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RESEARCH ARTICLE

MASTALGIA: PSYCHOLOGICAL INTERVENTION AND ITS IMPACT ON QUALITY OF LIFE

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ABSTRACT

Background: Mastalgia has been reported as a condition that impacts individual's activities of daily living and Quality of Life (QOL). The aim of this study was to evaluate impact of mastalgia related pain on QOL. The study also investigated the impact of psychological intervention done at breast clinic on both pain and QOL among patients with mastalgia.

Methods: A randomized clinical trial was conducted to identify impact of psychological intervention on QOL among patients with mastalgia. In total 128 participants were recruited from outpatient department of a Tertiary Care hospital in Karachi. The study was conducted over the period of 10 months. The recruited participants were randomly divided into two groups (n=64, each group). Group-I received psychological intervention of 45 minutes whereas, Group-II was considered as a control group. The Visual Analogue Scale (VAS) was used for assessing pain. However, QOL was measured by SF-36. Both scales were applied on initial presentation and then after the period of 3 months.

Results: Before giving psychological intervention, no statistical difference was noted in pain measured via VAS and QOL measured using SF-36. However, the analysis showed significant difference after giving psychological intervention. The participants in Group-I reported lower level of pain and better QOL when they were assessed after 3 months of psychological intervention in comparison to Group-II.

Conclusion: Findings of current study suggested that mastalgia impacts on QOL of patients. Moreover, study findings revealed positive influence of psychological intervention on patients with mastalgia. Therefore, it has been suggested to make psychological intervention as a build in component of treatment if patient presents with no findings on physical examination.

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INTRODUCTION

Quality of individual's life is based on variety of different factors including economical, psychological, physical and social factors. One of the most important physical factor that may impact on individuals Quality of Life (QOL) is perception of pain. Pain is associated with an unpleasant emotional and sensory state of mind. Individual experiencing pain may present with different behaviors depending on their pain threshold and suffering (Roth, 2000). Presence of pain impacts on individuals physical and emotional wellbeing eventually compromising on their quality of life (Andressen, 2000 and Mehnert, 2008). Among a number of medical conditions that lead to pain, mastalgia is reported as one of the commonly reported state. It has been identified that among all women experiencing mastalgia, only half of them presents to physician and only 5% of women get themselves assessed by a specialized physician in breast clinic (Ader, 1997). Moreover, among all women admitted with mastalgia, around 15% have been diagnosed with serious medical conditions whereas rest of women get discharged without any special intervention (Ader, 1997). Mastalgia has been considered as a condition that impacts on activity of daily living and has also been attributed to cost associated with investigations and treatment. Available evidences suggest that mastalgia adversely effects on physical, social, sexual, and work-school activities (Ader, 1997; Faiz, 2001 and Ader, 1997). Available studies suggests that patients presenting with mastalgia relates the condition with risk of developing breast cancer. They get fearful of developing breast cancer in short or long run (Smith, 1986). Patients reported with mastalgia have also been identified to be in anxious state in 35% of the cases (Wayne, 2002). This study aimed to identify impact of mastalgia related pain on health related QOL. In addition, this study also evaluated impact of psychological intervention done at initial visit by general

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surgeon at breast clinic on pain and QOL among patients with mastalgia.

MATERIAL AND METHODS

This randomized control trial was conducted in surgical department of a tertiary care hospital over the period of January 2015 till October 2015. All the patients reported with mastalgia (with no other comorbid) were invited to participate in this study. Patients who had menstrual irregularities, palpable mass, skin and nipple findings that may relate to any malignancy were excluded from the study. In addition, patients who were pregnant, were taking any hormonal treatment, were on oral contraceptives, were taking steroids, and those with macromastia were also excluded. Among all who met the inclusion criteria, 146 patient gave written consent to participate.

Table 1. Demographic Profile of Participants

Demographics	Group-I (n:64)	Group-II (n:64)	P-Value
Marital Status			0.55
Single	18	17	
Married	41	39	
Divorced/Widow	05	08	
Number of Children			0.59
None	18	17	
One	09	10	
Two	13	17	
More than Two	24	20	
Qualification			0.78
Primary	37	40	
Secondary	18	18	
Higher School	09	06	
Surgical History			0.67
Yes	11	09	
No	53	55	
Psychiatric Illness			1.0
Yes	01	00	
No	63	64	
Menstrual Cycle Irregularities,			0.8
Present	03	02	
Absent	61	62	
Substance Abuse			0.81
Yes	39	38	
No	25	26	

The demographic data was collected from all participants. To evaluate health related QOL, VAS and SF-36 QOL scale was applied on study participants. From 146 patients 18 patients were excluded as they provided incomplete data. Remaining 128 participants were randomly divided in two groups with 64 participants in each group. Women in Group-I received psycho-education whereas Group-II was considered as control group. Psycho-education was given by a trained surgeon and addressed anatomy of breast, physiology of mastalgia, psychological intervention for pain perception. In particular, psychological interventions for pain included identification of stressors that exacerbate pain along with the ways of managing it. In addition, psychological intervention addressed adaptive strategies to minimize stressors. An important psycho-education addressed training on muscle strengthening and loosening exercises. The psychological intervention took around 45 minutes for each patient. After the period of 3 months women in both Group-I and Group-II were asked to complete VAS and SF-36 QOL were applied. Demographic profile of study participants included age, marital status, qualification, and history of physical or psychiatric illness. Visual Analogue Scale (VAS) developed by Price et al. was used to evaluate pain level (Price, 1993).

Table 2. Comparison of Group-I and Group-II and Scores on SF-36 Scale in Initial and Last month

SF-36 Sub Scales	Group-I Psychological Intervention (n: 64)	Group-II No Psychological Intervention (n: 64)	*P*
Physical Role Difficulty			
Initial Month	44.56 ± 34.49	72.85 ± 16.32	
End Month	87.74 ± 12.89	59.36 ± 16.87	0.00
General Health			
Initial Month	49.26 ± 14.21	53.21 ± 14.24	
End Month	85.55 ± 9.97	42.32 ± 12.95	0.01
Physical Function			
Initial Month	76.79 ± 15.91	76.23 ± 16.21	
End Month	92.12 ± 8.26	62.82 ± 17.10	0.00
Pain			
Initial Month	52.16 ± 17.24	54.75 ± 19.34	
End Month	89.42 ± 11.42	39.20 ± 16.76	0.00
Psychological Health			
Initial Month	51.35 ± 16.96	50.62 ± 13.76	
End Month	82.16 ± 10.39	44.42 ± 12.96	0.00
Vitality			
Initial Month	48.24 ± 16.70	47.61 ±17.25	
End Month	73.99 ± 12.64	49.93 ± 16.37	0.01
Social Function			
Initial Month	67.26 ± 24.01	65.25 ± 20.20	
End Month	92.49 ± 14.20	51.95 ±19.27	0.00
Emotional Role Difficulty			
Initial Month	48.28 ± 23.85	59.96 ± 32.81	
End Month	79.58 ± 15.28	45.92 ± 34.12	0.00

The scale has ration ranging from 0 indication no pain to 19 showing unbearable pain. The scale has been used in several research studies and has found to be reliable and valid (Erdine, 2000). QOL was measured by SF-36. The scale addresses QOL for patients with physical illness. The scale has found to be sensitive. It consists of 36 questions and addresses physical, emotional, social, psychological, energy, pain, and perception of health (Kocyigit, 1999). All data was entered and analyzed using SPSS software. For normally distributed data student *t*-test was applied. The chi-square test was used for categorical variables.

RESULTS

Mean age of participants in Group-I who received psycho-education was 31.2± 7.2 and those in Group-II was 29.5 ± 7.9 ($p > 0.05$). There was not statistically significant difference in marital status, number of children, qualification, surgical history, psychiatric illness, menstrual cycle irregularities and substance abuse (Table - 1). All patients reported to experience pain for more than 6 months. Among all 82.6% patients reported to experience pain in both breasts. Around 65.2% of the patients reported that the pain radiates in surrounding areas. Patients in Group-I reported VAS level of 6.2 ±1.3 and among those in Group-II had VAS level of 5.9 ± 1.5 before psychological interventions. There was great difference in VAS level of patients after psychological intervention among Group-I (2.4 ± 1.4). However, there was no change among patients in Group-II (5.6 ±1.7). Prior to psychological interventions, there was no significant difference in both groups in SF-36 scale. However, after psychological intervention, the participants in Group-I who received psychological interventions had significantly higher scores on all sub-scales of SF-36 (Table - 2)

DISCUSSION

Among patients experiencing Mastalgia on 5% get themselves assessed by specialized physician (Ader, 1997). Patients presenting in clinic usually reports that they are not taking any treatment for the problem (Klimberg, 1998). In line with the existing literature, findings of the current study suggest that there was no medical reason to initiate the treatment regimen. On medical inspection, we found no pathological state. Participants who received psychological intervention were found statistically significant improvement on SF-36 scale and pain score. Mastalgia effects adversely on individual's QOL and their activity of daily living.

Individual's QOL is dependent on their life conditions. QOL heavily depends on physical, social, and emotional state. Many researchers have focused on importance of improving QOL. However, the attempt of improving QOL may not reflect daily applications[13]. In current study, patients experiencing mastalgia scored less on SF-36 scale depicting lower QOL. However, in third month after psychological intervention their scores on SF-36 scale improved depicting better QOL. Pain has proved to be an agent that impacts on QOL. The study by Aydemir et al. that addressed QOL among patient with migraine also identified lower level QOL among patients with migraine than ones in control group (Aydemir, 2011). Pain not only effects on physical wellbeing of patients but also on social and psychological wellbeing. Another study that evaluated impact of acupuncture on patients with Mastalgia reported positive effect of acupuncture on pain and QOL (Thicke, 2011).

The patients with mastalgia visits specialized doctor due to fear of any associated pathological conditions. Visiting specialized physician and undergoing diagnostic tests is associated with increased health care cost. As findings of currents study identified that psychological intervention have impact on both pain and QOL. We would recommend to provide psychological intervention to patients presenting with mastalgia without any findings on physical examination.

Conclusion

Mastalgia was found to be a condition impacting on individual's QOL. As findings of current study suggested that psychological intervention decreases perception of pain and improve QOL, we would suggest surgeons should adopt psychological aspects of managing mastalgia patients.

Conflict of Interest

All authors declare that there is no conflict of interest in publication of this study.

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