

Risk Factors Related To Mastalgia

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Abstract

Background: Breast pain becomes more complicated in many humans. Various hospitals are planning for surgery in the initial stages. The main aim of this paper to find the various factors which cause mastalgia, this is mainly causing the abnormal conditions of the breast.

Method : The experiments conducted on 400 patients and this is collected from various surveys, for patients older than the age of 40 the mammography and ultrasonography (US).

Results : The mean age was 44.23 ± 9.23 years. This group consists of 300 cases, the asymptomatic group consists of 100 persons. Due to the various reasons that are related to mastalgia ($p < 0.05$). These are based on their breastfeeding to the child. If it is more than 4 times or more were higher in the mastalgia group ($p < 0.04$). The breast imaging-reporting and data system (BI-RADS 2) mammography results were associated with mastalgia ($p < 0.05$). These two are more common in the mastalgia group ($p < 0.05$) that is Fibro cysts and fibro adenomas. Based on the previous history the malignant breast disease was simultaneously higher in the mastalgia group ($p < 0.05$).

Conclusions : Life stress, high caffeine consumption, smoking, lactation frequency, and benign disorders were factors identified to be related with mastalgia. Though a significant relation between mastalgia and malignant breast disease was detected in our study, more studies are still necessary to investigate this relationship.

Keywords: Mastalgia · Surveys · Mammography. US findings. Pain · Surgery

Introduction

The most common factor in women is Breast pain nothing but mastalgia which causes breast tenderness, hard burning sensation or tightness in the tissue, the pain may increase or maybe constant and this will occur some other times.¹ Due to the pain in the breast and tenderness, many women are fear with early symptoms of breast cancer, generally, these are not considered as disorders.²⁻³

Mastalgia is classified into two types such as cyclic breast pain (CBP) or non-cyclic breast pain (NCBP). CBC affects women at the age of 20 to 30 and it is up to 40 also. But still, it is menstruating. Mainly the pain occurs at the end of the menstrual cycle week or before the period occurs. At this time the breast is affected with the painful, tender, and swollen, based on the cycle the symptoms improve at another point. The pain occurs at the breast outer and upper parts of two breasts and this involve the underarm area as well. In the luteal period,

the result of water increased in breast stroma produced by increasing hormone levels.³⁻⁵ Menopause is the non-cyclic mastalgia. This may like sharpness, burning, or soreness in the breast.

Causative pathophysiology of pain stays hazy however is believed to be known with secretion factors (e.g., hormone-substitution treatment, oral contraceptives, pregnancy, menses, pubescence, and menopause) these variables will modify the steroid, Lipo-Lutin and prolactin levels.⁶ Kind breast issue (e.g., fibrocystic changes), mind-expanding drugs, psychosocial factors and passionate stress square measure connected with breast torment.²⁻⁷ Lactation problems (e.g., engorgement, mastitis, and breast ulcer), inflammation (Tietze disorder), Postthoracotomy disorder, Spinal and paraspinal issue and Referred torment (e.g., pneumonic, heart, or vesica sickness) will likewise cause breast torment. Caffeine and vasoconstrictive utilization square measure likewise

viewed as related with pain.¹ Cancer is a rare reason for breast torment.⁴

Breast pain associated with malignant growth is one-sided, non-cyclic, and extremely a lot of confined.⁸

The fundamental center is to research the components of inpatient history that influences the event of breast pain, and to decide the connection among mastalgia and considerate or malignant breast utilizing a huge arrangement of members.

Method

The research was completed in an exceedingly non-public Surgery facility in Iraq, between September 2018 and August 2019. This experiment was affirmed by the local human morals committee. The patients were relegated to at least one of 2 gatherings: the pain gathering, from women, admitted to the breast surgery outpatient center with mastalgia (n = 300); and therefore the symptomless gathering (the management gathering), including patients undergoing routine breast screening (n = 100). Patients UN agency was treated with oral contraceptives, psychoactive specialists, secretion medical care, or was operators, even as patients below 18, or over 70 older were banished from this research.

A standard summary study for all patients within the groups was performed regarding their enthusiastic anxiety, utilization of caffeine and phytotoxin. AN intensive physical assessment was performed for all patients. The gap between the areola and therefore the os indent was calculable, any length surpassed 33 cm was thought of as macromastia. Breast screening was done by means that of the diagnostic procedures for patients skilled than the age of 40; imaging (US) was done once necessary for any age. Breast thickness bit by bit will increase to type D, during this manner, drop-off the affectability of the diagnostic procedure. What is more, the imaging discoveries in the diagnostic procedure were ordered accordant to the Breast Imaging-Reporting and information system (BI-RADS)? The BI-RADS classes are characterized as BI-RADS zero, fragmented; BI-RADS one, typical; BI-RADS2, thoughtful finding(s); BI-RADS three, presumptively generous; BI-RADS four, suspicious abnormality; BI-RADS five, deeply resembling harm; and BI-RADS vi, presence of biopsy-demonstrated danger.

The NCSS 2007, and PASS 2008 Statistical Software (Utah, USA) programs were used for

measurable examination to perform the mean, variance, return and proportion, the Mann-Whitney U take a look at was used to affirm a normal dispersion condition. Fisher's actual take a look at, Pearson's chi-squared take a look at, and Yates' progression rectification were used for the subjective evaluations of the data. Contrasts were thought of statistically vital once $p < 0.05$.

Results

Overall 400 females with a males period of 44.23 ± 9.23 years (approx 19-65) were enlisted. The mastalgia gathering, 300 patients, and, the well gathering, two hundred patients. Guys age was basically higher within the pain gathering ($p = \text{zero}.001$) (Table 1). The rate range of patients World Health Organization admitted extended gung ho feeling of tension was higher within the pain gathering ($p < \text{zero}.005$). alkaloid use and smoking were known with pain ($p < \text{zero}.05$). The lactation repeat rate disclosed associate degree on a awfully basic level higher association with bosom torment within the pain gathering ($p < \text{zero}.05$). The sort, shape, and laterality of bosom torment within the pain bundle area unit consolidated in Table a pair of. the speed range of patients of the pain bunch eaten soul, paracetamol, and non-steroid assuaging medicine were primarily higher ($p < \text{zero}.05$) (Table 3).

A total of 280 patients was given to mammographic screening, 209 patients from the pain gathering, and seventy one patients within the well gathering. The unendingly visit bosom thickness configuration was composed associate degree within the well gathering, and sort B saw as increasingly typical within the pain gathering ($p < \text{zero}.01$). In step with the BI-RADS categories, BI-RADS one was increasingly customary within the well occasion and BI-RADS a pair of within the commanding within the pain gathering ($p < \text{zero}.05$). The analysis of the U.S.A. photos disclosed the events of elementary bruises and fibro adenomas were higher within the pain gathering ($p < \text{zero}.05$). The assessment of the tomography discoveries between the 2 social occasions shows up in Table four.

Different sorts of six patients resolved to own BI-RADS four were within the pain gathering. Once the diagnostic assay, the psychoneurotic evaluations disclosed that 3 of those patients had a unsafe contamination, agitating cautious intervention.

Table 1. the comparison between the mastalgia and asymptomatic groups patients

		Total	Mastalgia	Asymptomatic	p
Age mean ± SD, years		44.23±9.23	45.25±9.50	42.85±10.20	0.001
Patients, n		400	300	100	
Stress, n (%)	none	85 (20.5)	52 (17.3)	33 (33.0)	0.001
	stressful	315 (79.5)	248 (82.7)	67 (67.0)	0.002
Caffeine consumption (coffee), n (%)	none	250 (62.5)	170 (56.7)	80 (80.0)	0.003
	1 cup/day	65 (16.2)	60 (20.0)	5 (5.0)	0.012
	≥ 2 cups/day	85 (21.3)	70 (23.3)	15 (15.0)	0.012
Smoking (cigarettes), n (%)	None	280 (70.0)	205 (68.3)	75 (75.0)	0.004
	5-10/day	71 (17.8)	55 (18.3)	16 (16.0)	0.125
	>10/day	49 (12.2)	40 (13.3)	9 (9.0)	0.007
Lactation (breast-fed infants), n (%)	0	30 (7.50)	10 (3.30)	20 (20.0)	0.001
	1	39 (9.80)	22 (7.30)	17 (17.0)	0.005
	2	97 (24.2)	65 (21.6)	32 (32.0)	0.154
	3	72 (18.0)	60 (20.0)	12 (12.0)	0.001
	≥ 4	162 (40.5)	143 (47.7)	19 (19.0)	0.035
BSO±TAH, n (%)	No	384 (96.3)	294 (98.0)	90 (90.0)	0.001
	Yes	16 (4.0)	6 (2.0)	10 (10.0)	0.005
Menopause, n (%)	premenopausal	312 (78.0)	252 (84.0)	60 (60.0)	0.001
	postmenopausal	88 (22.0)	48 (16.0)	40 (40.0)	0.002
Breast size, n (%)	Normal	368 (92.0)	280 (93.3)	88 (88.0)	0.001
	macromastia	32 (8.0)	20 (6.7)	12 (12.0)	0.002
Recent breast trauma, n (%)	No	391 (97.8)	292 (97.3)	99 (99.0)	0.055
	Yes	9 (2.2)	8 (2.7)	1 (1.0)	0.058
Breast cancer, n (%)	No	393 (98.2)	295 (98.3)	98 (98.0)	0.015
	Yes	7 (1.8)	5 (1.7)	2 (2.0)	0.005

SD, BSO±TAH: history of a prior bilateral salpingoophorectomy with or without total abdominal hysterectomy.

Table 2. Mastalgia patients' based on the pain the distribution is done

Breast Pain	Type	N	%
Radiation	Diffused	140	46.7
	Localized	160	53.3
Laterality	Bilateral	61	20.3
	Unilateral	239	79.7
Relation with menstruation	Cyclic	205	68.3
	Non-cyclic	95	31.7

Table 3. Analgesic consumption comparison between the mastalgia and asymptomatic groups

Analgesic consumption n (%)	Total	Mastalgia	Asymptomatic	P
None	350 (87.5)	255(85.0)	95(95.0)	0.001
Aspirin	9(2.2)	8(2.7)	1(1.0)	0.011
Paracetamol	17(4.3)	15(5.0)	2(2.0)	0.001
NSAIDs	24(6.0)	22(7.3)	2(2.0)	0.021

Table 4. Comparison of mammography and ultrasound findings between the mastalgia and asymptomatic groups

	Total, n (%)	Mastalgia, n (%)	Asymptomatic, n (%)	p
Mammographic breast density (pattern) (n=280)				
A	57 (20.4)	12 (5.7)	45 (63.4)	0.001
B	172 (61.4)	160 (76.6)	12 (16.9)	0.001
C	44 (14.7)	34 (16.3)	10 (14.1)	0.010
D	7 (2.5)	3 (1.4)	4 (5.6)	0.020
Mammographic category (n=280)				
BI-RADS 0	160 (57.1)	101 (52.3)	59 (67.8)	0.073
BI-RADS 1	30(10.7)	16 (8.30)	14 (16.1)	0.001
BI-RADS 2	70(25.0)	60 (31.1)	10 (11.5)	0.001
BI-RADS 3	10(3.57)	7 (3.63)	3 (3.45)	0.014
BI-RADS 4	6(2.14)	6 (3.11)	0 (0.0)	0.021
BI-RADS 5	4(1.4)	3 (1.55)	1 (1.15)	0.002
Ultrasound findings (n=285)				
Normal	35(12.3)	25 (13.5)	10 (10.0)	0.003
Simple cysts	20(7.02)	20 (10.8)	0 (0.0)	0.001
Fibroadenomas	45(15.8)	35 (18.9)	10 (10.0)	0.039
Fibrocystic disease	180(63.2)	100 (54.1)	80 (80.0)	0.015
Lymph nodes	3(0.78)	3 (1.62)	0 (0.0)	0.014
Complex cysts	2(0.70)	2 (1.08)	0 (0.0)	0.004
Fatty tissue necrosis	1(0.35)	1(0.54)	0 (0.0)	0.004

Discussion

Various factors are effecting mastalgia, The author⁹ portrayed that the period of women grumbling of the pain in breast was in the range 35-55 years and that this side effect was once in a while experienced younger than 45. Present research, the male age of the all-out investigation group was 44.23 ± 9.23 years (territory 19-65 years), and the male age of the mastalgia group was higher lighting up that mastalgia happens in the perimenopausal period when the inconsistency of hormonal and menstrual beginnings. Numerous studies showed that there is a connection between breast torment and mental strain.¹⁰⁻¹² In this paper, the patients how had an unpleasant lifestyle were essentially higher in the mastalgia gathering. Numerous concentrates uncovered a connection between caffeine utilization and smoking with breast torment.¹⁻³⁻⁶ In our examination, there was a critical association between either standard caffeine utilization or substantial smoking (in excess of 10 cigarettes every day) and mastalgia.

Anomalies of the estrogen/progesterone proportion, which can happen on the off chance that one of these hormones increment, the other one will diminish, or expanded prolactin levels are identified with mastalgia.¹³⁻¹⁴ The event of breast side effects, for example, expanding, irritation, and nodularity in the menopausal period, at that point the end of these manifestations in the postmenopausal period is potential because of the impacts of the estrogen hormone.¹⁵⁻¹⁶

In perspective on lactation, the level of ladies with a background marked by breast feeding⁴ or more newborn children were expanded in the mastalgia gathering. These outcomes shed light on the connection of breast torment with the expanded frequencies of lactation, which is identified with an expanded number of births, and therefore with an expanded introduction to significant levels of estrogen and prolactin. Additionally, at least 4 times of lactation may bring about anatomical changes in the breast tissue, particularly in the ductal framework, which could likewise expand the breast torment episodes.

An earlier reciprocal salpingo-oophorectomy with or without absolute stomach hysterectomy was identified with a fundamentally diminished event of mastalgia.

The mastalgia side effects which coordinate the announced investigations that found a huge connection between the asymptomatic gathering and postmenopausal

state.¹⁷⁻¹⁸

Macromastia or breast hypertrophy is an uncommon ailment of the breast connective tissues wherein the breasts become exorbitantly enormous. In the event that the separation between the sternal score and the areola surpassed 33 cm this means that macromastia.¹⁹ In our examination, the recurrence of macromastia was altogether lesser in the mastalgia gathering, recommending that macromastia probably won't be one of the components that reason mastalgia. Mastalgia may happen attributable to greasy tissue rot, or a strain in the Cooper tendons as aftereffects of either dull or entering injury to the breast. In our investigation, higher paces of injury history found in the mastalgia gathering.

Extreme mastalgia can happen in 10–22% of patients and requires medicinal medications. As an initial step approach, analgesics In our present examination, the mastalgia bunch utilized pain-relieving specialists more than the asymptomatic gathering, and the most picked pain relieving type was NSAIDs.

As breast thickness builds, the mastalgia does. In our examination, the sort B breast design was higher in the mastalgia gathering. Different designs demonstrated immaterial contrasts between the two gatherings. Mastalgia and generous breast issue is altogether related. Our examination indicated a higher recurrence of mastalgia in patients with discoveries of benevolent issue (BI-RADS 2). The connection between breast torment and kind issue distinguished utilizing the US is likewise easily proven wrong. The author announced that fibroadenomas and basic sores were the most widely recognized existing together benevolent sores.

Furthermore, the rate of fibrocystic malady recognized by the US was essentially higher in patients with mastalgia. Since the fibrocystic ailment is a substance demonstrating a summed up inclusion of the breast parenchyma, that it prompts diffuse breast torment isn't startling. Despite the high likelihood of the dwelling together of a dangerous breast tumor with non-cyclic breast torment, albeit uncommon, repetitive mastalgia can likewise be identified with harm.

Despite the fact that the aftereffects of our examination uncover a relationship among mastalgia and danger, this issue is as yet dubious, and there is as yet a requirement for enormous future investigations to uncover the relationship more precisely.

Conclusion

Symptoms like stress, coffee consumption, smoking, and other abnormal disorders are the key points found which is related to mastalgia. There is a relation between mastalgia and malignant breast disease is found in our research. In the future, more research is to be done.

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