Dear Colleague,

This is one in a series of case reports and discussions in the field of General Surgery. Over the next several months I will discuss cases that I have seen in my practice in the areas of Surgery of the Breast, Colon, Melanoma, Thyroid and Parathryroid, Laparoscopic Surgery, Reflux surgery and Hernia surgery as well as other interesting topics. I hope you enjoy these.

Today's topic is **Breast cancer surgery**.

A fifty year old woman presented to the office having been referred by her primary physician. Her sister had breast cancer and the patient was urged by her family physician to have a screening mammogram which showed a grouped area of calcification in the right breast. She could palpate no mass on breast self examination.

Evaluation of the breast always starts with a physical examination, since 10 to 20% of breast cancers are not visible on mammography. When reviewing mammograms two findings are of importance, clustered calcification or mass effect, both of which require tissue sampling. Sonography of the breast can be performed in my office and if the mass is visible by this technique a sono guided core biopsy can be done. In this patient the mass was not visible using ultrasound , therefore a stereotactic breast biopsy was performed. Specimens received from stereotactic biopsy can show benign, malignant, or atypical findings, in the latter case a surgical reexcision is required to definitely exclude malignancy. In this case the pathology showed Ductal Carcinoma In Situ (DCIS).

DCIS is the earliest form of breast cancer giving the patient good options for treatment. Our patient was counseled that her surgical options included mastectomy with or without reconstruction versus lumpectomy followed by radiation therapy. In tumors that exhibit microscopic invasion a sentinel lymph node biopsy using radio guidance is added. MRI

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was performed and helps to establish suitability for lumpectomy. This patient chose to undergo lumpectomy which was accomplished a few days later in the operating room on an outpatient basis. A requirement for lumpectomy is that all margins are microscopically clear of tumor. Once this final report was received the patient could choose her form of radiation therapy.

In the past radiation was given on a daily basis over a six week period to the **Whole Breast**. An alternative technique, **Accelerated Partial Breast irradiation** has been used in selected patients over the last 5 years. This technique involves placing a catheter into the lumpectomy cavity allowing the radiation therapist to deliver radiation directly to the tumor site; the full dose is accomplished over a five day period. Some patients prefer this shorter treatment period. However a study published by **M.D.Anderson Hospital 12/7/11** and **presented at the San Antonio Breast Symposium** pointed out that patients that had undergone Accelerated Partial Breast irradiation had an increased rate of subsequent mastectomy (4% vs 2.2%) when compared to those that received conventional **Whole Breast Radiation**. This new information needs to be confirmed but intuitively makes sense and dictates that we include this information in any discussion with our patients and restrict this technique to carefully selected patients.

The management of breast cancer involves three stages: diagnosis, choosing the correct surgical treatment option, and oncology consultation. Genetic testing is also offered to patients with family history of breast and ovarian cancer. After undergoing lumpectomy with clear margins and receiving radiation therapy , this patient will be followed on a regular basis but should enjoy an excellent prognosis due in a large part to early detection by her primary physician.

I hope this has been informative. Please don't hesitate to contact me with questions regarding surgical care.

Thanks
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