently reported symptom was tiredness (82%), whereas the least prevalent symptom was depression (55%). Pain was prevalent in 71% of patients, median severity score was 50%.

Conclusion: Patients with cancer suffer from a large constellation of symptoms, frequent assessment with a designated tool can help early identification of these symptoms and subsequent management. This highlights the need for integrated palliative services along with other health care provision.

Keywords: Cancer, symptom, prevalence, Jordan, Arabic EORTC

Introduction

Jordan is a small country in the Middle East region with a total area up to 92,300 square kilometers, land 91,971 sq. km, and water 329 sq. km. According to 2016 census number of Jordan’s population is 9.235 million1. Nearly less than half of population concentrates in and around the capital city, Amman. Arabs make up the vast majority (98%) of the population, other ethnicities are Aacharx (1%) and Armenians (1%). Population density is concentrated in the center and north of the country. In terms of religion, 92% are Sunni Muslims, 6% are Christians, most of which follow the Orthodox Church, and 2% are Druze2.

In the past decade, the number of new cancer cases diagnosed among Jordanians has increased by 44% (3362 cases in 2000 to 4849 in 2010). The Age Standardized Incidence Rate (ASR) adjusted to the world standard population was 135.1 per 100,000, which represents an increase by 8.5% from the ASR in 2000 (124.5 per 100,000 population). Jordan’s ASR for cancer is similar to other Arab countries in the region and much lower than the ASR in Europe and North America3. It appears that increase in cancer cases in Jordan in the recent years is due to dramatic increase in population.

The top five cancers among Jordanian cancer patients are: colorectal, lung, prostate, urinary bladder and leukemia in males, and breast, colorectal, thyroid, non–Hodgkin’s lymphoma and uterine in females3.

King Hussein Cancer Center is the only comprehensive cancer center in Jordan with a palliative care program. It is located in the capital city, Amman. Palliative care program started in 2003 as WHO demonstration project4. The program delivers services for inpatients, outpatients, as well as for those at home through a home health care service.

Understanding symptom prevalence is important so that health care providers can prioritize to prevent the...
Until recently, there are considerable number of 
untreated symptoms in patients with cancer that needs 
assessment and management. Not only that presence of 
symptoms play a major role in the quality of life, it was 
shown that patients’ and physicians’ scoring of symptoms 
can predict patient overall survival.

**Methods**

This was a secondary analysis of cross-sectional 
survey that evaluate the psychometric properties of the 
Arabic version of the European Organization for Research 
and Treatment of Cancer Quality of Life 15 items 
Questionnaire for Palliative Care (EORTC QLQ–C15–PAL) 
among patients admitted to a tertiary cancer center in 
Jordan.

A total of 175 patients participated. The survey was 
done between July, 2014 and September, 2014.

Inclusion criteria were: patients above 18 years old, 
histologically or radiologically diagnosed cancer, Patients 
who are alert and oriented to time, place, and person, and 
who are able to read and answer the questionnaire.

After obtaining written consent, researchers conducted 
a face to face interview where Arabic translation of 
European Organization, and Treatment of Cancer Quality 
of Life 15 items Questionnaire for Palliative Care (EORTC QLQ–C15–PAL) was used to assess 
symptoms experienced by patients with cancer.

Patient demographics and clinical characteristics 
were collected during the interview and from the patients’ 
electronic medical records. The following were collected: 
age, gender, educational level, employment status, 
cancer primary type, presence of absence of metastasis, 
palliative performance scale, use of medications for 
symptom management.

The Arabic version of the EORTC QLQ C15 Pal was 
used to assess symptoms experienced by patients with 
cancer. This tool is shortened version of the EORTC QLQ 
C30 designed for patients at an advanced stage. Both 
tools, the EORTC QLQ C15 and EORTC QLQ C30 proven 
to be valid in several studies done in different types in 
cancer patients in different countries. The Arabic 
version was shown to be valid and reliable tool with a high 
internal consistency (Cronbach’s alpha coefficient met the 
0.7 alpha criterion).

The EORTC QLQ C15 Pal contains six single item 
domains: nausea/vomiting, pain, dyspnea, insomnia, 
appetite loss, constipation and global health quality of 
life; two domains with two items: emotional functioning 
and fatigue and a three item physical functioning domain. 
Each item is graded from 1 to 4 (1—not at all, 2—a little,
Table 2. Prevalence and severity scores in quartiles for each subscale/item in the Arabic version of the EORTC-QLQ-C15 Pal

<table>
<thead>
<tr>
<th>EORTC QLQ-C15-PAL (version 1)</th>
<th>Prevalence Number (%)</th>
<th>Severity Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>First quartile</td>
<td>Second quartile (Median)</td>
</tr>
<tr>
<td><strong>Physical function</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Do you have any trouble taking a short walk outside of the house?</td>
<td>115 (66%)</td>
<td>46.7</td>
</tr>
<tr>
<td>2. Do you need to stay in bed or a chair during the day?</td>
<td>123 (70%)</td>
<td></td>
</tr>
<tr>
<td>3. Do you need help with eating, dressing, washing yourself or using the toilet?</td>
<td>93 (53%)</td>
<td></td>
</tr>
<tr>
<td>4. Were you short of breath?&lt;sup&gt;a&lt;/sup&gt;</td>
<td>99 (57%)</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>Pain</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Have you had pain?</td>
<td>125 (71%)</td>
<td>50</td>
</tr>
<tr>
<td>12. Did pain interfere with your daily activities?</td>
<td>110 (63%)</td>
<td></td>
</tr>
<tr>
<td>Q6. Have you had trouble sleeping?&lt;sup&gt;a&lt;/sup&gt;</td>
<td>121 (69%)</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>Fatigue</strong>&lt;sup&gt;a&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Have you felt weak?</td>
<td>131 (75%)</td>
<td></td>
</tr>
<tr>
<td>11. Were you tired?</td>
<td>144 (82%)</td>
<td></td>
</tr>
<tr>
<td>8. Have you lacked appetite?&lt;sup&gt;a&lt;/sup&gt;</td>
<td>136 (78%)</td>
<td>16.7</td>
</tr>
<tr>
<td>9. Have you felt nauseated?&lt;sup&gt;a&lt;/sup&gt;</td>
<td>111 (63%)</td>
<td>0</td>
</tr>
<tr>
<td>10. Have you been constipated?&lt;sup&gt;a&lt;/sup&gt;</td>
<td>107 (61%)</td>
<td>33.3</td>
</tr>
<tr>
<td><strong>Emotional Subscale</strong>&lt;sup&gt;b&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Did you feel tense?</td>
<td>130 (74%)</td>
<td></td>
</tr>
<tr>
<td>14. Did you feel depressed?</td>
<td>97 (55%)</td>
<td></td>
</tr>
<tr>
<td>15. How would you rate your overall quality of life during the past week?&lt;sup&gt;b&lt;/sup&gt;</td>
<td>33.3</td>
<td>50</td>
</tr>
</tbody>
</table>

Table 2. Prevalence and severity scores in quartiles for each subscale/item in the Arabic version of the EORTC–QLQ–C15 Pal

<sup>a</sup> Scores range from 0 to 100. Higher score signifies more severity.

<sup>b</sup> Scores range from 0 to 100. Higher score signifies less severity.

3–quite a bit and 4–too much). For each domain if any item was answered with 2 or more then the symptom was considered present. Symptoms were scored according to the EORTC QLQ C15 Pal scoring manual<sup>26</sup>. Symptom severity scores were compared on basis of gender, age, presence of metastasis and cancer primary type.

Descriptive analysis of patients’ information was done. Counts and percentages were used to describe categorical data and the mean, median and range to describe continuous data. ANOVA testing was used to compare means of symptoms severity scores. IBM SPSS version 23 was used to perform the statistical analysis.

The institutional review board at King Hussein Cancer Center approved this study. The study was done in agreement of the ethical standards of the 1964 Declaration of Helsinki.

Results

A total of 175 patients participated in the study. All were admitted as inpatients. There were slightly more males (51.4%) than females. Mean age was 50 years, ranging from 35 to 54. Majority of patients did not have metastasis (73%). In addition, 131 (75%) received chemotherapy, 50 (29%) received radiotherapy, and 81 (46%) had surgery during their course of illness. Most of the participants were unemployed (73%). Table 1 shows demographics and clinical characteristics.

Median number of symptoms per patient was 6, interquartile range was 5–7. The majority of patients (143; 81%) had more than 3 non–pain symptoms each. The most frequently reported symptom was tiredness (82%), whereas the least prevalent symptom was depression (55%). Table 2 shows symptoms frequency and severity.
When symptom severity scores were compared between males and females, there was no statistically significant difference between the two groups except for item 9 "Did you have nausea?", mean score for this item in males and females was 27.0 and 27.3, respectively, (P value <0.05).

Comparison of different age groups showed that elderly patients had more severe symptoms in three domains (physical function, fatigue and global score of quality of life) than young patients did, (P value <0.05).

Patients with metastatic disease had higher symptom severity scores than patients with non–metastatic disease, all domains showed statistically significant difference except for item 9 "Did you have nausea?", (P value <0.05).

Different cancer types did not show statistically significant difference in all domains except for item 4 “Were you short of breath?”. Table 3 shows symptom severity scores for each cancer type.

Pain was prevalent in 71% of patients, median severity score was 50%. At the time of the interview,
91 (52%) patients were receiving opioids. Of these, 48 (53%) patients were receiving morphine, 40 (44%) were receiving tramadol, 6 (6.5%) fentanyl, 4 (4.4%) oxycodone, and 1 (1%) methadone. When compared, patients who were receiving opioids had less pain severity score than who were not, P value <0.05.

Percentage of patients utilizing opioids by malignancy type was as follow: 26% in hematological malignancies, 59% in breast cancer, 65% in genitourinary cancer, 71% in gastrointestinal, 76% in lung cancer, and 36% in other cancers group. Patients with hematological malignancies had significantly higher pain severity score, P value <0.05, and were the least to utilize opioids when compared to patients with solid malignancies, P value <0.05.

Out of the 175 participants, 12 (7%) patients were receiving antipsychotic medications.

Discussion

This analysis is the first to estimate the prevalence of symptoms in cancer patients in Jordan.

Symptoms were prevalent in more than 50% for each item/subscale. The median number of symptoms per patient in our cohort was 6 which is similar to what was reported in Kuwait27 and Saudi Arabia28. According to the global update of palliative care development, all three countries did not reach the level of integration of palliative care into the mainstream service provision29. The use of a symptom assessment tool was shown to detect higher number of symptoms per patient than open ended questions30.

The most common prevalent symptom was fatigue, same as what was reported in other countries27,31–33. Pain was prevalent in 71% of patients interviewed, median severity was 50, patients with hematological malignancies had significantly higher pain severity and significantly lower percentage of patients utilizing opioids. This indicates lower and late referral rates to palliative services as was reported in previous studies34,35.

Despite that 25.7% responded to question 14 in the emotional subscale “Did you feel depressed?” with 3,4 (quite a bit, very much), only 7% were receiving antidepressants which denotes under–diagnoses and treatment of depression. This highlights the importance of screening for depression, and be more aware of signs and symptoms of depression in cancer patients.

With exception of question number 4 “were you short of breath?”, there was no significant difference in symptom severity score among patients with different types of malignancies. Similar to what Kirkova et al reported, as symptoms of pain, fatigue, anorexia, insomnia, depression, and anxiety did not differ among cancer primary site groups33.

Of note, 73% of participants were unemployed. This is similar to what was reported in other studies36,37. The high symptom burden and the need for frequent time off work to attend treatment sessions lead many patients to lose their jobs with subsequent social and existential suffering.

Limitations of our study include the cross sectional and the single institution design. A multicenter study with sequential assessment of a larger group of patients in a longitudinal design will generate a more generalizable data.

Conclusion

Patients with cancer suffer from a large constellation of symptoms, frequent assessment with a designated tool can help early identify these symptoms and subsequent management. This highlights the need for integrated palliative services along with other health care provision.

References


