Case Report

Case Reports of Malignant Mucocele-Like Lesions

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Mucocele-like lesions (MLL) of the breast have been reported as extremely rare as well as benign, but now it is believed they can be both malignant and benign. This paper describes two cases of malignant MLL, both subjected to immunohistochemical staining. Case 1: A 42-year-old woman with multiple malignant MLLs without evidence of a mass at presentation to our hospital after biopsy, but whose ultrasonogram showed small multiple hypoechoic lesions. Case 2: A 70-year-old woman, whose left breast cancer was found on routine mammography after modified radical mastectomy for right breast cancer. Pathologically, MLL with intraductal carcinoma was diagnosed. Case 1 underwent two lumpectomies in 3 years, but even now new lesions have developed. However, the patient refused to have another operation. C-erbB2 was negative in both cases. When malignant MLL is histologically of low grade, excisional biopsy is sufficient for a single MLL with intraductal carcinoma, while it may be necessary to perform a subcutaneous mastectomy for multiple lesions.


Key words: Breast cancer, Mucocele-like lesions (MLL), Intraductal carcinoma, Immunohistochemical staining

Mucocele-like lesions (MLL) of the breast originally were reported in 1986 by Rosen as benign lesions that histologically resembled mucinous carcinoma of the breast1. Subsequent reports proved the association between MLL and ductal hyperplasia or carcinoma2. Here we present two cases of malignant mucocele-like lesions.

Case Report

Case 1

A 42-year-old woman found a right breast lump by herself in September 1996, and underwent fine-needle aspiration at another hospital. The fine-needle aspiration cytology (FNAC) diagnosis was class III b, indicating malignant rather than benign disease. Since there were a few atypical cells in the mucinous material, mucinous carcinoma was suspected. As a result of the biopsy, MLL with intraductal carcinoma was suspected. In November 1996, the patient consulted the Tokushima Breast Care Clinic. Ultrasonography showed two hypoechoic lesions, one near the biopsy site, and one in another part of the breast (Fig 1). Lumpectomy was performed and the histological diagnosis was MLL with intraductal carcinoma. Because the surgical margin was histologically positive, subcutaneous breast mastectomy was recommended, but because the patient refused, she was only followed clinically. Four months after the lumpectomy, two new hypoechoic lesions were found on the ultrasonogram, and lumpectomy was performed again with the same histological diagnosis. Three months after the second lumpectomy, another two hypoechoic lesions were identified by ultrasonography, but the patient refused another operation. Until now, no change has been observed in the lesions. The patient’s family history and past history were unremarkable. On physical examination after biopsy, no evident mass in the breast or axillary lymph nodes was palpated. The mammogram showed only a focal, asymmetric density and small, round calcifications clustered in the upper outer quadrant of the right breast without any mass, so the patient was...
Fig 1. Ultrasonography of case 1 showed two hypoechoic lesions, one near the biopsy site, and one in another part of the breast.

Fig 2. Multiple cysts filled with mucinous substance, and mucin leaking from cysts.

classified as category 3. The ultrasonogram showed small multiple hypoechoic lesions, 4-8 mm in size, with clear margins, indicating cysts. Gross pathologic findings showed multiple cysts with a mucinous substance. Microscopic examination identified abundant mucin produced by the tumor cells filling the intraductal spaces, and where neoplastic epithelium had formed very low-grade papillary projections in some parts of the tumor (Figs 2 and 3). In the stroma, a mucinous substance had leaked without detached neoplastic epithelium, and the surgical margin was histologically positive after the first lumpectomy. According to the Van Nuys classification for DCIS

Case 2

A 70-year-old woman, who had undergone a modified radical mastectomy for invasive ductal cancer of the right breast two years previously, had a left breast cancer found during routine mammography. There was no palpable mass in the left breast and no axillary lymph nodes on physical examination. Small hypoechoic lesions were seen on the ultrasonogram. The mammogram showed clustered, pleomorphic calcifications in the upper outer quadrant of the left breast, with a category 4 classification.

Fig 3. Low papillary projections found in intraductal carcinoma.

Fig 4. The mammogram of case 2 showed clustered, pleomorphic calcification in the left breast, category 4.