

Analysis of Patients with Breast Symptoms at a Breast Clinic

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유방증상으로 유방클리닉을 찾은 환자의 진단별 특성

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목 적: 유방암환자, 양성유방질환환자 그리고 유방에 질병이 없는 환자의 증상을 알아보고 특히 유방암 환자에서 유의해야 할 증상 특징을 구명함과 동시에 증상기간과 이에 영향을 주는 인자가 있는지도 알아보고자 하였다.

대상 및 방법: 1988년 1월부터 1998년 12월 사이에 유방클리닉에서 본 환자 3,648명을 대상으로 하였다. 이중 1,913명은 유방에 질병이 없는 여성(제1군), 965명은 유방암환자(제2군), 그리고 770명은 양성유방질환환자였다(제3군). 초진시 유방증상을 분석하여 각 군과 증상과의 관계를 알아보고자 하였고 특히 암환자에서 중요한 증상을 구명하려고 하였다. 환자의 증상기간은 경제적인 여건에 따라, 학력정도에 따라 그리고 각 연령층에 따라 분석 비교하였다. 통계검정은 Pearson chi-square 혹은 ANOVA table을 사용하였다.

결 과: 유방에 병변이 없는 것으로 판명된 여성에서 가장 많은 증상은 유방종괴촉지(57.9%)였고 그 다음은 유방통증(50.8%)이었다. 유방암환자에서는 유방종괴촉지(95.4%)가 압도적으로 많았고 유방통증은 14.6%에서 있었으나 유방통증을 호소한 대부분의 유방암환자들은 종괴를 함께 동반했고 유방통증만으로 내원한 환자는 0.9% (9/965)에 불과했다. 유두이상분비의 빈도는 암환자에서 낮았고(5.6%) 그나마도 대부분은 다른 증상을 동반하였고 유두이상분비만을 호소한 암환자는 1.1% (10/965)에 불과했다. 아무 증상 없이 검진을 위해 내원한 환자는 전체환자의 3.8%에 불과했고 유방암환자는 2.5%만이 증상 없이 내원해서 암이 발견되었다. 평균 증상기간은 질병유무에 관계없이 아주 길어 전체환자에서는 317일이나 되었다. 암환자에 있어서는 경제상태가 좋을수록 증상기간이 어느 정도 짧게 나타났으나 다른 군의 환자에서는 영향을 주지 않았다. 학력이나 연령은 아무 환자에서도 증상기간에 영향을 주지 못했다.

결 론: 외래환자의 유방증상은 상당부분에서 질병과 관계가 없었고 유방암환자의 증상은 무통의 종괴가 거의 대부분이었고 유방통증이나 이상유두분비는 아주 드물게 나타났다. 아직은 증상 없이 내원하는 환자가 너무 적어 일반의 조기진단에 대한 계몽과 교육이 필요하고 유방방사선촬영을 통한 대증선택검사의 보급도 시급하다고 사료된다.

핵심 단어: Breast symptoms, Breast diseases

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INTRODUCTION

Clinical manifestations of the breast diseases are relatively simple. A palpable mass, mastalgia, and abnormal nipple discharge are among the more common presenting symptoms. Other symptoms include enlargement of one or both breasts, change of the nipple, retraction, alterations of symmetry, ulceration, erythema, and an axillary mass.

These symptoms, especially breast pain and lumps, are rather common even among females without obvious breast pathology. Bland and others (1) reported that up to one-half of patients presenting with breast complaints had no evidence of breast pathology. They also reported that breast pain represented more commonly a proliferative benign breast disorder rather than carcinoma.

Nipple discharges are also quite common and most clinically significant nipple discharges are spontaneous, persistent, and nonlactational in nature (2~3). Newman et al reported that there was spontaneous discharge from the nipple in 10% of 2685 women undergoing routine health examination (4).

There have been only a few comprehensive studies regarding symptomatology of the Korean women with breast problems (5~6). This study is to evaluate the symptoms and durations of symptoms in patients visiting the breast clinic of the department of surgery from 1988 to 1998.

MATERIALS AND METHODS

A total of 3,648 patients with breast problems at presentation were included in this study that were seen between January 1988 and December of 1998 at the breast clinic of the Department of Surgery. One thousand nine hundred and thirteen patients turned out to have no evidence of breast diseases following

physical examination, mammography, and if needed, ultrasonography (group-one) and 965 patients proved to have breast cancer (group-two), and various benign breast diseases were diagnosed in 770 patients (group-three). All 770 patients with benign breast diseases underwent some type of minor operative procedures such as local excision and incision and drainage and found to have benign breast tumors in 450 patients, fibrocystic changes in 206 patients, inflammatory disorders in 60 patients, and other benign diseases in 49 patients.

Initial presenting symptoms of these patients were analysed and attempts were made to characterize symptomatology of various disease conditions. And, considering delayed diagnosis in many of patients with breast cancer in this country, durations of symptoms were compared according to their economic conditions, educational status, and their ages at the time of presentation.

The materials used in this study were collected through a questionnaire given to each patient at the time of their initial visit to the clinic. Efforts had been made to make sure that each person answered all questions in the questionnaire. Specific randomization process was not followed but there was no selection criteria for these patients except that most of the records of the breast cancer patients were included but for the rest of patients, selection was determined solely by the schedule of the author on each particular clinic day. All available data went into a database program of a personal computer. Questions without answer were treated as missing data. The data were processed using SPSS program (7) and statistical analyses were performed using Pearson chi-square or ANOVA table.

RESULTS

Three main symptoms of patients that visited the

Table 1. Frequency of symptoms at initial visit

	Normal women* (n=1909)	Breast cancer† (n=965)	Benign disease† (n=770)	All patients (n=3644)	Pearson chi-square
Breast mass	1108 (57.9%)	921 (95.4%)	660 (85.7%)	2689 (73.8%)	.000
Breast pain	971 (50.8%)	141 (14.6%)	160 (20.8%)	1272 (34.9%)	.000
Abnormal discharge	161 (8.4%)	54 (5.6%)	69 (8.9%)	284 (7.8%)	.011

*Patients found to have no evidence of breast diseases (Group One), †Patients found to have breast cancer (Group Two),

†Patients found to have benign breast diseases (Group Three)

breast clinic with breast problems were breast mass, breast pain (mastalgia), and abnormal nipple discharge. Missing data in symptoms were present in four of 3648 patients and all these four patients were in the group-one.

Among 1909 patients in group-one, a complaint of breast lump was present in 1108 patients (57.9%), breast pain in 971 (50.8%), and abnormal nipple discharge in 161 patients (8.4%). For patients in group-two (n=965), a breast mass was present in 921 (95.4%), breast pain in 141 (14.6%), and abnormal nipple discharge in 54 (5.6%), and for patients in group-three, corresponding figures were 660 (85.7%), 160 (20.8%), and 69 (8.9%), respectively. For entire patients of 3,644, a breast mass as a symptoms was present in 2,689 (73.8%), breast pain in 1,272 (34.9%), and abnormal nipple discharge in 284 (7.8%). Comparison of each of these symptoms by groups showed statistically significant differences (Table 1).

Each patient may have one, two or all three symptoms. In group-one patients, 735 (38.4%) had mass alone as their presenting symptoms, 585 patients (30.6%) pain alone, and 84 patients (4.4%) abnormal nipple discharge alone. Three hundred and thirty two patients (17.4%) had mass and pain together, 23 patients (1.2%) mass and abnormal nipple discharge, and 36 patients (1.9%) pain and abnormal discharge together. Eighteen patients (0.9%) presented with all three symptoms and ninety-six women (5.0%) pre-

sented without any symptoms. In group-two, 755 (78.2%) presented with mass alone, and nine (0.9%) and 10 patients (1.1%) each presented with breast pain alone and abnormal discharge alone, respectively. Combinations of symptoms in group-two were as follows: mass plus pain in 123 patients (12.8%), mass plus abnormal nipple discharge in 35 (3.6%), pain plus abnormal nipple discharge in only one (0.1%), and all three symptoms in eight (0.8%). Twenty-four patients (2.5%) presented without any symptoms. In group-three, 539 patients (70.0%) presented with mass alone and 43 patients (5.6%) and 38 patients (4.9%) each presented with breast pain alone and abnormal discharge alone, respectively. Combinations of symptoms in group-three were as follows: mass plus pain in 101 (13.1%), mass plus abnormal nipple discharge in 15 (1.9%), pain plus abnormal nipple discharge in 11 (1.4%), and all three symptoms in five (0.7%). Eighteen (2.3%) presented without any symptoms (Table 2).

Duration of symptoms was defined as the interval between the time when patients first recognized their symptoms and their first visit to the clinic for their symptoms. Those without recorded duration on the questionnaire were treated as missing data. Available numbers of patients were 1867 in group-one, 959 in group-two, and 750 in group-three. Durations of symptoms were divided in random ranges as shown in Table 3, which summarizes the number of patients

Table 2. Distribution of symptoms by group

	Normal women* (n=1909)	Breast cancer [†] (n=965)	Benign diseases [‡] (n=770)	All patients (n=3633)
Mass only	735 (38.4%)	755 (78.2%)	539 (70.0%)	2029 (55.7%)
Pain only	585 (30.6%)	9 (0.9%)	43 (5.6%)	637 (17.5%)
Discharge only	84 (4.4%)	10 (1.1%)	38 (4.9%)	132 (3.6%)
Mass + Pain	332 (17.4%)	123 (12.8%)	101 (13.1%)	556 (15.2%)
Mass + Discharge	23 (1.2%)	35 (3.6%)	15 (1.9%)	73 (2.0%)
Pain + Discharge	36 (1.9%)	1 (0.1%)	11 (1.4%)	48 (1.3%)
All Three	18 (0.9%)	8 (0.8%)	5 (0.7%)	31 (0.9%)
No symptoms	96 (5.0%)	24 (2.5%)	18 (2.3%)	138 (3.8%)

*Patients found to have no evidence of breast diseases (Group One), [†]Patients found to have breast cancer (Group Two),

[‡]Patients found to have benign breast diseases (Group Three)

Table 3. Distribution of symptoms by duration

	Normal* (% , Cum [†] %) n=1867	Cancer [†] (% , Cum [†] %) n=959	Benign [§] (% , Cum [†] %) n=750
0 day	79 (4.2%, 4.2%)	30 (3.1%, 3.1%)	18 (2.4%, 2.4%)
1 ~ 14 days	416 (22.3%, 26.5%)	177 (18.5%, 21.6%)	202 (26.9%, 29.3%)
15 ~ 30 days	313 (16.8%, 43.3%)	201 (21.0%, 42.5%)	115 (15.3%, 44.7%)
31 ~ 60 days	179 (9.6%, 52.9%)	102 (10.6%, 53.2%)	60 (8.0%, 52.7%)
61 ~ 90 days	105 (5.6%, 58.5%)	89 (9.3%, 62.5%)	39 (5.2%, 57.9%)
91 ~ 180 days	214 (11.5%, 70.0%)	124 (12.9%, 75.4%)	84 (11.2%, 69.1%)
181 days ~ 1 year	231 (12.4%, 82.3%)	129 (13.5%, 88.8%)	89 (11.9%, 80.9%)
1 ~ 3 years	189 (10.1%, 92.4%)	60 (6.3%, 95.1%)	93 (12.4%, 93.3%)
Over 3 years	141 (7.6%, 100.0%)	47 (4.9%, 100.0%)	50 (6.7%, 100.0%)

*Patients found to have no evidence of breast diseases (Group One), [†]Cumulative, [‡]Patients found to have breast cancer,

[§]Patients found to have benign breast diseases

in each group according to the durations. Cumulative percentages in each group of patients indicated that there was no difference in duration of symptoms between groups. The number of patients with durations of symptoms less than 30 days were 43.3%

(808/1867) in group-one, 42.5% (408/959) in group-two, and 44.7% (335/750) in group-three. The number of patients with the duration of symptoms less than 60 days were 52.9%, 53.2%, and 52.7% for the group-one, group-two, and group-three, respectively. Excep-

Table 4. Mean duration (days) of symptoms by economic status

	Normal women* (n=1850)	Breast cancer [†] (n=861)	Benign diseases [‡] (n=734)	All patients (n=3576)
High class	287 (n=70)	146 (n=17)	135 (n=28)	229 (n=115)
Middle class	333 (n=1454)	225 (n=561)	332 (n=570)	309 (n=2585)
Low class	320 (n=326)	397 (n=283)	367 (n=136)	357 (n=745)
Significance	0.825	0.010	0.259	0.099

*Patients found to have no evidence of breast diseases (Group One), [†]Patients found to have breast cancer (Group Two),

[‡]Patients found to have benign breast diseases (Group Three)

Table 5. Mean duration of symptoms by educational status

	Normal* (n=1855)	Breast cancer [†] (n=858)	Benign diseases [‡] (n=735)	All patients (n=3448)
No education	555 (n=50)	397 (n=126)	363 (n=21)	433 (n=197)
Grade school	334 (n=347)	304 (n=303)	279 (n=109)	314 (n=759)
Middle school	363 (n=456)	310 (n=176)	255 (n=136)	331 (n=768)
High school	303 (n=655)	147 (n=179)	370 (n=270)	294 (n=1104)
College	230 (n=347)	203 (n=74)	353 (n=199)	305 (n=620)
Significance	0.070	0.063	0.482	0.132

*Patients found to have no evidence of breast diseases (Group One), [†]Patients found to have breast cancer (Group Two),

[‡]Patients found to have benign breast diseases (Group Three)

tions were found in patients in group-two that had fewer patients (11.2%) for the duration longer than 1 year than patients in group-two and group-three (Table 3).

Economic conditions influenced the average duration of symptoms of patients in group-two with shorter average duration as the economic conditions became better (147 days, 225 days, and 397 days for high, middle, and low economic status respectively, $p=0.01$). But for patients in group-one and group-three, no differences were found by economic status (Table 4).

Higher educational status showed tendency to shorten the average duration of symptoms in group-one and

group-two, but statistically significant differences were not present in any group of patients (Table 5).

Ages of the patients did not influence the average duration of symptoms in all groups (Table 6).

DISCUSSION

Most of patients visiting the outpatient clinic for breast problems are not cancer related. Benign conditions are far more common than cancer. England and coauthors (8) reported that about 90 per cent of these patients had benign lesions. Most common benign lesions found included macrocystic cysts, galactoceles and fibroadenomas (9). Up to one-half of

Table 6. Mean duration of symptoms by ages

	Normal women* (n=1867)	Breast cancer [†] (n=959)	Benign diseases [†] (n=750)	All patients (n=3576)
10~19세	261 (n=27)	439 (n=7)	316 (n=45)	308 (n=79)
20~29세	279 (n=319)	138 (n=42)	314 (n=231)	283 (n=592)
30~39세	326 (n=790)	176 (n=188)	389 (n=237)	315 (n=1215)
40~49세	339 (n=465)	305 (n=335)	307 (n=156)	322 (n=956)
50~59세	439 (n=199)	290 (n=243)	270 (n=63)	346 (n=505)
60~69세	327 (n=58)	402 (n=112)	217 (n=14)	364 (n=184)
70세 이상	156 (n=9)	269 (n=32)	101 (n=4)	231 (n=45)
Significance	0.221	0.219	0.753	0.693

*Patients found to have no breast diseases (Group One), [†]Patients found to have breast cancer (Group Two), [†]Patients found to have benign breast diseases (Group Three)

patients presenting with breast complaints have no evidence of breast pathology (1). But unfortunately, the clinical manifestations of breast cancer are not unique and not easily distinguished from those of benign conditions.

The most common clinical manifestation of breast cancer is a mass. And the mass is discovered in 65% or more of cases by women themselves (1, 10). The mass may be tender, but it is more often painless. And almost 15% of palpable cancers are accompanied by discomfort (11). Breast pain represents more commonly a proliferative benign breast disorder rather than carcinoma (1).

In this study a breast mass and breast pain were both very common in all groups of patients. A breast mass was presenting symptom in 95% of breast cancer patients, 86% of patients with benign breast diseases, and 58% of patients who turned out to have no breast diseases. Breast pain was less common than breast mass occurring in 15% of breast cancer patients and 21% of patients with benign diseases, but quite common (51%) in women without breast diseases. More important to note was that in breast cancer

patients, most of those with initial complaint of breast pain also had breast mass (123/141, 87%) and only nine patients (9/965, 0.9%) had breast pain as the only presenting symptom.

Nipple discharge has usually been divided into galactorrhea and abnormal nipple discharge. Galactorrhea has been defined as spontaneous nipple discharge of milklike fluid and usually from stimulation of the breast or increased serum level of prolactin due to oral contraceptives, thyroid disease, or pituitary adenoma (12~13). Nipple discharge was neither a frequent complaint nor a frequent sign of breast cancer. Only three to five per cent of consultations (14) and 7.4% of breast operations (15) were in response to such discharge. No more than two to three per cent of cancers were associated with discharge and about 80 to 86% of these appeared with a mass (16). A local pathological lesion was found if the discharge was spontaneous, was from on breast only, and was confined to one duct.

In this study, abnormal nipple discharge was present in 8.4% (161/1909), 5.6% (54/965), and 8.9% (69/770) of patients in group-one, group-two, and

group-three, respectively. In breast cancer patients (group-two), only 10 patients had abnormal discharge alone as their presenting symptom and 35 patients had a combination of abnormal nipple discharge and a palpable mass, indicating that abnormal nipple discharge is a rare symptom in patients with breast cancer.

In one study published in 1987 which included 280,000 women without any symptoms related to their breasts who were screened both with mammography and physical examination, 39% of cancers were found by mammography alone. Among the minimal cancers detected in the same study, 54% were detected by mammography alone. If more women seek medical consultation before they have symptoms or if a comprehensive screening program can be developed, more breast cancers can be found in earlier stages with corresponding lower mortality. It has been shown that screening can decrease breast cancer mortality by about 30% for women screened at age 50 and older and probably for women aged 40 to 49 as well (17~19).

Although women in this study were not related to screening, in the absence of a comprehensive screening program in this country, more asymptomatic women should be seeking medical consultation. But as seen in this study only 3.8% (138/3633) of patients visited the outpatient clinic. Among breast cancer patients, only 2.4% (24/965) came without any symptoms.

Haagensen wrote: "Despite the fact that the symptoms of breast carcinoma are recognized by most women, it is a tragic fact that many of them delay a long time before consulting a physician after they have discovered one or another of the initial symptoms of breast carcinoma." He reported that in his personal series of patients, the median delay was 11.9 weeks from 1943 to 1955, 5.5 weeks between 1956 and 1967, and 4.1 weeks between 1968 and 1980, and economic factor and lack of education were among

factors determining this delay (2). Our data came from patients seen during the last 11 years and the average duration for breast cancer patients was 280 days, with median 60 days (8.6 weeks). Economic factor did contribute in our breast cancer patients but education did not. Our educational system is probably lacking to inform necessary and essential medical matters to the public and we also need to develop a comprehensive national screening program.

CONCLUSION

The most important symptom of the breast cancer is a palpable mass in the breast. The breast pain and abnormal nipple discharge are not important symptoms of the breast cancer, although we can not disregard completely any of these symptoms as a symptom of the breast cancer.

A lump in the breast and breast pain as presenting complaints are quite common in women without breast disease, and it is very important to reassure these patients that they do not have breast cancer.

Only a minority of women consults physicians without any symptoms and the mean duration of symptoms for breast diseases is over 10 and half months (317 days). We do need more widespread public education regarding breast cancer and we should have a better and systematic educational system in the primary and secondary school systems.

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