

# *Fibrocystic Disease of the Breast*

Sompong Raksasook, MD, FRCS (Ire.)

Two hundred and fifty-six patients presenting with fibrocystic disease were closely followed and analysed. It was found in the younger age-group in this series. Recurrent rate was 36 per cent among the operated group. In the non-operated group, only 13.33 per cent recurred within 9 months to 2½ years after complete regression. Neither group developed carcinoma subsequently.

Fibrocystic disease of the breast is a very common disease in women. Its relationship to carcinoma has long been a controversial subject. Many names have been given to this disease according to various histological findings which may sometimes appear in the same lesion. Such names are : cystic disease; Schimmelbusch's disease; chronic cystic mastitis; adenosis; fibroadenosis. Geschickter<sup>1</sup> used the term "mammary dysplasia" for this group of lesion. However, some authors have included fibroadenoma as one component of mammary dysplasia when many types of histological characters appear in the same lesion. It is therefore necessary to define fibrocystic disease referred to in this study as lesions characterised by the presence of fibrosis; adenosis; papillomatosis; fibroadenoma and multiple cysts of various sizes which may be grossly seen or microscopically observed in the same lesion. Pure localised fibroadenomata were excluded from this study.

The purpose of this study is to find out whether fibrocystic disease subsequently develops into mammary carcinoma. This was achieved by long term following up of these patients. A series of 256 patients diagnosed as fibrocystic disease was analysed. Its age incidence, relationship to menstruation, lactation, recurrence rate and the possibility of occurrence of carcinoma were presented.

*From the Department of Surgery,  
Ramathibody Hospital Medical School,  
Mahidol University, Bangkok, Thailand.*

## **MATERIAL AND METHOD**

Two hundred and fifty-six patients presenting with fibrocystic disease during May 1969 through May 1978 were regularly followed. The age incidence; duration of complaints; menstrual and lactational status; and end results after periods of following up were analysed. Diagnosis was based on careful history taking and clinical examinations. Mammography was limited to some patients when findings in physical examinations were inconclusive. It was not used in the presence of a definite palpable mass or masses when excision was indicated in this series.

Patients without a definite three dimensional mass were treated non-surgically. Findings at physical examination in this group varied from nodularity and induration of the breasts with or without pain and/or tenderness. Reassurances, administration of tranquilizers or analgesics may be indicated as necessary. Their symptoms and signs were regularly followed. If a definite palpable mass was found, the patient was treated surgically by excision.

All patients who had palpable masses were treated by wide excision and the specimens were sent for pathological diagnosis. Frozen section for quick diagnosis was done in suspected cases.

Appointments were made for every patient to attend the follow-up clinic every three to six months. Only patients primarily seen and followed by the author were included in this study, in order to obtain uniformity regarding evaluation of clinical changes of the lesions.

## **RESULTS**

During May 1969 through May 1978, a total of 840 cases with breast disorders were seen. There were

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764 benign (90.95 per cent) and 76 malignant (9.05 per cent) lesions. Of the 764 benign lesions, 256 were diagnosed and treated as fibrocystic disease, giving the incidence of 33.51 per cent among the 764 benign lesions. Patients in this category included a variety of presentations varying from pain and indurated areas or nodularity of the certain part of the breast, to obvious three dimensional palpable mass or masses. All patients were female.

In this series, fibrocystic disease is most commonly found in the 21-30 years age-group (Table 1), with the highest frequency at 24 years. The average age was 32.42 years, range between 15-53 years.

Table 1 Age Incidence

Age	Number of Patients	Per cent
11-20	27	10.55
21-30	127	49.61
31-40	65	25.39
41-50	35	13.67
51-60	1	0.39
Not recorded	1	0.39
<b>Total</b>	<b>256</b>	<b>100.00</b>

Marital status was recorded as 149 not married (58.20 per cent) and 107 married (41.80 per cent). Lactational status was recorded in 225 patients. Only women giving breast feeding to their babies for more than three months were considered as "breast fed". Thirty-seven patients were considered as "breast fed" (16.44 per cent) while 188 (83.56 per cent) were not. All patients had not yet menopausal. Most of the patients (209/238) still had regular menstruation (87.82 per cent) while the rest (29/238) had irregular menstruation (12.18 per cent).

There were three main types of complaints by these patients : pain and induration; palpable mass or masses and nipple discharge. Pain was recorded in 161 patients (62.89 per cent). A palpable mass or masses were found in 203 patients (79.30 per cent) while there was no mass in 53 patients (20.70 per cent). Sixteen patients (6.25 per cent) had discharge from the nipples before the operations. The type of discharge was shown in Table 3.

The duration of complaints was recorded in 247 patients (Table 2). Most of the patients presented with either of the complaints mentioned above. One hundred and sixty-eight patients (68.02 per cent) had known of the breast disorders within less than one year. The longest duration of complaints was 20 years; the shortest was one day.

Excision of the mass was done in 121 patients (47.27 per cent) while 135 (52.73 per cent) were not operated upon. Only 75 (61.98 per cent) of the

Table 2 Duration of Complaints (Recorded in 247 patients)

Duration in Years	Patients	Per cent
Less than 1	168	68.02
1	33	13.36
2	20	8.10
3	9	3.64
4	8	3.24
More than 5	9	3.64
<b>Total</b>	<b>247</b>	<b>100.00</b>

Table 3 Patients with Nipple Discharge

Type of Discharge	Patients	Per cent
Serous	7	43.75
Sero-sanguinous	2	12.50
Frank red blood	2	12.50
Milky	2	12.50
Pus	2	12.50
Not specified	1	6.25
<b>Total</b>	<b>16</b>	<b>100.00</b>

operated cases (121) and 100 (74.07 per cent) of the non-operated cases (135) attended regular follow-up clinics. Recurrence occurred in 27 of the 75 patients (36 per cent) being followed in the operated group. No recurrence occurred in 48 of the 75 patients (64 per cent). The length of observation time were as follows : 10 for more than 1 year; 34 for 1-5 years; 4 for 6-8 years.

In the non-operated group, 55 (55 per cent of the 100 patients regularly followed) were improved but with persistence of symptoms and signs without a definite mass. These patients were followed for five years. Complete spontaneous regression occurred in 45 patients (45 per cent) of the non-operated group. Regression occurred within six months to five years. Recurrence occurred after nine months to two and a half years in six of the 45 spontaneously regressed lesions, giving the recurrent rate of 13.33 per cent. None of the patients had developed carcinoma of the mammary gland in both groups.

## DISCUSSION

Fibrocystic disease is the most common benign lesions of the breast. It has a tendency to recur, either at the same or new site; and its relationship to carcinoma have caused worries and anxieties to both patients and physicians alike.

Geschickter<sup>1</sup> found that the incidence of mammary carcinoma in 793 cases of mammary dysplasia

followed by an average of 10.2 years was 1.26 per cent instead of the expected 0.42 per cent. He believed that longstanding adenosis may predispose to carcinoma if this is followed by adequate estrogenic stimulation. He concluded that mammary dysplasia is not truly precancerous but it may form the focus for subsequent mammary carcinoma. Haagensen<sup>2</sup> had the same opinion. In 1940, Warren<sup>3</sup> reported carcinoma developing from three to four times more frequently in patients who previously had chronic cystic mastitis than those with normal breasts.

In this study, the maximum incidence of fibrocystic disease of the breasts in women between the ages of 21-30 years was lower than in Geschickter's series from which the maximum incidence was between the ages of 35 and 40 years. Marital status was not significant, since the percentage of single and married patients (58.20 and 41.80 percent respectively) were almost equal. Lactational status did show some significance since 83.56 per cent of patients who had fibrocystic disease had not given breast feeding to their children. This supports the concept that fibrocystic disease is influenced by female sex hormones. All patients had not yet menopausal; 87.82 per cent of these had regular menstruation.

A palpable mass is the most common complaint (79.30 per cent). It may associate with pain. This finding is similar to that reported by Geschickter<sup>1</sup> and Haagensen<sup>2</sup>. Only 6.25 per cent came with discharge from the nipple and these were mostly serous (43.75 per cent) (Table 3).

The management plan was divided into two groups because of the labile behaviour of this disease and its tendency to spontaneous regression. In the group that was treated surgically, the recurrent rate was 36 per cent. In the non-operated group, it was 13.33 per cent. Spontaneous regression occurred in 45 per cent of cases. This occurred in patients whose cystic components of the disease were not large enough to be palpable.

Swerdlow and Humphrey<sup>4</sup> reviewed slides of 630 breast biopsies and mastectomy specimens during the period of 1946-1955. They found that 13 patients each had a biopsy diagnosed as fibrocystic disease and later a second biopsy was interpreted as carcinoma. Sixty patients each had a biopsy diagnosed as fibrocystic disease and did not develop carcinoma. The average age of the latter group was 43.5 years with a range from 17-84 years. The group of patients developing carcinoma ranged in age from 24 to 62 years with an average of 47 years.

It is surprising to notice that after following these patients regularly for eight years, none of the patients who were diagnosed as fibrocystic disease, both clin-

ically and histologically, developed mammary carcinoma. However, the number of the patients in this study is very small and is not comparable to other series mentioned above. Although the longest time that these patients were followed was eight years; only a small number of operated cases (8.33 per cent) were seen regularly up to that period. Most of the patients (70.83 per cent) attended regular follow-up to only five years after the operation.

Since none of the patients who have fibrocystic disease in this series subsequently developed carcinoma, its relationship between these two conditions is not as threatening in Thailand as it seems to be in the west. However, one must remember that fibrocystic disease that preceded the development of carcinoma was characterized by hyperplasia of epithelial cell linings of small and large ducts; lobes and lobules of the mammary gland (Swerdlow and Humphrey). These types of histological characters were also commonly seen in specimens of fibrocystic disease in patients who had not subsequently developed carcinoma after long term follow-up (10 years). The difference between these two groups described by Swerdlow and Humphrey is the degree of hyperplasia. These somewhat "borderline" histological changes are sufficient for those who are dealing with this disease to pay more attention to these patients. The only safe way is to educate these patients about the usefulness and importance of attending regular follow-up.

## CONCLUSION

Fibrocystic disease is the most common benign breast lesion. Its relationship to mammary carcinoma is not evident in this study, since none of the patients subsequently develop carcinoma. The low maximum age incidence and the short period of following up may explain the absence of carcinoma in this series. However, the similarity of histological characters between cases primarily diagnosed as fibrocystic disease but which subsequently developed carcinoma and those which did not, emphasizes the necessity of regular and close following up of these patients for at least 10 years, or preferably, for the rest of their lives.

## REFERENCE

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