Print ISSN: 2321-6379
Online ISSN: 2321-595X
DOI: 10.17354/ijssOct/2017/29

Original Article

Determination of Prevalence of Depression, Anxiety and Stress In Patients with Specific and Non-Specific Abdominal Pain Referring to Emergency Department of Imam Khomeini Hospital In Sari

Seyed Mohammad Hosseininejad[1], Iraj Goli Khatir[2], Forouzan Elyasi[3], Iradj Maleki[4], Mina Alvandipour[5], Naeem Khanalipoor Vajargah[2]

[1]Department of Emergency Medicine, Diabetes Research Center, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran, [2]Emergeny Medicine Department, Mazandaran University of Medical Sciences, Sari, Iran, [3]Psychiatry and Behavioral Sciences Research Institute, Addiction Institute, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran, [4]Gut and Liver Research Center, Faculty of Medicine, Mazandaran, University of Medical Sciences, Sari, Iran, [5]Department of Surgery, Faculty of Medicine, Mazandaran University of Medical Sciences, Sari, Iran

Abstract

Background: About 50% of adults have experienced abdominal pain. Complaints of abdominal pain account for about 10% of emergency visits. There are many types of diseases that occur with complaints of abdominal pain that range from a life threatening disease to a self-limiting illness, among which psychiatric disorders are also a major contributor to non-organic abdominal pain. And among psychiatric disorders, depression and anxiety disorder and fatigue are more common in these people.

Materials and Methods: This cross-sectional study was carried out on patients who had undergone abdominal pain in the emergency department of Imam Khomeini Hospital in Sari during the year 1395 and have filed a case study. Data collection was performed by referring to the emergency department of patients who had been referred to or admitted to the abdominal complaints and finally diagnosed non-specific abdominal pain. A form of data collection was also completed. The standard DASS-21 questionnaire, validated by Sahebi et al.

Results: In this study, we divided the samples (150 people) into two equal groups of abdominal pain, 75 non-specific abdominal pain (44% male and 56% female) and 75 patients with specific abdominal pain (50.7%). Male and 49.3% female) were divided. Most patients were in the age group of 30-45 years. In none of the two groups, none of the variables of anxiety, stress, and depression were very severe and their severity did not exceed the limit of 1.3% (1 person), in the non-specific group of one There was severe anxiety disorder and in a special group there was one case of depression and severe anxiety disorder. The highest level of anxiety disorder among the non-specific group was in both mild and moderate variables in both groups. The total number of psychological disorders in the non-specific group was mild to severe, more than the specific group. In the non-specific group, the pain history was 65.3%, which was 38.66% for the specific group. 17.3% of non-specific patients and 61.3% of them had nausea and vomiting. For fever it was reported 4% and 36% respectively. In the case of urinary tract, the ratio of 4 to 16%. In the non-specific group, the most common site of pain was reported by Generalize and Epigastric region, but in the special group, the greatest site of pain was Epigastric, Periumbilical, Right upper quadrant. In the non-specific and specific group, the most frequent reports of dissemination were reported in the non-specific group, although most did not express the exact location.

Conclusion: The results of this study indicate that there is a strong link between abdominal pain and especially non-specific abdominal pain with accompanying psychological disorders. It also indicates the high prevalence of these disorders in abdominal pain.

Key words: abdominal pain, non-specific abdominal pain, functional pain, anxiety, depression, psychological disorders

Access this article online

www.ijss-sn.com

Month of Submission : 08-2017
Month of Peer Review : 09-2017
Month of Acceptance : 09-2017
Month of Publishing : 10-2017

Corresponding Author: Iraj Goli Khatir, Emergeny Medicine department, Mazandaran University of Medical Sciences, Sari, Iran. E-mail: amamali110@gmail.com

INTRODUCTION

Approximately 50% of adults have experienced abdominal pain (1). About one quarter of the patients admitted to the emergency department complain of acute abdominal pain (2), although in some cases self-healing is improved, but in a large number of patients, they are indicative of important and acute abdominal problems (3).) So that it can even lead to the death of the patient (4). Complaints of abdominal pain account for about 10% of emergency visits. While 7% of the cases may cause pain, it is a life-threatening problem. Abdominal pain has been reported to be due to more than eight million emergency cases in the United States in 2006 (5).

More than 25% of cases of abdominal pain cannot be clearly detected despite clear clinical and Para clinical examinations (6). There are many types of illnesses that occur with complaints of abdominal pain and from a life-threatening disease to a self-limiting illness, among which the presence of psychiatric disorders is also a major contributor to non-organic abdominal pain And among psychiatric disorders, depression and anxiety disorder and fatigue were more common in these people (7, 8).

Early and proper diagnosis is required in determining the patients' responsibilities, and not performing diagnostic and unnecessary interventions and delaying treatment (9). Non-specific abdominal pain generally refers to acute abdominal pain below 7 days that can not be diagnosed with examinations and after initial diagnostic interventions, which is a common cause of abdominal pain (10).

The diagnosis of abdominal pain is still an important aspect in treating patients, and for diagnosis, it is usually necessary to have auxiliary diagnostic methods, including radiology, ultrasound and laboratory (11), and especially CT scan imaging techniques. Diagnosis of this disease (12), even today, is used to diagnose and treat parasitic osteoporosis (13), which is especially useful in children with abdominal pain (14, 15)

Emergency physicians should have the capability to quickly identify and treat patients at risk with life threatening conditions, while there is currently no specific guidance on the evaluation and management of non-specific abdominal pain in the emergency room [16]. Due to the complexity of the diagnosis, the increased costs imposed and time-consuming processes (17, 18), and because of the lack of well-defined and accepted standards for the management of patients with non-specific abdominal pain, It is necessary to base the studies on the basis of which they can design and implement logical instructions in this regard. The first step in this process is to be aware of the status of patients, identify the consequences and know the causes of it. Using this information, she designed a diagnostic and therapeutic protocol to help manage patients with abdominal pain.

Considering the fact that a significant percentage of patients with abdominal pain have been referred to them due to inorganic causes, and among these people, psychological disorders are a major contributor to studying this cause is of particular importance. Anxiety and depression disorders in this group have the highest prevalence (19). Of course, the results of some studies suggest that even pain patients who seem to have clinical findings and similar diagnostic tests, show very different degrees of physical and psychological impairment (20, 21). Also, considering that in previous studies no extensive study was conducted on adulthood and most studies on recurrent and non-specific pain in children, our aim was to determine depression, anxiety and stress disorders among adult patients with complaints An abdominal pain is specific and non-specific, so that the results of this study can be effective in identifying and treating patients with non-specific abdominal pains.

MATERIALS AND METHODS

This research is a descriptive cross-sectional study on patients who underwent abdominal pain in the emergency department of Imam Khomeini Hospital in Sari during the second half of 1395. Imam Khomeini Training and Treatment Center (SAR) is a referral center for patients in the province and a total of 7,000 people are admitted monthly to emergency patients.

All patients with non-specific abdominal pain, which were monitored on the basis of repeated examinations, tests and imaging, such as imaging and graphic examination, endoscopy and colonoscopy, as needed, and consulting with the necessary services to diagnose the cause of pain until the pain disappeared. They are discharged only with symptomatic relief (dosing) without a clear cause for pain, and in subsequent follow-up patients will be diagnosed with nonspecific abdominal pain as well as patients with specific abdominal pain, ie patients who have ultimately undergone a specific diagnosis and measures The treatment begins, they enter the study.

Regarding the possibility of referral to patients with non-specific abdominal pain in gastrointestinal and surgical clinics, the student is responsible for gathering information by referring to gastroenterology clinics and hospital surgery from patients who have complained with abdominal pain and eventually emergency physicians and Internal and surgical procedures for the diagnosis of non-specific abdominal pain were provided. Data collection form and specific questionnaire were completed. For this study, a

form of information collection that includes demographic information, as well as information on pain characteristics, clinical findings, laboratory and radiological findings, and ultimately ultimate diagnosis, is designed.

Also, the standard DASS-21 questionnaire was used by Sahebiet al to (22) diagnose and screen the symptoms of depression, anxiety and stress in patients. Each of the DASS21 subscales includes 7 questions, each of which is the final score of the total score of the questions. Since DASS21 is a short form of DASS42 (42 questions), the final score of each subscale must be doubled. The reliability of the questionnaire was 0.71, 0.46 anxiety and 0.78 stress, based on Cronbach's alpha for depression.

Data collection is done by the host without intervention in the patient care process. Finally, the findings are analyzed by statistical methods and the results will be analyzed.

Criteria for Entering theStudy

1. All people with abdominal pain were admitted to the Emergency Department of Imam Khomeini Hospital in Sari.
2. All patients with abdominal pain refer to gastroenterology clinics and hospital surgery, and the final diagnosis of non-specific abdominal pain is presented to them.
3. Satisfaction of patients to enter the study

Exclusion criteria

1. Abdominal pain due to trauma
2. Patient dissatisfaction for entering the study
3. Those who had clearance with personal consent despite the advice of the physician.

Statistical analysis

All data was entered into the computer using SPSS21 software and two independent samples were used to determine the effective factors on probable access to a definitive diagnosis. The significance level is less than 0.05.

RESULTS

As you can see in Table 1, none of the variables appeared to be very severe in either of the two groups, and their severity did not exceed the limit of 1/3 (1), so that in the non-group A specific case of severe anxiety disorder and in a specific group, there is one case of depression and severe anxiety disorder. There is anxiety disorder in both groups in both the mild and moderate levels. The total number of psychological disorders in the non-specific group is higher than the specific ones.

The results of Table 2. show that there is a significant difference between depression, stress and anxiety disorder in two distinct and non-specific groups (P-value <0.05) and depression in the nonspecific group with mean (8.4000) and mean Proprietary (6.2533) which is more non-specific in patients with abdominal pain. And stress in the nonspecific group with a mean (9.8133) and proprietary mediums (7.6533), which is greater in patients with non-specific abdominal pain. And anxiety disorder in the non-specific group with an average of 7.4400 and a specific mediast (6.1600), which is higher in non-specific abdominal pain patients.

According to the results of Table (4-9), the mean of pain start time in the non-specific pain group was higher than the mean start in the specific pain group, which shows a significant difference between the time of onset of pain in the two groups (P-value <0.05) But according to this table, there is no significant difference between the duration of admission in two groups (P-value> 0.05).

There were no significant correlations between nutrition and constipation in the two groups (p-value> 0.05). But in the case of urinary problems, this problem is significantly more than non-specific in the specific group (p-value <0/05).

The results of Table 4 show that in the non-specific group, the most common site of pain was reported by Generalize and Epigastric region, and the lowest site was in the left lower quadrant area, but in the specific group, the greatest site of pain relates to Epigastric, Periumbilical, Right upper quadrant, among which the epigastric pain was very common, and the least place was left lower quadrant. However, the exact definition of the location of abdominal pain can be somewhat difficult and the possibility that our registrations are not accurate is also present. The results of this table indicate that there is a significant difference between the place of abdominal pain in two groups (p-value <0.05). There was no significant difference between the place of delivery in two groups (p-value> 0.05). More pain was reported as unanswered, but the highest rate was reported in both groups.

There is a significant difference between the white blood cells in the two groups (P-value <0.05). As it is seen, in the non-specific group, 1.3% of the subjects have a lower white blood cell count than normal and 5.3% more than normal, indicating a meaningful relationship between them. In the specific group, white blood cells are significantly higher than normal (69.3%), which may be the cause of infection or stress in this group of patients. In the specific group, hemoglobin levels were significantly lower than 12 (p-value <0.05).

In the specific group, the abnormal platelet count was significantly higher than the non-specific group (P-value <0.05), which most of the subjects had below the normal platelet level.

Table 1: Summary of the status of the prevalence of depression, stress and anxiety disorders in patients with specific and non-specific abdominal pain referring to emergency department of Imam Khomeini Hospital in Sari

Group	Severity	Common	Mild	Moderate	Sever	Very sever	p-value α= 0.05
Nonspecific	Depression	38 (7/50%)	35 (7/46%)	2 (6/2%)	---	---	000/0
	Stress	72 (96%)	2 (6/2%)	1 (4/1%)	---	---	000/0
	Anxiety disorder	35 (7/46%)	20 (7/26%)	19 (3/25%)	1 (3/1%)	---	000/0
Specific	Depression	59 (8/78%)	13 (3/17%)	2 (6/2%)	1 (3/1%)	----	000/0
	Stress	71 (7/94%)	3 (9/3%)	1 (3/1%)	---	---	000/0
	Anxiety disorder	51 (68%)	7 (3/9%)	16 (4/21%)	1 (3/1%)	---	000/0

Table 2: Significant comparison of depression, stress and anxiety disorder in patients with specific and non-specific abdominal pain

Variable	Group	Number	Average	SD	Mean standard error	p-value α= 0/05
Depression	Nonspecific	75	8.4000	3.56.29	0.41111	
	Specific	75	6.2533	4.14629	0.47877	0.001
Stress	Nonspecific	75	9.8133	3.05222	0.35244	0.000
	Specific	75	7.6533	3.89904	0.45022	
Anxiety disorder	Nonspecific	75	7.4400	3.26836	0.37740	0.025
	Specific	75	6.1600	3.65410	0.42192	

Table 3: Clinical examination of the onset of pain and duration of hospitalization for patients

Variable	Group	6-1 hour	12-6 hour	18-12 hour	24-18 hour	No answer	Mean	p-value α= 0/05
start time	Nonspecific	12%	6/10%	6/6%	3/65%	3/5%	32/3%	000/0
	Specific	24%	6/42%	8%	20%	3/5%	25/2%	
Admission time	Nonspecific	7/2%	7/2%	3/1%	7/2%	6/90%	14/3%	327/0
	Specific	3/1%	3/1%	4%	4%	6/82%	23/2%	

Table 4: Variables related to clinical examination in two groups

Variable	Right upper quadrant	Left lower quadrant	Epigastric	Generalize	Periumbilical	No answer	p-value α= 0/05
Site of abdominal pain							
Nonspecific	7/10%	3/9%	7/30%	3/33%	16%	0%	0/000
Specific	6/38%	33/9%	80%	3/17%	3/25%	3/1%	
Location of referral pain							
Nonspecific	6/2%	3/9%	4%	6/2%	---	3/81%	0/166
Specific	3/9%	28%	3/1%	6/2%	---	6/58%	0/000

There is a significant difference between the results of ultrasonography in the two groups. It can be seen that in the answer to sonography for non-specific group, no non-normal cases were observed, but in the special group 58.2% had ultrasound with a diagnosis of a disease or specific complication (P-value> 0.05).

DISCUSSION

It can be said that most referrals do not result in a non-specific abdominal pain compliant with acceptable diagnosis, and most of them will be improved without special complications (23). This study is one of the first studies of proprietary and non-specific abdominal pain and its relationship with psychological disorders in Iran with the aim of investigating the prevalence of psychological disorders such as depression, anxiety and stress in patients with specific and non-specific abdominal pains and their relationship.

The results of this study in terms of high psychological disorders in the non-specific pain group indicate that non-specific pain is very important and a high percentage of

respondents is due to abdominal pain. In a study by Abbas et al. In New Zealand, 52% of nonspecific abdominal pains were reported even with CT scan (24). Cooper et al. In the United Kingdom estimated that 85% of patients with abdominal pain were diagnosed with nonspecific abdominal pain (25).

In the samples studied, after radiography, 89% of the non-specific group and 68% of the normal or unknown group were reported, in ultrasonography, this was for non-specific 100 and 89% respectively. In the urine test, this was 92% to 82%. Following the one-year-old Gunnarsson et al. In Iceland, 78 percent of abdominal pain was unknown (26). In the study of Ahn et al., Even with radiography, 68% of cases with abdominal pain were also reported as the cause of the disease (27).

Youssef et al. Also stated in their study that the exact amount of the disease is not known from abdominal pain, but it also affects the age of adolescence and women (27).

A study found that the rate of depression symptoms associated with pain per week in 15-year-old subjects with abdominal pain was 49% in female subjects and 34% in males (42%). Which confirms the results of the present study, is the same as the highest abdominal pain in adolescence to mid-age, and increased from an early age to an average age, and after middle age it decreases again, but in terms of sex in this study, the association between the number of women and A man with abdominal pain was not meaningful.

Smith et al. concluded that psychological complications such as anxiety and depression are more common in adults suffering from abdominal pain (28). According to Garber and colleagues, 11 of the sample population had anxiety disorder (85%) and major depressive disorder in 5 cases (38%) of 13 children with abdominal pain in the pediatric clinic (29). Liakopoulou-Kairis et al.Also identified a mental disorder in 82% of patients with abdominal pain (30). Richard et al. In their study of 75 volunteers, patterns of change in anxiety, pain and depression during the admission period were selected in 67 patients with abdominal pain (31)

The prevalence of depression and anxiety in the nonspecific group was more than specific, but in a specific case, a severe depression was also observed. Severe anxiety in each group was uncommon and the prevalence of stress in both groups was negligible. Romano et al. Reported a prevalence of depression in patients with chronic abdominal pain between 10-100% (32)

Also, Magni and a few studies found this abundance between 30-60% (33), which confirmed our results, but this difference in the range of psychological disorders probably related to history of pain, culture, environment, location of pain, type of pain and Economic conditions are sick. Magni et al. Find these differences in relation to the type and location of pain in the diagnostic criteria for pain and depression and number of samples (34).

According to a study by Magni et al., Using the Depression Scale from the Center for Epidemiological Studies (CES-D), 18.7% of Americans, Mexicans and Cubans with abdominal pain, which have been identified as having depression, are likely to There is a great deal of need for intervention, and 40.8% of Puerto Rico's were also affected. They said that the Puerto Rican people are more susceptible to psychological disorders than Americans and Cubans. Using the Diagnostic Interview Program (DIS), they showed that conservative figures are more susceptible to major depression than DSM-III. We think these results clearly indicate the existence of a close relationship between chronic abdominal pain and depression in populations under this study (34).

Frequent abdominal pain in life requires an increase in the use of adult health care, and this complication may lead to an anxiety disorder after it. Recently, some articles on the relationship between suicidal ideation and depression in adults suffering from both specific and non-specific abdominal pain have been studied. Suicidal thoughts are far higher in adult patients with chronic abdominal pain (28).

In this study, we did not explicitly investigate suicidal thoughts, but according to the statistics, in one group of patients with severe abdominal pain, one had severe depression and one had severe anxiety, but in non-specific pain, there was only one severe anxiety disorder and The rest were moderate and weaker cases, which were higher in the non-specific group.

If we consider the relationship between abdominal pain and depression, it is evident from the data that the symptoms of depression and psychiatric disorders in people with abdominal pain are more than that of a poorly classified population (34).

The results indicate that about 40% of both proprietary and non-specific groups mentioned the nutrition problem, but according to the results of Christensen, Gremse and Huertas-Ceballos studies and their colleagues, despite the suspicion of food allergy, gluten insensitivity, Dietary fiber and lactose malabsorption, have been very disappointed with the results of dietary interventions such as fiber supplements and lactose-free diet (35-37). According to our findings, the history of pain, constipation and underlying illness in the non-specific pain group has been reported

more than the specific group, but anorexia, nausea and vomiting, fever, urinary frequency, and specific pain relief.

Management of non-specific pain in the abdomen is a multi-stage process for achieving the best outcome with less cost and minimal damage to the patient (38, 39). Non-specific abdominal pain management is a three-step process. The first stage consists of narration, clinical examination, basic diagnostic evaluations and estimation of possible diagnosis. At this stage, while rejecting life-threatening illnesses, basic diagnostic evaluations such as ultrasound and laboratory tests have been proposed (40, 41).

If no definitive diagnosis was performed at this stage, the second step is to use more advanced imaging methods. In many CT scan centers, the first approach is in these cases (42, 43). If CT scan also did not identify definitive diagnosis for the cause of the disease, in the third step, laparoscopic use as a possible option in Detection of the cause of pain can be addressed (39, 44).

In the present study, the sonography result for the non-specific group was completely normal and there was no complication in ultrasound, but in the special group it was 58.2%, but in the study of Forouzanfar et al. In the non-specific group, 6.2% Of the subjects with diagnosis and abnormal sonography, but in the special group 27.3% of the study subjects had abnormal conditions (23).

65% of the non-specific group and 38% of the specific group had a history of pain in our study. Jeffrey et al. Also found that previous pain experience had an effect on the current pain and also had an impact on their depression (45).

From the limitations of our study, we can conclude that the present study was descriptive and thus could not open the relationship between abdominal pain and psychological disorders. Only a prospective study will definitely help clarify this issue.

CONCLUSION

These results clearly indicate that non-specific abdominal pain is even more associated with specific pain associated with an increased risk for symptoms of depression and psychological disorders, which may also be the opposite. Therefore, it can be confirmed that there is a close link between non-specific abdominal pain and depression, stress and anxiety disorders.

REFERENCE

1. Hyams J, Burke G, Davis P, al e. Abdominal pain and irritable bowel syndrome in adolescents: a community-based study. J Pediatr. 1996:129-220.
2. Syrjala K, Chapman C. Measurement of Pain. 7, editor. London: Bonica JJ; 1990. 580-94 p.
3. Nevoton E, Mandavia S. Surgical complications of selected gastrointestinal emergencies: pitfalls in management of the acute abdomen. Emerg Med Clin North Am. 2003;21(4):873-907.
4. Walters P. Approach to the acute abdomen. Clin Tech Small AnimPracr. 2000;15(2):63-9.
5. Niska R, Bhujya F, Xu J. Natinal Hospital Ambulatory Medical Care Survey;2007 emergency department summary. Natl Health Stat Report. 2010(26):1-31.
6. Mai-Phan T, Patel B, Walsh M, Abraham A, Kocher H. Emergency room surgical workload in an inner city UK teaching hospital. World J Emerg Surg. 2008:3-19.
7. Lameris W, Randen Av, EsHv, al e. Imaging strategies for detection of urgent conditions in patients with acute abdominal pain: diagnostic accuracy study. Br Med J. 2009;338:b2431.
8. Colgan S, Creed F, Klass H. Symptom complaints, psychiatric disorder and abnormal illness behaviour in patients with upper abdominal pain. November 1988:887-92.
9. vanRanden A LW, Luitse JSK, et al. The role of plain radio¬graphs in patients with acute abdominal pain at the ED. Am J Emerg Med. 2011;29(6):582–9.
10. Sheridan W, White A, Havard T, al e. Nonspecific abdominal pain: the resource implications. Ann R CollSurg Engl. 1992;74:181–5.
11. Dye T. The acute abdomen: a surgeon`s approach to diagnosis and treatment. Clin Tech Small AnimPracr. 2003;18(1):53-65.
12. Bischoff M. Radiographic techniques and interpretation of the acute abdomen.Clin Tech Small AnimPracr. 2003;18(1):7-19.
13. Fahel E. Non-traumatic acute abdomen: videolaparoscopic approach. JSLS. 1999;3(3):187-92.
14. Schowartz M, Bulas D. Acute abdomen. laboratory evaluation and imaging SeminPedianSurg 1997;6(2):65-73.
15. Spitz L, Kimber C. Acute abdomen. The history.seminPedian Surg. 1997;6(2):58-61.
16. Mills A, Dean A, Hollander J, Chen E. Abdominal pain: a survey of clinically important outcomes for future research. CJEM. 2010 Nov;12(6):485-90.
17. Gupta R, Bhatia V, Gupta P. Left lower quadrant acute abdominal pain: a case of Spigelian hernia, a rare diagnosis by emergency ultrasound. PJR. 2010;20(4):158-61.
18. Haller O, Karlsson L, Nyman R. Can low-dose abdominal CT replace abdominal plain film in evaluation of acute abdominal pain?. Ups J Med Sci. May 2010;115(2):113-20.
19. Nasab MR. Prospective study of etiologies of acute abdominal syndrome in patients admitted to Ali IbnAbitaleb Hospital of Rafsanjan. Journal of Rafsanjan University of Medical Sciences and Health Services. 2003;2(2):112-8.
20. Bonica J. General considerations in chronic pain 2, editor. philadelphia: Lea &Febiger: Bonica, JJ (Ed); 1990. 196-80 p.
21. Rudy T, Turk D, Zaki H, Curtin H. An impiricaltaxometric alternative to traditional classification of temporomandibular disorders.pain. 1989;36:311-20.
22. Sahebi A, Asghari M, Salari R. Validation of Depression Anxiety and Stress Scale (DASS-21) For an Iranian population Journal of Iranian Psychologists. 2005;4(1).
23. Forouzanfar M, Hatamabadi H, Hashemi B, Majidi A, Baratloo A, Shahrami A, et al. Outcome of nonspecific abdominal pain in the discharged patients from the emergency department. Journal of Gorgan University of Medical Sciences. 2014;16(2):62-8
24. Magni G, Rossi MR, Rigatti-Luchini S, Merskey H. Chronic abdominal pain and depression. Epidemiologic findings in the United States. Hispanic Health and Nutrition Examination Survey. PAIN. October 1991;49:77-85.
25. Cooper J, Hammond-Jones D, O'Neill E, Patel R, Murphy R, Clamp S, et al. The Clinical Decision Unit has a role to play in the management of acute undifferentiated abdominal pain. Eur J Emerg Med. 2012 Oct;19(5):323-8.
26. Gunnarsson O, Birgisson G, Oddsdottir M, Gudbjartsson T. [One year follow-up of patients discharged from the emergency department with non-specific abdominal pain]. Laeknabladid [Article in Icelandic]. 2011 Apr;97(4):231-6.
27. Ahn S, Mayo-Smith W, Murphy B, Reinert S, Cronan J. Acute nontraumatic abdominal pain in adult patients: abdominal radiography compared with CT evaluation. Radiology. 2002 Oct;1(225):64-159.

28. Smith M, Edwards R, Robinson R, al e. Suicidal ideation, plans, and attempts in chronic pain patients: factors associated with increased risk. Pain 2004;111:201–8.
29. Garber J, Zeman J, Walker L. Recurrent abdominal pain in children: psychiatric diagnoses and parental psychopathology. J Am Acad Child Adolesc Psychiatry. 1990;29:648–56.
30. Liakopoulou-Kairis M, Alifieraki T, Protagora D, al e. Recurrent abdominal pain and headache: psychopathology, life event and family functioning. Eur Child Adolesc Psychiatry. 2002;11:115–22.
31. Richard.Chamoman C, Gary B, Cox F. Anxiety, Pain, and Depression supprounding elective surcery: a multivariate comparison of abdominal surgery patients with kidney donors and resipients. Journal of Psychosomatic Research. May 1976;21:7-15.
32. Romano JM, Turner JA. Chronic pain and depression: does the evidence support a relationship? Psychol Bull. 1985;97:18-34.
33. Magni G. On the relationship between chronic pain and depression when there is no organic lesion. Pain. 1987;31 1-21.
34. Magni G, Rossi MR, Rigatti-Luchini S, Merskey H. Chronic abdominal pain and depression. Epidemiologic findings in the United States. Hispanic Health and Nutrition Examination Survey. PAIN. October 1991;49:77-85.
35. Christensen M, Mortensen O. Long-term prognosis in children with recurrent abdominal pain. Arch Dis Child. 1975;50:110–5.
36. Gremse D, Nguyenduc G, Sacks A, DiPalma J. Irritable bowel syndrome and lactose maldigestion in recurrent abdominal pain in childhood. South Med J. 1999;92:778–81.
37. Huertas-Ceballos A, Macarthur C, Logan S. Dietary interventions for recurrent abdominal pain (RAP) in childhood. Cochrane Database Syst Rev. 2002(2).
38. Poulin E, Schlachta C, Mamazza J. Early laparoscopy to help diagnose acute non-specific abdominal pain. Lancet. 2000;355(9207):861-3.
39. Morino M, Pellegrino L, Castagna E, E EF, Mao P. Acute nonspecific abdominal pain: A randomized, controlled trial comparing early laparoscopyversus clinical observation. Ann Surg. 2006 244(6):881-6.
40. Dhillon S, Halligan S, Goh V, Matravers P, Chambers A, Remedios D. The therapeutic impact of abdominal ultrasound in patients with acute abdominal symptoms. Clin Radiol. 2002;57(4):268-71.
41. Allemann F, Cassina P, Röthlin M, Largiadèr F. Ultrasound scans done by surgeons for patients with acute abdominal pain: a prospective study. Eur J Surg. 1999 165(10):966-70.
42. Gupta H, Dupuy D. Advances in imaging of the acute abdomen. Surg Clin North Am. 1997;77(6):1245-63.
43. Ahn S, Mayo-Smith W, Murphy B, Reinert S, Cronan J. Acute nontraumatic abdominal pain in adult patients: abdominal radiography compared with CT evaluation. Radiology. 2002 225(1):159-64.
44. Ou C, Rowbotham R. Laparoscopic diagnosis and treatment of nontraumatic acute abdominal pain in women. J Laparoendosc Adv Surg Tech A. 2000;10(1):41-5.
45. Jeffrey.Lackner M, Brian.Quigley M, Edward.Blanchard B. Depression and Abdominal Pain in IBS Patients: The Mediating Role of Catastrophizing. Psychosomatic Medicine. 2004;66:435–41.

How to cite this article: Hosseininejad SM, KhatirIG, Elyasi F, Malekil, Alvandipour M, Vajargah NK. Determination of Prevalence of Depression, Anxiety and Stress In Patients with Specific and Non-Specific Abdominal Pain Referring to Emergency Department of Imam Khomeini Hospital In Sari. Int J Sci Stud 2017;5(7):237-243.

Source of Support: Nil, **Conflict of Interest:** None declared.