

## Profile of breast disease in patients with mastalgia audit of breast clinic in Mosul

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### ABSTRACT

**Objective:** In the medical encyclopedia ;Mastodynia, mastalgia or mammalgia are names for a medical symptom that means - *pain in the breast* .This common problem seen in the west, finds little mention in our country and our literature. The purpose of this study is to report the pattern of various breast diseases amongst women presenting with mastalgia (breast pain) in Mosul breast clinic emphasizing their assessment and hoping to initiate further studies on their natural profile.

**Patients and methods:** A retrospective study of 682 female patients with mastalgia. From the Breast Clinic in Al Jamhoory Teaching Hospital in Mosul between Aug 2002 - March 2004. Records of six hundred eighty two patients with breast pain with or without lumpiness utilizing Cardiff daily breast pain chart filled by the patients were reviewed. Their mean age was about 38 years. All patients were examined clinically and by ultrasound (probe 7.5MHz). Mammography and histopathological examination were done to those with equivocal and suspicious clinical and ultrasonographic results.

**Results:** Cyclical breast pain was reported in 422 patients (62%), normal breast nodularity in 154 (22%), inflammatory lesions in 40 (6%), benign breast pathology in 56 (8%), benign tumours in 6 (less than 1%) and malignant tumours in 4 (less than 1%).

**Conclusions:** Breast pain is a common problem in the breast clinic. This study showed that cyclical breast pain and nodularity represent the commonest conditions followed by benign and inflammatory lesions. Breast pain needs to be evaluated as with many other medical problems, by good history (including breast pain chart) and examination. This to be followed by imaging (as the age implies) and histopathological assessments. Surgeons evaluating breast pain should have more rational criteria in using further sophisticated, expensive and invasive tests.

Key words: breast; mastalgia; profile.

### الخلاصة

**الهدف:** الم الثدي الذي يعتبر حاله شائعة في الغرب قلما نجد دراسة عنه في بلدنا. الغرض من هذه الدراسة هو عرض شكل أمراض الثدي المختلفة بين المريضات اللواتي تشكين من الم الثدي لدى مراجعتهن عيادة أمراض الثدي في الموصل بالاعتماد على الشكل السريري والمرضي أملا أن تكون الدراسة حافزا لدراسات أخرى عن الموضوع.

**التصميم:** دراسة تراجعية على ٦٨٢ مريضة تشكين من الم الثدي.

**المكان والزمان:** تمت الدراسة في المستشفى الجمهوري التعليمي بالموصل في الفترة بين آب ٢٠٠٢ إلى آذار ٢٠٠٤ .

**المرضى والطريقة:** تمت مراجعة سجلات ٦٨٢ مريضة تشكين من الم الثدي معدل أعمارهن ٣٨ سنة. تم الاستعانة بجدول الم الثدي اليومي والذي يملا من قبل المريضات وتم فحص المريضات سريرياً و باستخدام أجهزة الفحص بالأموح فوق الصوتية. خصصت أشعة الثدي والفحوص النسيجية للمريضات اللواتي كانت لديهن نتائج الفحص السريري وفحص الأمواج فوق الصوتية غير واضحة أو مشتبه بها.

**النتائج:** كان عدد المريضات المصابات بألم الثدي الدوري ٤٢٢ (٦٢%) , وعقيدات الثدي الطبيعية في (٢٢%) , واخماج الثدي في ٤٠ (٦%) , وأمراض الثدي الحميدة في ٥٨ (٨%) , وأورام الثدي الحميدة في ٦ (اقل من ١%) , وأورام الثدي الخبيثة في ٤ (اقل من ١%).

**الاستنتاج:** أن ألم الثدي هو مشكله شائعة في العيادات التخصصية للثدي. لوحظ في الدراسة أن ألم الثدي الدوري و عقيدات الثدي الطبيعية يشكلان النسبة العظمى من المرضى يعقبها أمراض الثدي الحميدة واخماج الثدي. يمكن أن توفر هذه الدراسة منهجا للأطباء الجراحين في عيادات الثدي التخصصية عن كيفية التعامل مع ألم الثدي واستخدام مفيد للفحوصات الطبية البسيطة والمتوفرة ذات الدقة في التشخيص.

**D**iseases of the breast are common clinical problems<sup>(1)</sup>. The majority of breast diseases may be developmental or involutive<sup>(2)</sup>. Breast pain (mastalgia) is usually a benign disorder in young women that stems from increased mammary blood flow following hormonal imbalance during their menstrual cycle<sup>(3)</sup>. It was estimated that 2/3 of working women and 77% of screening population admitted to having had breast pain when directly questioned<sup>(4)</sup>. A recent classification of mastalgia, first described by the Cardiff Mastalgia Clinic is useful in making clinical decisions and consists of 3 components: cyclical, non-cyclical, and chest-wall pain<sup>(5,6)</sup>.

It is the clinical importance of mastalgia and the scarce information about this entity in our locality<sup>(7,8)</sup> that led us to conduct this study in order to profile the spectrum of various breast lesions among patients with breast pain attending Mosul breast clinic in Aljamhoory hospital emphasizing their assessment and thus, to initiate further studies on the natural profile of such lesions.

### Patients and methods:

Records of (682) female patients with breast pain with or without lumpiness who attended the breast clinic at Al Jamhoory Teaching Hospital for the period from Aug 2002 to March 2004 were reviewed. The gathered data included age, relation to menstrual cycle (using **Cardiff daily breast pain chart**<sup>(9,10)</sup>, filled by the patients (figure1) and breast specific complaints as (type of pain, duration, lumps and discharge). Clinical breast examination and breast ultrasound (with a 7.5 MHz probe) were done. Informations from mammographic assessment that was performed to those who had clinically and

sono-graphically positive lesions were utilized. Reports of histopathological tests including fine needle aspiration cytology and excisional biopsy that were restricted to those with equivocal and suspicious imaging results were reviewed. Accordingly, different patterns of breast diseases were defined as cyclical breast pain, normal breast nodularity, inflammatory lesions, benign breast conditions, and tumours.

### Results:

A total of 682 female patient records with breast pain with or without lumpiness were reviewed. The mean age was 38 years; their age range was (15–70) years. While analyzing the **Cardiff daily breast pain chart**, four hundred twenty two patients (62%) had attacks of generalized breast pain (or heaviness) intensified some 7-10 days before the onset of their menstrual cycles following which pain improved on menstruation and the duration ranged from 1 to 12 months. Clinical examination of these patients revealed diffused nodularity and breast tenderness. These patients were subjected to ultrasound examination that was normal and diagnosed as having cyclical mastalgia.

Two hundred sixty patients (38%) had localized focal breast pain, not related to menstrual cycles i.e. non cyclical of 1 to 14 months duration range. These patients underwent breast ultrasonographic examination. Results were recorded as normal findings 154 (23%), benign lesions 30 (4%), fibroadnoma mass 6 (1%) and suspicious lesions 70 (10%).

After excluding those with normal ultrasonographic results, 106 patients (16%) with symptomatic non cyclical mastalgia in



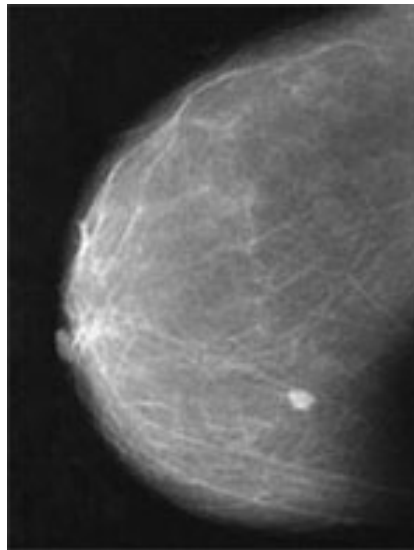


Figure 4: Mammogram showing suspicious dense mass

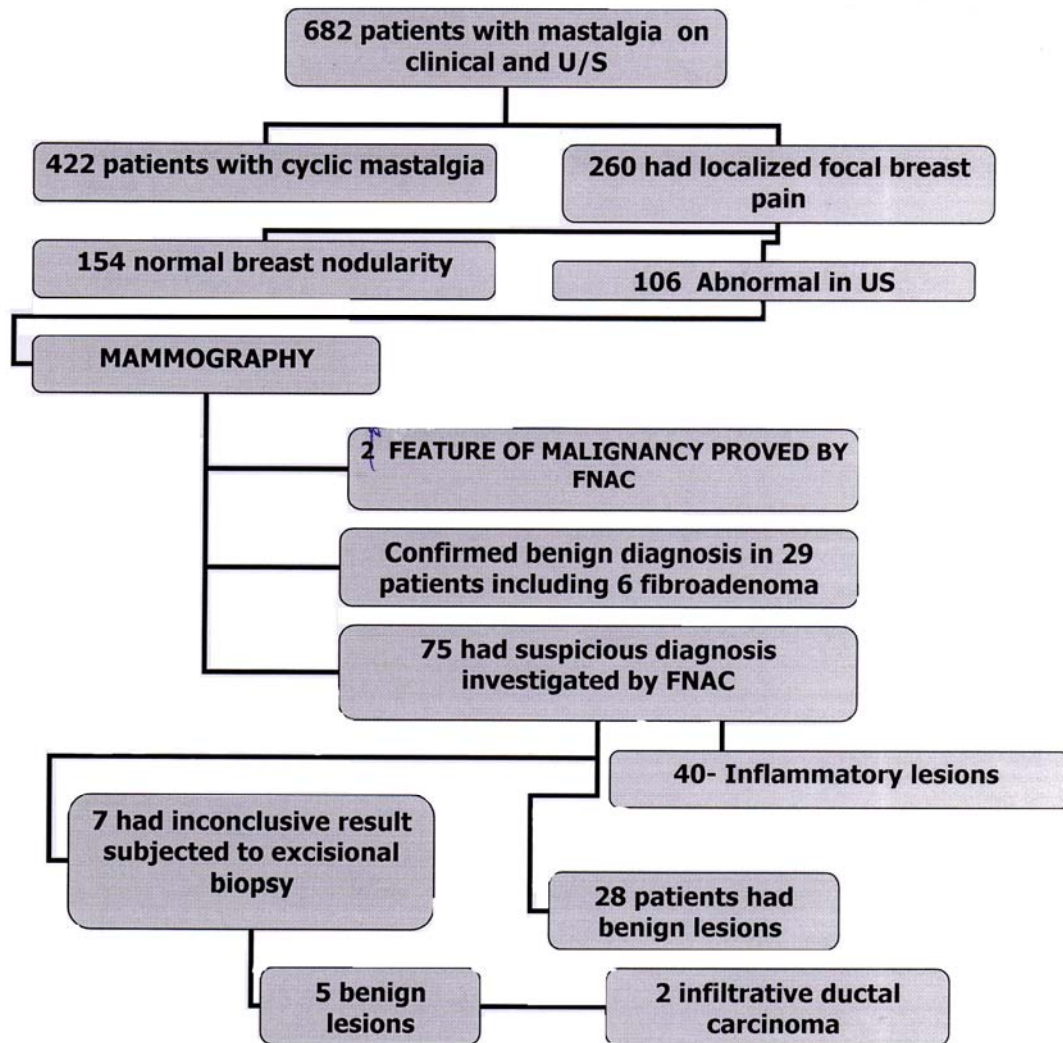


Figure 5: Summarization of the results in patients with mastalgia

## Discussion:

In contrast to Western societies, breast pain is less common in Asian cultures, affecting as few as 5%.<sup>(11,12)</sup> Most reports addressing the pattern of breast diseases in Arab females are scant<sup>(13,14)</sup>. This study finds that mastalgia is a real problem in the breast clinic and showed that cyclical mastalgia(62%) is certainly more common than non- cyclical mastalgia(38%). These results are comparable with other reports<sup>(2,4,15)</sup>. The causes for the higher frequency of cyclical mastalgia and breast nodularity in the current study are still not known. Reports have attributed it to age, psychological, dietary, hormonal or breast factors (as duct ectasia) relating to abnormal menstrual cycles to play a role in the etiology<sup>(16-18)</sup>. Despite many investigations, Roukema et al reported that many women occasionally still suffer from periods of severe mastalgia but little is known about its etiology<sup>(19)</sup>. Confronted with patients complaining of non-cyclical breast pain, it is important that surgeons determine whether it arises from mammary or extra-mammary source. Among those who presented with non-cyclical mastalgia, our results reveal that benign conditions (8%) followed by inflammatory lesions (6%) were the most frequent pathology observed. This ranking order is in agreement with Jamal et al. results who studied 312 patients<sup>(20)</sup>.

However, in this study, the most prevalent age group attending the breast clinic was between 20-29 years. This might be attributed to the benefit of Breast Self Examination using folders and media concentrating on referral when discovering abnormalities. Moreover, this age range is in agreement with Frances et al. who found that mastalgia usually occurs in women in their 20s and 30s<sup>(17)</sup>. Regarding evaluation, Goodwin et al. concluded that women with cyclical mastalgia have many breast concerns and they undergo more frequent breast investigations than do women without mastalgia<sup>(21)</sup> while Be lieu stated that the most important factor in the evaluation of breast pain is a thorough clinical and ultrasonographic examinations that are

assuring to exclude malignancy together with histopathology of suspicious lesions<sup>(16)</sup>. Actually this policy had been followed in the current study where breast ultrasound was utilized as being available, non-invasive and assuring. Tavaf et al. stressed that accurate assessment of mastalgia requires a prospective pain diary evaluation, owing to the variable and subjective nature of symptoms and recall bias<sup>(22)</sup>. In our study we found that this diary, filled by the patients, was extremely helpful especially in segregating those with cyclical from non cyclical pain.

Ader et.al pointed out that there is an increased utilization of mammography among women with cyclical mastalgia than among asymptomatic women<sup>(23)</sup>. In this study; mammography was restricted only to those patients with symptomatic non cyclic breast pain that had positive ultrasound results to verify the diagnosis and to exclude malignancy especially in patients older than 35 years.

It was observed that patients with mastalgia had surgical breast biopsies or fine needle aspirations 6 times as the controls<sup>(22)</sup>. In this context, Morrow still suggests that histopathology is restricted to those with dominant breast mass<sup>(24)</sup>. This selectivity is in agreement with our work in restricting cytological assessment to only those with suspicious lesions constituting (11%) to narrow the spectrum of diagnosis and for reassurance too. Moreover, as far as most of our patients had cyclical mastalgia and breast nodularity (62%), we agree with Gately and Mansel's conclusion that mild pain and breast nodularity are considered normal and should not be biopsied surgically as it is unnecessary making subsequent assessment more difficult<sup>(25)</sup>. This was aided by the fact that the number of biopsies showing malignant neoplasm in the current study was relatively small (4 out of 682) and all were in the non-cyclic group.

It was found that the two most common concerns of our studied patients are the fear that breast pain is a symptom of breast

cancer and the presence of severe pain that affects a woman's quality of life<sup>(26)</sup>. Although breast pain alone is rarely a symptom of breast cancer (only in 7%), the primary aim of evaluation is to exclude this diagnosis especially those with cancer phobia<sup>(4,27)</sup>. Smith et al had concluded that the odds ratio of breast cancer in a patient with mastalgia is 1:35, possibly due to increased tissue sensitivity to estrogen<sup>(28)</sup>. A retrospective cohort study found that only 2% of all breast pain cases resulted in breast cancer diagnosis and less than 7% of all painful lumps were cancerous<sup>(29)</sup> while in the present study only 4 patients (less than 1%) had malignancy and presented with non cyclical mastalgia.

### Conclusions:

The present study emphasizes the fact that mastalgia can no longer be ignored. Many women with mastalgia worry more about the consequences of cancer than about the pain itself. It should not be forgotten that mastalgia is a symptom and therefore is not a specific disease in its own. The current study showed that cyclical breast pain (62%) and modularity (22%) were the commonest conditions followed by benign (8 %) and inflammatory lesions (6 %). We conclude that breast pain is best evaluated through a comprehensive gathering of information utilizing breast pain record diary, since patients' recollection of events can be inaccurate. It is also important that physical examination often allows better assessment, particularly to exclude extra mammary causes. Much work needs to be done in our locality to guide surgeons evaluating breast pain through best utilization of imaging facilities ( U.S/MMG) as the age implies and histopathology, enabling a consistent approach, which will reduce the number of ineffective interventions and ensure appropriate use of invasive, expensive and sophisticated tests.

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