ONCOLOGY

Reproductive health assessment for women with cancer: a pilot study

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OBJECTIVE: The purpose of this study was to pilot a survey instrument and to develop descriptive data about the reproductive goals of reproductive-aged women (15-44 years) with cancer.

STUDY DESIGN: This was a cross-sectional pilot survey study of 20 women who were diagnosed with various types of cancers at the oncology clinic of Stroger Hospital of Cook County, Chicago, from January-July 2006.

RESULTS: Of the 20 patients whose cases were surveyed, the mean age was 36.6 years, and 90% of the women had breast cancer. Ten percent of patients would continue pregnancy, if they became pregnant while receiving treatment. Contraception was used by 55% of patients (n = 11), of whom 55% of the women (n = 6) were using abstinence.

CONCLUSION: The result of this pilot study demonstrates the need for reproductive health counseling in women with cancer; the range of discussion must include fertility interest, contraception, and fertility preservation.

Key words: cancer, contraception, fertility, reproductive health

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Annually, in the United States, approximately 692,000 women are diagnosed with various types of cancer for the first time.[1] Ten percent of newly diagnosed patients with cancer are under the age of 45 years and are in the reproductive-aged group. In caring for reproductive-aged women with cancer, reproductive health issues remain an important concern, and addressing these issues is of paramount importance.[2]

A case series of 6 women in the reproductive-aged group who were diagnosed with cancer in our institution illustrated the need for more extensive counseling pertaining to the issues of fertility preservation, contraception, pregnancy, and chemo/radiation treatment.[3] Based on a review of the literature, we found a paucity of literature and clinical acumen regarding reproductive health issues in patients with cancer. The spectrum of reproductive health issues may range from prevention of unintended pregnancy and prevention of premature loss of fertility to the optimization of a desired pregnancy. Provision of such care may include access to family planning, reproductive health technology, and obstetric and gynecologic services. The purpose of this study was to pilot a survey instrument to develop descriptive data on the reproductive goals of reproductive-aged women (15-44 years) with cancer.

Materials and Methods

Study population

A sample of 20 patients between the ages of 15-44 years who were diagnosed with cancer who sought care during a half-day session of the Oncology Clinic of John H. Stroger Jr Hospital of Cook County from January-July 2006 was selected. The inclusion critera included women in the reproductive-aged group who were diagnosed with cancer of various types and who gave consent to participate in the survey. Postmenopausal (natural or iatrogenic) women were excluded from the study. This cross-sectional study was approved by the institutional review board. We developed and piloted a one-time reproductive health survey to assess the fertility and contraceptive options of premenopausal women who undergo cancer treatment. Patients were interviewed about their future childbearing options, menstrual history, contraceptive use, and choices. Additional patient information (such as basic demographic information, medical diagnosis, and treatment plan) was collected through the electronic medical record.

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RESULTS

The mean age of patients who were surveyed was 36.6 years (Figure 1). The race distribution was 25% white, 25% African American, 35% Hispanic, and 15% other. Of the 20 patients, 90% (n = 18) had breast cancer, and 10% had other cancers. Thirty percent of the women were married, 30% of the women were single, and 40% of the women were living with a partner. Forty percent of the women were nulliparous, 15% of the women had 1 living child, and 45% of the women had > 2 children. When asked about childbearing, 50% of the women (n = 10) stated that they had completed childbearing, 45% of the women (n = 9) stated that they desired future childbearing, and 5% of the women (n = 1) were unsure.

Of the 18 patients who had breast cancer, 83.33% of them (n=15) had modified radical mastectomy. Of the 55% of women (n = 11) who received chemotherapy alone and the 40% (n = 8) who received both chemotherapy and radiotherapy, 66.7% of the women (n = 8) and 75% of the women (n = 6), respectively, continued to have regular menstruation after treatment. Of the group of patients who desired childbearing (n = 9), 6 women received chemotherapy, and 3 women received both chemotherapy and radiotherapy. Of these 9 women, 8 women continued to have regular menstruation, and 1 woman ceased menstruating. One patient who was uncertain of future childbearing plans and who received chemotherapy had regular menstruation thereafter.

Regarding thoughts on pregnancy risk, 55% of the women (n = 11) thought they could never become pregnant after cancer treatment. Forty-five percent of the women (n = 9) reported that they were certain that they wanted children in the future. Twenty percent of the women (n = 4) wanted to become pregnant at that time. Forty percent of the women (n = 8) said that they would terminate the pregnancy if they became pregnant while undergoing treatment. Ten percent of the women (n = 2) stated that they would continue with the pregnancy.

When asked about the person making final decisions about contraception, it was found that 40% of the women (n = 8) decided on their own; for 60% of the women (n = 12), partners were part of the decision-making process. Of all the patients, 45% of the women (n = 9) denied the use of any contraception, whereas 55% of the women (n = 11) were using some type of contraception. Within the latter group, abstinence was the preferred method by 54.6 % of the women (n = 6). The remainder of the women used barrier methods, especially condoms and foams.

COMMENT

An increasing body of literature addresses fertility issues among reproductive-aged women with cancer. Studies have shown that young women with cancer are likely to remain fertile and have the same sexual behaviors and needs as their peers without cancers. Improvements of cancer treatments and survival, along with advancements in reproductive health technologies, have opened the discussion of fertility preservation in reproductive-aged women with cancer. Although caregivers focus on fertility preservation during cancer treatment, there is no significant discussion regarding the use of contraception during cancer treatment. Our study was designed to include the issues of unintended pregnancies and contraceptive needs.

Surgical and radiation treatment may not affect or impact fertility or pregnancy, unless the reproductive organs are involved directly. Some forms of chemotherapy may impact fertility and pregnancy outcomes. Most of the cancer treatments are gonadotoxic, and amenorrhea is a common finding in patients who undergo cancer treatment.[4] Studies have found that women who maintain normal periods throughout chemotherapy continue to remain at risk for the development of premature ovarian failure.[5] We also found that most of the patients who continued to have menstruation and consequently had increased chances of pregnancy were younger, compared with those who stopped having menstruation. The fact that most women < 35 years old will resume menstruation after chemotherapy may be attributable to the greater follicular reserve in this population.[6] Therefore, iatrogenic amenorrhea depends on the age of the patient and also the type, intensity, and duration of treatment and may be temporal.

For patients who undergo chemotherapy and who desire fertility, ovarian function should be reassessed periodically.[7] Because menstrual activity is not a reliable index to assess ovarian function, various tests, such as follicle-stimulating hormone level, inhibin A or B levels or anti-Müllerian hormone level, and vaginal ultrasonography assessment of the number of antral follicles, can be used. The best biochemical indicator of ovarian reserve is the serum FSH levels. The knowledge of the functional ovarian reserve may benefit patients before important decisions are made regarding fertility preservation. Fertility preservation options include oocyte retrieval and freezing, embryo cryopreservation, and ovarian cryopreservation.

Even with all the advancements in cancer treatments, it is still challenging to treat cancer successfully. Success rate of cancer treatment depends not only on early detection of cancer but also on early intervention. Many of the treatment modalities that are used are teratogenic/mutagenic (category X) drugs and are known to cause miscarriages and congenital anomalies in the fetus. The timing of the use of these drugs in pregnancy is a critical factor; second-trimester use may reduce the risk to a developing fetus in certain cases.

Pregnancy that occurs during the time of cancer diagnosis, treatment, and management may pose a dilemma for the patient and her providers. Of the 20 patients who were surveyed, 45% of the women (n = 8) said that they would terminate the pregnancy, and 10% of the women (n = 2) said that they would continue with the pregnancy, if they become pregnant while undergoing cancer treatment. Ultimately, whichever option the patient wishes to pursue, a multidisciplinary approach, which involves physicians, nursing, and ancillary staff, should be undertaken to address the wishes of