INTRACYSTIC CARCINOMA OF THE BREAST : A CASE REPORT

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Abstract : A 65-year-old woman noted a lump in her left breast, although fine needle aspiration cytology showed no carcinoma cells in the serous yellow fluid of the lump. Excisional biopsy revealed intracystic papillary carcinoma with a small invasion to the stroma in the cyst wall. Breast conserving surgery with irradiation to the residual breast tissue was performed. Intracystic carcinoma of the breast is a rare form of breast disease. An oval-shaped shadow with a partially irregular margin in the mammogram and cystic mass with an irregular inner wall in the echogram suggest a higher probability of this disease. Excisional biopsy is required for a pathological diagnosis prior to an appropriate treatment. Due to the generally favorable prognosis and unlikely chance of metastasis, breast conserving surgery is the proper treatment for the disease.

Key words : Intracystic papillary carcinoma, Breast
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INTRODUCTION

Intracystic carcinoma is a rare form of breast disease. Brodie reported the first case of the disease in 1846 (cited in 1). There have been several reports, however the incidence varies from only 0.56 to 2.0% of all female breast carcinomas^{1,2)}. Generally intracystic papillary carcinoma is not clinically determined as being either a secondary cystic degeneration of a previously noncystic carcinoma, or carcinomatous invasion of a pre-existing benign breast cyst²⁾. Furthermore, it is difficult to diagnose the disease differentially from an intraductal papilloma. We report a case of intracystic papillary carcinoma with infiltration to the stroma, which was diagnosed by open biopsy and treated with breast conserving surgery.

CASE REPORT

A 65-year-old woman noticed a lump in the left

breast in September, 1993 and visited our hospital in October, 1993. There were no remarkable occurrences in her previous or her family history. Physical examination revealed an oval-shaped, mobile, soft mass, measuring 2.6 cm in the maximum diameter in the upper outer quadrant of the left breast. The tumor with a clear and smooth margin was located 5 cm distant from the nipple. Skin or nipple retraction, and nipple discharge were not found. No metastatic lymph nodes were palpated in the axilla. A well defined, oval-shaped shadow with partially irregular margin was detected in the mammogram (Fig. 1). An echogram revealed a cystic mass with an irregular inner wall (Fig. 2). Fine needle aspiration of the lump yielded small amount of watery, yellow fluid and cytology of the aspirate was negative for malignancy.

Although no cancer cells were obtained by fine needle aspiration, There was a slight possibility of carcinoma accompanied by a cystic change. Therefore

Fig. 1. A mammogram showing a well defined oval opacity with partially irregular outline (arrow).

Fig. 2. An echogram showing a cystic lesion with an irregular inner surface (arrow).

Fig. 3. a, Microscopic study showing an intracystic papillary carcinoma of the breast and stromal invasion (arrows) (H.E. staining, original magnification $\times 40$).
 b, Atypical cells with a cribriform pattern (H.E. staining, original magnification $\times 100$).
 c, Invasion to fatty tissues (arrows) (H.E. staining, original magnification $\times 100$).

an excisional biopsy under a local anesthesia was performed, and a pathological study confirmed the diagnosis of intracystic papillary carcinoma (Fig. 3a,b, c). Re-excision of the tumor area and axillary dissection to level I was performed under general anesthesia. Pathologically there was no residual cancer, lymphatic vessel invasion or lymph node metastasis. Irradiation at the dosage of 50 Gy was performed on the residual breast as a routine treatment. The patient has been free from the disease for five years.

DISCUSSION

It is difficult to distinguish intracystic papillary carcinoma by clinical features from a benign process such as a simple cyst or intracystic papilloma. A well-defined opacity with a smooth outline in a mammogram may often resemble other benign forms of the breast³. Intracystic papillary carcinoma can be recognized as a malignant disease only if an invasion beyond the wall of the cyst occurs⁴. Pneumocystography often shows an irregularity of the inner surface of the cyst or a papillary projection into the lumen³.

Echography reveals both the cystic and solid components of the lesion and a cystic lesion sometimes indicates the presence of hemorrhage⁴. Magnetic resonance imaging (MRI) has the ability to visualize clearly both the cystic and solid components of the mass and further the papillary projections⁴. In the present case, a mass lesion with a partially irregular margin in mammograms and with the irregular inner surface was seen in the echograms, strongly suggesting carcinoma in spite of the cystic lesion.

The importance of analyzing the cystic fluid, especially if it contains blood, is critical for preoperative diagnosis. In histological examination, malignant cells are often found in the blood-stained fluid aspirated from cysts. Flow cytometric demonstration of aneuploid population may support the diagnosis of the disease⁵. The measurement of carcinoembryonic antigen (CEA)⁶ or prostate specific antigen (PSA) levels⁷ in the aspirated fluid may also be helpful in confirming the preoperative diagnosis. In this case, we attempted only histological study of the cystic fluid, which resulted in detection of no malignant cells in the

fluid.

Lefkowitz et al⁸⁾ reported that intracystic papillary carcinoma of the breast has 10-year disease free survival of 91% and 10-year over all survival of 100%. Distant metastasis or local chest wall recurrence had been seen in only this series of invasive papillary carcinoma⁸⁾. A mastectomy assures the greatest length of disease-free survival, but it is probably excessive treatment for most cases. It has recently been suggested that a radical mastectomy is not always indicated for the treatment of this lesion⁹⁾. Breast conserving surgery is considered to be the most suitable procedure for the disease, although axillary dissection or irradiation to the residual breast might be also necessary. Excisional biopsy should be performed in order to obtain a final diagnosis to decide upon a minimum invasive operative procedure.

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