Research Article

Role of fine needle aspiration cytology in cyclic mastalgia: an outpatient department based study

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ABSTRACT

Background: Mastalgia is one of the most common presenting symptoms of benign breast diseases, which may be cyclical or continuous. Mastalgia is the commonest breast symptom presenting in surgical clinics. FNAC has been employed in diagnosis of benign breast disease (BBD) doubts still exist upon its accuracy and reliability. However its accuracy has been compared to clinical examination and mammography in diagnosing BBD. To study cytomorphological findings in women aged 15-35 years suffering from cyclic mastalgia presenting to our OPD is the main objective of the present study.

Methods: Women 94 in number age between 15 years-35 years of attending the outpatient department with complain of pain in breast were initially included in the study. Out of this 72 cases were deemed fit for study as they fulfilled the criteria mentioned in material and method.

Results: We found that fibroadenosis alone constitutes 58.3% of all cases of cyclical mastalgia and is the most common cause of cyclical mastalgia in women presenting to OPD.

Conclusions: Fibroadenosis is most common cause of cyclical mastalgia in women aged 15-35 years which is due to Hormonal disturbances unlike non-cyclical mastalgia.

Keywords: Cyclic mastalgia, FNAC, Fibroadenosis

INTRODUCTION

Mastalgia is a general term used to describe number of conditions, in which pain is present in one or both breast(s). It is also called mastalgia or muzodynia. Mastalgia is one of the most common presenting symptoms of benign breast diseases, which may be cyclical or continuous. Mastalgia is the commonest breast symptom presenting in surgical clinics. Mastalgia is a symptom of great importance to those who experience it. These have been tendencies to ignore the condition, however, the relative reluctance of the patient due to the nature of disease and the antipathy towards the disease that has prevailed in our society has led to little scope of therapy. In some patients mastalgia is of short duration

and an extreme variant of physiological premenstrual breast engorgement. It usually resolves spontaneously after reassurance and observation.

However, in few women mastalgia either cyclical or non-cyclical is severe enough to inhibit, occupational, social & sexual activities. Fine needle aspiration cytology (FNAC) has been employed in diagnosis of benign breast disease (BBD) doubts still exist upon its accuracy & reliability. However its accuracy has been compared to clinical examination and mammography in diagnosing BBD. Nicholas et al¹ reported that FNAC has diagnostic accuracy of 96% for all breast lesions and of over 97% for discrete lesion. Sensitivity approached 90% for all lesion and 92.5% for discrete lesion and pointed out that

most breast biopsy showed benign condition and emphasized the advantage of FNAC to surgical excision. However FNAC in diffuse fibroadenosis, these patients can be safely evaluated by clinical examination and mammography specially those over 35 years. Values of FNAC as a part of diagnostic triad of clinical examination, mammography and FNAC is being increasingly advised but clinical examination along with FNAC alone is highly accurate FNAC could be used along with clinical examination in young patients with low degree of suspicion and along with mammography in older patients. Cyclical mastalgia is the most common type and as the name suggest it is associated with hormonal changes and thus amenable to hormonal manipulation. A number of agents like EPO, danazol, bromocriptine, tamoxifen, gestrinone and LHRH analogues have been used.

Aims & objectives

To study cytomorphological findings in women of cyclical mastalgia on basis of FNAC findings in women aged 15-35 years presenting to OPD.

METHODS

Our study was carried out in OPD of Surgery department during January 2015-December 2015 i.e. 1 year. Ours was a prospective study in which all women qualifying for study was sent for FNAC and its findings was observed in cases of cyclical mastalgia. Women 94 in number age between 15-35 years of attending the outpatient department with complain of pain in breast were initially included in the study. Out of this 72 cases were deemed fit for study as they fulfilled the criteria mentioned in material and method.

- The pain had to be of such severity that the physical activity of patient was curtailed.
- The patient had persistent marked pain throughout menstruation cycle.
- The pain was not relieved by mild analgesic (NSAID) or analgesics gave a partial/temporary relief.
- The pain had to be episodic and exacerbated during the cycle.
- The patient was able to carry out her usual activities but pain was exacerbated with unusual or increased activity.

A thorough general as well as local examination was done. Mammography was done in patient above 35 years of age. All extra mammary cause of breast pain like Tietze's syndrome was excluded from the study.

RESULTS

We found that fibroadenosis alone constitutes 58.3% of all cases of cyclical mastalgia and is the most common cause of cyclical mastalgia in women presenting to OPD.

FNAC alone was able to make diagnosis in approx 96% cases, in about 4% cases further invasive investigations was required to confirm the cause of mastalgia.

Table 1: FNAC findings in patients with cyclical mastalgia.

Findings	No. of cases	Percentage
Only fibroadenosis (FS)	42	58.33
Fibroadenosis with hyperplasia (FSH)	10	13.89
Fibroadenosis adenoma (FSA)	13	18.05
Fibroadenoma (FM)	4	05.56
Inconclusive (I)	3	04.17
Total	72	100.00

DISCUSSION

The exact cause of mastalgia is still unknown. Severe mastalgia can however disrupt normal life by interfering with sleep, relationship with husband and children and may also affect occupation of working women. Severe cyclical mastalgia runs a long course especially if it begins in third or fourth decade of life. It may last the entire menstrual age of female and the only chance of relief may be menopause. Its clear relationship to the menstrual cycle has pointed to the female sex hormones, being responsible with perhaps an altered sensitivity of the breast as target organ. This type is amenable to hormonal manipulation.

In this study we found only fibroadenosis (58.33%) as the commonest cause of mastalgia. Fibroadenosis along with fibroadenoma was present in 18.05% cases. fibroadenosis with hyperplasia and cystic changes were present in 13.89% cases. Fibroadenoma alone as a cause of mastalgia was seen in 5.56% cases finding of FNAC were inconclusive in 4.17% cases.

In contrary to our study Chandanwale et al² studied the cytomorphologic features of benign breast lesions and correlate with clinical and histological findings and found that the most common lesion encountered in their study on FNAC was fibroadenoma (49%) followed by fibrocystic disease (14%), and acute mastitis (5%). Tuberculous mastitis was 3%.

This substantiates that mastalgia can be present in normal breast tissue and the whole process is an aberration of normal development and involution (ANDI) rather than a disease process. Shukla HS et al³ in his study at Banaras. Hindu University, Varanasi (1991) found that patient showing fibrocystic disease and fibrosis showed poor response to therapy. B.V. Sreedevi⁴ in a study found that in cyclical mastalgia fibroadenosis patients were 30 (42%), Cystic diseases were 7 (10%) and only cyclical mastalgia were in 35 (49%) cases.

There are great variations in breast volume during the menstrual cycle. Volume is greatest in the second half of the cycle, after premenstrual increases in size, nodularity, density and sensitivity. Progesterone may stimulate glandular growth in luteal phase. Changes occur in the mitotic rate of glandular tissue in the luteal phase than in the follicular phase. The premenstrual increase in the volume occurs as a consequence of the increase in size of lobule without any evidence of epithelial proliferation. Thereafter, engorgement of the stroma, lobules, and ducts is evident, with an increase in the size of ducts and acini as the lumen dilates. Parenchymal engorgement and edema subside with onset of menses.

CONCLUSION

Fibroadenosis is most common cause of cyclical mastalgia in women aged 15-35 years which is due to Hormonal disturbances unlike non-cyclical mastalgia.

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Ethical approval: The study was approved by the institutional ethics committee

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