

ORIGINAL ARTICLE

Histopathological Study of Malignant Neoplasm of Breast of Different Age and Sex Groups In a Tertiary Care Hospital

Nazmun Nahar¹, Mohammed Iqbal², Kazi Md. Shahidur Rahman³, Md. Abdullah Yusuf⁴,
Shahed Iqbal⁵, Shahana Hossain⁶

¹Associate Professor & Head, Department of Pathology, Medical College for Women & Hospital, Uttara, Dhaka, Bangladesh; ²Associate Professor, Department of Anatomy, Monno Medical College, Manikganj, Bangladesh; ³Assistant Professor, Department of Pathology, Monno Medical College, Manikganj, Bangladesh; ⁴Assistant Professor, Department of Microbiology, National Institute of Neurosciences & Hospital, Dhaka, Bangladesh; ⁵Associate Professor, Department of Pediatrics, Chattagram Maa-O- Shishu General Hospital, Agrabad, Chittagong, Bangladesh; ⁶Associate Professor & Head, Department of Anatomy, Tairunnessa Memorial Medical College, Gazipur, Bangladesh

[Received on: 2 March 2018; Reviewed on: 12 April 2018; Accepted on: 10 May 2018; Published on: 1 July 2018]

Abstract

Background: Various types of female breast cancer associated with rapidly increasing age incidence. **Objective:** The purpose of the present study was to find out the frequency of different types of malignant neoplasm of breast in different age and sex. **Methodology:** This cross-sectional study was carried out at the Department of Pathology, Chittagong Medical College, Chittagong, Bangladesh from May 2005 to June 2006. Patients presented with breast lump of different age and sex were subjected to this study. Details gross examination was done followed by H & E staining for histopathological study. **Result:** A total number of 48 samples were selected after fulfilling the inclusion and exclusion criteria. This present study conducted in 27 specimens out of 48 breast lump. Among these benign and malignant were 21 and 27, respectively. Majority of the malignancy found in age group 41-50 years. Histopathologically Invasive ductal carcinoma was common 81.5%. There was significant association between different age group and type of neoplasm. In relation to sex malignant breast neoplasm was more common in female. **Conclusion:** In conclusion invasive ductal carcinoma was the commonest lesion of breast. In relation to sex malignant breast neoplasm was more common in female. [*Journal of Current and Advance Medical Research* 2018;5(2):42-44]

Keywords: Malignant neoplasm, Invasive ductal carcinoma, age & sex

Correspondence: Dr. Nazmun Nahar, Associate Professor & Head, Department of Pathology, Medical College for Women & Hospital, Uttara, Dhaka, Bangladesh; Cell no.: +8801914140697; Email: iqbal085nahar082@gmail.com

Cite this article as: Nahar N, Iqbal M, Rahman KMS, Yusuf MA, Iqbal S, Hossain S. Histopathological Study of Malignant Neoplasm of Breast of Different Age and Sex Groups In a Tertiary Care Hospital. *J Curr Adv Med Res* 2018;5(2):42-44

Funding: This study has been performed without any funding from outside else.

Conflict of Interest: There was no conflict of interest to any of the authors.

Contributions to authors: Nahar N, Rahman KMS, Iqbal S, Hossain S have contributed in protocol preparation, data collection, data analysis up to the report writing; Nahar N, Iqbal M, Yusuf MA, Iqbal S, Hossain S have written & revised the manuscript.

Copyright: ©2018. Nahar et al. Published by Journal of Current and Advance Medical Research. This article is published under the Creative Commons CC BY-NC License (<https://creativecommons.org/licenses/by-nc/4.0/>). This license permits use, distribution and reproduction in any medium, provided the original work is properly cited, and is not used for commercial purposes.

Introduction

Mammary glands have physical as well as psychological importance in human female¹. The breast is a modified sweat gland composed of both epithelial and connective tissue elements². Therefore, each element is the source of both benign and malignant disease³. Both benign and malignant diseases occur in men and women of all ages⁴. Especially, the large majority of breast cancers are detected during the reproductive and menopausal age⁵. Malignant breast neoplasm is the most common non-skin malignancy in women and is second only to lung cancer as a cause of cancer death⁶. Diagnosis of benign from malignant lesions is important in breast neoplasm⁷. These malignant breast neoplasm comprises several tumor subtypes with distinct etiologies and clinical outcomes⁸⁻⁹. The purpose of the present study was to determine the frequency of different types of malignant neoplasm of breast in different age and sex.

Methodology

This cross-sectional study was carried out at the Department of Pathology, Chittagong Medical College, Bangladesh one year period from May 2005 to June 2006 for a period of one year. Patients presented with breast lump of different age and sex were subjected to this study. The specimens were received from indoor patient Department of Surgery, Chittagong Medical College, Bangladesh. The patient presents with definite palpable lump, irrespective of age and sex were included in this study. Specimens of paraffin embedded tissue were sectioned and stained with hematoxylin and eosin. All tissue were examined histopathologically. All data were statistically evaluated in SPSS version 17.0.

Result

This present histological study was done in 48 specimen of breast lump. Among these benign and malignant were 21 and 27, respectively. In this paper, we discussed only 27 malignant neoplasm. In table 1 showed highest incidence 96.3% of malignant neoplasm of breast was found in female. Whereas 3.7% found in male.

In table 2 showed that a total of 48 patients with breast lump underwent histopathological study. Maximum number of patients 11(22.9%) were in the age group 31-40 years (4th decade) and 41-50 (5th

decade) years, respectively. Frequency was lowest 03(6.2%) in the age group >60 years.

Table 1: Distribution of Malignant Breast Lesion According to Sex

Gender	Frequency	Percent
Female	26	96.3
Male	1	3.7
Total	27	100.0

The highest incidence of malignant tumour 9(33.3%) were found in the age group of 41-50 years (5th decade). Next incidence of 6(22.2%) were found in the age group of 31-40 years (4th decade). In addition to there is significant association between different age groups and types of breast neoplasm (*p* value 0.001).

Table 2: Association between Age Group with Benign and Malignant Neoplasm of 48 Breast Lump

Age Group (Years)	Type of Neoplasm		Total
	Benign	Malignant	
11 to 20	9(42.9)	0(0.0)	9(18.8)
21 to 30	5(23.8)	5(18.5)	10(20.8)
31 to 40	5(23.8)	6(22.2)	11(22.9)
41 to 50	2(9.5)	9(33.3)	11(22.9)
51 to 60	0(0.0)	4(14.8)	4(8.3)
61 to 70	0(0.0)	3(11.1)	3(6.2)
Total	21(100.0)	27(100.0)	48(100.0)

P value=0.0001; Figure within parenthesis indicates percent.

Histopathological categories of malignant cases in different age groups are shown in table-3. In present study among malignant neoplasm, highest incidence 22 (81.5%) of Invasive ductal carcinoma (IDC) and it was commonly found 9(33.4%) in between 41-50 years. On the contrary, no frequency of malignant neoplasm is found in the age group 11 to 20 (Table 3).

Discussion

The frequencies of malignant disease was high 12(66.6%) cases in the age groups 41-50 years (5th decades) followed by 09(42.8%) cases in the age groups 31-40 years (4th decades).The frequency of malignant diseases was low 0 (0%) in the age group 11 to 20 years. Moormeier¹⁰ (1996) studied on 10,000 cases of breast lumps. The frequency of malignant diseases was high (80%) in the 4th and 5th

decades. This result was similar to that of present study.

Table 3: Histopathological Categories of Malignant Cases in Different Age Groups (n=27)

Types	Age Group (Years)						Total
	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	
IDC	0(0.0%)	3(11.1%)	4(14.8%)	9(33.4%)	3(11.1%)	3(11.1%)	22(81.5%)
ILC	0(0.0%)	1(3.7%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(3.7%)
IMC	0(0.0%)	0(0.0%)	1(3.7%)	0(0.0%)	0(0.0%)	0(0.0%)	1(3.7%)
DCC	0(0.0%)	1(3.7%)	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(3.7%)
MPh	0(0.0%)	0(0.0%)	0(0.0%)	0(0.0%)	1(3.7%)	0(0.0%)	1(3.7%)
FS	0(0.0%)	0(0.0%)	1(3.7%)	0(0.0%)	0(0.0%)	0(0.0%)	1(3.7%)
Total	0(0.0%)	5(18.5%)	6(22.2%)	9(33.3%)	4(14.8%)	3(11.1%)	27 (100%)

Invasive ductal carcinoma=IDC; Invasive Lobular Carcinoma=ILC; Invasive Medullary Carcinoma=IMC; Duct Cell Carcinoma=DCC in situ; Malignant Phylloides=MPh; Fibro Sarcoma=FS

In malignant neoplasm, highest incidence 81.5% of invasive ductal carcinoma and it was commonly found 33.4% in between 41-50 years. Anderson et al¹¹ showed on 270,124 cases of breast lump. Among malignant tumour, duct cell carcinoma was high 68.5% in 50 years. This result was also similar to the present study.

In our study, the total number of female patients with malignant neoplasm were 26(96.3%). The incidence of male breast malignancy was 1(3.7%). The findings of a similar study done by Mudholkar et al², which showed malignant breast neoplasm in female 97.6 % and male 2.4 %.

Conclusion

The findings of this study showed that the frequency of malignant breast neoplasm is increasing with age. Among these invasive ductal carcinoma is the commonest and mostly affected female.

References

1. Aziz M, Ahmad N, Zahid J. Comparison of FNAC and open biopsy in palpable breast lumps. Journal of the College of Physicians and Surgeons--Pakistan: JCPSP. 2004;14(11):654-6
2. Mudholkar VG, Mashal SN, Kawade SB. Histopathological Study of Neoplastic Lesions of Breast. Indian Medical Gazette.2012;335-364
3. Lester, S.C. The breast. In: Kumar V, Abbas AK, Fausto N, Aster JC. Robbins and Cotran pathologic basis of disease. 9th edition. London: W.B. Saunders Company. 2015;1043
4. Khan S, Kapoor AK, Khan IU, Shrestha GB, Singh P. Prospective study of pattern of breast diseases at Nepalgunj Medical College (NGMC), Nepal. Kathmandu University Medical Journal, 2003;1(2):95-100
5. Rosai J. Rosai and Ackerman's surgical pathology. vol II. 9th. Edinburgh: Mosby, 2004;1763-1876
6. Lester SC. The breast. In: V Kumar, AK Abbas, N Fausto. Eds. Robbins and Cortan pathologic basis of disease. 7th edition. London: W.B. Saunders Company, 2004;1043
7. Kahn ZM. The frequency of various causes of breast lumps in females presenting to surgical OPD in a tertiary care hospital. Annals of Pakistan Institute of Medical Sciences 2013;9(1):26-9
8. Millikan RC, Newman B, Tse CK, Moorman PG, Conway K, Smith LV, Labbok MH, Geradts J, Bensen JT, Jackson S, Nyante S. Epidemiology of basal-like breast cancer. Breast cancer research and treatment. 2008;109(1):123-39
9. O'Brien KM, Cole SR, Tse CK, Perou CM, Carey LA, Foulkes WD, Dressler LG, Geradts J, Millikan RC. Intrinsic breast tumor subtypes, race, and long-term survival in the Carolina Breast Cancer Study. Clinical Cancer Research. 2010;16(24):6100-10
10. Moormeier J. Breast cancer in black women. Annals Internal Medicine 1996;124(10): 897-905
11. Anderson WF, Pfeiffer RM, Dores GM, Sherman ME. Comparison of age distribution patterns for different histopathologic types of breast carcinoma. Cancer Epidemiology and Prevention Biomarkers. 2006;15(10):1899-905