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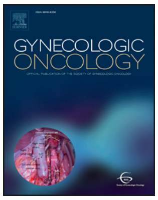

Retrospective review of symptoms and palliative care interventions in women with advanced cervical cancer

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HIGHLIGHTS

- Advanced cervical cancer patients are burdened with various distressing symptoms.
- Symptoms include pain, anorexia, poor feeling of well-being, fatigue and insomnia.
- Many clinically significant symptoms improve at follow-up visits to palliative care.

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ABSTRACT

Objective. The objective of this study was to delineate and measure the symptom distress experienced by patients with advanced cervical cancer at the time of palliative care (PC) referral.

Methods. A total of 156 patients with advanced cervical cancer were referred to PC from 2010 to 2012. Of these, 88 patients had completed the Edmonton Symptom Assessment System (ESAS) and were included in the analysis.

Results. The mean age was 45 years (25–76), 47% were white, 18% were African American, and 33% were Hispanic. Fifty-one percent were married, 64% had no advance directives, and 75% had recurrent disease. Clinically significant symptoms recorded by patient reported outcome measurement (defined as ESAS scores ≥4) were pain (81%), anorexia (72%), a poor feeling of well-being (70%), fatigue (69%), and insomnia (54%). The chief complaint recorded for the visit was pain in 94% of patients. According to the PC specialists' assessment, pain (96%), emotional distress (77%), and constipation (50%) were predominant symptoms. Various PC interventions including opioids, laxatives, and expressive supportive counseling were provided. Clinically significant symptoms including nausea, depression, anxiety, and feeling of well-being were significantly improved at follow-up visits.

Conclusion. More than half of patients with advanced cervical cancer were significantly burdened with pain, anorexia, a poor feeling of well-being, fatigue, insomnia, and constipation at the time of PC referral. This research is an integral step towards developing a standardized tool for assessing symptoms in women diagnosed with cervical cancer and thus maximizing effectiveness of patient centered care.

1. Introduction

In the United States, approximately 12,900 women are diagnosed with cervical cancer every year, and 4100 deaths are attributable to cervical cancer [1]. The incidence of cervical cancer has significantly decreased in recent years owing to primary, secondary, and tertiary preventions with the human papillomavirus vaccine, Pap tests, and the treatment of dysplasia [2]. However, cervical cancer is still the second leading cause of cancer death in women aged 40 years or younger in the United States and is the fourth leading cause of all cancer deaths worldwide [1,3]. Unfortunately, women who have received inadequate or no screening for cervical cancer may present with advanced stage disease. As a result, they may have limited treatment options with compromised survival outcomes.

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Apart from a poor prognosis, patients with advanced cervical cancer may experience a variety of distressing physical symptoms associated with the anatomic location of their disease and complications after surgery and/or radiotherapy. They may also experience distressing psychological symptoms related to their relatively young age and low socioeconomic status [4,5]. Common physical symptoms include pain, fatigue, lymphedema, sexual dysfunction, proctitis, cystitis, constipation, diarrhea, foul odor, and fistulas [4–10]. Levels of depression and anxiety are significantly higher in cervical cancer patients than in the general population, and their quality of life is lower [11]. Decreasing the burden of these symptoms in cervical cancer patients may improve their quality of life and daily functioning [12]. Unfortunately, despite the tremendous impact symptoms can have on quality of life, there is no standardized tool for assessing symptoms of gynecologic cancer, and symptom assessment is rarely a part of routine cancer care [13].

The objective of this study was to delineate and measure the severity and frequency of multiple physical and psychological symptoms in patients with advanced cervical cancer at the time of referral to palliative care (PC) and to characterize the PC interventions that patients received. Supportive care interventions for women with cervical cancer are needed at almost every provider–patient interaction but often left unaddressed or not assessed until symptoms become extreme. Fortunately in some cases, women are then referred to palliative care specialists. Few studies in the literature have focused only on the symptoms of women with active cervical cancer and all have been cross sectional in design [4–10]. Having this type of information will allow for a better understanding of what questions should be part of every provider's symptom assessment repertoire and allow for guidance in the design of effective clinical trials with supportive care endpoints.

2. Methods

2.1. Patients

Patients with advanced cervical cancer who were referred to PC specialists at The University of Texas MD Anderson Cancer Center from 2010 to 2012 were included in this study. Among 4375 patients who visited the outpatient Supportive Care Center, 95 patients had cervical cancer, and among 4072 patients who were referred to PC as inpatients, 97 had cervical cancer. In total, 192 consecutive referrals were identified, and 35 were duplicate visits. The unique total number of referral visits identified was 156. Patients were eligible for this study if they had a diagnosis of advanced cervical cancer, had completed the Edmonton Symptom Assessment System (ESAS), and were 18 years or older. We defined advanced cancer as metastatic or recurrent disease or progressive locally advanced disease not amenable to receive curative treatment. A total of 88 patients met the eligibility criteria and were included in the final analysis. Forty-one patients had follow-up visits to PC within 2 months of their first PC consultation. Thirty-five of the 41 patients completed the ESAS at follow-up visits, forming a subgroup of patients whose data could be analyzed for changes over time. The Institutional Review Board at the MD Anderson Cancer Center approved this study and waived the requirement for informed consent.

2.2. Palliative care service

An interdisciplinary team led by board-certified PC specialists provides PC at MD Anderson. The interdisciplinary team members include registered nurses with specific training in PC, pharmacists, a nutritionist, a chaplain, social workers, and psychologists. The care of all patients is provided using standardized management algorithms [14]. In the outpatient Supportive Care Center, patients and their families are initially assessed by the PC nurse using assessment tools such as the ESAS [15,16]; Memorial Delirium Assessment Scale (MDAS) [17]; Cut down, Annoyed, Guilty, Eye opener (CAGE) questionnaire [18]; and Eastern Cooperative Oncology Group (ECOG) performance status [19]. The PC nurse discusses with the PC specialist the results of the initial assessment including ESAS scores, prescribed medications, and other findings. After the discussion, the physician conducts an interview and physical examination to assess the patient. The appropriate interdisciplinary team members, according to his/her individual needs, then care for the patient. Patients referred to the inpatient PC mobile team also receive initial assessments using the ESAS, MDAS, CAGE, and ECOG performance status and are treated on the basis of these assessments.

2.3. Data collection

Demographic information including age, sex, ethnicity, marital status, and education level were collected from the patients' electronic medical records. The following additional information was collected: disease status at the time of referral; cancer treatment status; setting of referral (inpatient vs. outpatient); history of depression or anxiety; morphine equivalent daily dose (MEDD); the presence of deep vein thrombosis (DVT); use of a ureteral stent, nephrostomy, or colostomy; date of advanced cancer diagnosis; date of death or last follow-up; and survival status.

In accordance with our standard clinic procedure, patients had documented ESAS, CAGE, and MDAS scores and ECOG performance status at the time of referral. The ESAS determines the severity of 10 symptoms (pain, fatigue, nausea, depression, anxiety, drowsiness, dyspnea, anorexia, feeling of well-being, and insomnia) rated using a numerical scale of 0–10 (0, no symptoms; 10, worst possible symptoms) (Supplementary Table 1). Consistent with previous studies, symptoms of moderate or severe intensity (scores ≥ 4) were defined as clinically significant symptoms [20,21]. The symptom distress score was defined as the sum of the scores of 9 items excluding insomnia [15,22].

One gynecologic oncologist with a PC subspecialty (LMR) and 2 medical oncologists with PC training (YJK, JCP) intensively reviewed the first 12 charts to identify characteristics of symptom assessments and PC interventions provided by PC specialists. On the basis of this initial review of 12 charts, documented chief complaints, symptom assessments, and PC interventions were categorized (Tables 3 and 4), and the remaining charts were reviewed according to these categories.

2.4. Statistical analysis

The patient characteristics and symptom assessments were summarized using descriptive statistics including means, medians, frequencies, and percentages. Median ESAS scores were compared between two groups, those who received inpatient vs. outpatient consultations, using the Wilcoxon rank–sum test. Median survival and median time to PC consultation were calculated using the Kaplan–Meier method. Survival was calculated from the date of advanced cancer diagnosis or PC referral to the date of death or last follow-up, and groups were compared using the log–rank test. All tests were two-sided, and $P < 0.05$ was considered statistically significant. Confidence intervals (CIs) were calculated at a 95% confidence level. All analyses were performed using IBM SPSS Statistics for Windows version 21.0 (IBM Corp., Armonk, NY, USA) or SAS version 9.2 (SAS Institute, Inc., Cary, NC).

3. Results

A total of 88 patients with advanced cervical cancer referred to PC between January 1, 2010, and December 31, 2012, were eligible for this study. The mean patient age was 45 years (standard deviation [SD], 11; range, 25–76 years); 47% were white, and 51% were married. The majority of patients (75%) had recurrent disease; 19% of patients had newly diagnosed advanced cervical cancer and had not yet received treatment, 51% were receiving palliative chemotherapy, and 16% were not able to receive any more anti-cancer treatment. More than half of the patients (58%) were referred as inpatients and had an ECOG

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