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ORIGINAL ARTICLE / RESEARCH

Hassles and Quality of Life in Myocardial Infarct Patients

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ABSTRACT

Acute myocardial infarction (AMI or MI), commonly known as a heart attack, is a serious, sudden heart condition, usually characterised by varying degrees of chest pain or discomfort, weakness, sweating, nausea, vomiting, and arrhythmias, sometimes causing loss of consciousness. Psychological factors preceding and consequent to MI need attention.

Aim: The aim of the study was to assess the quality of life (QOL) and daily hassles in myocardial infarct patients.

Method: Thirty consecutive outpatients with diagnosis of myocardial infarction, both males and females, in the age range of 28-70 years, belonging to all educational groups, were recruited from the In-patient Department of Cardiology, Post Graduate Institute of Medical Education and Research, Chandigarh. Thirty normal controls were recruited for comparative purposes. Both the groups were administered Daily Hassles Scale and WHOQOL Bref version.

Results: Analysis of Hassles Scale and WHOQOL Scale assessing various areas (general, physical, psychological, environmental, and social) was done to find out the impact of daily hassles on the QOL of cardiac patients. Results show that QOL is affected after MI, compromising in the areas of general well-being, physical health, psychological functioning, and environmental dimensions. No significant differences were found on hassles experienced by MI patients as compared to the normal controls.

Key words: Myocardial infarction, quality of life, hassles

Key message:

1. AMI is one of the leading life-threatening diseases.
2. MI is characterised by physical and psychological concomitants.
3. MI affects the functional ability of the subject and subsequent quality of life.
4. Stress is a common psychological cause leading to MI.
5. Individual's personality characteristics and perception of stress are crucial confounding variables.
6. Need to focus on antecedent and consequent factors of MI.

Introduction

Acute myocardial infarction (AMI or MI), commonly known as a heart attack, is a serious, sudden heart condition usually characterised by varying degrees of chest pain or discomfort, weakness, sweating, nausea, vomiting, and arrhythmias, sometimes causing loss of consciousness. It occurs when a part of the heart muscle is injured, and this part may die because of sudden total interruption of blood flow to the area. It is a life-threatening medical emergency, which demands both immediate attention and activation of the emergency medical services. One of the contributory causes is researched to be stress, both physical and psychological.

Much of the stress in our lives results from having to deal with daily hassles pertaining to our jobs, personal relationships, and everyday living circumstances. Hassles are irritants that range from minor annoyance to major family pressures, problems, or difficulties. Many people experience the same hassles every day. When taken individually, these hassles may feel like only minor irritants, but cumulatively, over time, they can cause significant stress. Studies have found that one's exposure to daily hassles is actually more predictive of illness than is exposure to major life events. Cardiac mortality rises sharply within a small time-frame after a catastrophic event, but even common daily hassles, anxiety, depression, or personality traits can impair cardiac health [1]. Positive associations between the frequency of job hassles and psycho-physiological reactions have been reported in some studies [2]. It is also reported that predictive psychosocial risk factors for women with respect to coronary heart disease (CHD) were physical stress reactions, emotional stress reactions, burnout, family relationships, and daily hassles/satisfactions, and they were at approximately the same level as biomedical risk factors [3]. Twisk et al. [4] investigated the influence of positive and negative life events (including daily uplifts and daily hassles) on several biological and lifestyle CHD risk factors. Their study could not fully

determine whether or not different mechanisms play a role in the health benefits of positive life events compared to the health burdens of negative life events. However, the fact that those life events do affect the mental and physical constituents of the body is beyond doubt. Consequently, post MI, patients may have debilitating effect on the otherwise active life. The quality and quantity of impact may be of interest psychologically and functionally.

Quality of life (QOL) is increasingly being used as an outcome measure in clinical trials and observational studies designed to evaluate the quality of care for patients with AMI [5–7]. QOL is the concept that includes a large set of physical and psychological characteristics. QOL has been defined as “the extent to which one's usual or expected physical, emotional, and social well being is affected by a medical condition or its treatment” [8]. Interest in QOL has developed in the wake of growing recognition of the importance of a patient's perspective of his or her health status after medical treatment. Such perceptions have become particularly important, given that recent advances in AMI treatment have left practitioners with numerous treatment alternatives that offer no clear survival benefits at substantial cost [9],[10]. In the absence of such benefits, QOL measurements can provide an additional measure of the effectiveness of post-AMI care. Health-related QOL was low, studied 7 months after a myocardial infarction [11].

Psychological factors preceding and consequent to MI need attention. It is also seen that psychosocial stress and hassles are clearly risk and prognostic factors in myocardial infarction. However, till date no systematic study has been carried out on Indian population assessing the hassles and QOL in myocardial infarction, a major cause of mortality and morbidity. Present study is an attempt in this direction. The aim of the present study was to compare the QOL and hassles of myocardial infarct patients with normal controls and to examine the correlation between the two.

Sample

Thirty consecutive patients with diagnosis of myocardial infarctions, both males and females, in the age range of 28–70 years, belonging to all educational groups, fulfilling the exclusion and inclusion criteria, were recruited from the In-

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patient Department of Cardiology, Post Graduate Institute of Medical Education and Research, Chandigarh. Thirty normal controls were recruited for comparative purposes.

Inclusion criteria

1. Patients with first episode of MI attack were recruited for this study.
2. Only stable patients were included in the sample (survived the attack and expected to live for another year and had stable vital parameters like normal BP, near-normal pulse, and no respiratory distress).
3. Those who were able to speak and understand Hindi.

Exclusion criteria

1. Patients with abnormally higher mental functions/psychiatric illness were clinically assessed with the help of a psychiatrist and excluded.
2. Physical limitation or illness severity needed to be sufficient to preclude participation.

Ethical clearance

1. The comfort level of the patient was ensured.
2. Implicit and explicit consents were taken.
3. Non-cooperation should not in any way hamper the treatment given.

Tools

1. **Hassles Scale [12]:** Hassles are simply obstructions in daily life of a person. The participants rate each hassle occurring during the previous month for both severity and persistence on a three-point scale. Frequency, cumulative severity and intensity of hassles were calculated for each subject. The scale has 119 items and has been shown to have good reliability.
2. **WHOQOL Bref version [13]:** It is a self-administered instrument. It pays emphasis on subjective evaluation of respondent's health and living condition. It measures five domains of QOL: general, physical, psychological, environmental, and social. This scale has 26 items scored 1–5, with total score range of 26–130. Its psychometric properties have been found to be comparable to those of the full version (WHOQOL-100).

3. **Socio-demographic profile sheet:** It was used to collect the socio-demographic information, i.e. name, age, sex, education, locality, etc. of the patients and the caregivers.

Procedure

Patients clinically diagnosed as having MI were identified, and the purpose of the study was explained to them. Patient who were in CCU and have survived the MI attack were assessed on the third or fourth day. Written informed consent was obtained from those who agreed to participate in the study. They were assured that information given by them would be kept strictly confidential. Control group consisted of relatives and attendants of patients in the same age group. Patient group as well as control group was administered Hassles Scale and WHOQOL Bref version. It took about 30–45 minutes to complete the tests.

Results

The patient group consisted of 26 males (86.67%) and four females (13.3%). The age range was from 28 to 70 years, with a mean of 45.60 years (SD = 11.47 years). Almost one-third of the patient group was working as skilled or unskilled workers (36.67%) and had a monthly income between Rs. 5000 and Rs. 10,000 per month (30%). Majority of the subjects (93.3%) in the patient group were married and living in a nuclear set-up (60%). Almost two-thirds of the patients (66.67%) were Hindus. In the present study, an equal number of normal subjects were recruited as the control group for comparative purposes.

[Table/Fig 1] shows means, SDs, and *t* ratios of dimensions of QOL of MI and control group. MI group has lower general well-being (mean 5.83, SD 1.53) than the control group (mean 6.80, SD 1.03), and the *t* ratio (2.87, $p < 0.01$) reached the level of significance. On physical health, the MI group (mean 18.37, SD 4.24) has lower score than the control group (mean 25.47, SD 2.85), and the *t* ratio (7.61, $p < 0.01$) reached the level of significance. Similarly, control group has higher score on general psychological functioning (mean 19.97, SD 2.41) than the MI group (mean 17.07, SD 3.42) and the difference is statistically significant (3.79, $p < 0.01$). Control group also reported higher score on environment (mean 24.43, SD 2.54) than the MI group (mean 22.33, SD 4.19), and the difference

is statistically significant (2.35, $p < 0.05$). However, no significant difference between the mean scores is found on social dimensions of QOL.

[Table/Fig 1] Mean, SD, and *t*-values of scores on WHOQOL Bref version

| Sr. no. | Variables | MI group | Control group | <i>p</i> -Value |
|---------|---------------|------------------------|------------------------|-----------------|
| 1. | General | M = 5.83 SD = 1.53 | M = 6.80 SD = 1.03 | 2.87** |
| 2. | Physical | M = 18.37 SD = 4.24 | M = 25.47 SD = 2.85 | 7.61** |
| 3. | Psychological | M = 17.07 SD = 3.42 | M = 19.97 SD = 2.41 | 3.79** |
| 4. | Environmental | M = 22.33 SD = 4.19 | M = 24.43 SD = 2.54 | 2.35* |
| 5. | Social | M = 9.47 SD = 1.91 | M = 9.13 SD = 0.73 | .89 |

* $p < 0.05$.
** $p < 0.01$.

[Table/Fig 2] Mean, SD, and *t*-values of scores on Hassles Scale

| Sr. no. | Variables | MI group | Control group | <i>p</i> -Value |
|---------|---------------------|-------------------------|-------------------------|-----------------|
| 1. | Cumulative severity | M = 92.27 SD = 26.17 | M = 95.97 SD = 42.06 | 0.41 |
| 2. | Frequency | M = 44.07 SD = 11.79 | M = 45.83 SD = 19.21 | 0.43 |
| 3. | Intensity | M = 2.09 SD = 0.07 | M = 2.08 SD = 0.085 | 0.36 |

[Table/Fig 3] Mean, SD, and *t*-values on subscales of Hassles Scale

| Sr. no. | Variables | MI group | Control group | <i>p</i> -Value |
|---------|-----------|-------------------------|-------------------------|-----------------|
| 1. | Personal | M = 55.87 SD = 16.06 | M = 63.57 SD = 24.83 | 1.4 |
| 2. | Social | M = 20.73 SD = 5.36 | M = 18.83 SD = 9.68 | 0.94 |
| 3. | Financial | M = 15.67 SD = 10.24 | M = 13.57 SD = 11.29 | 0.76 |

[Table/Fig 2] and [Table/Fig 3] show the comparison of MI and control group on various dimensions of hassles scale. It is evident that MI and control group have no significant differences on subscales of hassles scale, neither

do the two groups differ on severity, frequency, and intensity of hassles.

[Table/Fig 4] Correlation coefficients of WHOQOL Bref version with Hassles Scale

| WHOQOL | Cumulative severity of hassles | Frequency of hassles | Intensity of hassles |
|---------------|--------------------------------|----------------------|----------------------|
| General | -0.162 | -0.157 | -0.059 |
| Physical | -0.073 | -0.081 | -0.012 |
| Psychological | -0.080 | -0.083 | -0.030 |
| Environmental | -0.042 | -0.058 | 0.067 |
| Social | 0.048 | 0.039 | 0.089 |

[Table/Fig 4] shows the correlation of hassles and dimensions of QOL. It is clear from the table that the correlation values do not reach the level of significance.

Discussion

Aim of the present study was to assess the QOL and hassles in myocardial infarct patients in the wake of growing recognition of the importance of a patient's perspective of his or her health status after medical treatment.

The QOL provides information pertaining to the effect of the vent and/or intervention on the patient's life. Present study provides same insight into the different dimensions of QOL of patients with myocardial infarction. A glance at [Table/Fig 1] reveals that MI and control groups differ significantly on general well-being, physical health, psychological functioning, and environmental dimensions of QOL. The patients suffering from MI have lower scores on four of the five areas of QOL, as measured by WHOQOL Bref version, except for social relationships. Results clearly indicate that QOL is affected after MI; there are compromises in the areas of general well-being, physical health, psychological functioning, and environmental dimensions. These findings are consistent with a number of previous studies. It has been reported that patients with MI have lower scores on all the sub-dimensions of QOL except for social functioning [14]. In another study, health-related QOL was investigated in Japanese patients. As compared to the rest of the Japanese national norms, physical functioning, role-physical, general health, and role-emotional were lower [15]. It is possible that after myocardial infarction patients often experience physical and

emotional effects related to the events that impair functioning to the point of interfering with house work, work for pay, social life, and other important activities. The younger the MI, the more the QOL would be affected, because the older people would have fulfilled their life obligations. They may experience anxiety and depression that were not present before the event, which may exacerbate the existing conditions [16–19].

Daily life is filled with countless minor annoying sources of stress termed hassles. Much of the stress in our lives results from having to live with daily hassles and can interfere with our immune systems [20],[21], and it is believed that exposure to everyday hassles is more predictive of illness than major life events. The present study tried to investigate the role of daily hassles in patients with MI with the help of Hassles Scale. A glance at [Table/Fig 2] and [Table/Fig 3] reveals that the two groups do not differ significantly on any of the subscales of hassles, neither are there any difference on the severity, frequency, and intensity of the hassles. It can be concluded from the results that patients suffering from MI experience the same amount of hassles as the normal population. These results are in line with an earlier study that also has reported hardly any association between positive and negative life events and biological CHD risk factors [4]. The plausible reason could be the way in which the individual perceives that non-life-threatening stressors (hassles) can influence his/her physiological reaction and subsequent development of real physical illness. Type A personality, perceived control, social relationships, and coping styles can be the main mediating variables. Twisk et al. [22] stated that the subjective appraisal of life events should always be taken into account and that the relationship between daily hassles and CHD risk factor seemed to be mediated by different coping styles and type A behaviour. Some evidence also indicates that optimistic people are much more stress resistant than pessimists [23]. Cognitive appraisal of the stress is a very important factor. Stress occurs only to the extent that the persons involved perceive that the situation is somehow threatening to their important goals (primary appraisal) and that they will be unable to cope with these dangers or demands (secondary appraisal) [24],[25]. The same situation may be stressful for one and not for the others. Further,

no correlation was found between QOL and daily hassles experienced by MI patients.

The present study has helped us gain a deeper understanding of adult experiences of living with MI, in order to enhance the QOL provided by the health-care system. The study did give us some insight into the QOL and hassles of MI patients. Results of the study suggest a need to investigate and implement treatment strategies that do have a significant impact on QOL, particularly because subjects perceived that levels of QOL were below normative levels of general population. It is also important to measure QOL at the time of admission for MI to target treatment intervention that can improve QOL for patients. It is also necessary to determine the predictors of QOL in MI patients to improve the QOL.

However, this study was conducted on a small sample. In order to generalise the results, the study should be replicated on a larger sample. There is a need to assess the mediating variables like personality types and coping styles. One of the limitations of the present study is that it describes QOL and hassles at one point of time. However, these findings are of clinical interest and warrant further investigation in a longitudinal way.

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