ORIGINAL ARTICLE

ASSESSMENT OF VARIOUS EPIDEMIOLOGICAL ELEMENTS CONTRIBUTING TOWARDS THE LATE PRESENTATION OF BREAST CANCER IN WOMEN OF KHYBER PAKHTUNKHWA

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ABSTRACT

Objective: To determine various epidemiological elements contributing towards the late presentation of breast cancer in women of Khyber Pakhtunkhwa (KPK).

Study Design: Descriptive Study.

Place and Duration of Study: Institute of Radiotherapy and Nuclear Medicine (IRNUM) Peshawar, one year.

Patients and Methods: After receiving informed consent, 60 female breast cancer patients were included in this study. An interview was conducted in order to record the area of distribution, age at first pregnancy, nutritional & socioeconomic status, familial breast cancer, any gynecological issue, and narcotics & contraceptives use.

Results: The findings suggested that being young at the time of the first pregnancy was a significant risk factor for breast cancer. Another contributor to late-stage breast cancer diagnosis was low socioeconomic status.

Conclusion: This study concluded that young age at first pregnancy and low socioeconomic status were major risk factors for breast cancer and barriers to consultation for breast cancer diagnosis in KPK women. Furthermore, educational reforms for our people are intensely required.

Key words: *Familial breast cancer, narcotics, nutrition*

How to cite this article: Aziz I, Ali S, Majeed A, Khan SM. Assessment of various epidemiological elements contributing towards the late presentation of breast cancer in women of khyber pakhtunkhwa. HMDJ 2022; 02(01): 11-14

INTRODUCTION

Breast cancer affects women all over the world. According to World Health Organization (WHO), approximately 1.7 million breast cancer patients were reported in 2012, accounting for 25% of all cancers [1]. Breast cancer is the most commonly diagnosed cancer in females in the United States, accounting for 30% of all new cancer diagnoses in women [2]. According to research, genetic factors, age at first childbirth, hormonal imbalance, and use of oral contraceptives have all been linked to the onset of breast cancer, Racial, geographical differences, and socio-economic standing are all important elements [3].

Breast cancer is the commonest malignancy among Pakistani females [4,5].As per WHO, breast cancer is responsible for a high mortality rate in Pakistani women (31%), with a total cancer mortality rate of 34%. Pakistani women have the highest risk of breast malignancy among Asian women, trailing only Western and African women [6]. Due to a lack of awareness, early detection of breast cancer, which is an efficacious strategy for controlling the prevalence of breast cancer, is a challenge in our population. To improve disease control and prevention, the United Kingdom and the United States have established early diagnosis and screening programs. Programs like these still need to be expanded in Pakistan. However, epidemiological studies have been carried out to learn more regarding the prevalence of different cancers in Pakistan. Data from Rawalpindi [7] Quetta & Karachi [8] , and overall Punjab is available [9-11].

The epidemiological status of breast cancer in Khyber Pakhtunkhwa (KPK) , Pakistan's 3rd most populous province, must be prioritised. IRNUM registered approximately 5,658 cancer patients in the third or fourth stages in 2014. Pakistani women in rural areas lack adequate information about early

detection and treatment to prevent the progression of breast cancer. As a result, extensive data collection on breast cancer in the KPK region is critical. The majority of breast cancer patients present with a late onset, according to common observation. This causes a delay in treatment and has serious consequences. This study attempted to draw attention towards the factors associated with late-stage breast cancer presentation.

PATIENTS AND METHODS

This descriptive study included 60 females diagnosed with breast cancer who were recruited from IRNUM. The study was designed in accordance with the Helsinki Declaration [12]. All patients gave their informed consent. The patients were chosen randomly for this study. A detailed questionnaire-based interview was used to collect information on area of distribution, age of women at 1st first pregnancy, multiple pregnancies, drug use, gynecological issues, use of contraceptives, and nutritional & socioeconomic status. Using SPSS 20, The qualitative data was analyzed and presented as a percentage & frequency.

CAPSULE SUMMARY

In an effort to recognize the factors behind the late presentation of breast cancer in KPK, the authors found that a low socioeconomic status was the key element. Moreover, higher incidence was found in patient with young age at first pregnancy.

Table 1: Area- wise distribution of Carcinoma in KPK

Area	Frequency	Percentage (%)
Swat	7	11.60
Dera Ismail Khan (D.I.Khan)	2	03.33
Dir	3	05.00
Peshawar	**30**	**50**
Kohat	5	08.33
Charsadda	6	10.00
Nowshera	2	03.33
Mardan	3	05.00
Bannu	1	01.66
Waziristan	1	01.66

RESULTS AND DISCUSSION

Peshawar had the highest percentage of breast cancer (41.6 percent), while Bannu and Waziristan, the lowest (1.66%). (Table 1). The average age at the time of the first pregnancy was <30 years, according to our findings. The average age at the time of the first pregnancy was 30 years, according to our findings. Breast cancer was found in 26.6% (16) of women who had their first pregnancy between the ages of 18 and 20, and in 55 % (33) of patients who had their first pregnancy between the ages of 20 and 25. Six patients (10%) had their first pregnancy between 30-40 yrs., five (8.3%) were nulliparous. Despite the fact that western oncologists indicated late pregnancy as a risk factor [13], our data contradicts their findings. We found that our women, younger at their first pregnancy, were at the risk of breast cancer (Table

2). Resultantly, the situation would be beneficial if practiced on a regular basis. Though race and ethnicity might be the factors, to reach a comprehensive conclusion, population-based studies are required. The fact that younger females are presenting with advanced cancer is concerning and necessitates extra care. Self-examination of the breast is crucial in early-stage diagnosis, and necessitates national awareness campaigns.

Number of pregnancies and breast malignancy revealed that 28 patients (46.4 percent) had 2-6 children, 6.8 percent had 11-15 children, and 5 patients (8.3 %) were nulliparous (Table 2). According to this data, multiple pregnancies in the absence of required medical care may be a risk factor for breast malignancy. Because comprehensive data is not available, these findings are inconclusive. The economic situation of patients revealed that 75% of patients belonged to a group of Pakistanis with a monthly income of Rs. 3000-8000, while only 2% of patients had a monthly income of Rs. 100,000 or more (Table 2).

The findings above suggest that socio-economic standing may be a risk factor for breast cancer progression. It is surely a significant reason to avoid regular medical examinations, which could aid in earlier diagnosis [14-15]. Furthermore, an already diagnosed patient can hardly afford the expensive treatment.

Table 2: Risk predictors for breast cancer in KPK women

Variables		Frequency	Percentage (%)
Age at 1st Pregnancy	**18-20**	**16**	**26.6**
	20-25	**33**	**55**
	25-30	**0**	**0**
	30-40	6	10
	40-50	0	0
	Nulliparous	5	8.3
Number of Pregnancies	Nulliparous	5	8.3
	1 child	2	3.3
	2-6 children	**28**	**46.6**
	7-10 children	19	31.6
	11-15 children	6	10
Monthly income in Rs/month	**3000-8000**	**45**	**75**
	>8000	13	21.6
	>10000	2	3.33

We observed that mixed- food consumers outnumbered (46 ,76%) meat lovers (10 ,16.6 %). Women on vegetarian diets made up 6.6 percent of the participants. We did not find any conclusive link between nutrition, narcotics, contraceptives use , gynecological issues with the onset of breast cancer. Ninety-six-

Table 3: Non-Risk factors for breast cancer in KPK women

Variables		Frequency	Percentage (%)
Nutrition	Meat fonders	10	16.6
	Vegetarians	4	6.6
	Mixed	**46**	**76.6**
Narcotics use	Smoking	-	0
	Alcohol	-	0
	Snuff	2	3.33
	None	**58**	**96.6**
Family history of breast cancer	Cancer in 1st degree relative	1	1.66
	Cancer in Mother	1	1.66
	Cancer in sister	4	6.66
	None	**54**	**90**
Use of Contraceptives	Used	4	6.66
	Not Used	**56**	**93.3**
Any Gynecological problems	Present	10	16.6
	Absent	**50**	**83.3**

point six percent (58) of patients were not addicted to narcotics such as alcohol, smoking, or sniffing (Table 3).

Only 6 (9.98%) of the 60 patients had a family history of breast malignancy (Table 3). On account of being genetically predisposed, a positive family history is a factor in the development of breast cancer. The majority of our women were unaware of the screening programs. According to our observations, mostly due to cultural reasons, our women were hesitant to discuss any physical change. We advised them to see their doctor on a regular basis for an early diagnosis and educated other family members as well.

The earlier cancer is detected, the better the chances of cure and survival. The findings of this study suggest that screening and early detection, as well as cost-effective treatment facilities can reduce the incidence of breast cancer in Pakistan.

CONCLUSION

We conclude that young age at first pregnancy and low socioeconomic status are risk factors for late stage breast cancer presentation and are barriers to consultation among KPK women.

RECOMMENDATION AND LIMITATION

Our main limitations were a single-center study and patients' reluctance to participate in the study. This small-scale study discovered that enrollment is required from cities, small towns, and villages. It is vital to deal with the spread of breast cancer.

AUTHORS' CONTRIBUTION

Ishrat Aziz	Conception and design, Acquisition of data, Drafting the Article
Saadat Ali	Drafting the Article, Critical revision
Asifa Majeed	Analysis and interpretation of data, Critical revision
Sher Muhammd Khan	Conception and design

REFERENCES

1. Ferlay J, Soerjomataram I, Dikshit R, Eser S, Mathers C, Rebelo M, et al. Cancer incidence and mortality worldwide: sources, methods and major patterns in GLOBOCAN 2012. Int J Cancer. 2015;136: E359-86.

2. Siegel RL, Miller KD, Jemal A. Cancer Statistics, 2017. CA Cancer J Clin. 2017;67: 7-30.

3. Elebro K, Butt S, Dorkhan M, Jernstrom H, Borgquist S. Age at first childbirth and oral contraceptive use are associated with risk of androgen receptor-negative breast cancer: the Malmo Diet and Cancer Cohort. Cancer Causes Control. 2014;25: 945-57.

4. Asif HM, Sultana S, Akhtar N, Rehman JU, Rehman RU. Prevalence, risk factors and disease knowledge of breast cancer in Pakistan. Asian Pac J Cancer Prev. 2014;15: 4411-6.

5. Menhas R, Umer S. Breast Cancer among Pakistani Women. Iran J Public Health. 2015;44: 586-7.

6. Population fact sheets: Pakistan. Estimated incidence, mortality and 5 year prevalence: females: World Health Organization; 2016 [cited 2017 31 August]. Available from: http://gco.iarc.fr/today/fact-sheets-populations?population=586&sex=2#collapse1.

7. Jamal S, Mamoon N, Mushtaq S, Luqman M. Pattern of childhood malignancies: study of 922 cases at Armed Forces Institute of Pathology (AFIP), Rawalpindi, Pakistan. Asian Pac J Cancer Prev. 2006;7: 420-2.

8. Bhurgri Y, Pervez S, Usman A, Khan JA, Bhurgri A, Kasi Q, et al. Cancer patterns in Quetta (1998-1999). J Pak Med Assoc. 2002;52: 560-5.

9. Aziz Z, Sana S, Saeed S, Akram M. Institution based tumor registry from Punjab: five year data based analysis. J Pak Med Assoc. 2003;53: 350-3.

10. Bhurgri Y, Bhurgri A, Nishter S, Ahmed A, Usman A, Pervez S, et al. Pakistan--country profile of cancer and cancer control 1995-2004. J Pak Med Assoc. 2006;56: 124-30.

11. Bhurgri Y, Bhurgri A, Pervez S, Bhurgri M, Kayani N, Ahmed R, et al. Cancer profile of Hyderabad, Pakistan 1998-2002. Asian Pac J Cancer Prev. 2005;6: 474-80.

12. Association GAoWM. World Medical Association Declaration of Helsinki: ethical principles for medical research involving human subjects. J Am Coll Dent. 2014;81: 14-8.

13. Newcomb PA, Trentham-Dietz A, Hampton JM, Egan KM, Titus-Ernstoff L, Warren Andersen S, et al. Late age at first full term birth is strongly associated with lobular breast cancer. Cancer. 2011 May 01.

14. Alves Soares Ferreira N, Melo Figueiredo de Carvalho S, Engracia

Valenti V, Pinheiro Bezerra IM, Melo Teixeira Batista H, de Abreu LC, et al. Treatment delays among women with breast cancer in a low socio-economic status region in Brazil. BMC Womens Health. 2017;17: 13.

15. Quaglia A, Lillini R, Casella C, Giachero G, Izzotti A, Vercelli M, et al. The combined effect of age and socio-economic status on breast cancer survival. Crit Rev Oncol Hematol. 2011;77: 210-20.