

Breast Cancer Treatment During Pregnancy: Navigating Challenges and Prioritizing Health

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Introduction

Breast cancer is a formidable adversary, striking fear and uncertainty into the hearts of those it afflicts. The diagnosis of breast cancer during pregnancy, however, adds an additional layer of complexity, intertwining the fates of two lives. Breast cancer occurring anytime during gestation, lactation or within one year after delivery is called Pregnancy-associated breast cancer (PABC). Management of pregnant women with breast cancer is challenging mainly due to effect of chemotherapeutic drugs on foetus.¹ This editorial seeks to explore the multifaceted challenges and considerations involved in treating breast cancer during pregnancy, while emphasizing the importance of a balanced, compassionate approach that prioritizes both maternal and fetal health.

The Dual Diagnosis: Understanding the Complexity

Breast cancer is the most common malignancy diagnosed during pregnancy, occurring in approximately 1 in 3,000 pregnancies.² This incidence is likely to increase in coming times mainly due to increase in the age of first pregnancy.³

There is a lower prevalence of hormone receptor expression and predominance of more aggressive subtypes peculiar for younger ages, such as triple-negative or HER2-positive. In pregnant patients we normally encounter disease at a more advanced stage, potentially contributing to a worse prognosis.⁴ The unique physiological changes that occur during pregnancy, such as increased breast density and hormonal fluctuations, can complicate the detection and treatment of breast cancer. Patients normally come

with a palpable mass, as well as with focal pain, diffuse breast enlargement, and nipple discharge. Clinical Breast Exam should be made a part of prenatal examination. Moreover, the emotional and psychological toll of navigating a cancer diagnosis while anticipating the arrival of a new life cannot be understated.^{2,4}

Diagnostic Dilemmas: Balancing Safety and Accuracy

Imaging and Screening: The detection of breast cancer during pregnancy often requires a nuanced approach to imaging and screening. While mammography remains a cornerstone of breast cancer detection, concerns about fetal exposure to radiation necessitate the use of protective shielding. Ultrasound, which uses sound waves rather than radiation, is a valuable adjunctive tool that can provide additional information without posing risks to the fetus and has a sensitivity of around 100 %.²

Biopsy and Pathology: If a suspicious lesion is identified, a biopsy is essential to confirm the diagnosis and determine the appropriate course of treatment. Ultrasound-guided core needle biopsy is often preferred, as it minimizes exposure to radiation and provides accurate diagnostic information. Pathological analysis of the biopsy sample ensures to identify the specific type and stage of breast cancer, guiding treatment decisions.

Benign lumps have a likelihood to grow during pregnancy due to hormonal effects. Over 80% of masses biopsied during pregnancy and lactation carries a benign outcome.⁵

Treatment Strategies: Tailoring Approaches to Optimize Outcomes

Surgical Interventions: Surgery is a cornerstone of breast cancer treatment and can be safely performed during pregnancy with careful planning and coordination. Surgical approach may involve lumpectomy, mastectomy, reconstruction, or oncoplastic techniques.⁶ The timing of surgery is influenced by the gestational age of the fetus, with the second trimester often being the optimal window for surgical intervention. Both breast-conserving surgery and mastectomy are viable options, depending on the extent and location of the cancer. Standard of care in the first trimester is Modified radical mastectomy while breast-conserving surgery (lumpectomy with lymph node dissection) is an option for the second and third trimester. Delay in the radiotherapy due to breast-conserving surgery in the first trimester limits this option in pregnant women.^{1,3} Sentinel Lymph Node Biopsy for the axillary staging is the standard of care but the blue dye can lead to anaphylactic or allergic reactions leading to harm to the fetus.⁶

Systemic Therapies: Chemotherapy is a critical component of breast cancer treatment, but its use during pregnancy necessitates a delicate balance between efficacy and safety. Certain chemotherapeutic agents, such as anthracyclines, can be administered during the second and third trimesters with relative safety. However, the first trimester is generally avoided due to the higher risk of teratogenic effects on the developing fetus. Hormonal therapies and targeted therapies, on the other hand, are typically deferred until after delivery due to potential risks to the foetus.^{3,4}

Radiation Therapy: Radiation is an essential part of Breast Conservation Surgery and still has a role in modified radical mastectomy patients' management. Detrimental radiation exposure risks towards developing fetus prohibits its use in pregnant patients. Safety of the fetus demands its postponement in cases where radiation therapy is deemed essential.⁵

Psychosocial Considerations: Supporting Mental and Emotional Well-being

Emotional and psychological challenges for patients and their families is an overlooked aspect of the management. The diagnosis and treatment of breast cancer during pregnancy can be overwhelming. The double responsibility of caring for the unborn child as well as getting treated can lead to excessive feelings of

guilt, anxiety and fear. Comprehensive psychosocial support is essential to maintain a positive outlook as well overcome the above complex emotions.^{4,5}

Conclusion:

A Holistic Approach to Care

A multidisciplinary approach is required to manage the breast cancer during pregnancy. Health and wellbeing of both the mother and fetus needs consideration while devising a plan of management. A careful balance of benefits as well as risks of various treatment modalities is required to devise an individualized treatment plan to optimize outcomes for all.

It is important that we remain steadfast in our commitment to provide compassionate, evidence-based care that supports the physical, emotional, and psychological needs of breast cancer patients.⁵ Breast Surgeons, Oncologists, obstetricians and other specialists must cooperate to come to a comprehensive treatment plan.

In conclusion, breast cancer management during pregnancy is a difficult but manageable task if done with dedication and care. Compassionate care, unwavering support and meticulous planning can help navigate this intricate path and ensure the best possible outcomes for both mother and child.

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