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PRIMARY CARCINOMA AND BENIGN TUMOURS OF THE FEMALE BREAST IN MALAYSIAN WOMEN

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SUMMARY

In a 10 year period 1971-1980, the records of 944 individual women with benign breast lumps and 228 with primary carcinomata are reviewed. This study describes the age, ethnic distribution of benign and malignant breast tumours in women in Peninsular Malaysia and compares the pattern with Western experience.

There are important variations in the incidence pattern between the different races in Peninsular Malaysia and between them and women in Britain and the United States.

INTRODUCTION

The incidence of primary carcinoma of the female breast shows considerable ethnic variation in different communities and geographical regions of the world. Western authors have remarked on the low incidence of breast cancer in Japanese women in Japan (a developed country) and in women in other under developed countries. Immigrant Japanese women in California, however, have a higher incidence than their compatriots in Japan. (The incidence approaches half that of Caucasian women but is five times that in the country of origin).

Race and environment are believed to be important factors in the aetiology of breast cancer.

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In Peninsular Malaysia the three major races comprising Malays, Chinese, and Indians live in a varied social and cultural environment. In addition more Malays than Chinese are rural based. The author hopes to add one more illustration on the influence of race and environment in the aetiology of breast cancer. It is also an attempt to record the incidence rate of breast cancer of women in Malaysia in the last decade and to form some basis for future comparative study. The trend in Western countries particularly the United States and Britain is that the incidence of breast cancer is on the increase especially in the premenopausal group.

MATERIALS AND METHODS

Nine hundred and forty-four and 228 individual cases of benign and primary carcinomata respectively were seen in the pathology department of the General Hospital at Johor Bahru between the years 1971 to 1980. This study is based on the records of those with breast lumps removed surgically for histological examination.

Very few patients have mixed pathology in each breast specimen or biopsy. In the benign tumours where there is a mixed pattern only the predominant lesion is considered as one case; the minor lesion is excluded. Associated benign tumours in specimens with carcinoma are not entered as separate cases in the benign category. The 1172 specimens thus represent an equivalent number of individual female patients.

This study excludes from consideration rare malignant tumours arising from the mesenchymal component of the breast and skin. (Only one case of angiosarcoma is reported in ten years).

The benign tumefactions considered in this study comprise fibroadenomata (inclusive of three giant forms) and various conditions lump together as cystic hyperplasia where the diagnosis include any of the following : mammary dysplasia, fibroadenosis, adenosis, cystic disease, fibrocystic disease - these could be singly or in combination from the histological picture of cystic hyperplasia. Three cases of intraduct papillomas are included under cystic hyperplasia for purposes of easy statistical handling.

Excluded are inflammatory (infective and non infective) tumefactions such as plasma cell mastitis, fat necrosis, duct ectasia and tuberculosis.

Two Caucasian patients with fibro adenomata are also excluded.

No attempt is made to study the biological behaviour of cystic hyperplasia and cancer as the records are incomplete in clinical and pathological details such as stage, size of tumour, standardised histological typing and lymph node reactive patterns.

All the carcinomata are infiltrating; there is not a single case of insitu carcinoma. The bulk of the records show invasive ductal carcinoma.

The youngest patient with cancer is recorded in a Malay girl aged 19 years and the oldest in a Chinese woman of 84 years.

RESULTS

Table I shows the racial distribution of breast tumours in women in Peninsular Malaysia (State of Johor), New York and Britain.

TABLE I

INCIDENCE OF BREAST TUMOURS

	Number of Cases				
Race	**Malay**	**Chinese**	**Indian**	**American**	**British**
Benign:					
Fibroa-denoma	239	414	68	440	122
Cystic hyperplasia	69	124	30	1,196	519
Carci-noma	102	110	16	991	497
Ratio of Fibro-adenoma Carcinoma	2.4 : 1	3.3 : 1	4 : 1	1 : 2.2	1 : 4

The American (Haagensen from New York) and the British studies are quoted from Symmers. [1] Haagensen's study covers a period of ten years while the British experience is collected from the examination of six general hospitals in a certain period. The clinical orientation of doctors towards a woman with a breast lump is therefore entirely different in Malaysia and in the West. Taking all benign tumefactions together the chance for a breast lump in any woman in Peninsular Malaysia being malignant is slightly better than one in four (228 out of 944).

Table II shows the age distribution of fibroadenoma and cystic hyperplasia in Malaysian women.

TABLE II

AGE DISTRIBUTION OF BENIGN BREAST TUMEFACTIONS IN MALAYSIAN WOMEN

	Number of Cases at : YEARS				
Race	**< 20**	**20 - 29**	**30 - 39**	**40 and above**	**Total**
Malays					
Fibroadenoma	55	150	24	10	239
Cystic hyperplasia	8	30	18	13	69
Chinese					
Fibroadenoma	93	242	63	16	414
Cystic hyperplasia	17	47	36	24	124
Indians					
Fibroadenoma	21	36	8	3	68
Cystic hyperplasia	2	13	9	6	30

There is no difference in age distribution of fibroadenoma at all in the three races and the peak incidence corresponds to that in British women.

Table II and Fig. 1 show that benign tumours can be safely diagnosed for a woman below 30 years of age and that above 40 year of age the clinical suspicion for malignancy should be very high. In the post menopausal group the lump should be regarded as malignant until proven otherwise. Table III works out the approximate risk of malignancy in the interphase period between age 30 to 39 years.

The Malay woman in the fourth decade of life thus runs a greater risk of malignancy compared to the Chinese and Indians. This is only a statistical

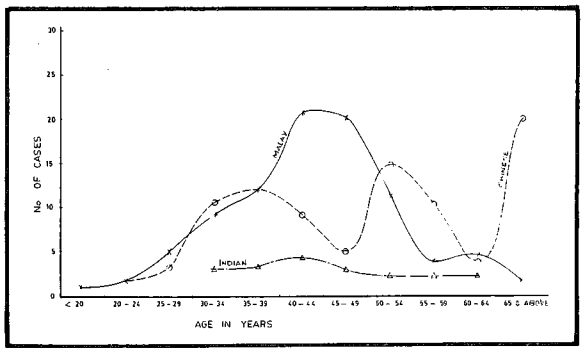

Fig. 1 Distribution of mammary carcinoma in Malaysian women from a study of 228 individual cases.

TABLE III
RISK OF MALIGNANCY IN A BREAST LUMP IN MALAYSIAN WOMEN IN THE 4TH DECADE OF LIFE

Race	No of Cases		
	Malignant	Benign	Ratio Malignant : Benign
Malays	24	42	1 : 2
Chinese	25	99	1 : 4
Indians	4	15	1 : 4

analysis and argument against its validity would be well founded. It is entirely based on the incidence of benign tumours in Malays and it is possible that young conservative Malay women with benign tumours would not readily seek treatment. However, the peak frequency of fibroadenoma and cystic hyperplasia in Malays would suggest that there is no postponement in seeking treatment otherwise the frequency would shift to the older age group. Further the hospital admission figures for the state average 44,994, 41,942 and 14,403 per year for Malays, Chinese and Indians respectively within the period 1971 - 1980.

This has to be computed with the population census of 1970 for the state which shows Malays as 53.3 percent, Chinese 39.5 percent, Indians 6.7 percent and others 0.5 percent of the population. These figures approximate to the national average.

Until the issue is resolved by further in-depth studies it is wise to maintain a higher clinical suspicion of malignancy in the breast lump of the Malay woman in the fourth decade of life.

The higher incidence of cystic hyperplasia to fibroadenoma in Caucasians as compared to Malaysians is another contrasting feature. This is in spite of the fact that in this study cystic hyperplasia is a hodge podge grouping. Some authors believe the high incidence of cystic hyperplasia is connected with the higher incidence of cancer in Caucasian women. The low incidence here of cystic hyperplasia reflects pari passu the lower incidence of cancer. However West African females rate twice as high as Europeans in the incidence of cystic hyperplasia but only a comparative rarity in breast cancer. [2] A comparative study of the relationship of cystic hyperplasia and breast cancer in different communities must take into account the life expectancy of females at birth. The life expectancy of the female in Malaysia is estimated at 70.9 years.

Given the high life expectancy and no dearth of cancer cases relatively in the sixth and seventh decades, the relationship of cystic hyperplasia and cancer is probably correct. The experience in Malaysia confirms that cystic hyperplasia predisposes a higher risk to cancer. Between the Malays and Chinese, the higher incidence of cystic hyperplasia in the latter is reflected in a higher incidence of cancer. (Table I)

Cystic hyperplasia besides being lower in incidence in Malaysia is again in contrast and occurs in much younger patients. (Table II) In Caucasian women the characteristic age is in the second half of reproductive life; like their Western peers, cystic hyperplasia is rare after the menopause.

Fig. I shows the racial and age distribution of breast cancer in Malaysian women. As in Caucasian patients, carcinoma is rare below the age of 30 years when the incidence of fibroadenoma peaks. The incidence rate is estimated at 69 per 100,000 women in the United States. The 1980 population census lists 797,657 females in the population for the state of Johor. The overall incidence rate for cancer of the breast would be approximately 28 per 100,000 women. A difference is observed, however between the incidence in the Malays and Chinese. It is found to be higher in the Chinese approximately 34 per 100,000 and 24 per 100,000 for Malays (calculated from the 1970 census figures.)

While it may be argued that for benign tumours conservatism among Malay women may prevent their seeking hospital treatment, it is unlikely that this reasoning can be applied to cancer of the

TABLE IV

PROPORTION OF CANCER OF THE BREAST IN PRE AND POST MENOPAUSAL WOMEN.

Race	Proportion below 50 yrs.	Proportion above 50 yrs.
Malays	72.5%	27.5%
Chinese	45.5%	54.5%

breast. This is a serious disease and at some stage in its evolution, the patient is compelled to visit the doctor. The lower incidence in the Malay is, therefore, in all probability a true situation. This is not surprising. To the author's knowledge, the traditional Malay would marry young, bear children early and breast feed for long periods. These are factors believed to protect against developing breast cancer. The more urban Chinese would more likely have to abandon some or all these traditional Asian habits.

The pattern in the Malays follows that of Caucasian women with a bimodal distribution, with a lower incidence in postmenopausal group. The major deficit, however, is the high incidence in the late 4th decade whereas statistics from the Netherlands show peak frequencies at 48 and 65 years.

In contrast, the Chinese show a major shift in incidence in the older age group (The Indians constitute a minority in the study and are excluded, probably inadequate statistical data.)

Table IV amplifies the situation further as obtained in Chinese and Malays.

CONCLUSIONS

There is no difference in age distribution of fibroadenoma for women in Peninsular Malaysia and their Western counterparts. It is a relatively common tumour.

Cystic hyperplasia in contrast, occurs in younger women in Malaysia. It is however a relatively uncommon lesion. Reflected in this low incidence of cystic hyperplasia is the lower incidence of cancer of the breast.

Cancer of the breast has an average incidence of about 28 per 100,000 women for all races in Peninsular Malaysia as compared to 69 per 100,000 women in the United States. The Chinese in Peninsular Malaysia have a higher incidence 34 as against 24 per 100,000 women compared to the Malays.

However, the major deficit in the Malays is the higher incidence of cancer in younger patients as compared to the Chinese. Below age 50 years the percentage of cancer cases in Malays in this study is 72.5 percent while it is 45.5 percent for the Chinese.

The woman in the fourth decade of life with a breast lump would run a risk of malignancy of one in four for Chinese and Indians but increases to one in two for Malays. Until further investigations prove otherwise it is prudent to regard the Malay patient with a breast lump with greater apprehension.

The traditional conservative habits of early marriage, early parity, prolonged breast feeding demonstrate their values in conferring protection against breast cancer.

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