

Breast Lumps in Adolescent and Young Female: Are All Benign?

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ABSTRACT

OBJECTIVE: To analyze the pattern of presentation and pathology of breast lump in adolescents and young female patients.

METHODS: Medical records of female patients below 30 years presenting with palpable breast lump at Liaquat University Hospital during August 2008 to July 2009 were retrospectively reviewed. Patients having acute mastitis, inflammatory carcinoma and recurrent malignant or benign lesions were excluded from study.

RESULTS: A total of 214 patients were included in study. Mean age was 22.11 years. Approximately 46% of the patients were at the age 20 or less. Most common mode of presentation was painless lump in 61.22% followed by pain and lump in 20.56%. The histopathology of resected specimen showed that fibroadenoma was the most common lump while benign phylloides was the least common. Carcinoma breast was identified in 25 cases, of which 3 cases were at age 20 or less. The commonest histopathology was infiltrating duct cell carcinoma (60%), followed by lobular carcinoma (16%), scirrhus carcinoma (12%) and medullary carcinoma in 8%. The Paget's disease was found in 4%.

CONCLUSION: We found an increased frequency of breast cancer in comparatively younger age. These findings suggest that any female patient with palpable breast lump should preferably be managed by surgeon with special interest and training in breast diseases.

KEY WORDS: Breast Lump, Young Females, Breast Cancer.

INTRODUCTION

Developmentally breast is simply a modified sweat gland. It is rudimentary in male in contrast to female where it developed at the onset of puberty and regarded not only as symbol of womanhood and sign of feminine beauty but also functionally destined to feed their offspring¹. Keeping in view larger volume, influence of different hormones and more complex structure of female breast, it is not surprising to come across female patients presenting with different breast diseases². Of all breast disorders, palpable breast lump is the 2nd most common presentation, pain being the first³. Generally a breast lump in adolescents and young females is nearly always regarded as benign at first instance and patient may falsely be reassured with the result she refrain from further consultation. On the other hand, all lumps are not cancers; however the possibility of cancer must always be considered, as approximately 10% of all breast lumps are finally diagnosed as cancer. Therefore appropriate management of breast lumps in women needs an ability to appraise the spectrum of presentation of different breast diseases. With this background scenario, the objective of this study was to analyze the pattern of presentation, and pathology of breast lump in adolescents and young female patients.

METHODS

It is a retrospective, descriptive study, conducted at

Surgical Department of Liaquat University of Medical and Health Sciences Jamshoro, from August 2008 to July 2009. The data retrieved and analyzed only for patients below the age of thirty years presenting with palpable breast lump. A Proforma to collect data pertinent to study was filled out for each patient. All these patients were evaluated by flow chart that includes clinical history, detailed history of breast complaint presented, a general physical examination and a clinical breast examination. To further assess the breast lumps, radiological examination was performed using ultrasonography with high frequency probe. Fine needle aspiration cytology (FNAC) was performed to confirm the diagnosis. Core biopsy was done only in patients with inconclusive FNAC report. After collecting data results were analysed. The patients having acute mastitis, inflammatory carcinoma and with recurrence of malignant and benign lesions were excluded from the study after investigations.

Statistical Analysis:

All data was entered on SPSS version 15. Patient's age was presented by mean. For presentation of qualitative data variables like presenting sign and symptoms, surgical procedures and histopathological findings, frequencies and percentages were computed. Statistical test was not applicable for this descriptive type case series.

RESULTS

A total of 214 patients who presented with lump/lumpiness in breast, having age of 30 years or less were included in the study during the period from August 2008 to July 2009. The mean age was 22.11 years. Approximately 46% of the patients were at the age of 20 or less while 54% were in their third decade. In this series of patients 50% were married. The right breast was affected in 168 cases while left breast in 46 cases. The lump was the most common mode of presentation (n= 175, 81.78%). Among these 175 pa-

TABLE I:

Histopathology of Specimen→	Fibrocystic Disease	Fibroadenoma	Breast Abscess	Carcinoma Breast	Normal Breast Tissue/Cyclical mastitis	Benign Phylloides	Total
Managed by ↓							
Excisional biopsy	26	71	0	0	0	0	97
Lumpectomy	03	22	0	2	1	3	31
Simple mastectomy	00	0	0	23	0	0	23
Conservative Treatment	46	0	0	0	3	0	49
Incision and Drainage	00	0	14	0	0	0	14
Total	75	93	14	25	4	3	214

tients lump was painless in 61.22% (n=131), while in other 20.56% (n=44) lump was painful. Next common mode of presentation (n=36, 16.82%) in this series was breast pain while 3 (1.40%) patients sought consultation for nipple discharge. These 39 cases were unaware of presence of any breast lump, the lump/lumpiness among these 39 patients was found on clinical examination.

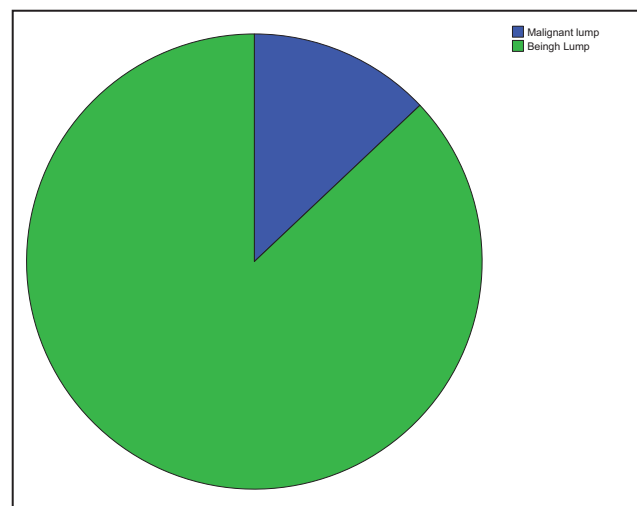
The FNAC was performed in all cases, before surgical procedures. It was found inconclusive in 35 cases. As per protocol of the unit, these cases were subjected to core tissue biopsy to yield diagnostic results. The results of core tissue biopsy from these 35 cases showed fibrocystic disease in 26 cases and small fibroadenoma in 6 cases, while in 3 cases core biopsy showed normal breast tissue. The different surgical procedures performed included, excisional biopsy, lumpectomy, incision & drainage and simple mastectomy. We performed skin sparing mastectomy and immediate breast reconstruction using pedicle Latis-simus Dorsi Flap in only 11 cases of T1 breast carcinoma, where axillary lymph nodes were neither clinically palpable nor ultrasonographically enlarged yet axillary sampling was done before proceeding for reconstruction. The 12 cases of carcinoma breast were either T2 or T3 with palpable axillary lymph nodes and therefore immediate reconstruction was not per-

formed, while 2 cases of T1 refuse for immediate reconstruction. Expectant treatment was offered in 49 cases where clinical examination revealed lumpiness, rather than the well defined lump, and FNAC/core tissue biopsy showed benign breast disease/normal breast tissue. For patients undergoing surgery, the histopathology of the resected specimen showed that fibroadenoma was the most common lump while the benign phylloides was the least common as shown in **Table I**.

The carcinoma breast was identified in 25 (11.68%)

cases as shown in **Figure 1**. Among these, 19 patients were married and 6 were unmarried and 3 patients were at age 20 or less. The commonest histopathology was infiltrating ductal cell carcinoma (60%), followed by lobular carcinoma (16%), scirrhous carcinoma (12%) and medullary carcinoma in 8 %. The Paget's disease was found in 4%.

FIGURE I:



DISCUSSION

The fibroadenoma, a solid non inflammatory lump was the most common lesion (43.92%) in this series of patients, a finding identical to the other published series^{4,5}. The mean age of our patients was 23 years in contrast to the finding of Kwok Leung Cheung⁶ where it was 32 years; however it may be due to the fact that we studied patients aged 30 years or less. Fibrocystic disease was the 2nd most common disorder in this series of patients accounting for 35%. This is more than twice as reported by Rakhshanda et al⁷ (16.8%) however almost identical as showed by Kamran et al⁸ (36%). The feature that distinguishes this study when compared to others is that among all patients diagnosed with fibrocystic disease, more than 60% (63.33%) cases were managed conservatively. This confidence was inspired due to the fact that we used clinical breast examination, imaging in the form of ultrasound and tissue sampling as FNAC/core tissue biopsy for diagnosis, commonly known as the triple test⁹⁻¹¹. The results of different studies have shown that the triple test has almost 100% accuracy^{9,10}. However in this series of patients, 1 patient presented with lumpiness, diagnosed after triple test as a case of fibrocystic disease, she underwent lumpectomy but the histopathology demonstrated normal breast tissue. As second side of the mirror it may be that, we failed to approach the diseased part. In the remaining 3 patients where tissue sampling showed normal breast tissue, diagnosed as case of cyclical mastalgia and surgery was deferred; however all these cases were followed up regularly. The breast abscess was the 3rd most common benign disorder (n=14, 6.54%) in this series of patients. The true local incidence is not available, however it is shown that 10% of all lactating women develop different infectious complications¹². Lactational mastitis is seen in 2-3% of lactating women and 5-11% of those with lactational mastitis develop abscess¹³. The breast abscess prevailed in this series as 6.54%. This is in sharp contrast to other series. TW khazada¹⁴ reported a prevalence of 16%, M.N Taj¹⁵ as 22% and Nisar Ahmad¹⁶ found annual prevalence of 8%. The 12 patients with breast abscess were married and lactating, while 2 patients were unmarried, with history of fever in recent past. Singh S¹⁷ has reported that breast abscess may be a complication of enteric fever. In our patients, although fever was not documented as enteric, but we were unable to find any evident source for suppurative inflammation. Benign Phyllodes tumour was found in 3 unmarried patients. This is identical to the study of Shahida khatoun et al¹⁸ with respect to the mean age and marital status.

Despite the increasing evidence that the prevalence of carcinoma of the breast in younger age has increased

in most part of the world¹⁹ still the generally held belief is that it is a disease of old age or at the most middle aged women. In contrast to this common belief it has been shown that not only one in every nine Pakistani women is likely to suffer from carcinoma breast²⁰, but also relatively younger females are affected more frequently²¹ as opposed to the west where most patients are at age of 60. Carcinoma of the breast was identified in 25 cases in this series of patients with frequency of 11.68%; this is alarmingly high when compared to the study of Ishtiaque Ahmed et al²² who found it to be only 1.4% in 3rd decade of life. In this series only 50% (n=13) patients at the time of presentation were at stage T1, while remaining 12 cases were either at T2/T3 with clinically palpable axillary lymph nodes or ultrasonologically enlarged axillary lymph nodes. This finding of greater clinical stage at relatively young age confirms the finding that in younger age group carcinoma breast behaves more aggressively²³ with respect to more advanced clinical stage and tumor size at presentation, increased frequency of axillary lymph node metastases²⁴, higher tumor grade and more frequent vascular invasion²⁵. The skin sparing mastectomy is basically en-bloc removal of all breast tissue and areola nipple complex by peri-areolar incision²⁶ giving maximal preservation of the remaining breast skin envelope for immediate reconstruction either with autologous tissue or implants. The technique is getting its place in oncological reconstruction as it gives highest patient satisfaction rate with excellent aesthetic outcome²⁷. We used this technique in 11 cases of early breast cancer using pedicle Latissimus Dorsi Flap²⁸ with excellent postoperative results. The practice of immediate breast reconstruction gives opportunity for ablative and reconstructive surgery in one setting; has positive impact on quality of life with respect to psychological and spiritual aspects²⁹ and neither inclusion of chemotherapy nor the timing of its administration significantly affect complication rates when compared to mastectomy and delayed breast reconstruction³⁰.

Having said this yet the increased prevalence of carcinoma breast in younger population is alarming, and demand the development of Breast Cancer registry system, Breast clinics, and attention of non governmental organizations so that more resources may be available to save our future generations.

CONCLUSION

The findings of this study demand that any female patient presenting with symptomatic breast disease should be referred to a designated breast clinic or to a surgeon with special interest and training in breast diseases. Although the clinical breast examination is more important than the history alone, the role of im-

aging and tissue sampling should not be underestimated as the combination of all above provides insight into the diagnosis with reasonable accuracy.

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