

EVALUATION OF ANXIETY & DEPRESSIVE SYMPTOMS IN PATIENTS WITH 1ST EPISODE OF CHEST PAIN ATTENDING MEDICINE OUT PATIENT DEPARTMENT OF TERTIARY CARE TEACHING HOSPITALBhavik S. Shah¹, Lakhan Kataria², Kajal Tanna³**HOW TO CITE THIS ARTICLE:**

Bhavik S. Shah, Lakhan Kataria, Kajal Tanna. "Evaluation of Anxiety & Depressive Symptoms in Patients with 1st Episode of Chest Pain Attending Medicine Out Patient Department of Tertiary Care Teaching Hospital". Journal of Evolution of Medical and Dental Sciences 2015; Vol. 4, Issue 45, June 04; Page: 7727-7733, DOI: 10.14260/jemds/2015/1125

ABSTRACT: INTRODUCTION: As chest pain is an important symptom of coronary artery disease (CAD) and other non-cardiac diseases, the presentation of the symptom often prompts referral to physicians for further investigation. Previous studies had shown significant association between chest pain and Depressive and anxiety symptoms. **AIMS AND OBJECTIVES:** Evaluate and screen depressive symptoms, anxiety symptoms and somatic symptoms in patients with 1st episode of chest pain attending medicine out-patient department of tertiary care teaching hospital. **METHODOLOGY:** Cross-sectional observational study. Prior permission from institutional ethics committee of 'SUMANDEEP VIDYAPEETH' had been taken. 100 patients having first episode of chest pain coming to Medicine opd of DHIRAJ HOSPITAL are recruited randomly after 1st December 2014. Each patient is given case report form containing sociodemographic data, patients medical history, depression and somatic symptoms scale and Hamilton's anxiety scale (HAM-A). All data are entered in spss 16 and analysed with different (Statistical) tests. Differences on categorical measures will be reported as P value. The result is significant if $P < 0.05$. **RESULT:** 38% & 49% patients have clinically significant depression and anxiety respectively. DSSS score is positively correlated with duration of chest pain. **CONCLUSION:** significant level of depression and anxiety found in 1st episode of chest pain patients. **KEYWORDS:** Chest pain, anxiety, depression.

INTRODUCTION: As chest pain is an important symptom of coronary artery disease (CAD), the presentation of the symptom often prompts referral to a (Physicians & Physicians) for further investigation.

However, often, no organic pathology is found. Besides, patients with chest pain but no evidence of heart disease, as a group, have an excellent prognosis for survival and a future risk of cardiac morbidity similar to that reported in the general population.^[1] Over 50% of patients with chest pain are diagnosed by physicians with chest pain unrelated to the cardiac system. Non-cardiac or unexplained chest pain (NCCP) can be defined as recurrent angina-like or substernal chest pain thought to be unrelated to the heart after a reasonable cardiac evaluation. Only one-third of patients with chest pain are diagnosed with ischemic heart disease.^[2]

Although (The Medical) prognosis of NCCP patients is good, these patients do not function well. The unexplained chest pain is persistent; it causes long-term physical limitations, and negatively affects daily activities. Chest pain is persistent in 50% to 70% of NCCP patients, and 19% to 51% of the patients experience occupational losses, and 40% to 100% experience functional losses. They are exposed to increased rates of medical interventions, including high rates of hospitalization and inappropriate cardiac drug intake.

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Most of the time, chest pain cases in which an organic etiology cannot be determined over time and those presenting with atypical features should be evaluated as a component or an accompanying symptoms of various specific psychiatric (Disorders), primarily such as panic disorder and depression.^[2]

However, the disorder is rarely recognized by physicians.^[3] Possible reasons for that, in addition to lack of knowledge about the disorder, may be lack of validated screening instruments. Furthermore, physicians may be reluctant to enquire about the psychological symptoms in these patients, as it has been supposed that patients are defensive about symptoms being due to mental illness.^[2]

With this background, the present study was designed to determine the prevalence of anxiety, depressive and somatic symptoms in patients with 1st episode of chest pain attending medicine outpatient department of tertiary care teaching hospital.

AIMS AND OBJECTIVES:

1. To evaluate depressive symptoms, anxiety symptoms and somatic symptoms in patients with 1st episode of chest pain attending medicine outpatient department of tertiary care teaching hospital.
2. To study psychosocial factors in relation to depressive, anxiety and somatic symptoms in patient with 1st episode of chest pain attending to medicine department for consultation.
3. To identify undiagnosed psychiatric disorders in patients with 1st episode (Having) chest pain attending medicine outpatient department of tertiary care teaching hospital.

MATERIALS AND METHODS: Study Design-This is an observational, cross-sectional study which was conducted on 100 patients between ages 18–70 yrs with 1st episode of chest pain attending medicine outpatient department of Dhiraj Hospital, Pipariya from after Dec. 2014.

Exclusion Criteria:

1. Those subjects who are not willing to give prior informed written consent.
2. Those subjects who are previously diagnosed with having known psychiatric disorder, mental retardation and dementia.
3. Those patients who has current or lifetime cardiac disease and pulmonary disease.
4. Those (Patient) who are taking psychotropic medicine or medication significantly affecting pain or history of drug abuse.

Data collection-Prior permission of institutional ethics committee of Sumandeep Vidyapeeth will be taken to start the study.

Prior written informed consent from participating patient will be taken.

Subjects will be assured about confidentiality of their data & will be explained to answer appropriately to the questions.

Case report form (CRF) containing demographic detail will be filled up.

The form is constructed by the investigators to obtain data of patients' previous or current medical diseases, current medication and risk factors for CAD (Family history, smoking habits, diabetes, treated hypertension, hyperlipidemia).

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The Depression & somatic symptom scale (DSSS) and Hamilton's anxiety scale will be given.

These forms and questionnaires are given after consultation with physicians and physicians are blind to results.

After 1st time consultation with physicians for chest pain what advices are given is also noted.

INSTRUMENTS: Demographic data form, the form was constructed by the investigators to obtain data of patients' previous or current medical diseases, current medication and family history.

Depression and Somatic Symptoms Scale (DSSS): The DSSS is able to assess both depression and somatic symptoms and may overcome the deficiency of other scales for depression that include few somatic symptoms. Therefore, DSSS could serve an instrument to monitor the severity of depression and somatic symptoms. Although the 17-item HAMD scale contains eight items pertaining to somatic symptoms, six of the eight items are designed to identify vegetative symptoms, including insomnia, loss of appetite, loss of bodyweight, and decreased libido. Other somatic symptoms – for example, fatigue, chest tightness, palpitations, headache, muscle soreness, and other types of pain – are coded for by only two items, thereby accounting for only six points, or 11.5% of the total score. The fact that the codes for several somatic symptoms are limited to two items makes it almost impossible to track specific somatic symptoms and dimension.^[4]

It is self-rated scale consisting 22 items in which 12 items related to depression and 10 somatic items. In somatic sub scale 5 items query about pain producing pain sub scale. Hung et al found that internal consistency of scale is .73 to .94 & test-retest reliability is .88-.92. Further they found that score of DSSS are significantly (correlated) to score of HAMD with Correlation coefficient of 0.78.

The rating scale for each (Items) ranges from absent (0) to (Sever) (3) and total score is found by adding results of all 22 to items. Higher score indicate more (Sever) depressive and somatic symptoms. Non-depressed person has score below 25.

Hamilton Anxiety Rating Scale (HAM-A): It is clinician rated scale designed to quantify the severity of anxiety symptoms and to assess the response to therapeutic interventions. Consists of 14 items (Anxious mood, tension, fears, insomnia, intellectual impairment, depressed mood, somatic muscular complaints, somatic sensory complaints, cardiovascular symptoms, respiratory symptoms, gastrointestinal symptoms, genitourinary symptoms, autonomic symptoms, patient's behaviour at interview), each defined by a series of symptoms. Each item is scored on a scale of 0 (Not present) to 4.

STATSTICS: All data are entered in spss 16 and analysed with (Different) statistical tests. Differences on categorical measures will be reported as P value. The result is significant if $P < 0.05$.

RESULT:

Socio-Demographic Variables of The Study Population: Total 100 patients between 18 to 70 yrs. are included. Majority of patient age is below 50 yrs. 71% of total population. In which male are 58 and female are 42 in number. 91% population has studied upto high school and only 8% have studied upto graduate level. Most of patients (81%) are working as farmer, clerk, and shop owner and as housewife. Only 13% patients are unemployed. Majority of patients (93%) are from lower or upper

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lower socioeconomic class (Kuppuswamy's socioeconomic status). 95% of patients are married and 75% of patients are living in joint family.

Past Medical History: 10% patients have previous history of medical illness like (Cataract, hysterectomy), hernia, D & C etc.

(Anxiety) Symptoms: In 51% of patients Hamilton's anxiety score were less than 17 which are normal. 35% patients have mild to moderate anxiety. 8% and 4% patients have moderate to (Sever) and (Sever) anxiety level respectively. 75% (6 out of 8) patients with moderate to (sever) anxiety are from 18 to 40 yrs. age. 91.4% (32 out of 35) patients with mild to moderate anxiety level are between 41-60 yrs. All patients with Moderate to Severe anxiety level are female. 75% (26 out of 35) patient with mild to moderate anxiety level are male. 94.7% (33 out of 35 patients) patients with HAM-A score >17 are from lower/upper lower socioeconomic class. 51.4% (18 out of 35) patients with >17 HAM-A score have less than 15 days of duration. Moderate to (Sever) degree level of (Anxiety) patients have duration of either less than week or 6 months.

Depressive Symptoms: Out of 100 patients 38% have DSSS score more than 25 which means clinically significant depression which needs to be further evaluated. Somatic symptoms and depressive symptoms both are (Equally) reported. 55% (21 out of 38) patients having DSSS score more than 25 are between age group 41-50. Next is 24% (9 out of 38) patients are from age 51-60 yrs. 48% (28 out of 58) male and 24 % (10 out of 42) female have dsss score >25. 94.7% (36 out of 38) patients have (Depression) are from lower socioeconomic class. Out of 38 patient with dsss score >25, 40% (21) patients have less than 15 days of symptom duration for chest pain. 29 % (11) patients have 5 to 6 months of duration for chest pain.

(Corelation) Analysis: There is positive and (Statistical) significance ($p < 0.05$) correlation between symptom duration and DSSS score, it means that if symptom duration of chest pain increases than dsss total score will increase. Also positive and (Statistical) significance ($p < 0.05$) correlation is seen between socioeconomic status and HAM-A score. Which means lower socioeconomic status patients has more HAM-A score and higher level of anxiety.

DISCUSSION: Chest pain is one of the most common medical complaints in general population. Since it may be a warning sign of coronary artery disease (CAD) or myocardial infarction (MI), it is also one of the most frightening pains.^[2,5] Between 52% and 77% of patients presenting to the emergency department and referred for coronary angiography suffer chest pain that is not cardiac in origin and many chest pain patients do not receive a medical explanation for their pain.^[5] Major causes of medically unexplained chest pain are psychiatric disorders like depression, Panic attack, somatic symptom disorder, etc.

In present study patients having 1st episode of chest pain have significant level of depression and anxiety. 38% patients have clinically significant depression and 49% patient have clinically significant anxiety. Such findings also observed in a study on patient with non-cardiac chest pain by Dr. Abhaik sinha etal regarding psychiatric co morbidities shows that 58(65.9%) out of 88 of the study population had psychiatric disorder in some form. Of these 58(65.9%) patients majority (44.9%) were having panic disorders followed by depressive disorders (36.2%).^[6]

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A meta-analysis of 13 psychiatric epidemiological studies (Reddy and Chandrashekhara) with a total sample size of 33, 572 subjects who met the following criteria; door-to-door survey, all age groups included and prevalence rate for urban and rural being available yielded an estimated prevalence rate of 20.7% (18.7-22.7) for all anxiety disorders, which was reported to be highest among all psychiatric disorders.^[7] In our (Study prevalence) of significant anxiety is 49% which was double than normal population.

Also in our study we have found that male (48%) has more depressive symptoms than female (24%) which is little odd finding than available epidemiological data in India in general population. In one study, prevalence of anxiety and depressive symptoms was estimated to be 42% and 31%, respectively, in the total chest pain population. Males with abnormal test were depressed but females experienced more anxiety symptoms. Patients with negative tests had significantly higher scores for anxiety and higher depression scores than those with positive tests.^[8]

There is positive and (Statistical) significance ($p < 0.05$) correlation between symptom duration and DSSS score, it means that if (Symptom) duration of chest pain (Increases) than dsss total score will increase. This finding is supported by other study in which the prevalence of depressive disorders in patients with AMI 1 month after the cardiac event was stated as 59.5% by Strik et al., which was higher than the other studies.^[9]

(Though study is observational and size of study is small finding should not generalized on large scale.)

CONCLUSION: Significant depression and anxiety found in 1st episode of chest pain patients. Also there is positive correlation between duration of chest pain and severity of depression.

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(Characteristics)		No. patients	No. patients (%) with dsss>25	No. patients (%) with HAMD score>17
Sex	Male	52	28	26
	Female	48	10	23
Age (years)	18-30	15	3	7
	31-40	19	3	7
	41-50	37	21	16
	51-60	19	9	17
	61-70	10	2	2
Kuppuswamy's socioeconomic status	Middle/lower middle	7	2	4
	Upper lower	62	24	25
	Lower	21	12	20

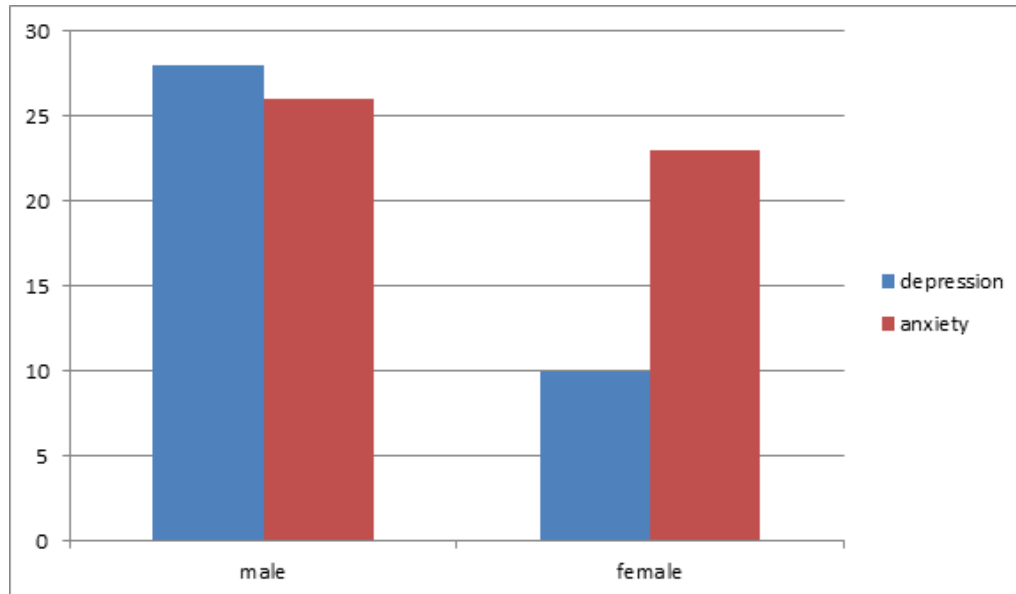
Table 1: Sociodemographic factors and anxiety and depression

SEX	HAM-A score				Total
	=<17: NIL	18-24: mild to moderate	25-30: Moderate to severe	Severe	
MALE	32	21	3	2	58
FEMALE	19	13	5	5	42
Total	51	34	8	7	100

Table 2: Gender wise distribution of severity of anxiety

		Dsss somatic	Dsss depression	Dsss total	HAM-A
sd in days	Pearson Correlation	0.179	0.262	0.239	0.050
	Sig. (2-tailed)	0.075	0.008	0.017	0.624
	N	100	100	100	100
k status	Pearson Correlation	0.083	0.009	0.046	0.207
	Sig. (2-tailed)	0.412	0.933	0.651	0.039
	N	100	100	100	100

Table 3: Correlation

Prevalence of Significant Anxiety and Depression:**Graph 1****AUTHORS:**

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