Quality of life in long-term survivors of early stage endometrial cancer

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INTRODUCTION

Endometrial carcinoma (EC) is the most common gynaecologic malignancy among postmenopausal women in western countries. The age-adjusted incidence rate in the USA is 23.3 per 100,000 women per year. Other regions with age standardized rates in excess of 10 per 100,000 include Europe, Australia and New Zealand, the southern part of South America, and the nations of the Pacific islands. Low rates occur in Africa (Uganda 3.3 per 100,000) and Asia (China 3.8 per 100,000) [1, 2]. In Poland, the age-adjusted incidence was 14.4 per 100,000 women per year [3].

Most patients who present with an early stage of the disease have an excellent prognosis. For an early stage of the disease, surgery is the treatment of choice. The standard in therapy still remains total abdominal hysterectomy, bilateral salpingo-oophorectomy, and surgical staging, including pelvic and para-aortic lymphadenectomy. While most women with early-stage EC can anticipate a cure with surgery alone, a significant minority of women with deeply invasive or high-grade tumours will experience local, regional, or distant recurrences. Therefore, adjuvant therapies have been proposed, especially for women with early-stage tumours with atypical histology, such as papillary serous and clear cell carcinomas [4, 5, 6].

The use of adjuvant radiation therapy has been controversial since randomized trials have demonstrated improvement in local control, without a clear impact on survival [7]. Since the standard procedures have comparable survival rates, patients typically select the procedure that optimizes the QOL. Treatment for EC is often quite morbid and may involve multiple modalities (surgery, radiation and chemotherapy). Postoperative adjuvant radiotherapy in EC is frequently associated with considerable normal tissue injury that may compromise patient QOL such as small and large bowel complications, urinary complications, and vaginal atrophy [8, 9, 10, 11, 12, 13].

In recent years, a number of studies examining QOL in long-term survivors of EC have been published. The results of these studies indicate that survivors of EC report high levels of QOL, approximately the same levels as the normal population [10, 14, 15, 16].

OBJECTIVE

The objective of this study was to perform a comparison of the QOL of women with early stage EC who were treated with either surgery alone, or surgery in combination with postoperative pelvic external beam radiotherapy.
MATERIALS AND METHOD

Study population. A long-term follow-up assessment of patients with I and II stages of EC treated at the Department of Gynaecology and Septic Obstetrics of the Medical University in Białystok, and the Department of Gynaecology of the District Hospital in Białystok between 2000–2008, were included in the study.

A total of 328 EC survivors who had completed cancer treatment more than 3 years ago and had previously completed questionnaires concerning QOL – European Organization for Research and Treatment of Cancer Quality of Life Questionnaire (EORTC QLQ-C30) and depression – Beck Depression Inventory-II (BDI-II). The patients were grouped into those with surgery alone (n=202) or surgery with adjuvant radiotherapy (n=126). Responses were compared to 284 healthy women who were seen for standard gynaecologic screening examinations.

Instruments. The EORTC QLQ-C30 is a generic QOL measure for cancer patients. It comprises a global health status/QOL, 5 multi-item functional subscales and several single/multi-item symptomatic subscales. Likert scales (1–7 in the global health status subscale and 1–4 in other subscales) are linearly transformed into scores of 0–100 where higher scores indicate better functional status or worse symptomatic problems. Higher QLQ-C30 scores on the functioning scale and the global QOL scale indicated better functioning or QOL, whereas higher scores on the symptom scales represented a higher level of symptoms or problems in the QLQ-C30. For these items, only scores from eligible respondents were computed. Mean scores and standard deviations (SD) were calculated for the multi-item and single-item scales [17]. The Polish version of the EORTC QLQ-C30 version 3.0 was used, and scored according to the EORTC scoring guidelines [18].

The second edition of the Beck Depression Inventory-II (BDI-II) 22 was used to assess depressive symptoms. The 21-item BDI-II is a widely used self-reporting tool for measuring depressive symptoms, corresponding to the Diagnostic and Statistical Manual of Mental Disorders, 4th Edition criteria of depression. The BDI-II scores range from 0 – 63, with a score of ≥19 considered to indicate moderate to severe depression [19].

Statistical analysis. Statistical analysis was carried out using Statistica software, version 9.0PL (StatSoft Inc., StatSoft Polska Sp. z o.o., Poland). Data among the 3 different groups was statistically analyzed using the t test for independent variables. Differences in sociodemographic variables between treatment groups were explored with one-way analysis of variance (ANOVA) using the Bonferroni procedure to correct for multiple comparisons.

RESULTS

Of the 536 consecutive patients who underwent surgery during the study period, 156 were not eligible for the following reasons: death (n = 56), address not known (n = 10), cancer progression (n = 54), and recurrence radically cured (n = 36). Questionnaires were sent to the remaining 380 eligible patients, and 328 (86%) of them returned the completed survey. Age, marital status, education level, BMI, smoking and alcohol consumption were entered as covariates, and the means or percentage shown were adjusted. Characteristics of the study population are shown in Table 1.

Table. Sociodemographics of the questionnaire respondents according to treatment

<table>
<thead>
<tr>
<th>Demographic</th>
<th>Surgery (n=202)</th>
<th>Surgery+ Radiotherapy (n=126)</th>
<th>Control (n=284)</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, years</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>62.1</td>
<td>60.9</td>
<td>62.2</td>
<td>0.324</td>
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<tr>
<td>Standard deviation</td>
<td>11.3</td>
<td>10.3</td>
<td>9.5</td>
<td></td>
</tr>
<tr>
<td>Marital status</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married/cohabiting</td>
<td>150 (74.3)</td>
<td>98 (77.8)</td>
<td>222 (78.2)</td>
<td>0.787</td>
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<tr>
<td>Widowed</td>
<td>16 (7.9)</td>
<td>6 (4.8)</td>
<td>14 (4.9)</td>
<td>0.184</td>
</tr>
<tr>
<td>Divorced</td>
<td>8 (3.9)</td>
<td>8 (6.3)</td>
<td>12 (4.2)</td>
<td>0.326</td>
</tr>
<tr>
<td>Unmarried</td>
<td>28 (13.9)</td>
<td>14 (11.1)</td>
<td>36 (12.7)</td>
<td>0.824</td>
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<tr>
<td>Patients with children</td>
<td>152 (75.2)</td>
<td>86 (68.2)</td>
<td>246 (86.6)</td>
<td>0.481</td>
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<tr>
<td>Employment status</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working</td>
<td>112 (55.4)</td>
<td>58 (46.1)</td>
<td>186 (65.5)</td>
<td>0.789</td>
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<tr>
<td>Unemployed</td>
<td>14 (7.0)</td>
<td>8 (6.3)</td>
<td>24 (8.5)</td>
<td>0.925</td>
</tr>
<tr>
<td>Retired</td>
<td>70 (34.6)</td>
<td>52 (41.3)</td>
<td>70 (24.6)</td>
<td>0.911</td>
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<tr>
<td>On sick leave</td>
<td>6 (3.0)</td>
<td>8 (6.3)</td>
<td>4 (1.4)</td>
<td>0.752</td>
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<tr>
<td>Education</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Primary school</td>
<td>30 (14.8)</td>
<td>22 (17.5)</td>
<td>40 (14.1)</td>
<td>0.268</td>
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<tr>
<td>Middle-range training</td>
<td>74 (36.7)</td>
<td>42 (33.3)</td>
<td>98 (34.5)</td>
<td>0.398</td>
</tr>
<tr>
<td>University degree</td>
<td>98 (48.5)</td>
<td>62 (49.2)</td>
<td>146 (51.4)</td>
<td>0.622</td>
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<td>Health behaviors</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Smokers</td>
<td>40 (19.8)</td>
<td>26 (20.6)</td>
<td>50 (17.6)</td>
<td>0.314</td>
</tr>
<tr>
<td>Alcohol consumption, mean units per week</td>
<td>5.2</td>
<td>4.8</td>
<td>4.2</td>
<td></td>
</tr>
<tr>
<td>Body mass index, kg/m²</td>
<td>32.4</td>
<td>31.1</td>
<td>29.7</td>
<td>0.622</td>
</tr>
</tbody>
</table>

DISCUSSION

Although the majority of women survive early stage EC, the treatment almost always requires some medical intervention. The most common treatment protocol is surgery followed by...
adjuvant radiation therapy. Studies investigating the symptom burden in patients with EC have highlighted issues related to treatment. The symptoms comprise psychological morbidity as well as physical morbidity, including late urological and gastrointestinal symptoms following radiotherapy [13, 20, 21, 22, 23, 24].

Until recently, treatment for EC has focused almost exclusively on the prolongation of life, and few research studies have adequately addressed issues related to the QOL [10, 14, 15, 16]. Because of the growing number of EC survivors, the QOL has become increasingly important. However, most pertinent studies have focused on the short-term effects of treatment and disease, showing that EC survivors have a reduced QOL early after treatment. In the presented study, overall QOL in EC survivors more than 3 years post-diagnosis was not significantly different from that of healthy women. This result is consistent with longitudinal studies observing that QOL improves over time in gynaecologic cancer survivors [10, 14, 15, 16].

The presented study included a consecutive series of patients with a long follow-up (median 36 months since treatment) who did not experience recurrence or a second primary tumour. The most striking finding was that the study group reported having a QOL similar to that of members of the control group. Other studies produced similar findings [10, 14, 15]. This effect may be due to a change in a patient’s internal standards as a result of adaptation to the limitations of the control group. Other studies produced similar findings[8, 15, 31]. However, in the present study, depression was not observed. The results overall indicate that levels of depression in EC survivors return to approximately the same level of healthy controls before survivors reach more than 3 years post-diagnosis.

In conclusion, according to the presented results, QOL in EC survivors approximates that of healthy controls after 3 years post-surgical treatment. Patients treated for early stage EC should be informed about the anticipated good prognosis, years post-surgical treatment. Patients treated for early stage EC survivors return to approximately the same level of healthy controls before survivors reach more than 3 years post-diagnosis.

The findings of the current study suggest that the majority of long-term EC survivors have good health and do not experience psychological morbidity. Levels of clinical depression in gynaecologic cancer survivors up to 5 years post-diagnosis are elevated, compared to healthy controls [30]. Previous studies have indicated that levels of clinical depression in gynaecologic cancer survivors up to 5 years post-diagnosis are elevated, compared to healthy controls [8, 15, 31]. However, in the present study, depression was not observed. The results overall indicate that levels of depression in EC survivors return to approximately the same level of healthy controls before survivors reach more than 3 years post-diagnosis.
REFERENCES