

ORIGINAL RESEARCH ARTICLE

SPECTRUM OF BREAST DISEASES IN A RURAL HIMALAYAN REGION OF WESTERN NEPAL: A HOSPITAL BASED STUDY

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ABSTRACT

Background: Breast diseases, among the most common diseases in females occur in various patterns from benign to malignant. Their identification is crucial as some of the benign disorders pose threat to turn into malignancy. This study was aimed to determine the spectrum of breast diseases.

Methods: This was a hospital based retrospective study among all the patients in General Surgery OPD of Karnali Academy of Health Sciences, Teaching Hospital, diagnosed with breast diseases during one year period from August 2019 to July 2020 AD. Data were extracted and entered in SPSS version 16 for further analysis.

Results: Out of 110 cases, only 4 (3.96%) were male. Almost half 54 (49.09%) of the cases were in the age group of 21-30 years. Fibrocystic disease, Breast Abscess and fibroadenoma, and cracked nipple were 39 (35.45%), 38 (34.54%), 15 (13.63%) and 8 (7.28%) respectively. The benign diseases were seen mostly in the younger population while malignant breast diseases were seen in the older population. Mastalgia was mostly seen in the twenties (17.3%) and the thirties (10%) while Breast abscess was commonly encountered in the twenties (16.4%) and the teens (11.8%). The gynaecomastia were seen only in four males.

Conclusions: Fibrocystic breast diseases, Mastitis with or without abscess, fibroadenoma and cracked nipples were the first four most common breast diseases in females. The younger population had predilection towards the benign diseases which occurred most frequently in the third decade while the malignant occurred in sixth and seventh decade.

INTRODUCTION

The female breast, a specialized secondary sex organ undergoes various cyclical changes influenced by hormones at different stages of reproductive life. Although male breast is rudimentary and do not have any role in reproduction, it makes up 1% of all the malignancies.¹ Breast is more developed in females and its morphology keep changing throughout the life. The diseases of the breast include congenital, inflammatory, neoplastic, functional and others.^{2,3} The benign lesion are common during the reproductive period while malignant lesions are common during post-menopausal period.^{4,5} The breast cancer is one of the most common cancers in female worldwide and this causes a fear of its occurrence if any features of breast disease arises.^{6,7}

About 85% of the breast masses are identified by self-breast examination which are palpable when they attain the size more than 1 cm in diameter. Accounting the tumor doubling time, a single cell takes about 3 years to reach this size.⁸

In Nepal, the majority of the rural women suffer from breast diseases but they cannot express because of the cultural

inhibition and the deep-seated taboo prevalent therein. On the other hand, cancer phobia drives them to seek the medical and surgical services even for benign problems. This study was aimed to determine the spectrum of breast diseases prevailing in the rural Himalayan region of western Nepal.

METHODS

This was a retrospective study conducted in Department of General Surgery, Karnali Academy of Health Sciences (KAHS), Teaching Hospital from August 2019 to July 2020 AD (Shrawan 2076 to Ashar 2077 BS). An ethical approval was taken from the institutional review board (IRB) of the KAHS before starting the study (Ref. No. 2076/2077/19)

The data from all the patients with breast disease were extracted from OPD records and filled into per forma. The demographic data including the age, sex, and ethnicity along with the diagnosis were recorded. The data were entered into the SPSS version 16, analyzed using descriptive statistics and presented in tables and figures.

RESULTS

Total 4110 patients visited the surgical OPD during the study period. Out of them, 110 (2.68%) were included in the study. Only 4(3.64%) of the total cases were male and the rest of the 106 (96.36%) cases were all female (Figure 1).

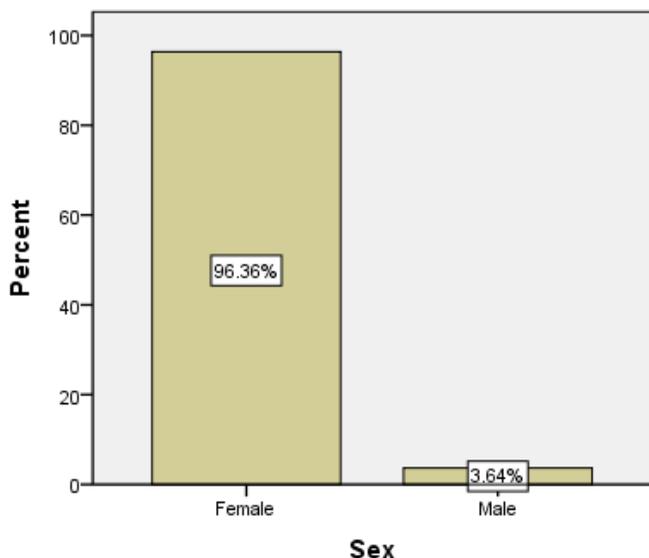


Figure 1: Gender wise distribution of the breast diseases

Table 1: Frequency of breast diseases according to age group

Age (years)	Frequency (%)
11-20	24 (21.82)
21-30	54 (49.09)
31-40	24 (21.82)
41-50	1 (0.91)
51-60	5 (4.54)
>60	2 (1.82)
Total	110 (100)

Table 2: Age wise distribution of the particular breast diseases

SN	Spectrum of Breast diseases	Age in Years						Total	%
		11-20	21-30	31-40	41-50	51-60	>60		
1	Fibrocystic disease	4	19	11	1	3	1	39	35.45
2	Mastitis/Breast Abscess	13	18	6	0	1	0	38	34.54
3	Fibroadenoma	1	9	5	0	0	0	15	13.63
4	Cracked nipple	2	6	0	0	0	0	8	7.28
5	Gyneacomastia	3	0	1	0	0	0	4	3.64
6	Ductectasia	0	1	1	0	0	0	2	1.82
7	Carcinoma	0	0	0	0	1	1	2	1.82
8	Galactocele	1	0	0	0	0	0	1	0.91
9	Retracted nipple	0	1	0	0	0	0	1	0.91
	Total	24	54	24	1	5	2	110	100

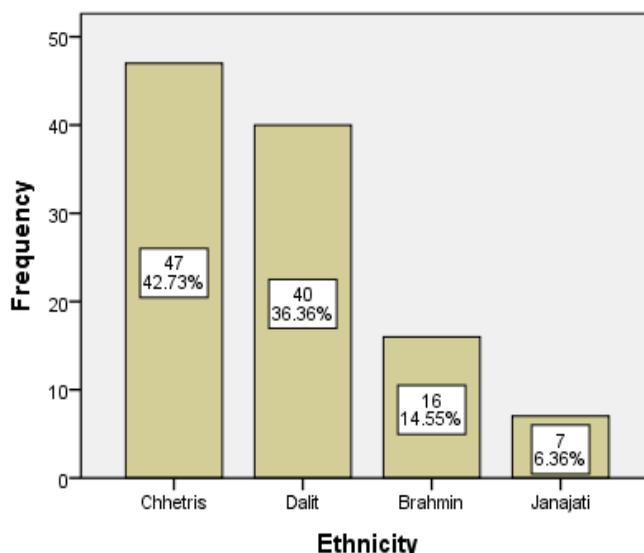


Figure 2: Ethnicity wise distribution of breast diseases

Chettri (42.73%) was the most common ethnicity followed by Dalit, Brahmin and Janajati (Figure 2).

The maximum number of cases were in the 21-30 years of age group (n=54, 49.09%) followed by 11-20, 31-40 years of age group and so on (Table 1).

The highest number of the cases were Mastalgia/Fibrocystic disease (35.45%) and Mastitis/Breast Abscess (34.54%) among others which were then followed by fibroadenoma, cracked nipple and so on. The benign diseases were seen mostly in the younger population while the two of the total cases were carcinoma seen in the older population one in the 6th decade and the other in the 7th decade. Mastalgia was mostly seen in the twenties (17.27%) and the thirties (10%) while breast abscess was commonly encountered in the twenties (16.36%) and the teens (11.82%). The gynaeomastia were seen in four male out of them three were teens and one case was in his thirties (Table 2).

DISCUSSION

The present study was conducted among 110 patients diagnosed with breast diseases presented in General Surgery OPD at KAHS during the study period.

Breast is one of the specialized organs of female with various functional and physiological properties. Breast cancer is one of the leading cause of death in Asia which has overcome cervical cancer. However, the benign diseases of the breast occur at higher frequency than the carcinoma in women.^{9,10}

Only 4(3.64%) of the total cases were male (gynaecomastia) and the rest of the 106 (96.36%) cases were all female which shows almost similar i.e. few results in the study done by Singh UR et.al in which male were 6.68%.¹¹

The chettri (42.73%) was the most frequent ethnicity followed by Dalit (36.36%), Brahmin (14.55%) and janajati (6.36%). Although the chhetris (16.6%) and Brahmin (12.18%) are higher than dalit according to Nepal census 2011 AD the dalit suffered more than brahmin in our study.¹²

The age which had the maximum number of the breast diseases was 21-30 years of age (n=54 i.e. 49.1%) These findings were almost similar to studies which also had more cases in the same 21-30 age group, Khazada et.al showing 44%¹³, and Bajracharya et al showing 33.6%.¹⁴

Mastalgia (fibrocystic disease) or the breast pain was the most common diagnosis made in our study (n=39) i.e. 35.45% however it was second only after fibroadenoma in other studies; fibroadenoma (28.28%) fibrocystic diseases (21.71%)¹¹ and fibroadenoma (27%) fibrocystic diseases (21%)¹³. In our study fibroadenoma (13.63%) was only after breast abscess

(34.54%) in the third position. This could be because of the pain related to fibrocystic disease which led early sougning of the problem as self-breast examination in not understood by the female in this part of the world because of lack of proper education which could have revealed painless fibroadenoma.

The benign diseases were seen mostly in the younger population while the two of the total cases were carcinoma seen in the older population one in the 6th decade and the other in the 7th decade. Mastalgia was mostly seen in the 3rd decade (17.3%) and also the Breast abscess (16.4%). The fibroadenoma was also common in the third decade (16.4%). The gynecomastia were seen in four male out of them three were teens and one case was in his thirties. These findings are coherent with the other studies Chavan R et.al¹⁵ and Hiremath BV et.al¹⁶ that showed the diseases were mostly noted in the 3rd decade.

CONCLUSION

Benign diseases of the breast were the most common problems in female of the reproductive age especially the younger age however carcinoma were few in number and also in older population. The four most common breast diseases were fibrocystic disease, mastitis/breast abscess, fibroadenoma and cracked nipple respectively. These diseases were most commonly encountered in the third decade. Few males suffered from the breast problems which were gynaecomastia in all the scenarios. The findings of this study would be helpful for surgeon as well as other health professional in better understanding the pattern of breast diseases.

CONFLICT OF INTEREST: None

FINANCIAL DISCLOSURE: None

REFERENCES:

1. Susan Standring et al. Gray's Anatomy-The Anatomical, Basis of Clinical Practice. 40th edition, Churchill Living Stone, Elsevier, London, UK; 2008; P: 927-33
2. Sainsbury RC. Breast. In: Normal WS, Balstrude C K, P. Ronan O'Connel, eds. Baily and Love's Short Practice of Surgery. 25th ed. London: Edward Aranold Ltd.; 2008: 827-35.
3. Guray M, Sahin AA. Benign Breast Diseases: Classification, Diagnosis, and Management. *Oncologist* 2006; 11:435-49. [DOI]
4. Yasaswini H, Rao SK, N Praneel N. Clinical Evaluation of Breast Lump. *Sch. J. App. Med. Sci.* 2018; 6(10): 3964-7. [LINK]
5. Kumar A, Vohra LS, Bhargava S, Reddy PS. Investigation of Breast lump an evaluation. *MJAFI* 1999; 55: 299-302. [DOI]
6. Mahboubi E. Epidemiology of cancer in Saudi Arabia, 1975-1985. *Ann Saudi Med* 1987; 7:265-76. [DOI]
7. Panthy L, Zhengqiu Z, Amgain K, Pandey A, Amgain G, Paudel Dp. Burden Of Various Cancers With Respect To Bio-Social Features Of Patient Attaining In A Tertiary Level Health Care Facility of Jianguo Province Of China. *Age.* 2016; 20(30):1-13. [LINK]
8. Heuser L, Spratt JS, Polk HC Jr. Growth Rate of primary Breast Cancers. 1979;43:1888-94. [DOI]
9. Agarwal G, Pradeep PV, Aggarwal V, Yip CH, Cheung PS. Spectrum of breast cancer in Asian women. *World J Surg* 2007;31:1031-40. [DOI]
10. Amruthavalli BV, Srihari V. Clinical Study of Benign Breast Diseases. *IOSR-JDMS* 2015; 14:34-40. [LINK]
11. Singh UR, Thakur AN, Shah SP, Mishra A. Histomorphological spectrum of breast diseases. *JNMA* 2000; 39: 338-341. [DOI]
12. Nepal Census 2011; Retrieved on 2020 July 28) [Accessed from: https://censusnepal.cbs.gov.np/] [LINK]
13. Khanzada TW, Samad A, Sushel C. Spectrum of benign breast diseases. *Pak J Med Sci* 2009; 25(2):265-8. [LINK]
14. Bajracharya A, Pangi A. Profile of Breast Diseases in Eastern Nepal. *Journal of College of Medical Sciences-Nepal.* 2016;12(3):89-93. [DOI]
15. Chavan R, Prasad A. Clinicopathological study of breast diseases: A hospital-based study. *J Pathol Nep* 2019; 9:1460-3. [DOI]
16. Hiremath BV, Hegde N. Spectrum of breast disease in an urban general surgical centre in India. *Breast Dis.* 2015;35(3):179-86. [DOI]