Malignant Tumours of The Male Breast - A Review of 50 Cases

Pages with reference to book, From 275 To 277

Shahid Jamal, Sajid Mushtaq, Iftikhar A. Malik, Amir H. Khan, Nadira Mamoon (Histopathology Department, Armed Forces Institute of Pathology, Rawalpindi.)

Abstract

Carcinoma of breast is one of the less frequent malignancies in males. In this study 50 cases of malignant turnouts of male breast diagnosed during a 10 years period (1980-1989) are analysed retrospectively. The malignant breast tumours in males were about 3% of all breast malignancies in both sexes and 0.34% of all types of malignant turnouts diagnosed during the study period. One male breast was involved for every 33 female cases, The peak incidence was between 5th to 7th decade with mean age of 58.54 years. The mean duration of symptoms was 13.69 months and 46.15% cases reported to the hospital after one year of their symptoms. Clinically, a painless lump in the breast was most frequently seen, followed by ulceration of the skin. Histologically, the infiltrating duct carcinoma (grade III) was the predominant lesion and one case of Paget's disease of the breast was also seen (JPMA 44:275, 1994).

Introduction

Carcinoma of the male breast isarare disease, especially in relation to its counterpart in females, where itis one of the most frequent caivinomas. In males, it is so rare that inmost of the reported series the number of cases is hardly more than fifty[1-3] . The prognosis of male patients with breast cancer is worse than in females due to the high incidence of sub-areolar cancers with early lymph node metastases. Moreover, the males develop breast cancer usually at an older age than women and involvement of deeper tissues and skin is more common[4]. We analysed the data of carcinoma of the nude breast diagnosed from 1980-1989 in order to find out the clinic pathological presentation of this disease.

Materials and Method

The Armed Fortes Institute of Pathology, Rawalpindi receives specimens not only from military hospitals but also from civilian hospitals of Northern Punjab and adjacent parts of North West Frontier Province (N WFP). The series comprise of 50 cases of malignant tumours of male breast studied at the institute during a period of ten years from 1980 to 1989. Clinical data was recorded by the attending clinicians. Ten percent formal saline was used as fixative for all specimens. Gross examination of surgical specimen was performed and recorded on a proforma. Adequate representative tissue sections from the breast lesions were taken as described by Rosai[5]. The material was processed under standardized conditions for paraffin embedding. Haematoxylin and Eosin (H&E) stain was routinely used. However, special stains like Periodic Acid-Schiff and reticulin were performed as and when required. Histological characterization of tumours was done according to the classification proposed by Azzopardi[6], whereas the microscopic grading of Bloom and Richardson[7] was adopted.

Results

During the study period (1980-1989) a total of 14633 malignant tumours (including 8415 male cases)

were analysed. Carcinoma of the male breast was 0.34% of all malignant tumours and 0.59% of all male malignant tumours studied at AFIP, Rawalpindi. During this period, a total of 50 cases of malignant breast tumours were seen in males and 1644 in females. Male to female ratio was 1:33. Breast tumours in males were 2.9% of all breast malignancies. Clinically, a painless lump in the breast was most common (58%) (Table I)

Table I. Initial signs and symptoms (n=50).

Signs and symptoms	No. of cases	Percentage
Painless lump breast	29	58
Painfull lump breast	3	6
Ulceration of skin	7	14
Nipple ulceration	3	6
Nipple retraction	3	6
Nipple discharge	3	6
Symptoms due to distant metastases	1	2
Incidental finding	1	2

followed by ulceration of the overlying skin. Nipple discharge, ulceration and painful lump in breast were seen in equal number of cases, while only one patient presented with signs and symptoms due to distant metastases. Left breast was more frequently involved (60%) than the right (40%). Majority of the patients (>70%) were of 41-70 years of age. Age range was 35-86 years and the mean age was 58.5 years. Information regarding duration of symptoms was available in 26 patients and showed mean duration of symptoms of 13 months with a range of 2-48 months. A significant number of patients (46%) reported to the hospital after one year of appearance of symptoms. There was no history of oestrogen therapy for carcinoma prostate in any of these patients. The tumour size was assessed in 25 patients where mastectomy was performed and it was found that in most of these cases (70 %) tumour size was greater than 3 cm. Histologically, the infiltrating duct carcinoma was the main lesion (88%) while cases of squamous cell carcinoma (4%) and one case of cystosarcomaphylloides were also seen (Table II).

Table II. Histological types of malignant tumours of male breast (n=50).

Histological type	No. of cases	Percentage
Infiltrating duct carcinoma	44	88
Squamous cell carcinoma	2	4
Cystosarcoma phylloides	1	2
Undifferentiated carcinoma	3	6

In 3 cases the tumour was undifferentiated on histology. Paget's disease of the breast was seen in one case. High grade turnouts (grade III=70%) were more frequently seen. In 36% cases skin involvement

by the tumour was seen, axillary lymph node involvement were observed in 30% patients while 5(10%) cases also showed nipple involvement.

Discussion

Cancer of the male breast is an uncommon disease and accounts for about 0.7% of all breast tumours[8]. In this study we found male breast tumours to be 2.9% of all breast malignancies. In most of the Western studies the male to female ratio of 1:100 to 1:110 has been reported[9-11] but in our study it was 1:33. It appears that either the male breast tumours are somewhat more frequent or a lesser number of females are affected as compared to the West. Bezwoda et al., 1987[12] in their study have reported a higher frequency of breast malignancies in black males (M:F ratio 1:59.2) as compared to white males (M:F ratio 1:127.7) [12]. In some studies from African countries like Uganda[13] and Zambia[14] the incidences of 4.8% and 15% were reported respectively. It has been suggested that gymaecomastia, probably related to hyperstrogenism, due to hepatic damage is more frequent in these populations which may be resulting in a higher frequency of breast cancer in black men[11]. Possibility of similar factors playing an aetiological role in our population needs to be looked into. Comparison of peak incidence revealed that in females 73.3% patients of carcinoma breast were between 31-60 years of age so that the peak incidence of carcinomabreast in males was a decade later than in females. Other studies report painless lump in the breast as the commonest form of presentation[8]. Majority (60%) of our cases also presented with lump in the breast. Skininvolvement by fixation and ulceration is another common feature in male breast carcinoma[6]. We also found a higher involvement of overlying skin (14% cases) and nipple ulceration (6% cases). Men with breast carcinoma usually tolerate symptoms for a longer period of time[6]. Meanduration of symptoms in the present study was 13 months and quite a significant proportion of cases (46.1%) reported one year after the appearance off last symptoms. Tumour size of more than 3 cm was found in the majority (70%) of cases. Expected histological pattern[15] with the majority (88%) being infiltrating duct carcinomas was seen. Paget's disease which is a rare entity in male breast[16,17] was seen in only one case. This study has highlighted that the malignant tumours of the male breast are probably more common in our population as compared to the male population of most of the Western countries. This may probably be due to higher frequency of clinical or subclinical chronic liver diseases. However, in Asian and African countries further studies are required to find out exactly whether this particular factor of chronic hepatic diseases has a role to play in the aetiology of carcinoma of male breast.

References

1. Somerville, P. Carcinoma male breast: a report of 19 cases and review of the literature. Br.J. Surg., 1952;39:296-303.
2. Greening, W.P. and Aichroth, P.M. Cancer of the male breast. Br.J.Cancer, 1965;19:92-100.
3. Slack, R.WT The survival rate ofmen with carcinoma of the breast. Br.J.Surg., 1975;62:963-65.
4. Nonis, H.J. and Taylor, H.B. Carcinoma of the male breast. Cancer, 1969;23:1428-35.
5. Rosai, J. Gross techniques in surgical pathology. In: Aekermens surgical pathology. 7th ed. St. Louis, The CV. Mosby Company, 1989, pp. 13-29.
6. Azzopardi, J.G. Classification of primary breast carcinoma. In; Problems in breast pathology. London, W.B. Saunders Company Ltd., 1979, pp. 240-57.
7. Bloom, H.J.G. and Richardson, WW. Histological grading and prognosis in breast cancer. A study of 1409 cases of which 359 have been followed for 15 years. Br.J.Cancer, 1957;11 :359-77.

8. Ribeiro, G.G. Carcinoma of the male breast; a review of 200 cases. Br.J.Surg., 1977;64;38 1-83.
9. Hudson, M.J.K. and Smart, C.J. Carcinoma of the male breast. Br.J.Surg., 1974;61 :440-44.
10. Circhlow, R.W. Carcinoma of the male breast. Surg. Gynecol. Obstet., 1972;134:1011-19.
11. Haagensen, CD. In: Haagensen, CD. ed. Diseases of the breast. Philadelphia, W.B. Saunders Company, 1971,pp. 779-92.
12. Bezwoda, W.R., Hesdorffer, C., Dansey, R. et sl. Breast cancer in men. Cancer, 1987;60;1337-40.
13. Ojars, E.A. Carcinoma of the male breast in Mulaga Hospital in Kampala. East Afr.Med. J., 1978;55 :489-91.
14. Bhsgwsndin, S.S. Carcinoma of the male breast in Zambia. East Afr.Med.J., 1972;49;176-79.
15. Crichiow, R.W. Breast cancer in men. Semin.Oncol., 1974;1:145-52.
16. Nehme, A.E. Paget’s disease of the male breast; a collective review and case report. Am.Surg., 1976;42;289-95.
17. Gupta, S., Khanns, N.N., Khanns, S. and Gupta, S. Paget\'s disease of male breast: a clinic pathological study and a collective review. J.Surg.Oncol., 1983;22:151-56.