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Research Article

Somatization in Mastalgia Patients: Is there a Relationship between Mastalgia and Somatization Symptoms?

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Abstract: Somatization can be defined as the physical complaints and symptoms that cannot be explained through physical findings and examinations. In the illnesses in which pain remains at the forefront, the manifestation of the emotions by means of symbolic body language can cause somatization. Benign breast pain is a common problem; reported prevalence range from 41% to 69%. The aim of this study is to examine the relationship between mastalgia and somatization symptoms. This study included 116 patients with non-organic breast pain admitting to the General Surgery Breast Clinic of Adana Numune Education and Research Hospital from February 2012 to February 2013. The control group included 105 healthy volunteers. Hamilton Anxiety Scale (HAM-A), Beck Depression Inventory (BDI), Symptom Checklist Revised-90 (SCL-90-R) and Somatization Dissociation Scale (SDQ) were used to assess the psychiatric symptoms of the patients. When we consider about the BDI and HAM-A test, there was no significant between the patient and control groups. The somatization subscale scores showed significant difference between the patient and control groups (2.12±0.87; 0.91±0.55, respectively) ($p<0.001$). There was a significant increase in SDQ scores in the patient gruop (30.02±7.50; 22.74±4.01, respectively) ($p<0.001$). In the mastalgia patients in whom no organic ethiology was determined, somatization findings and levels were found high in accordance with the normal ones. These findings might indicate that mastalgia patients need a multi-discipline approach including psychiatric treatment.
Keywords: Mastalgia, Breast Pain, Somatization.

INTRODUCTION

Pain has been one of the most unsettling and draggy findings since mankind existed. Vegetative indications such as chronic pain, sleeplessness, loss of appetite in the company of psychological and physical strain might cause social and economical issues by showing decrease in the functionality and the daily life activities [1]. When asked to the women applying to the hospitals for any reason, it was reported that 75% of them had the least mild level of mastalgia [2]. The term of Mastalgia was first used by Viennese surgeon Bilroth in order to define mastalgia [3]. In the premenstural period, mild cyclical mastalgialasting for 1-4 days is considered to be normal. On the other hand, mild or severe level chronic mastalgia lasting for over 5 days can be defined as mastalgia [4, 5]. It was reported that only half of women had applied to a physician due to mastalgia, in addition, only 5 % of these women had been examined by a specialized breast clinic [6, 7] mastalgia, in general, is a chronically progressing disease. It is known that there is a close relationship between the existance of chronic pain and somatization [8, 9]. In the studies carried out, it was determined that 12 % of the chronic pain suffering patients and 17 % of the irritable bowel syndrome suffering patients had the somatization disorders [10]. In our country, in the study carried out with the university students, a positive relationship was found between chronic pain and the existanceot the disease and somatization disorder [11]. No study researching the existance of somatization in the mastalgia patients has been reached both in the national and international literature.The aim of this study was to assess the somatization symptoms in patients with mastalgia.

MATERIALS AND METHODS

This research is a cross-sectional study designed for collecting qualitative and quantitative data. The universe of the study consisted of 680 mastalgy patients who applied to the general surgery department between February 2012 and February 2013. A telephone survey was conducted to determine the study sample. 116 patients admitting to the General Surgery Breast Clinic of Adana Numune Education and Research Hospital from 15 February 2012 to 15 February 2013 with unilateral or bilateral breast pain for at least six months without any organic disease or menstrual cyclic disorders were enrolled to the study.

The control group included 105 healthy volunteers. The two groups were adjusted for age, educational and marital status. Written informed consent was obtained from all participants. Ethics Committee approval were taken from Numune Education and Research Hospital. Research carried out on humans in compliance with the Helsinki Declaration. Hamilton Anxiety Scale (HAM-A), Beck Depression Inventory (BDI), Symptom Checklist Revised-90 (SCL-90-R) and Somatization Dissociation Scale (SDQ) were used to assess the psychiatric symptoms of the patients and control group.

Collection of the study groups

The exclusion criteria were as follows: Having; a palpable mass in breast examination, signs of skin or nipple indicating malignancy, signs of inflammation suspicious nipple discharge, rapid growth in the breast, cystic or solid mass diagnosed in the breast via scanning techniques (mamography or ultrasonagraphy), current or previous psychiatric disorder, pregnancy, presence of referred pain, medical treatment with steroid or hormon, macromastia those with a score of 17 or higher in the Beck depression scale, HAM-A test result coming out of the definition of mild anxiety.

Social demographic data form

This form drills into the demographic data of the patient and collects information about his/her age, gender, marital status, level of education.

Hamilton Anxiety Scale (HAM-A)

This scale which was developed by Hamilton comprises 14 items prepared to define the level of anxiety and the dissemination of symptoms, and also to measure the variation of the amplitute of these findings [12]. The presence and amplitude of the findings are evaluated by the interviewer. Each question is valued with a score of 1-4, and then the total sum is calculated. A total sum of 0-5 points indicates that no anxiety is present, while 6-14 points indicate minor anxiety (low-mild), and 15 points or more indicate major anxiety [13]. The Turkish validity and reliability study was conducted by Yazici *et al*. in 1998 [14].

Beck Depression Inventory (BDI)

This inventory was first developed by Aeron T. Beck in 1961, and revised in 1971 [15]. It was translated to Turkish by Hisli in 1989, and its validity and reliability were proved [16]. The BDI is a self-assessment scale comprising 21 items, and it validates the depressive symptoms and characteristic approaches. Each item contains 4 choices which are scored from 0 to 3. A total of 0-63 points are achieved ftom the sum of the 21 items, and any increase in the score indicates an increase in depressive symptoms. The cut point for the Turkish population is accepted as 17 [17].

Symptom Checklist Revised-90 (SCL-90-R)

A psychiatric symptom is a measurement and survey tool analyzing the difficult situation the individual was stuck in or the level of the negative stress reaction that the indivudual had. 5 point likert scale is made up of 90 answered items. The scale has sunscales reflecting 9 different indication groups. These are somatization, obsession-compulsion, interpersonel sensibility, depression, anxiety, rage, phobic anxiety, paranoid ideation, psychoticism subscales. In this study, all the subscales were used in defining psychiatric symptoms. Subscale points are composed of point averages that they cover, and is able to get a value between 0-4. Turkish form has validity and reliability [18].

Somatization Dissociation Scale (SDQ)

The Somatization Dissociation Questionnaire (SDQ-20) is a 20-item self-report instrument that evaluates the severity of somatoform dissociation. The SDQ-20 was developed by Nijenhuis *et al*. in 1996. It has an excellent internal consistency (Cronbach's alpha=0.95). Mokken scale analysis showed that the 20 items were strongly scalable [19, 20]. The SDQ-20 total score was strongly correlated with DIS-Q (r=0.76) and DES (r=0.85) [19, 21]and with reported trauma[22]. The short form of the scale with five items is a screening instrument for DSM-IV dissociative disorders [23]. SDQ is used for measuring the severity of somatic and dissociative disorders. The validity and reliability study of the Turkish version was carried out by Sar V [24].

Statistical Analyses

The research was carried out by using SPSS 16.0 statistical packaged software in computer environment. The Study Groups were of sufficient number and variable distribution was found normal. For this reason, parametric tests were used in contrasting the data. In analysing the data, Student–t test was applied in contrasting the continuous variables, chi-square test was applied in contrasting the categorical analyses.

RESULTS AND DISCUSSION

The mean age of the study group was 30.55±7.78 years while that of the control group was 31.25±7.35 years ($p>0.05$). The mean educational period of the patient group was 8.74±2.71 years and it was 8.34±2.80 years in the control group ($p>0.05$). 94 (81%) of the study group and 81 (77%) of the control group were single ($p>0.05$) (Table 1).

Table1: Socio-demographic characteristics of the study and the control groups

	Mastalgia Group (n: 116) Mean ± SD	**Control Group (n:105) Mean ± SD**
Age	30.55±7.78	31.25±7.35
Mean Educational	8.74±2.71	8.34±2.80
Marital status	**n (%)**	**n (%)**
Married	22 (19%)	24 (23%)
Single	94 (81%)	81 (77%)

The score of Beck Depression Inventory (BDI) for the study group was 7.98±4.19 and it was 7.39±4.65 for the Control Group (p>0.05). The score of HAM-A for study group was 9.57±4.55 and it was 8.97±5.66 for the Control group (p>0.05). The results of HAM-A concluded that minimal level of anxiety is for both groups in the study (Table 2).

Table 2: The average and standard deviation and statistical analysis of HAM-A subscales and BDI of the Study and the Control Groups

	Mastalgia Group (n: 116) Mean ± SD	**Control Group (n:105) Mean ± SD**
HAM-A	19.48±9.55	20.71±10.68
BDI	8.58±5.69	8.63±5.54

While there was no significant difference between the groups in terms of obsession-compulsion, interpersonal sensibility, depression, anxiety, rage, phobic anxiety, paranoid ideation, and psychoticism subscales of SCL-90-R, there was significant difference in the somatization subscales (p<0.001). The SDQ scale were also significantly different between the Study and Control Groups (respectively 30.02±7.50; 22.74±4.01) (p<0.001) (Table 3).

Table 3: The average and standard deviation and statistical analysis of SCL-90 subscales and SDQ of the Study and the Control Groups

	Mastalgia Group (n: 116) Mean ± SD	**Control Group (n:105) Mean ± SD**
SCL-90		
Somatization	2.12±0.87	0.91±0.55*
Obsession-Compulsion	0.84±0.10	0.81±0.16
Interpersonel Sensibility	0.90±0.11	0.71±0.14
Depression	1.01±0.20	0.86±0.11
Anxiety	1.97±0.19	0.89±0.12
Rage	0.96±0.17	0.96±0.33
Phobic Anxiety	0.93±0.14	0.72±0.92
Paranoid Ideation	0.89±0.21	0.76±0.08
Psychoticism	0.87±0.17	0.71±0.12
SDQ	30.02±7.50	22.74±4.01*

*p<0.001 between Mastalgia and control group

While pain is a accompanier symptom in most physical illnesses, mastalgia is one of the illnesses in which pain is the most important indication. Determined in previous studies that psychological troubles in the mastalgia patients were able to be defined clinically, they are most frequently defined as common anxiety disorders and major depression [25]. In previous years, whereas mastalgia patients were reported to have been defined as direct psychoneurotic people, when it came to the treatment condition that the mastalgia patients had for a long time and no result was achieved, it was reported that the scores of anxiety and depression had raised [26] and psychiatric symptoms such as minor and major depression were determined to have been at a high level [27]. In the illnesses that have constant pains like mastalgia, the anxiety symptoms such as motor strain, the state of anxiety, alarmism and instant irritation can frequently be seen in the person. In the studies carried out, regardless of cyclic mastalgia or serious-resistant mastalgia, it was shown that the stress perception of the patients was higher than that of the patients who had no mastalgia complaint and they were prone to the psychiatric illnesses like panic distortion [2, 27]. One of the preeminent illnesses through which the term 'pain' passes in the DSM-IV and ICD-10 systems is somatization disorder. The relationship between Mastalgia and Somatization were evaluated in few medical journals [27, 28]. In this research, in the mastalgia patients who no organic ethiology was determined, somatization findings and levels were found high in accordance with the normal ones. Somatization is seen more frequently in traditional and

pre-modern agricultural societies. The ethiology of the disease has genetic, learning and socio-cultural factors, psychodynamics factors, stressor and overcoming assembly. In addition, it is known that the words defining the emotions in the historical development of the languages went through certain phases. There are no words telling of the psychological lives in the languages of many primitive societies and the emotions are generally told through somatic findings [11].

The manifestation of the emotions by means of symbolic body language can cause somatization [29, 30]. In the study carried out by Colegreva *et al*. who discussed the existance of somatization in the mastalgia patients, it was argued that these patients had more frequently anxiety and depression, less frequently pain and somatization symptoms [25]. The anxiety and depression values of the patients paticipated in our study were found indifferent from those of the patients in the Control Group. On the other hand, the score of SCL-90 somatization subscale displayed the existance of somatization distortion qualitatively and quantitatively. In addition, SDQ score according to the Control Group was found high in support of these results.

CONCLUSION

Our results suggest that it should be kept in mind that the existance of psychiatric symptomatology in the mastalgia patients should not only be limited to the depression, but also the existance of other psychiatric illnesses. All these findings might indicate that mastalgia patients need a multi-discipline approach including psychiatric treatment. Mastalgia patients applied for general surgery clinics must be demanded for psychiatric consultation.

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REFERENCES

1. Roth R; Psychogenic models of chronicpain: A selective review and critique. American Psychiatric Press, 2000; 456-460.
2. Ader DN, South-Paul J, Adera T, Deuster PA; Cyclical mastalgia: prevalence and associated health and behavioral factors. Journal of Psychosomatic Obstetrics & Gynecology, 2001; 22: 71-76.
3. John DC, Robin CN; Williamson Surgery. In John DC; Breast, 2001: 254-266.
4. Sayek İ; Temel Cerrahi. In: Sayek. Benign meme hastalıkları. 3rd edition, Guneş kitapevi, 2004: 946-949.
5. 5.Ader DN , Shriver CD , Browne MW; Cyclicalmastalgia: premenstrual syndrome or recurrent pain disorder? Journal of Psychosomatic Obstetrics & Gynecology, 1999; 20:198-202.
6. Smith RL, Pruthi S, Fitzpatrick LA; Evaluation andmanagement of breastpain. Mayo Clinic Proceedings, 2004; 79: 353-372.
7. Ader DN, Shriver CD; Cyclical mastalgia: Prevalence and impact in an outpatient breast clinic sample. Journal of the American College of Surgeons, 1997; 185: 466-470.
8. Norton GR, Norton PJ, Asmundson GJ, Thompson LA, Larsen DK; Neurotic butterflies in mystomach: the role of anxiety, anxiety sensitivity and depression in functional gastrointestinal disorders. Journal of Psychosomatic Research, 1999; 47: 233-240.
9. Fishbain DA , Cole B , Cutler RB , Lewis J , Rosomoff HL , Rosomoff RS; Chronic pain and the measurement of personality: do states influence traits? Journal of Psychosomatic Research, 2006; 7: 509-529.
10. Hollifield MA; Somatoform Disorder. In Kaplan HI, Sadock BJ editors; Comprehensive Textbook of Psychiatry. 8th edition, Lippincott Williams &Wilkins, Baltimore, 2004: 1800-1829.
11. Ozenli Y, Yoldaşcan E, Topal K; Prevelence and associated risk factors of somatization disorder among Turkish students. Anatolian Journal of Psychiatry, 2009; 10: 131-136.
12. Hamilton M; Theassesment of anxiety states by rating. British Journal of Medical Psychology, 1959; 32(1): 50-55.
13. Williams JB; A structured interview guide forthe Hamilton Depr ession Rating Scale. Archives of General Psychiatry, 1988;45(8): 742-747.
14. Yazıcı MK, Demir B, Tanrıverdi N; Hamilton Anxiety Rating Scale: Interrater Reliabilty and Validity Study. Turkish Journal of Psychiatry, 1998; 9(2): 114-117.
15. Beck AT, Ward CH, Mehdelson M, Mosk J, Erbaugh J; An inventory for measuring depresssion. Archives of General Psychiatry, 1961; 4: 561-571
16. Hisli N; Beck depresyon envanterinin üniversite ögrencileri için geçerligi, güvenirligi. Psikoloji Dergisi, 1989; 2(7): 3-13.
17. Savaşır I, Sahin NH; Bilissel-Davranısçı Terapilerde Degerlendirme: Sık Kullanılan Ölçekler, Ankara, Türk Psikologlar Dernegi Yayınları, 1997: 23-38.
18. Dag I; The reliabilty and validity of Symptom Check List SCL-90-R for university students. Turkish Journal of Psychiatry, 1991; 2(1): 5-12.
19. Nijenhuis ER, Spinhoven P, Van Dyck R, Van der Hart O, Vanderlinden J; The development and psychometric characteristics of the Somatoform Dissociation Questionnaire (SDQ-20). The Journal of Nervous and Mental Disease, 1996; 184(11): 688-694.
20. Nijenhuis ER, Spinhoven P, Van Dyck R, Van der Hart O, Vanderlinden J; Psychometric characteristics of the Somatoform Dissociation

Questionnaire: a replication study. Psychotherapy and Psychosomatics,1998; 67(1): 17-23.
21. Nijenhuis ER, Van Dyck R, Spinhoven P, van der Hart O, Chatrou M, Vanderlinden J; Somatoform dissociation discriminates among diagnostic categories over and above general psychopathology. Australian & New Zealand Journal of Psychiatry, 1999; 33(4): 511-520.
22. Nijenhuis ER, Vanderlinden J, Spinhoven P; Animal defensive reactions as a model for trauma-induced dissociative reactions. Journal of Traumatic Stress, 1998; 11(2): 243-260.
23. Nijenhuis ER, Spinhoven P, Van Dyck R, Van der Hart O, Vanderlinden J; Thedevelopment of the somatoform dissociation questionnaire (SDQ-5) as a screening instrument for dissociative disorders. ActaP sychiatrica Scandinavica, 1997; 96(5): 311-318.
24. Sar V, Kundakci T,Kiziltan E, Bakim B, Aydiner O; Validityandreliability of Somatoform Dissociation Questionnaire (SDQ), 34th National Psychiatry Congress Abstract Book, 1998: 221-227
25. Colegreva S, Holkombe C, Salmon P; Psychological characteristic of women presenting with breast pain. Journal of Psychosomatic Research, 2001; 50(6): 303-307.
26. Preece PE, Mansel RE, Hughes LE; Mastalgia: psychoneurosis ororganic disease? British Medical Journal, 1978; 7(3): 29-33.
27. Jenkins PL, Jamil N, Gateley C, Mansel RE; Psychiatric illness in patients with severe treatment-resistant mastalgia. General Hospital Psychiatry, 1993; 15: 55-57.
28. Aksu G, Hocaoğlu Ç; The study of alexithymia, anxiety, worry and depression levels of the patients who suffered by mastalgiaand underwent to radiodiagnostic assay. Klinik Psikiyatri, 2004; 7: 95-102
29. Merskey H, Mai F; Somatazation and conversion disorder. Somatoform Disorder (WPA Series Evidence and experience in psychiatry, Volume 9, Hoboken NJ, John Wiley & Sons, 2006, 23-65.
30. Tere L, Ghiselli W; Do somatic comlaints mask negative affect in youth. Journal of American College Health, 1995; 44(3): 91-96.