SJIF Impact Factor: 5.464

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

ISSN: 2457-0400
Volume: 6.
Issue: 7
Page N. 27-33
Year: 2022

Original Article www.wjahr.com

EVALUATION OF MASTALGIA IN PATIENTS PRESENTED TO BREAST CLINIC IN BAGHDAD CITY

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Received date: 02 May 2022 **Revised date:** 22 May 2022 **Accepted date:** 12 June 2022

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ABSTRACT

Introduction: Mastalgia (breast pain) is a common breast symptom experienced by females of reproductive age. It causes an anxiety leading to repeated investigations and disturbs a woman's life style. the severity of pain may adversely impact the routine life besides creation of fear of harboring breast cancer. The aim of study to identify the determinants in patient's history that affect the incidence of mastalgia and its association with many variables in the current study. **Method:** A total of 199 females with mastalgia was included in the study. the variables include in the study are; age (years), weight (Kg) of females, age of menarche (years), age of first pregnancy (years), no. of baby. Other variables include are; any nipple discharge, types of discharge either (bloody, milky, no discharge, serous or yellowish), marital state, any relation with menstruation, type of menstrual cycle M.C, lactating state, smocking and coffee consumption, history of OCP, family history of breast Ca., initial site of pain either (left breast or both right and left breast or right breast), radiation of pain, previous breast surgery and type of pain. No any exclusion and inclusion criteria's. **Results:** there is significant association between pain radiation and no. of baby, there is significant association between site of breast pain and discharge, there is significant association between site of breast pain and marital state, there is significant association between type of pain and marital state, there is significant association between type of pain and age of females, there is significant association between type of pain and no. of baby. **Conclusion:** mastalagia is common complaint among Iraqi women, mainly before fourth decade of life. It was no association found between mastalgia and family history of breast cancer, mastalgia was mainly bilateral and not related to menstruation.

KEYWORDS: bloody, milky, no discharge, serous or yellowish.

INTRODUCTION

Mastalgia (breast pain) is a common breast symptom experienced by females of reproductive age. It causes an anxiety leading to repeated investigations and disturbs a woman's life style. the severity of pain may adversely impact the routine life besides creation of fear of harboring breast cancer.[1] Mastalgia may be cyclical when it is related to menstrual cycles, noncyclical when it bears no relation with menses or of extra mammary origin when the breast pain arises from structures other than breast.[2] According to WHO up to 70% of women in western societies experience breast pain at some point in life.[3] While the incidence in Asian population reported to be 5% and in Indian study found to be 13%.[4] Breast pain accounting for 47% of all breast related visits of breast clinics and 69% of these visits by premenopausal women.[5] Mastalgia can be severe enough to interfere with quality of life and daily activities impairing sexual function in 48%, impaired physical activity in 38%, impaired social activity in 12% and impaired school function in 8%.[6] Rarely that mastalgia been the presenting symptom of breast cancer, it's estimated that 2.7% of women with mastalgia have breast carcinoma and 4.6% of breast cancer cases presented with breast pain.[7] A recent classification consists of three components: cyclical, noncyclical, and chest-wall pain.[8] Cyclical pain is most prominent towards the end of the menstrual cycle, cyclical mastalgia affects up to 40% of women before menopause, most often in their thirties. In approximately

8% of these women pain will be severe and interfere with their normal activities. A minority of women with the most severe pain will also experience it during menstruation.[9] The pain can continue for many years but will usually disappear after menopause. In 20% of women, it subsides without intervention. Cyclical mastalgia is not to be confused with premenstrual syndrome (PMS).[10] The etiology of breast pain is not well understood. Hormonal estimations of estrogen, progesterone, and prolactin have shown no consistent abnormalities despite the correlation to the menstrual cycle.[11] Even so, pregnancy, lactation, menopause, oral contraceptives, and hormone replacement therapy variously affect the course of mastalgia.[12] Some studies have shown hyper responsiveness of prolactin to stimulation by thyrotropin-releasing hormone, while others have suggested elevated levels or abnormalities of lipid metabolism.[13] It has been proposed that breast pain during the luteal phase of the menstrual cycle may be due to higher serum estrogen-to-progesterone ratios. This may be related more to an insufficiency of progesterone rather than an excess of estrogen.[14] The intensity of pain showed a significant positive correlation with the width of the milk ducts, suggesting an association between duct ectasia and mastalgia. Moreover, the site of pain positively correlated with the site of duct dilatation in the noncyclical type.[15] Rarely is mastalgia the only symptom of breast cancer.[16] Levels of anxiety, depression, and social dysfunction were also shown to be significantly higher in women with severe mastalgia compared with those who had non-severe mastalgia.[17] You need to say few words on Iraq. The aim of study to identify the determinants in patient's history that affect the incidence of mastalgia and its association with many variables in the current study.

METHOD

A total of 199 females with mastalgia was included in this study., They were from Al-Imameen Al-Kadhimin Medical City / breast clinic from May 2021 to September 2021. The variables included in the study are; age (years), weight (Kg) of females, age of menarche (years), age of first pregnancy (years), no. of babies. Other variables include are; any nipple discharge, types of discharge either (bloody, milky, no discharge, serous or yellowish), marital state, any relation with menstruation, type of menstrual cycle, lactating state, smocking and coffee consumption, history of oral contraceptive pills, family history of breast Ca., initial site of pain either (left breast or both right and left breast or right breast), radiation of pain, previous breast surgery and type of pain. No any exclusion and inclusion criteria's. Chi-square was used for assessed association between variables, person correlation to show the correlation between continuous data. P-value less or equal to 0.05 is consider significant.

RESULTS

The mean weight 71.7 ± 11.1 Kg, mean age of menarche 13 ± 1 years, mean age of first pregnancy 18 – 30, no. of babies 2-3. As in table 1.

Table (1): characteristics of the studied sample.

variables	Mean ± SD
age (years)	39.8 ± 10.6
weight (Kg)	71.7 ± 11.1
age of menarche (years)	13± 1
age at first pregnancy (years)	(18 - 30)
no. of baby	3 ± 2

Table 2; 91% of patients without any nipple discharge, 95% of females are married, 87.9% of patients are menstruating, 59.3% of females are regular M.C., 97% of females are lactating their babies, 96% and 94% of patients have no smocking and coffee conception, 54.8% of females have no history of OCP, 65.8% of patients are FH of breast Ca, 34.2% of females have pain in both breasts initially, 78.4% of patients have no radiation of pain, 96% of females have no previous breast surgery, 95.5% of patients are with non-cyclical.

Table (2): distribution of studied variables.

variables		frequency	percentage
any nipple discharge	no	181	91.0
marital state	married	190	95.5
	single	9	4.5
Menstruation	menopausal	24	12.1
	menstruating	175	87.9
type of M.C.	irregular	81	40.7
	regular	118	59.3
lactating	no	193	97
smocking	no	191	96.0
coffee consumption	no	187	94.0
history of OCP	no	109	54.8
FH of breast Ca	positive	113	56.8
initial site of pain	left breast	68	34.2
	right and left breast	79	39.7

	right breast	52	26.1
radiation of pain	no	156	78.4
Previous breast surgery	no	191	96.0
type of pain	non-cyclical	95.5	190

As in table 3; there is significant association between pain radiation and no. of baby, 53.5% of pain radiation occur in patients have > 3 babies.

There is no significant association between type of pain and other variables.

Table (3): Association between variables and radiation of pain.

variables			**radiation of pain**	**P-value**
		no	yes	
	married	148 (94.9%)	42 (97.7%)	
marital state	single	8 (5.1%)	1 (2.3%)	0.68
	Total	156 (100%)	43 (100%)	
	menopausal	18 (11.5%)	6 (14%)	
M. state	menstruating	138 (88.5%)	37 (86%)	0.6
	Total	156 (100%)	43 (100%)	
	irregular	63 (40.4%)	18 (41.9%)	
type of M.C	regular	93 (59.6%)	25 (58.1%)	0.86
	total	156 (100%)	43 (100%)	
	no	151 (96.8%)	40 (93%)	
smocking	yes	5 (3.2%)	3 (7%)	0.37
	total	156 (100%)	43 (100%)	
	no	146 (93.6%)	41 (95.3%)	
coffee	yes	10 (6.4%)	2 (4.7%)	1.000
	total	156 (100%)	43 (100%)	
	no	84 (53.8%)	25 (58.1%)	
Hx of CP.	yes	72 (46.2%)	18 (41.9%)	0.73
	total	156 (100%)	43 (100%)	
	negative	70 (44.9%)	16 (37.2%)	
FH of breast Ca	positive	86 (55.1%)	27 (62.8%)	0.39
	total	156 (100%)	43 (100%)	
	no	150 (96.2%)	43 (100%)	
lactation state	yes	6 (3.8%)	0 (0%)	0.22
	total	156 (100%)	43 (100%)	
	no	140 (89.7%)	41 (95.3%)	
any discharge	yes	16 (10.3%)	2 (4.7%)	0.37
	total	156 (100%)	43 (100%)	
Hx of breast Su	no	149 (95.5%)	42 (97.7%)	
	yes	7 (4.5%)	1 (2.3%)	1.000
	total	156 (100%)	43 (100%)	
age of females	≤40	82 (52.6%)	23 (53.5%)	
	> 40	74 (47.4%)	20 (46.5%)	1.000
	total	156 (100%)	43 (100%)	
weight	≤70	81 (51.9%)	22 (51.2%)	1.000
	> 70	75 (48.1%)	21 (48.8%)	
	total	156 (100%)	43 (100%)	
age of M.C	≤13	107 (68.6%)	34 (79.1%)	
	> 13	49 (31.4%)	9 (20.9%)	0.25
	total	156 (100%)	43 (100%)	
age of first	no pregnancy	20 (12.8%)	3 (7%)	
pregnancy	≤ 20	113 (72.4%)	36 (83.7%)	0.3
	>20	23 (14.7%)	4 (9.3%)	
	Total	156 (100%)	43 (100%)	
No. of baby	≤3	96 (61.5%)	20 (46.5%)	**0.05**
	>3	60 (38.5%)	23 (53.5%)	
	total	156 (100%)	43 (100%)	

P-value ≤ 0.05 (significant)

As in table 4; there is significant association between site of breast pain and marital state, 98.5% of pain in left breast occur in married patients, 98.1% of pain in right breast occur in married patients. there is significant association between site of breast pain and discharge, 16.2% of left breast pain occur in patients have nipple discharge, 5.8% of right breast pain occur in patients have nipple discharge.

There is no significant association between type of pain and other variables.

Table (4): Association between variables and site of breast pain.

variables			**site of breast pain**		**P-value**
		left	right	both	
	married	67 (98.5%)	51 (98.1%)	72 (91.1%)	
marital state	single	1 (1.5%)	1 (1.9%)	7 (8.9%)	**0.05**
	Total	68 (100%)	52 (100%)	79 (100%)	
	menopausal	10 (14.7%)	4 (7.7%)	10 (12.7%)	
M. state	menstruating	58 (85.35)	48 (92.3%)	69 87.3%	0.5
	Total	68 (100%)	52 (100%)	79 (100%)	
	irregular	31 (45.6%)	21 (40.4%)	29 (36.7%)	
type of M.C	regular	37 (54.4%)	31 (59.6%)	50 (63.3%)	0.55
	total	68 (100%)	52 (100%)	79(100%)	
	no	68 (100%)	51 (98.1%)	74 (93.7%)	
smocking	yes	0 (0%)	1 (1.9%)	5 (6.3%)	0.07
	total	68 (100%)	52 (100%)	79 (100%)	
	no	64 (94.1%)	50 (96.2%)	77 (97.5%)	
coffee	yes	4 (5.9%)	2 (3.8%)	2 (2.5%)	0.58
	total	68 (100%)	52 (100%)	79 (100%)	
	no	65 (95.6%)	51 (98.1%)	71 (89.9%)	
Hx of CP.	yes	3 (4.4%)	1 (1.9%)	8 (10.1%)	0.12
	total	68 (100%)	52 (100%)	79 (100%)	
	negative	38 (55.9%)	29 (55.8%)	42 (53.2%)	
FH of breast Ca	positive	30 (44.1%)	23 (44.2%)	37 (46.8%)	0.93
	total	68 (100%)	52 (100%)	79 (100%)	
	no	32 (47.1%)	20 (38.5%)	34 (43.0%)	
lactation state	yes	36 (52.9%)	32 (61.5%)	45 (57.0%)	0.61
	total	68 (100%)	52 (100%)	79 (100%)	
	no	57 (83.8%)	49 (94.2%)	75 (94.9%)	
any discharge	yes	11 (16.2%)	3 (5.8%)	4 (5.1%)	**0.041**
	total	68 (100%)	52 (100%)	79 (100%)	
Hx of breast Su	no	63 (92.6%)	50 (96.2%)	78 (98.7%)	
	yes	5 (7.4%)	2 (3.8%)	1 (1.3%)	0.17
	total	68(100%)	52(100%)	79(100%)	
age of females	≤40	33 (48.5%)	29 (55.8%)	43 (54.4%)	
	> 40	35 (51.5%)	23 (44.2%)	36 (45.6%)	0.68
	total	68(100%)	52(100%)	79(100%)	
weight	≤70	33 (48.5%)	27 (51.9%)	43 (54.4%)	
	> 70	35 (51.5%)	25 (48.1%)	36 (45.6%)	0.77
	total	68(100%)	52(100%)	79 (100%)	
M.C age	≤13	53 (77.9%)	34 (65.4%)	54 (68.4%)	0.27
	> 13	15 (22.1%)	18 (34.6%)	25 (31.6%)	
	total	68(100%))	52(100%))	79(100%)	
age of first	no pregnancy	8 (11.8%)	3 (5.8%)	12 (15.2%)	
	<=20	51 (75.0%)	43 (82.7%)	55 (69.6%)	0.48
pregnancy	>20	9 (13.2%)	6 (11.5%)	12 (15.2%)	
	Total	68(100%)	52(100%)	79(100%)	
no. of baby	≤3	38 (55.9%)	31 (59.6%)	47 (59.5%)	
	>3	30 (44.1%)	21 (40.4%)	32 (40.5%)	0.88
	total	68(100%)	52(100%)	79(100%)	

P-value ≤ 0.05 (significant).

According to table 5, there is significant association between type of pain and marital state, 66.7% of cyclic type pain occur in married patients, there is significant association between type of pain and age of females 88.9% of cyclic type pain occur in females age ≤ 40 years old, there is significant association between type of pain and no. of baby, 88.9% of cyclic type pain occur in females have baby ≤ 3. there is no significant association between type of pain and other variables.

Table (5): Association between variables and type of pain.

variables			***type of pain***	**P-value**
		cyclical	non-cyclical	
	married	6 (66.7%)	184 (96.8%)	
marital state	single	3 (33.3%)	6 (3.2%)	**0.005**
	Total	9(100%)	190(100%)	
	menopausal	0 (0%)	24 (12.6%)	
M. state	menstruating	9(100%)	166 (87.4%)	0.6
	Total	9(100%)	190(100%)	
	irregular	1 (11.1%)	80 (42.1%)	
type of M.C	regular	8 (88.9%)	110 (57.9%)	0.08
	total	9(100%)	190(100%)	
	no	9(100%)	182 (95.8%)	
smocking	yes	0 (0%)	84.2%	1.000
	total	9(100%)	190(100%)	
	no	9(100%)	178 (93.7%)	
coffee	yes	0 (0%)	12 (6.3%)	1.000
	total	9(100%)	190(100%)	
	no	6 (66.7%)	103 (54.2%)	
Hx of CP.	yes	3 (33.3%)	87 (45.8%)	0.5
	total	9(100%)	190(100%)	
	negative	6(66.7%)	80(42.1%)	
FH of breast Ca	positive	3(33.3%)	110(57.9%)	0.18
	total	9(100%)	190(100%)	
	no	9(100%)	184 (96.8%)	
lactation state	yes	0 (0%)	6 (3.2%)	1.000
	total	9(100%)	190(100%)	
	no	8 (88.9%)	173 (91.1%)	
any discharge	yes	1 (11.1%)	17 (8.9%)	0.58
	total	9(100%)	190(100%)	
Hx of breast Su	no	9(100%)	182 (95.8%)	
	yes	0 (0%)	8 (4.2%)	1.000
	total	9(100%)	190(100%)	
age of females	≤40	8(88.9%)	97(51.1%)	
	> 40	1 (11.1%)	93 (48.9%)	**0.037**
	total	9(100%)	190(100%)	
weight	≤70	6 (66.7%)	97 (51.1%)	
	> 70	3 (33.3%)	93 (48.9%)	0.5
	total	9(100%)	190(100%)	
M.C age	≤13	9(100%)	132 (69.5%)	
	> 13	0 (0%)	58 (30.5%)	0.06
	total	9(100%)	190(100%)	
	no pregnancy	3(33.3%)	20(10.5%)	
age of pregnancy	<=20	4 (44.4%)	145 (76.3%)	0.08
	>20	2 (22.2%)	25 (13.2%)	
	Total	9(100%)	190(100%)	
	≤3	8 (88.9%)	108 (56.8%)	
no. of baby	>3	1 (11.1%)	82 (43.2%)	**0.05**
	total	9(100%)	190(100%)	

P-value ≤ 0.05 (significant).

Mastalgia is common distressing complaint among women and its one of the most common cause of seeking medical advice due to underlying fear of developing breast cancer in some points in their lives. In current study the mean age of females was 39.8 ± 10.6 years old and the prevalence decreased after that age, this is in agreement with study stated that 385 out 578 66.6% of subjects has onset of mastalgia between 16-35 years with 236 40.8% having onset between 16-25 years and 149 25.8% between 26-35 years. This is consistent with the pattern depicted in other populations. N Saghafi et al. in their study conducted at the University Hospital of Wales, Cardiff found the median age of onset of mastalgia to be 36 years (range 12-63 years)[18] The pain was bilateral in 86.9% and it was unilateral in 13.1%. This is consistent with other studies found in literature though some Asian studies had found predominantly unilateral mastalgia in their subjects.[19] In contrast with literatures, the study showed no association between mastalgia and family history of breast cancer. This difference might be explained by anxiety is highly prevalent among Iraqi women.[20] that mask anxiety of positive family history of breast cancer. Smoking was negatively associated with mastalgia, this is might be attributed to denial of the patients due to social unacceptability of smoking females in our culture. The majority of our patients were not consuming caffeine-containing drinks, which suggest that caffeine intake is not related to the causation of mastalgia. No association was found between nipple discharge and mastalgia, this is might be explained by that is nipple discharge regarded as important sign of anxiety among women which in turn mask the complain of mastalgia. It was found that mastalgia not associated with menstrual cycle, this is in line with other studies.[21] Extreme treatment of mastalgia like quadrentectomy or even mastectomy with breast implant and most of it found written in literature.[22,23] however no surgeon in Iraq suggest such treatment for mastalgia.

CONCLUSION

mastalagia is common complaint among Iraqi women, mainly before fourth decade of life. It was no association found between mastalgia and family history of breast cancer, mastalgia was mainly bilateral and not related to menstruation.

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