BREAST CANCER IN NORTHERN PAKISTAN

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ABSTRACT

One hundred and twenty patients were treated for carcinoma of the breast at the District Head Quarter Teaching Hospital, Abbottabad from 1984-1989. The age at diagnosis appears to be bimodal with an early peak between 36 years and 40 years and a later peak between 60 years and 66 years. As expected, these patients were of high parity (median 5) and 96% of them had breast fed for an average of 16 months. late presentation with advanced systemic disease accounts for the dismal prognosis. Eighty four percent of the patients presented with late disease and only 16% with early disease. Of the 25 patients, followed upto death , the median survival was 12 weeks. For various logistic reasons, long-term follow up was not possible for the remaining patients. To improve the outcome of breast cancer in our community an active educational programme is needed to increase the public awareness of the significance of beast symptomatology.

Key words: breast cancer, late presentation.

INTRODUCTION

Although breast cancer has been largely regarded as a disease of the Western world,[1-2] it has been well documented in some parts of the Indo-Pak subcontinent[3-4]. It is estimated that one in nine women will develop breast cancer in their lifetime and every year the number of women who develop breast cancer increases 1.5% [5-6]. In USA in 1969 66,000 new cases of breast cancer were diagnosed and in 1975 the number of new cases diagnosed was 88,000. 70 % of the breast cancers do not have the history [6]. Only 5 to 10% have a hereditary type of breast cancer. The hereditary form of breast cancer tends to occur in younger women and 50% of women in affected families develop breast cancer [3,5]. Clinical assessment of the disease is accurate and reliable although interpretation frequently differs between observers.[2]

This study presents our recent experience with the breast carcinomas and also identifies the characteristics of the patients who develop the disease in our practice.

PATIENTS AND METHODS:

Between 1984-1989, 118 women and 2 men were admitted to DHQ Teaching Hospital with the diagnosis of breast cancer. The two male patients have been excluded from the study.

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This series may be taken as a typical of the disease as it occurs throughout the Northern part of Pakistan as this hospital serves as a major referral centre for about 3 million people. The first year of this study was conducted retrospectively but the study was conducted prospectively for the next 4 years. All information was obtained from the patient's case records for the first year of the study and from personal interviews for the subsequent 4 years. In this study, we looked at the following patient characteristics: age, sex, parity, duration of breast feeding, age at first pregnancy, age at menarche, age at menopause, duration of hormonal contraception, duration of symptoms from the disease, size of the tumor, side of the tumor, evidence of metastases, results of Hb and ESR, type of treatment and the time to death. The TNM staging system has been used in this study.

RESULTS:

During the 5 year period under study, we treated 120 patients. Two of these patients were male (i.e. 2%) giving a male to female ratio of 1:109. The age of patients ranged from 27 to 72 years (median 50) (Table-1). The disease is bimodal in nature with an early peak between 35 years and 40 years and a late peak between 60 years and 65 years (Table-I). It was possible to determine the exact age at menarche in 50 patients and at menopause in 20 patients. The median age at menarche was 13 years (range 11 to 15) and the median age at menopause was 50 years (range 39 to 56). Accurate information on the age of first pregnancy was obtainable in 40 patients. The median age was 18 years (range 14 to 35). As expected these patients were3 of high parity (median 5) - Table-II and upto 96% of them had breast fed for an average of 16 months.

Table-I: Age Incidence.

Age (in years)	Frequency
20 - 30 years	4
30 - 40 years	42
40 - 50 years	22
50 - 60 years	20
60 - 70 years	30

Table-II: Parity.

No of children	Frequency
0	2
1	4
2	4
3	10
4	18
5	36
6	38
7	4
8	2

A positive family history was obtained in only 6% of the patients. Breast size was estimated both subjectively by the clinician and also by asking the size of the brassiere she normally used. In the 42 patients in whom it was possible to document this information 13 patients were found to have small breasts, the greatest proportion (i.e.

21 patients) had medium sized breasts and only 8 patients had large breasts. There was no significant history of benign breast disease previously in any of these patients. Breast cancer was present in the left breast in 51% of the cases and in the right breast in 45% of cases. It was bilateral in 4%.

Only 4 patients were found to be pregnant during the course of this study. The mode of presentation of the patients was divided into early (T_1, T_2-potentially curable disease) and late (T1, t2-potentially curable disease) and late (T_3, T_4-incurable disease - Table-III.

Table-III: Tumour Stage.

Stage	Frequency	%
I	9	8
II	10	8
III	34	29
IV	65	55

Table-IV: Stage of Presentation.

Early	19(16%)
Late	99(84%)

Majority of the patients (i.e. 99 patients) presented late, with only 19 presenting relatively early (Table IV). The majority of patients presented with a breast lump and the median duration of symptoms was 28 weeks. Information on the tumor size was available in 58 patients with a range of 2-20 cm (median 8 cm). Tru-cut needle biopsy was our method of choice for sampling tissue for histopathology. We used incisional biopsy when Tru-cut needle was out of stock and fine needle aspiration biopsy in patients who refused more invasive procedures. Enlarged lymph nodes mainly axillary, were detected, in 79% of cases and there was clinical evidence of distant secondary deposits in 47% as judged by hepatomegaly and bone secondaries seen on X-ray. All the patients, who were admitted with bilateral breast cancer presented with very advanced disease. Two of these patients were among the cases admitted for terminal care.

Table-IV: Treatment modalities.

Type of Treatment	No (118)	%
Mastectomy and Radiotherapy	65	55
Hormonal manipulation (Tamoxifen)	30	25
Radiotherapy alone	12	10
Chemotherapy alone	11	10

Relevant blood laboratory results showed a median Hb of 12 g/dl, ESR 60 mm/hr and the liver function tests were abnormal in 12 patients. 65 patients presented

with stage T4 carcinoma of the breast. With respect to lymph node status, 20 patients were clinically No, 46 patients N1, 44 patients N2 and 8 patients N3. With respect to metastatic disease, 53 patients were M0 and 65 patients were M1. 110 patients were offered treatment, but 10 refused any form of treatment.

Of the 25 patients who were followed up to death, the median survival was 12 weeks. Long term follow-up during the course of the study was difficult, because for various logistical reasons patients find it very difficult to come back to the hospital for follow-up, preferring to be seen at their local health centre when necessary.

DISCUSSION:

The striking regional and racial differences in the incidence of carcinoma of the breast are still difficult to explain despite extensive research in recent years. The low incidence of this condition in Pakistan has been reported by several workers.

By contrast breast cancer is the commonest form of cancer in females in Western countries. In the United Kingdom, about 1 in 16 women is affected at some time of her life by the disease.[1] In the United States, 1 in 10 women is affected by the disease in life times.[5]

In 1963 Pearson reported on 100 patients treated over a 7 year period in Nigeria.[8,9] During this period he admitted 14 new cases of breast carcinoma a year, accounting for 0.5% of all the surgical admissions. Our experience in Pakistan is similar. During the course of this study, we had an average of 24 new cases per year (surgical admissions 5000 per year which like Pearson's series accounted for 0.5% of all surgical admissions.

This study suggests that the average women is likely to have the following: an early ;first pregnancy, relatively late menarche, early menopause, high parity and a prolonged breast feed. All these factors are believed to play some protective role against the development of breast cancer. Indeed, Forrest has reported that women who bear their first child at the age of 20 years have half the risk of breast cancer of those who bear their first child at the age of 35 years.

For those patients who have developed breast cancer the question may be asked Why with all these factors in their favour, have they developed the disease? However when one looks the low incidence in general population one is tempted to think that the interplay between all these various factors helps to some extent in keeping the overall incidence down. Other factors which account for regional variations have been described. An association between breast cancer and an increase in the intake of dietary fat and obesity has been reported. Once again the reduced fat intake in our community may well contribute to the low incidence of breast cancer. The observation that migrants take on the incidence of the disease in their new host country has led

some workers to postulate an environmental cause. Although the incidence per year of breast cancer in black Americans (56/100,000) is lower than that of their white counterparts (76/100,000),[6] it is nevertheless higher than that of black Africans (14/100,000).[10] This would suggest that the incidence of breast cancer in black Americans has increased since their emigration to the USA many years age. As in other developing countries[11] our patients tend to present at a younger age than those in Western countries. Sixty three percent of our patients were pre-menopausal or peri-menopausal. An interesting feature in this study is the bimodal nature of the disease with an early peak between 35 years and 40 years and a "late" peak between 60 years and 65 years. This observation has been made in other series. In the United States, the greatest number of cases occur in women between 45 years and 59 years.[12] Although family history and a previous history of benign breast disease are known to increase the risk of breast cancer, they have not been important factors in our patients. Breast cancer was present in the left breast in 51% of the cases, the right breast in 45% of the cases and was bilateral in 4% of cases. These observations are different from those of other studies in Pakistan. However, our findings are similar to those of other workers, who report a higher incidence in the left breast than in the right breast. Ingram et al have shown that because of the clinical difficulties of detecting lumps in large breasts, patients with large breasts tend to present with more advanced disease than those with small breasts. Apart from this clinical observation, there seems to be no other obvious association between breast size and breast cancer. In this study, 31% of patients had small breasts, 50% had medium sized breasts and 19% large breasts. This suggests that breast size does not influence the course of the disease very much in our situation because most of the patients with small and medium sized breasts also present late.

Most surgeons working in the sub-continent would agree that the uniformly poor prognosis in this condition is due largely to late presentation. Indeed some patients just come to die in the hospital. Eight-four percent of our patients were admitted with late disease (T3, T4) and among these 11% were admitted in the moribund state for terminal care. The unfavourable prognosis of breast cancer in black patients has also been observed in the United States. These patients are reported to have 12-17% poorer 5-year survival rates for breast cancer than their white counterparts. However, Basset and Kreiger have shown that after adjustment for white black differences in age, stage, histology and socio-economic class, the 5-year survival rates and mortality were similar in both blacks and whites, poorer social class appears to be powerful determinant of shortened survival.[6] Since all our patients in this study came from the country side or from the working class in town, their low socio-economic status which has a bearing on their nutritional and immunological status, may well have contributed to their overall bad prognosis.

The reasons for late presentation were multi-fractortial and they will probably differ from country to country. However, in Pakistan the reasons may include the following: ignorance of the significance of a painless breast lump, fear of being subjected to surgery, some patients have more faith in traditional healers than hospitals and doctors; in a few cases the problem may be difficulty with access to a health centre.

We have largely treated our patients in the standard way with mastectomy, radiotherapy, hormonal manipulation and chemotherapy[12] (Table-V). We have offered mastectomy to selected patients despite the advanced nature of their disease mainly to avoid the distressing problems of later ulceration, infection and bleeding.

In conclusion, this study has shown that our approach to breast cancer in Pakistan should of necessity differ in some respects to that of the Western world. The main thrust in our situation should be public education to improve public awareness of the significance of breast symptomatology and encourage them to seek medical help. Certainly every woman should be advised to practice breast self-examination, but for the fore-seeable future expensive screening methods such as mammography will be available only to those who can afford them.

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