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DUCTAL CARCINOMA *IN SITU* OF THE BREAST

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ABSTRACT

Objective: To investigate the clinical characteristics, treatment and prognosis of ductal carcinoma *in situ* (DCIS) of the breast. Methods: Clinicopathological and follow-up data were collected in 52 patients with DCIS. Results: The clinic data showed that 50 patients had signs of breast lumps or/and nipple discharges, 2 patients presented abnormal mammography; 2 patients had lymph node involved; and 14 patients were accompanied with intraductal papillomatosis. All patients were received surgical therapy. The follow-up data showed 1 patient locally recurred after lumpectomy, and was underwent mastectomy again, then cured. There were no patients died of DCIS. Conclusion: Mastectomy should be a standard surgical mode, and the prognosis of DCIS was favorable, but mammography for screening of asymptomatic women should be strengthened to find DCIS.

Key words: Breast, Ductal carcinoma *in situ*, Treatment, Prognosis

Until recently, ductal carcinoma *in situ* (DCIS) has been a relatively uncommon lesion in China, but the percentage of DCIS in all breast carcinomas has gradually risen with the incidence of breast cancer increasing. There were 52 DCIS patients treated in our hospital from 1972 to 1996; it comprises 1.6% of all breast cancers. Here, the group of DCIS patients was analyzed to discuss its clinical characteristics, treatment mode and prognosis.

MATERIALS AND METHODS

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Patients

There were 52 cases treated from 1972 to 1996 in Department of surgery, Cancer Hospital, Shanghai Medical University. All these cases were confirmed by pathologic diagnosis, with exception of DCIS with microinvasion and Paget's disease. 16 cases of these patients had been underwent biopsy in outpatient department; the other 36 cases were confirmed to be DCIS by frozen slides before the radical operation.

Clinical Characteristics

Age range of the group in the study was from 32 to 74 years at diagnosis time, and the median age is 46 years. 25 cases were at premenopause while 27 cases were at menopause. 3 cases had family breast cancer history. The duration of symptom was from 1 month to 6 years, and the median time was 9 months. Breast mass was the first presenting sing in 32 cases, nipple discharge was 9 months. Breast mass was the first presenting sign in 32 cases, nipple discharge was the first presenting sign in 14 cases, both breast mass and nipple discharge were simultaneously presenting in 4 cases. Mammography was not in routine use at the time, and mammogram was positive or suspicious without clinic sign in 2 cases. The largest tumor mass was 4 cm, while the smallest one was 0.5 cm. Tumor size was smaller than 2 cm in 24 cases, tumor size from 2 to 4 cm was in 12 cases. 1 case had double focus in unilateral breast. Most of nipple discharges were bloody and plasmatic. Axillary lymph nodes were clinical palpable in 9 cases.

Treatment

All the 52 cases received surgical treatment. In 1970s, the main surgical mode was extending radical mastectomy (ERM), and in early 1980s, the main surgical mode was radical mastectomy (RM), modified radical mastectomy (MRM) or simple mastectomy with low axillary dissection, and since 1990, conservative breast surgery (CBS) was offered. 13 cases received ERM, 18 cases received modified

ERM, 9 cases received RM, simple mastectomy was offered to 3 cases, and CBS was offered to 2 cases. Postoperative adjuvant chemotherapy was offered to 9 cases, and radiotherapy was offered to 4 cases.

Pathological Materials

All 52 cases were confirmed to be ductal carcinoma *in situ*. One case had ductal carcinoma in situ of accessory mammary, one case had double focus, and 14 cases accompanied with intraductal papillomatosis and 2 cases (3.85%) were axillary node-positive. By clinical examination before operation, 9 cases had been found the palpable axillary lymph nodes, among which, 3 cases had suspicious metastasis, but only 2 of them had been confirmed by pathology examination. 6 patients who had no suspicious positive nodes before operation were confirmed pathologic node-negative after operation. All cases with extending radical mastectomy had not been found metastasis in intramammary lymph nodes.

Follow-up

All 52 cases had complete record of follow-up. During the follow-up period of 1 - 17 years, all cases had still survived, especially including 2 cases with positive axillary lymph nodes (follow up to 10 and 14 years respectively). One case who had received lumpectomy had excised the recurrence lesions in 2nd, 5th, and 6th year. However, since the patient had received modified extended radical mastectomy in 7th year, she still survived in the 15th year.

DISCUSSION

Before 1980, Rosher reported that DCIS comprised less than 5% of all breast malignancies.[1] When most cases of DCIS were detected by physical examination because of breast mass or nipple discharge. Since the mid-1980s, the extensive use of mammography for screening of asymptomatic women and widespread advocation to finding early breast cancer had resulted in a marked increase in the frequency of the detection of DCIS. Frykberg reported that DCIS increasingly comprised about 25% of all breast cancers.[2] In our country, most of DCIS were detected by physical examination with breast mass or nipple discharge. Only 2 cases in the study were detected by positive mammogram. So periodic mammogram screening of asymptomatic women would result in finding more DCIS.

DCIS is refereed a specious group of breast carcinoma. The essential histologic feature of DCIS is confinement of cancer cell lying within their natural basement membrane boundaries, precisely exclude the presence of any stromal invasion. The clinical significance of DCIS is to differ from its benign precursors and invasive counterparts. DCIS is the noninvasive stage of breast cancer and has a favorable prognosis, but it also would develop into invasive stage. It is generally agreed that the most of DCIS would develop into invasive carcinoma if inadequately treated after ten years. With the recognition of its biology of DCIS, the treatment mode was changed from radical mastectomy to CBS. DCIS have rarely positive lymph nodes, it was reported that the incidence of node-positive was about 2%,[3] and it maybe related to DCIS accompanied with microinvasion. In routine pathologic examination, it is difficult to find microinvasion in DCIS cases. The local recurrence rate (LRR) after mastectomy is only 0.75%; its mortality was 1.7%.[2] Because of multicentricity and the positive excisional margin, the LRR after lumpectomy was 18%. However, if postoperation radiotherapy was offered after lumpectomy, the LRR was down to 9%.[4,5] Even if local recurrence occurred, salvage mastectomy is otherwise indicated and provides a reasonable chance of long term survival. Therefore, in view of hazards of DCIS, the danger of its evolving into invasive carcinoma and its extensive multicentricity, mastectomy is standard treatment of DCIS for favorite outcome. It was reported the incidence of LRR was related to pathologic type, nuclear grade, tumor size, tumor multicentricity and the status of excisional margin.[6] It is well accepted that mastectomy should be used in treatment of DCIS, if DCIS is of large size, multicentricity and comedo type or high nuclear grade. Because most of DCIS are detected by mammogram and the tumor size was less than 1 cm, the main surgical mode is CBS.[7]

In this study, most DCIS had obvious clinical symptoms, size of most tumors was larger, and several cases had clinical positive nodes. The pathologic node-positive rate is 3.85%. 1 case had local recurrence; therefore, the simple mastectomy with low and mid axillary lymph nodes dissection was the good selection for treatment to DCIS. CBS following adjuvant radiotherapy or salvage mastectomy after local recurrence is the further selection when mammogram is widely applied to detect DCIS.

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