Journal of Rawalpindi Medical College (JRMC); 2019;23(1): 34-37

Original Article

Spectrum of Breast Diseases in a Breast Clinic of a Tertiary Care Hospital

Sara Malik , Usman Qureshi, Jahangir Sarwar Khan, Salman Shafique, Sarosh Afzal Farooqi, Gohar Rasheed, Syed Waqas Hassan, Hamza Waqar Bhatti,
Department of Surgery , Unit I, Holy Family Hospital and Rawalpindi Medical College

Abstract

Background: To determine the pattern and clinical presentation of breast diseases in different age groups presenting to a breast clinic.

Methods: It was a retrospective descriptive study which included all patients presenting to a breast clinic for three years. Age at presentation, symptoms, clinical features, investigations, operative findings and specimen reports were recorded and submitted for analysis. .

Results: A total of 3568 patients were included. Mastalgia was the commonest findings (39.42%) followed by fibroadenoma(15.83%) and carcinoma of breast (12.61%). Pain in the breast was the commonest presenting symptom (40.38%). Lump in the breast was found in 22.84%, while pain and lump were present in 27.27% of patients. Among carcinoma breast, intra ductal carcinoma was the commonest (57.55%) followed by malignant phyllodes tumour (17.77%).

Conclusion: Most common breast diseases presenting in our setting are mastalgia, fibroadenoma and breast carcinoma. Dedicated breast clinic in our public sector hospitals is need of time. It will help to create awareness about breast diseases among general public and will be a source to collect data about disease burden so that future policies can be streamlined.

Key Words: Breast Cancer, Acute mastitis, Mastalgia

Introduction

Breast tissue, in females, undergoes continuous functional changes.[1]Breast diseases range from self-limiting inflammatory diseases to life threatening invasive carcinomas.[2] Benign breast lesions are more common than malignant ones.[3,4] Benign breast disease formed the majority of the cases.[5] Benign breast diseases are more common in females of reproductive age especially in the second decade. The peak is attained in the fourth or fifth decade of life.[6] Benign breast diseases are divided into those with non-proliferative breast lesions, proliferative breast lesions without atypia, and proliferative breast lesions with atypia. Certain benign breast lesions are precursors of malignant breast diseases.[7] Women with benign or atypical breast lesions have two times greater risk of developing breast cancer in the western countries.[8] The etiology and pattern of breast diseases differs in different countries and ethnic groups.[6] Nulliparity, early menarche,low parity, no lactation,earlyage at first delivery and late menopause are some of the risk factors related to benign and malignant breast diseases. All these factors point towards high estrogen levels.[6] The common symptoms of breast diseases are pain and palpable lump in breast. Other symptoms include nipple discharge, nipple retraction and skin changes.[8] Triple assessment which includes clinical examination of the breast, ultrasound (below 35 years) or mammography (above 35 years) and breast biopsy(FNAC & TRUCUT BIOPSY) are the mainstay in making diagnosis of breast diseases.[9]

Materials and Methods

This retrospective descriptive study was conducted at Department of Surgical unit 1, Holy Family Hospital, Rawalpindi, Pakistan from January 2016 to December 2018. All patients irrespective of age and gender, presenting to the breast clinic of Holy Family Hospital were included in the study. Data was collected from the HIMS and record registers. Age at presentation, symptoms, clinical features, investigations, operative findings and histopathology reports were recorded. Data was entered and analyzed using SPSS v. 23.0. Descriptive statistics were applied and frequencies and percentages were calculated. Data was expressed in the form of tables and charts.

Results

Out of 3568 patients 765 (21.44%) presented in 2016, 1024 (28.69%) in 2017 and 1779 (49.85%) in 2018

(Figure 1). 3558 (99.71%) were females while male patients were only 10 (0.29%). 900 (25.22%) of the patients were complaining of lump in breast. Lump in breast was the most common in females of the age group of 31-40 years (Figure 2). Mastalgia was the most common disease 1403(39.32%) followed by fibroadenoma 565 (15.83%) (Table 1). Among 450 breast carcinoma cases intraductal carcinoma was the most common 259 (57.55%) (Table-2.).

Table-1: Pattern of breast diseases presenting to the breast clinic

Disease	Number	Percentage
Fibroadenoma	565	15.83%
Mastitis	330	9.24%
Breast abscess	273	7.65%
Fibrocystic disease	150	4.20%
Carcinoma breast	450	12.61%
Gynaecomastia	10	.28%
Phylloides	65	1.82%
Mastalgia	1403	39.32%
Intraductal papilloma	04	.11%
Breast ulcer (fungating mass)	80	2.24%
Duct ectasia	115	3.22%
Costochondritis	3	.08%
Sebaceous cyst breast	70	1.96%
Unilateral breast enlargement (FEMALE)	50	1.40%
Total	3568	100%

Table-2 Different types of breast carcinoma

Types of carcinoma	Number	%
Intraductal carcinoma	259	57.55%
Lobular carcinoma	36	8%
Malignant phylloides	80	17.77%
Pagets disease	75	16.66%
Total	450	

Table-3 Common presenting symptoms in patients with breast diseases

Symptoms	Number	Percentage
Lump	815	22.84%
Lump+pain	973	27.27%
Pain	1438	40.30%
Lump in other breast	37	1.03%
Eczema	55	1.54%
Nipple retraction	85	2.38%
Nipple discharge	165	4.62%

Pain breast was commonest presentation (40.38%) (Table 3).Mastectomy (16.03%) was the commonest surgical procedure performed (Table 4). Majority of the patients presented in age group of 21 to 40 years (Figure 1)

Table-4 :Different surgical procedures done in the patients presenting with breast diseases

Type of surgery	Number	Percentage
MRM	250	50%
Lumpectomy	14	2.80%
BCS	7	1.40%
Wide local excision	5	4%
Mastectomy	80	16.03%
Subcutaneous mastectomy	10	2%
Redo surgery	4	0.80%
Microdochectomy	5	1%
Ductal Papilloma excision	1	.2%%
Accessory breast excision	1	.2%
Fibroadenoma excision	121	24.24%
Sinus excision	1	.2%

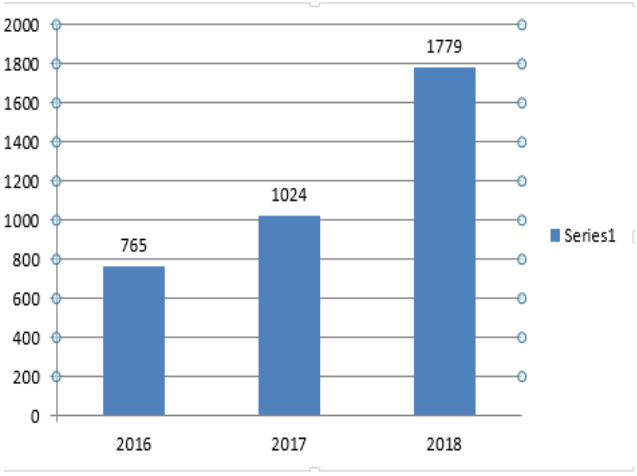

Figure 1: Total Number of patients presented in breast clinic per year (2016-2018)

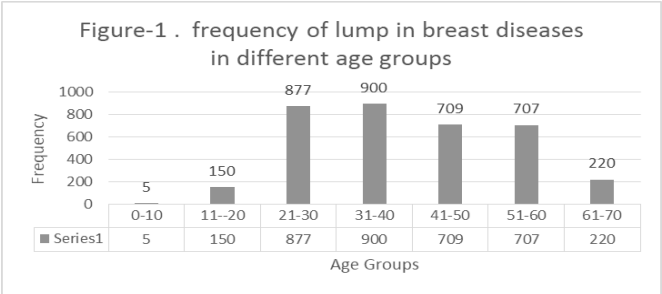

Figure 2: Frequency of lump breast in different age groups

Discussion

Breast cancer remains the commonest tumour in females. Awareness of breast cancer, public

attentiveness, and advancement in breast imaging has made a positive impact on recognition and screening of breast cancer.[1,6]The breast tissue in males only consists of some ducts so; the development of breast cancer in males is very unlikely. [10] Males also lack the hormone estrogen, the excess of which is a risk factor in development of breast cancer. The number of patients presenting to our breast clinic have gradually increased in last three years.This shows increasing awareness of women towards breast diseases due to dedicated facility provided.

In present study mastalgia was the commonest (39.32%) and fibroadenoma the second most common disease (9.24%). This is in contrast to a study by Saeed et al where fibroadenoma was the most common disease (36.46%).[1.]Ayoade et al and Yousif et alalso showed that fibroadenoma was the most common breast disease at their setting (26.2% and 48.7% respectively).[10,11] Study conducted by Ajmal et al, the incidence of fibroadenoma decreases with increasing age and generally found before 30 years of age in females in the general population. It is estimated that 10% of the world's female population suffers from fibroadenoma once in a lifetime.[12] Carcinoma of breast was the third most common breast disease encountered in our setting (12.61%). This is quite close to Saeed et al who reported 11.88% of the women with breast cancer in their setting.[1] Carcinoma was the second most common breast disease encountered in Nigeria by Ayoade et al after fibroadenoma.[10.] While breast carcinoma constituted 13.2% of the breast diseases in a study by Yousif et al in Egypt.[11]whereas study done by Akram et al[13,] Amongst all the malignant diseases, breast cancer is considered as one of the leading cause of death in post menopausal women accounting for 23% of all cancer deaths. It is a global issue now, but still it is diagnosed in their advanced stages due to the negligence of women regarding the self inspection and clinical examination of the breast.[14]

In mastitis faster clearance of symptoms for women is by using antibiotics.[1]This also shows that women are becoming increasingly aware of the importance of pain in breast and nipple discharge regardless of whether it is due to benign or malignant condition. [1] Kanat BH et al mentioned about closer relationship between anxiety and mastalgia in their study.[15] Mastalgia affects the quality of life of an individual negatively at a significant degree. Lump along with pain was the second most common presenting complaint in our study (27.27%). However, in the studies by Saeed et al and Ayoade et al most common presenting complaint was lump in breast i.e 85.61% and 91.7% respectively.[1,10] Whereas pain along with lump was the most common presenting complaint in the study by Yousif et al[10.] According to Ayoade et al ulceration was the third most common presenting complaint (7.4%).[10]Other presenting complaints in our study were nipple discharge (4.62%), nipple retraction (2.38%), eczema on breast (1.54%) and lump in the other breast (1.03%). In the study by Saeed et al nipple discharge was present in 2.2% of the patients, nipple retraction in 3.59%and lump in other breast was present in 11.6% of the patients.[1] In the study by Yosif et al nipple discharge was present in 4% while nipple retraction was present in 0.2% of the patients.[11.]

In study done by Patel et al Nipple discharge is commonly encountered by health care providers, accounting for 2%-5% of medical visits by women & presenting symptom in 5% to 12% patient.[14] In our study among breast carcinomas most common breast cancer was intraductal carcinoma (57.55%) followed by malignant phyllodes in (17.77%) of the patients. Paget's disease and lobular carcinoma as present in (16.66%)and (8%) of the patients respectively. These results are in consistency with the study by Saeed et al where intraductal carcinoma was the most common carcinoma (67.44%) followed by malignant phyllodes (16.28%), lobular carcinoma (9.3%) and Paget's disease (6.98%).[1.]

Lump breast was most common in the age group 31-40 years (25.22%) and 21-30 years (24.57%) in our study. Gulzar et el mentioned about 200 patients with palpable lump or mass & majority (65.6%) of them were older than 40 years of age.[16.] Breast cancer is the most common malignancy among women worldwide, and one of the leading causes of cancer-related deaths in females. Despite the development of novel therapeutic modalities, triple-negative breast cancer (TNBC) remains an incurable disease.[17]

Retrospective study done by Sopik et el. records of 525, 395 women who had either first primary DCIS or small (≤ 2.0 cm) node-negative invasive breast cancer in the Surveillance was retrieved 161,394 women with pure DCIS, 13,489 women with microinvasive carcinoma (≤ 0.1 cm of invasion), 153,856 women with invasive cancer 0.2-1.0 cm in size and 196,656 women with invasive cancer 1.1-2.0 cm in size were detected.[18]Rayne et al described the percentages of stages of breast cancer presented at their setup stage 1 in 15.5% of patients, stage 2 in 28.5% and stage 3 in 56.0%. Almost a third of the patients (30.4%) presented with a T4 tumour (6.1% inflammatory.[19]

In the study by Saeed et al most common age group which presents with lump in breast is 21-30 years (48.34%) followed by 11-20 years (12.43%) and 31-40 years (13.54%).[1]Lump in breast is extremely rare in non-pubertal females with only 0.14% of the patients falling in 0-10 years of age. Similarly, there were only 0.55% of the non pubertal female patients with lump in breast in the study by Saeed et al.[1] This is because breast is not developed before puberty and breast tissue only consists of ducts in non-pubertal females.

Quality of life in patients under treatment for breast cancer was moderate; therefore, special attention must be paid by caregivers to improve the quality of life in these patients.[20] Follow-up, support, and rehabilitation programs for women diagnosed with breast cancer must address a wide range of psychological and physical conditions to limit the consequences on working Life.[21,22,23]

Conclusion

Most common breast diseases presenting in our setting are mastalgia, fibroadenoma and breast carcinoma.

References

1. Saeed K, Mehboob F, Attiq N. Pattern of Breast Disease Presentation in Cantonment General Hospital (CGH) Rawalpindi. Isra Medical Journal. 2015;7(3):160-62.
2. Guray M. Benign Breast Diseases: Classification, Diagnosis, and Management. The Oncologist. 2006;11(5):435-49.
3. Fatima T, Azhar F, Butt Q. Pattern of benign breast disease in females presenting at public hospital. J Rawalpindi Med Coll 2011; 15(2):123-24.
4. Zafar A, Rehman A. Breast diseases, pattern in a general hospital. Professional Med J 2013; 20(3): 450-55.
5. Hiremath BV, Hegde N. Spectrum of breast disease in an urban general surgical centre in India. Breast Dis.. 2015 Jan 1;35(3):179-86.
6. Aslam HM, Saleem S, Shaikh HA, Shahid N, Mughal A, Umah R. Clinico-pathological profile of patients with breast diseases. Diagnostic pathology. 2013;8(1):77-80.
7. Okoth C, Galukande M, Jombwe J, Wamala D. Benign proliferative breast diseases among female patients at a sub Saharan Africa tertiary hospital: a cross sectional study. BMC surgery. 2013;13(1):9-12.
8. Chalya PL, Manyama M, Rambau PF, Kapesa A. Clinicopathological pattern of benign breast diseases among female patients. Tanzania Journal of Health Research. 2016;18(1):211-15.
9. Saunders CM, Baum C. 23rd ed. London: Book, Arnold; 2000. The breast in Bailey and Love's Short Practice of surgery. In: Russell RC, Williams NS, Bulstrode CJ; pp. 750–52.
10. Ayoade BA, Tade AO, Salami BA. Clinical features and pattern of presentation of breast diseases in surgical outpatients. Nigeria. Niger J Surg. 2012;18(1):13-16.
11. Yousif Z, Yacoub S. Patterns of breast diseases among women attending breast diagnosing center.Global Journal of Health Science. 2018;10(4):114-17.
12. Ajmal M, Van Fossen K .Breast fibroadenoma. FL: StatPearls Publishing;2018
13. Akram M, Iqbal M, Daniyal M, Khan AU. Awareness and current knowledge of breast cancer. Biol Res . 2017 ;50(1):33-37.
14. Patel BK, Falcon S, Drukteinis J. Management of nipple discharge and the associated imaging findings. Am J Med. . 2015 Apr 1;128(4):353-60.
15. Kanat BH, Atmaca M, Girgin M, Ilhan YS, Bozdağ A. Effects of mastalgia in young women on quality of life, depression, and anxiety levels. Indian J Surg. 2016 ;78(2):96-99
16. Gulzar F, Akhtar MS, Sadiq R, Bashir S. Identifying the reasons for delayed presentation of Pakistani breast cancer patients.Cancer Manag Res.. 2019;11:1087-90.
17. Christopoulos PF, Vlachogiannis NI, Vogkou CT, Koutsilieris M. The role of the androgen receptor signaling in breast malignancies. Anticancer research. 2017 Dec 1;37(12):6533-40.
18. Sun P, Narod SA. Impact of microinvasion on breast cancer mortality in women with ductal carcinoma in situ.Breast Cancer Res Treat. 2018 Feb 1;167(3):787-95.
19. Rayne S, Schnippel K, Kruger D, Benn CA. Delay to diagnosis and breast cancer stage in an urban South African breast clinic. S Afr Med J. 2019 Feb 26;109(3):159-63
20. Plym A, Johansson AL, Bower H, Voss M. Causes of sick leave, disability pension, and death following a breast cancer diagnosis in women of working age. Breast.. 2019 ;45:48-55
21. Shafaie FS, Mirghafourvand M, Amirzehni J. Predictors of quality of life in patients with breast cancer. Indian J Palliat Care. 2019;25(1):73-76.
22. Shafaee FS, Mirghafourvand M, Harischi S, Esfahani A. Self-confidence and quality of life in women undergoing treatment for breast cancer. Asian Pac J Cancer Prev.. 2018;19(3):733-36.
23. Chang O, Choi EK, Kim IR, Nam SJ. Association between socioeconomic status and quality of life among breast cancer patients. Asian Pac J Cancer Prev. 2014;15(20):8607-12.

Contribution of Authors: Sara Malik=A,B,D,F; Usman Qureshi = A,B,D,F; Jahangir Sarwar Khan=A,B,D;SalShafique=B,C; Sarosh Farooqi=E,F

Key for Contribution of Authors : A= Conception/ Study/ Designing /Planning; B= Experimentation/Study conduction;C=Analysis/Interpretation/ Discussion; D= Manuscript writing;E= Critical review;F= Facilitated for reagents/Material/Analysis