



## STUDY OF PSYCHIATRIC MORBIDITIES (DEPRESSION & ANXIETY) IN POST MYOCARDIAL INFARCTION PATIENTS

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### KEYWORDS :

#### INTRODUCTION:

According to World Health Report 2002, cardiovascular diseases(CVDs) will be the leading cause of death and disability in India by 2020.(1)Acute Myocardial Infarction (MI) is a potentially life threatening manifestation of CVDs.

Myocardial ischemia often leads to myocardial infarction. Acute myocardial infarction can develop at rest or with normal activity, and can be the first clinical manifestation of coronary heart disease.(1)Stress-induced ischaemia is more common than ischaemia induced by physical stressors.

Psychiatric problems contribute to the development of cardiovascular disease and develop as complications of it.(2) Behavioural risk factors for coronary disease, such as smoking, failure to exercise, and failure to adhere to treatment and lifestyle recommendations, are clearly exacerbated by depression or anxiety and may benefit from psychiatric treatment.(3)

Two meta-analyses have found that depression independently increases the risk for the development of CAD by about 65 percent.(4) Symptoms of depression and anxiety have been commonly observed among patients in the aftermath of MI in both Indian and international studies.

Individuals who experience such symptoms appear to have a poorer outcome than their counterparts in relation to treatment adherence, quality of life and limitations in daily activities.(4) MI patients who experience anxiety and depressive symptoms during recovery have demonstrated increased rates of cardiac and all-cause mortality in follow up. In a Finnish study of 85 consecutive post MI patients; the prevalence of depression was estimated at 21% at baseline, and 33.9% at the end of the 18 month follow up period.(4)

Depression was also an independent risk factor for death in post-myocardial infarction patients, increasing the mortality rate three- to fivefold.(5)Although the data are limited, antidepressant treatment in patients with coronary artery disease and major depression probably reduces mortality.(5,8)

Controlled breathing and relaxation training are quite effective in relieving dyspnoea, dizziness, or the chest pains that often accompany panic attacks and generalized anxiety.(9,10)

Keeping these issues in mind; the present study was designed to assess the frequency and persistence of depressive and anxiety symptoms following acute MI in a tertiary care centre in KATIHAR.

#### AIMS AND OBJECTIVES:

To assess the level of psychiatric morbidity (anxiety and depression) in the post myocardial infarction period.

To assess and compare the anxiety and depression in myocardial infarction patient and randomly selected control group.

#### STUDY DETAILS:

##### Site:

This study was conducted in Department of general medicine/ Cardiology and Department of psychiatry at KMCH, Katihar.

##### Sample:

50 patients who survived acute MI were interviewed 6 months after the illness. DSM-V Diagnostic criteria was followed. Hamilton Depression Rating Scale (HAM-D) and Hamilton Anxiety Rating Scale (HAM-A) were administered to assess the severity of depression/anxiety and compared with control group. A control group of 50 randomly selected participants from attendees, attending medical OPD.

##### INCLUSION CRITERIA:

50 patients who survived acute MI were interviewed 6 months after the illness in general medicine/cardiology OPD The present episode should be the first episode of myocardial infarction.

##### EXCLUSION CRITERIA:

Patients experiencing signs of angina pectoris, unstable Angina are excluded from the study.

Patients with previous psychiatric illnesses are excluded from the study. Those patients who have previously undergone coronary bypass and stent procedure, and now developing episode of myocardial infarction are excluded from the study.

##### METHODOLOGY:

After obtaining informed consent, patients were interviewed. Special Proforma was prepared for collecting the socio - demographic profile.

Patients who fulfilled criteria to establish a diagnosis of Major Depressive Disorder and Generalized Anxiety Disorder based on DSM V diagnostic criteria were administered Hamilton Depression Rating Scale (HAM-D) and Hamilton Anxiety Rating Scale (HAM-A) to assess the severity of depression & anxiety and were compared with control group.

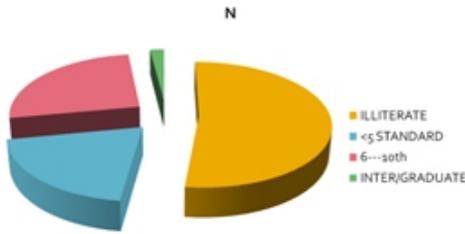
#### OBSERVATION AND RESULTS

(1)

Post MI Group Age Group distribution

Age Group	Male	Female	Total
<40	4	4	8
41---50	2	0	2
51---60	5	9	14
61---70	24	2	26
>71	0	0	0

## (2) LEVEL OF EDUCATION



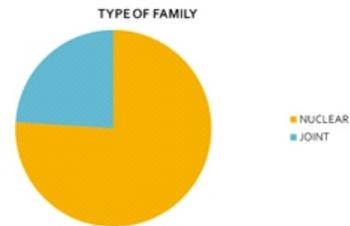
## (2) DISTRIBUTION OF EDUCATION

LEVEL OF EDUCATION	N
ILLITERATE	27
<5 <sup>TH</sup> STANDARD	13
6-10 <sup>TH</sup>	10
INTER/GRADUATE	0
TOTAL	50

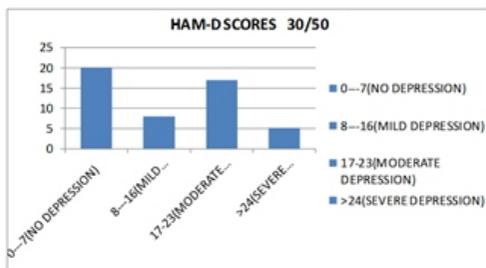
## (3) TYPE OF FAMILY

Type of Family	N
NUCLEAR	40
JOINT	10
TOTAL	50

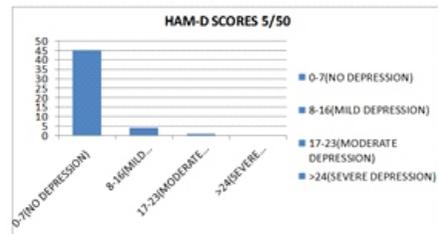
## (3) TYPE OF FAMILY



## (4) HAM-D SCORES



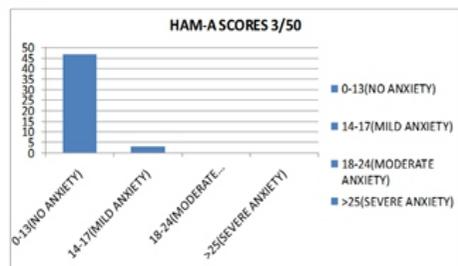
## (4) DEPRESSION IN CONTROL GROUP



## (5) HAM-A SCORE 20/50

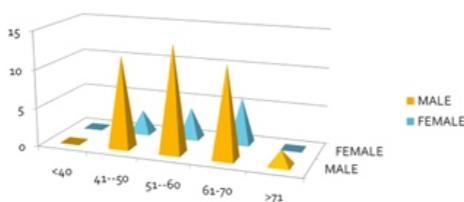
HAM-A SCORE	N
0-13 (NO ANXIETY)	30
14-17 (MILD ANXIETY)	2
18-24 (MODERATE ANXIETY)	6
>25 (SEVERE ANXIETY)	12
TOTAL	50

## (5) ANXIETY IN CONTROL GROUP



## CONTROL GROUP

### (1) AGE AND SEX DISTRIBUTION



### Correlation between case & control:

Chi-square calculated value for depression is 27.44 and the chi-square table value was 3.84 and the p-value was <0.00001, so there was highly statistically significant association between depression and myocardial infarction as the calculated value was more than table value with 1 d.f. (degree of freedom)

Chi-square calculated value for anxiety is 16.3 and the chi-square table value was 3.84 and the p-value was <0.001, so there was statistically significant association between anxiety and myocardial infarction as the calculated value was more than table value with 1 d.f. (degree of freedom)

**DISCUSSION:**

This study was conducted to analyze 50 patients who have recovered from myocardial infarction and they were picked up from cardiology outpatient clinic for psychiatric morbidity using DSM-IVTR criteria.

Once established, the severity was measured by using Hamilton rating scales for depression and anxiety.

Previous studies have reported varying rates of depression ranging from 13.6%<sup>31</sup> to as high as 87%<sup>(5,7)</sup> Two Indian studies have reported rates of roughly 25%<sup>6</sup> and 34%<sup>41</sup> each for depression among post-MI subjects. This figure is less than what was observed in our study.<sup>(5,6)</sup> A possible explanation for the difference could be the settings in which the patients were interviewed and different instruments and diagnostic criteria used in earlier studies would also be a reason for the varying findings..

**CONCLUSION:**

Depression & Anxiety are significantly associated with a major life threatening illness like myocardial infarction.

These results will highlight the importance of holistic care in managing patients.

The influence of psychiatric morbidity needs to be stressed to the other specialists to have a holistic approach.

Recognition & early intervention of depression and anxiety will improve quality of life in patients.

**REFERENCE:**

1. World Health Organization. The World Health Report 2002 – Reducing risks, promoting healthy life. Geneva;WHO:2002.
2. Miles, W.M., Williams, E.S., and Zipes, D.P. (1997). Coronary heart disease. In *Cecil essentials of medicine (4th edn)* (ed. T. Andreoli, C. Carpenter, J. Bennett, and F. Plum), pp. 53–68. W.B. Saunders, Philadelphia, PA.
3. Rozanski, A., Bairey, C.N., and Krantz, D.S. (1988). Mental stress and the induction of silent myocardial ischemia in patients with coronary artery disease. *New England Journal of Medicine*, 318, 1005–11.
4. Peter A. Shapiro M.D. in Cardiovascular Disorders : Kaplan & Sadock's Comprehensive Text book of Psychiatry Volume 2, 9th edition .LippincottWilliams & Wilkins 2009: pg 2251-2255.
5. Goyal A, Bhojak MM, Verma KK, Singhal A, Jhirwal OP, Bhojak M. Psychiatric morbidity among patients attending cardiac OPD. *Indian J Psychiatry* 2001; 43(4): 335-39.
6. Sarkar S, Chadda RK, Anxiety and depression in patients with myocardial infarction: findings from a centre in India. *Gen Hosp Psychiatry*. 2012 Mar-Apr; 34(2):160-6.
7. Akhtar MS, Malik SB Symptoms of depression and anxiety in postmyocardial infarction patients. *J Coll Physicians Surg Pak*. 2004 Oct; 14(10):615-8.
8. Lane D, Carroll D, The prevalence and persistence of depression and anxiety following myocardial infarction. *Br J Health Psychol*. 2002 Feb; 7(Pt1):11-21. 59.
9. Lesperance F, Frasure-Smith N, Talajic M, Bourassa MG. Five-year risk of cardiac mortality in relation to initial severity and one-year changes in depression symptoms after myocardial infarction. *Circulation* 2002; 105:1049-53.
10. Luutonen S, Holm H, Salminen JK, Risla A, Salokangas RKR. Inadequate treatment of depression after myocardial infarction. *Acta Psychiatr Scand* 2002; 106: 434-39.