Clinicopathological Relationship Between Fibrocystic Disease Complex and Breast Cancer: A Case Report

Sir,

A 43-year-old woman presented with a chief complaint of a painless right breast lump of three years’ duration. She claimed that initially the lump was small, but was gradually getting bigger just before presentation. There was no associated pain, nipple discharge or weight loss. She was Para 3+0 3 alive. Her last confinement was eight years before presentation. Her last menstrual period was a week before presentation. She denied any family history of breast disease. She had an intrauterine contraceptive device in the past, but had never used contraceptive pills. On examination, she was not pale, afebrile, anicteric or clinically ill-looking, but was anxious. The breasts were symmetrical, the nipples and areolae were normal. There was a poorly defined mass in the upper outer quadrant of the right breast. The medial part of the mass was hard in consistency. It was not attached to the skin or underlying structures. There were no clinically palpable ipsilateral lymph nodes. The left breast was essentially normal. All other systems were normal. A provisional diagnosis of right breast carcinoma was made.

Fine Needle Aspiration Cytology showed moderate cellularity and it was positive for malignant cells. A biopsy of the lump was suggested by the pathologist. Histopathology of the biopsy specimen showed a spectrum of lesions from the fibrocystic disease [Figure 1] to the intraductal carcinoma [Figure 2]. The case, therefore, typically illustrates intraductal carcinoma, which probably developed from a pre-existing fibrocystic disease.

It is a matter of practice/clinical importance when a clinician is confronted with a patient with benign breast lesion. Patients do ask the relationship of carcinoma to benign lesions of the breast. If a lesion has been shown on biopsy to be a simple tumor, a cyst or an example of fibrocystic disease, must it be regarded as precancerous and treated as such, or can the patient be assured that simpler measures will give a permanent cure? Unfortunately, there is no easy answer.

The subject can be approached from three different angles: (1) The frequency in which benign lesions are found in cancer-bearing breasts. (2) The frequency with which cancer patients give a history of previous benign disease. This is obtainable only in a small proportion of patients. (3) The frequency with which patients treated for benign lesions are found, when followed up for a period of years, to develop cancer. Studies of this kind have given divergent results, but the majority has indicated an increased risk.

The follow-up of women with a history of benign breast lesions shows that atypical hyperplasia is associated with a fourfold increase in the risk of its progression to cancer when compared with specimens without proliferative changes.[1] This supports the concept of severe epithelial proliferation as a precursor lesion for breast cancer, and may warrant its use as a marker for further studies.

Figures:

Figure 1: Fibrocystic change (epithelial hyperplasia subtype). Hyperplastic-epithelial-form papillae that project into dilated ductal lumina. There is apocrine metaplasia (H and E, ×205)

Figure 2: Intraductal carcinoma from another part of the same tissue shown in Figure 1. The malignant cells were confined to the ductal lumina (H and E, ×256)
breast cancer. Georgescu et al.[2] considered fibrocystic disease of the II and III degrees as facultative precancerous lesions. It was established from their study that occurrence of mammary cancer in fibrocystic disease following sectorectomy was 7.4 times higher than the mammary cancer rate in those without fibrocystic disease. In Ile-Ife, Adeniji[3] reported that two out of 13 women found to have ductal epithelial hyperplasia developed infiltrating ductal carcinoma (not otherwise specified) 10 – 15 months after an initial diagnosis of fibrocystic disease. Furthermore, Petrakis,[4] following epidemiological risk factors and cytologic studies of breast secretions obtained by nipple aspiration, reported that severe changes in the cytologic characteristics of the fluid were associated with a positive family history of breast cancer and fibrocystic disease. These findings were interpreted as supporting the hypothesis that women with such a family history may have increased susceptibility to environmental factors. When all these are put together, it becomes apparent that several factors act in concert, with atypical epithelial hyperplasia acting as a harbinger to other factors whenever/wherever it occurs.

It is advisable that the surgeon work in close collaboration with the pathologist to study the details of the variety of fibrocystic disease of the breast the patient is presenting with. A close follow-up is mandatory, particularly in patients with atypical epithelial hyperplasia, so that an early diagnosis of carcinoma can be made with the hope of better prognosis.

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