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BREAST CANCER;

EVALUATION OF RISK FACTORS IN OUR LOCAL POPULATION AN INSTITUTIONAL BASED DESCRIPTIVE & PROSPECTIVE STUDY

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ABSTRACT… Object: Evaluation & distribution of established etiological risk factors in patients of breast cancer in our local population. **Study Design:** Institution based non-interventional descriptive & prospective study **Place & Duration:** Department of Pathology, Liaquat University of Medical & Health Sciences, Jamshoro from January 2009 to December 2011. **Material & Methods:** One hundred & two cases of breast cancer diagnosed on HE staining were selected for the study. **Results:** More than 50% were in 4th and 5th Decades of life. 94% were married and 06% were un-married. 65% were in pre-menopausal group and 35% in post-menopause group. 93% had positive history of breast feeding. None of them had ever taken oral contraceptive. Smoking history was present only in 9.80 % cases. 27% cases had family history of breast cancer in first degree relative & 13% in 2nd degree relatives. Majority (66.66%) were belongs to lower middle socioeconomic class. **Conclusions:** Surprisingly in this study marital status, parity, and breast feeding not proved as protective factors against breast cancer.

Key words: Breast diseases, carcinoma breast, breast cancer

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INTRODUCTION

Breast cancer is the most common type of non skin cancer in women. A woman of 90 has one in eight chance of developing breast cancer. 75% of women having breast cancer are older than 50 years. It is the second leading cause of cancer death i.e about 250,000 women dies of this disease around the globe every year[1]. The breast tissue in female is under the influence of various hormones and subject to constant physiological variation through out reproductive life and beyond[2]. The impact of breast diseases in Western society assumes even greater importance as the incidence of breast cancer continues to increase steadily[3]. There is no single most powerful factor that places women at risk for breast cancer[4]. Major risk factors for cancer of breast which are well accepted are advanced age, positive family history and history of cancer in the same or other breast. But there are minor risk factors too, which have been studied, such as early menarche, late menopause, absence of breast feeding, and obesity etc[5].

These risk factors are largely determined in western population; either these hold true in our local population, is not known. Keeping in mind, this study is designed to evaluate various risk factors for breast cancer in our local population.

METHOD

This study was carried out at Liaquat University of medical and health science Jamshoro, from Jan 2009 to December 2011. In two years 102 cases were collected for the study.

Study design was non-interventional descriptive & prospective.

Inclusion criteria were female patients with histological proven carcinoma breast, having complete history and relevant record available

was selected. Exclusion criteria were male cases of carcinoma breast.

Data was collected on a predesigned proforma after getting well informed consent. Proforma was attached with variables including age, marital status, menopausal status, oral contraceptives, obstetrical history, history of breast feeding, and family history of carcinoma breast, smoking/pan-supari chewing, height, weight, socioeconomic class, clinical examination, surgical procedure (biopsy, excision, mastectomy) and histopathological report.

RESULTS

So far as the age is concerned, maximum number of cases were in 4th (24) 23.52% and 5th (36) 35.29% decades of life. 96(94.11%) were married, multipara (3-4 children) and 06(5.88%) were un-married. Menopausal status was also assessed and 66 (64.70%) cases were found to be in pre-menopausal group and 36(35.29%) in post-menopause group. Breast feeding history was also taken and indorsed on proforma 95 (93.13%) cases had positive history of breast feeding, out of 07 (6.86%) with negative history of breast feeding 06 (5.88%) were unmarried and 01 (0.98%) was married but nulliparous. None of them had ever taken oral contraceptive. Smoking history was present in 10 (9.80 %) cases, for more than 20 years. 16(15.68%) had history if chewing pan/supari. Additional risk factors were also assessed in the form of family history of breast cancer and dietary habit. 28 (27.45%) cases had family history of breast cancer in first degree relative as well 13 (12.74%) had family history in 2nd degree relatives. Majority 68 (66.66%) cases were of lower middle socioeconomic class, followed by 21(20.58%) cases with poor and 13 (12.74%) of upper middle class. Average height was 152 cms and average weight was 52 kg with average body mass index (BMI) of 20. Histological types carcinoma of breast includes 87 (85.29%) had invasive duct cell carcinoma and 15(14.70%) had invasive lobular carcinoma.

Risk Factors	Variables	No. of patients	%age
Age	4th Decade 5th Decade	24 36	23.52 35.29
Marital Status	Married Un Married	96 06	94.11 5.88
Menopausal status	Premenopausal Postmenopausal	66 36	64.70 35.29
Breast feeding & Parity	Positive history Negative history	95 07	93.13 6.86
Oral contraceptive	Non of them	-	-
Smoking	Positive history Negative history	10 92	9.8 90.2
Pan /Supari Chewing	Positive history Negative history	16 86	15.6 84.32
Family History	1st Degree relative 2nd Degree relative	28 13	27.45 12.74
Socioeconomic status	Poor Lower middle Upper middle	21 68 13	20.58 66.66 12.74

Table-I.

DISCUSSION

The total estimated incidence of breast cancer worldwide is about one million cases[6]. The last two decades have seen a progressive increase in the incidence of breast cancer not only in the West[7], but also in the previously low risk Asians including Pakistani women[1]. Epidemiological studies have identified a series of environmental factors that can predispose women of breast cancer[8]. In present study the variables age, marital status, parity, menopausal status, breast feeding, height & weight, oral contraceptive, smoking, family history and socioeconomic status have been studied. Approximately 50% of cases belonged to 4th and 5th decaled of life. It is consistent with other studies[9]. Marital status remained a big issue for the development of breast cancer and unmarried, delayed marriage, delayed first child remained strong cofactor / risk factor for the development of breast cancer[4]. Surprisingly in our study 96 % of cases were married and 93.13% had breast feed their children. Similarly old age is supposed to be another risk factor but in our series 66 (64.7%) were in pre menopausal state. Height remained 152 cm in average and weight 52kg. with average BMI of 20, which is again contradictory to the recognized cofactors for carcinoma of breast[10]. Smoking with 9.8% and pan chewing 15.68% were remained a non significant cofactor. Maximum numbers of patients were of lower middle class. This series remained an astonishing study for us; as it has contradicted almost all recognized cofactors, then we again went through a reviewed prove of cofactors leading to carcinoma breast and we find that women are at low breast cancer risk, if they had low breast density, regardless of age, menopausal status and hormonal therapy (HT) use[11].

This suggests that some factors that lead women to have low breast density, may also lead to a permanent change in breast density structure that last through out life and is not influenced by exogenous factors such as HT. Pregnancy, in particular early age at first birth, early age at menopause and inheritance of low breast density are all factors that would contribute to a permanent low breast density[10, 12]. A recently published risk model based on BIRADS density (Breast imaging reporting and Data system) found women with low breast density rarely had high breast cancer risk, regardless of age, family history of breast cancer, and history of prior breast biopsy[13]. Studies have reported the strength of the association between breast density and breast cancer does not vary by menopausal status[14]. However a systemic review by Michels et al showed association between body mass index, weight gain or alcohol intake and increased risk of post menopausal breast cancer and no association between fruits and vegetable intake and risk of invasive breast cancer[15]. Future research should explore whether women with high breast mammographic density are at high breast cancer risk regardless of other positive favorable factors.

CONCLUSIONS

Although age, pregnancy, body mass index, menopausal status, family history of breast cancer and history of prior breast biopsy were considered as cancer risk factors, but surprisingly in this study marital status, parity, and breast feeding are not proved as protective factors against breast cancer. There is need of some other well specified factors which decide or at least guide for this.

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Patriotism

is the virtue of the vicious.

Oscar Wilde