

To Treat or Not To Treat? Cancer During Pregnancy

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About the Author:

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"My first thought was, what about the baby?" stated Tracy Hartman, a woman who is six weeks pregnant, after doctors told her that she had cervical cancer (University of California Davis Health System, 2010, p. 1). A diagnosis of cancer is devastating to a mother who is often overjoyed by the prospect of parenthood. Because the diagnosis of cancer during pregnancy is a relatively rare complication, 1 in 1,000 pregnancies, large-randomized-controlled trials are difficult to conduct. As a result, data is noticeably absent to support definitive treatment guidelines (Pavlidis, 2002; Pereg, Koren, & Lishner, 2008). Although there are no definitive guidelines for treatment, researchers agree that management of the disease must be patient specific (Van Calsteren et al., 2010). The purpose of this paper is to present current options for management of cancer during pregnancy and to discuss the ethical issues of beneficence, nonmaleficence and autonomy of the mother and fetus related to the treatment options.

Review of the Literature

According to the Center for Disease Control, there is a rise in the rate of births to women over the age of 35 (Mathews & Hamilton, 2009). From 1970 to 2006, the proportion of first births to women over the age of 35 increased nearly eight times. In 2006, nearly 1 out of 12 first births were to women over the age of 35 (Mathews & Hamilton, 2009). The incidence of cancer in the 30 to 49 years-old age group is increasing (Van Calsteren et al., 2010). With the rates of pregnancy and cancer rising in the same population, they will inevitably collide. There will be a higher rate of cancer diagnoses in pregnant women.

The most common cancers in pregnancy are cervical, breast, and ovarian, followed by malignant melanoma, lymphoma, and leukemia (Moran, Yano, Al Zahir, & Farquharson, 2007). Cancer treatment during pregnancy is a challenge requiring the efforts of a multidisciplinary

team. There are two key concerns when considering treatment options: how the pregnancy affects the behavior of the cancer and how the cancer and its treatment affect the pregnancy (Moran et al., 2007). Therapeutic approaches to manage cancer during pregnancy include surgery, radiotherapy and chemotherapy.

Moran et al. (2007) concluded that surgery during pregnancy has been shown to be relatively safe. However, they recommend delaying non-emergent surgery until the second trimester. Waiting until the second trimester reduces the risk of fetal harm, induction of abortion and premature labor. When surgery is not an option, treatment teams may then consider radiotherapy or chemotherapy.

David Pereg et al. (2008) created a decision tree for the treatment of cancer during pregnancy. If a mother is diagnosed in the first trimester and would like to pursue radiation or chemotherapy, it is suggested that the mother consider terminating the pregnancy. During the first trimester, the fetus is undergoing organogenesis. Exposure to radiation or chemotherapy during organogenesis can result in congenital malformations, spontaneous abortions and even fetal death. First trimester exposure to chemotherapy has been associated with 10-20% risk of major malformations (Weisz, Meirow, Schiff, & Lishner, 2004).

In the second and third trimester, the mother may consider delaying treatment until achieving fetal maturity. If treatment delay is possible, the mother will go untreated but will be followed closely by the medical team. Often physicians will perform a cesarean section or induce labor at the end of the 34th week of gestation, when fetal maturity is achieved. One study showed that 71.7% (n=129) of pregnancies were induced or had elective cesarean section at a mean gestational age of 35.6 weeks (Van Calsteren, et al., 2010). If treatment delay is not possible, chemotherapy may be administered in both trimesters. If radiation is the proposed

treatment, it is recommended that the mother terminate her pregnancy if she is in the second trimester. Radiation given 8-25 weeks after conception is associated with up to 40% risk for severe mental retardation (Otake & Schull, 1998). Radiation may be given in the third trimester after an estimation of fetal dose is calculated by a medical physicist (Pereg et al., 2008). Each of the therapeutic treatment options carries its potential complications to the mother and/or to the fetus. The potential maternal-fetal conflict raises complex ethical dilemmas.

When a pregnant female is diagnosed with cancer, her decision to treat or not treat the cancer could cause her and the treatment team moral stress. A pregnant woman with cancer will have to make life or death decisions for herself and her unborn child and it is the responsibility of the interdisciplinary treatment team to unbiasedly guide her through the treatment options (Visco, Meyer, Xi, & Brown, 2009). The mother is the major beneficiary from anti-cancer treatment; consequently, the fetus would be placed at a substantial risk for congenital malformations or death. The decision to administer chemotherapy or radiation, or to terminate the pregnancy, is indicated with a poor maternal prognosis or when cytotoxic treatment is indicated in the first trimester (Van Calstern et al., 2010). In one study, the main indication for terminating pregnancy in 29 of 30 mothers was maternal malignancy (Van Calstern et al., 2010). If the mother chooses this treatment option, the treatment team would be practicing the ethical principle of beneficence—promote good—when looking at the treatment of the mother; however, they are violating the principle of nonmaleficence—do no harm—in relation to the fetus.

The second option is to delay treatment to allow the fetus to grow, develop and become viable. By postponing medical interventions, the fetus's well-being is preserved. Delaying treatment may be harmful to the mother as it allows time for her cancer to grow and possibly

metastasize. Nettleton et al. (1996) presented a mathematical model to quantify the risk of axillary nodal metastasis as a result of delayed treatment in breast cancer during pregnancy. They calculated that there is a daily increased risk of 0.028% for tumors with moderate doubling times of 130 days and 0.057% for tumors with rapid doubling times of 65 days. If this option is chosen, then beneficence is shown to the fetus and nonmaleficence is breached with regard to the mother.

The decision to treat or not treat cancer during pregnancy includes great legal and ethical fetal rights debates (Harris, 2000). Some bioethical models assert that the health care team has an ethical obligation to the fetus as a patient, because the health care team can care for it medically (Harris, 2000; Harris & Paltrow, 2003). An ethical paper outlines two criteria that, when met, does not violate nonmaleficence or beneficence obligations to the fetus. The beneficence-based obligation to the fetus has reached its limits if there is (1) a certainty or very high probability of a correct diagnosis, and (2) either certainty or a very high probability of death or severe irreversible deficit of cognitive developmental capacity as a result of the diagnosis (Chervenak & McCullough, 2009). Even when an ethical obligation exists, they do not have equal weight to legal obligations (Harris & Paltrow, 2003). Numerous court decisions have concluded that neither fetal rights nor state interests on behalf of the fetus supersede a woman's autonomy or rights as the ultimate medical decision maker (Harris & Paltrow, 2003).

The most important of the ethical principles to uphold in this situation is the mother's autonomy (Harris & Paltrow, 2003). To respect a patient's self-determination, a physician must provide patients with evidenced-based clinical information that allows the mother to make a competent decision. The health care team must provide nondirective counseling as to not suggest or imply a recommendation (Chervenak & McCullough, 2009). A mother's decision on

her course of treatment or lack of treatment should be her own. Attempting to bias a woman's treatment decision violates her autonomy. Respect for the mother's autonomy includes respecting her treatment decisions, even if they are in conflict with the health care provider's moral beliefs.

Conclusion

It is my opinion there will be two areas of nursing practice that will see the impact of cancer during pregnancy – oncology nursing and obstetric nursing. Oncology nurses will see a rise in pregnant patients and obstetric nurses will see a rise in oncology patients because these patients are one in the same. A rise in cancer during pregnancy will require that nurses become cross-disciplinary. With cross-disciplinary training, the nurse will be better equipped to handle this delicate situation. A nurse who is educated in both obstetrics and oncology will be able to provide answers to questions that are unique to a patient who is battling cancer while being pregnant.

Until new medications are established or the safety of current treatments on a fetus is solidly established, the nursing community must be aware of the treatment decisions that must be made. With any of the treatment options, the health care team could be faced with an ethical dilemma. Does the health care team uphold the principles of beneficence to the mother by treating the cancer, while simultaneously violating nonmaleficence toward the fetus? Or, does the health care team show beneficence to the fetus by not exposing it to harmful anti-cancer treatments and risk placing the mother in harm's way? The nurse will have his or her own opinions on what course of treatment a mother should choose; however, it is important to remember the nurse's role is to serve a patient advocate. Deciding on a course of treatment will not come with ease; however, it is one that will have to be made by the mother.

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