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CLINICAL CHALLENGES

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Caring for Pregnant Patients With Breast Cancer

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Case Study

Ms. G is a 37-year-old nulligravid female from a small town in rural Texas. She noticed unusual tenderness in her left breast and palpated a mass on self-examination. She underwent a breast biopsy and was diagnosed with invasive ductal carcinoma of the left breast. She was referred to a cancer center for treatment recommendations.

When Ms. G presented to the cancer center, she was scheduled for a staging workup. She underwent a bilateral mammogram that showed an irregular mass measuring 3.3 cm x 2.7 cm in the left breast with associated ipsilateral axillary lymphadenopathy. An ultrasound-guided core biopsy of the breast and fine needle aspiration (FNA) of the axillary lymph node and supraclavicular lymph node were performed. The core biopsy confirmed invasive ductal carcinoma. Pathology revealed the disease to be estrogen receptor-negative, progesterone receptor-20% positive, and HER2/neu negative. FNA of the axillary lymph node was negative for metastatic disease. The patient was staged as T2, N0, M0.

Treatment options, neoadjuvant (preoperative) chemotherapy followed by left total mastectomy versus left total mastectomy followed by adjuvant chemotherapy, were discussed at length. Ms. G elected to undergo surgery first to reveal the extent of the disease. She then would receive adjuvant

chemotherapy. She was referred to internal medicine for preoperative risk assessment.

Her visit to the internal medicine physician was scheduled for one week later. Prior to her appointment, she experienced some irregular menstrual bleeding and nausea. After using an over-the-counter pregnancy test, Ms. G discovered that she was pregnant, which was confirmed by a serum pregnancy test. Her oncologist was notified of the pregnancy, and the nurse liaison in the department of gynecologic oncology was contacted. Because the cancer center does not have obstetric services, a formal collaboration with the division of maternal fetal medicine (MFM) at a health science center had been established to treat patients with cancer on an as-needed basis. A nurse liaison is charged with assisting highrisk patients in obtaining a consultation with the division of MFM to facilitate appropriate obstetric care.

After receiving a referral from the nurse liaison, Ms. G and her husband met with an MFM physician, who discussed the effects of pregnancy on breast cancer, the effect of breast cancer during pregnancy, and the risks and complications of surgery and fluorouracil, doxorubicin, and cyclophosphamide (FAC) chemotherapy. The patient also had an ultrasound that documented the fetal gestational age at 10 weeks. The MFM physician recommended (a) an ultrasound every three to four weeks to monitor interval fetal growth, (b) a targeted ultrasound

for anatomic survey at approximately 20 weeks of gestation, (c) antenatal testing with biophysical profiles when indicated, and (d) suggestions for an obstetrician if Ms. G was unable to deliver in Houston. After the consultation, the MFM obstetrician conferred with the medical oncologist regarding the patient's plan of care and how best to manage her pregnancy while she underwent chemotherapy.

Ms. G had a left total mastectomy within a month of her initial visit. She was approximately 13 weeks pregnant. Pathology revealed an invasive ductal carcinoma, stage T2 N0 M0. Following surgery, the patient was seen by a medical oncologist who specializes in treating pregnant patients with breast cancer. Ms. G's treatment was delayed until the beginning of her second trimester. A subclavian catheter was inserted at gestation week 16, and she began receiving FAC chemotherapy. She continued to receive chemotherapy every three weeks for a total of six cycles. Chemotherapy was discontinued five weeks prior to the scheduled delivery of the fetus to allow Ms. G's blood counts to recover to the normal range.

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