SHORT COMMUNICATION

Health related quality of life in post-acute coronary patient

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Abstract

The study aimed to assess the effects of lifestyle-modification counselling on behavioural outcomes among patients after myocardial infarction. This was a quasi-experimental study, conducted at the Armed Forces Institute of Cardiology (AFIC), Rawalpindi, from December 2018 to February 2019, on 50 post-myocardial infarction (post-MI) patients. Knowledge, attitude, and practice regarding lifestyle was assessed using a self-designed, pre-tested, validated questionnaire. The participants were given health messages regarding lifestyle modifications for 15-20 minutes based on WHO guidelines on the nature of the disease, diet, exercise, smoking cessation, weight and blood pressure monitoring, and salt intake. The mean age of the patients was 58.68±10.8 years. The MI knowledge sufficiently improved (28,100%), positive attitude was observed (27, 96.4%), and healthy practices were anticipated (24, 85.71%) significantly ($p<0.001$) after counselling. The lifestyle modification counselling improved the knowledge, attitude, and practice among post- MI patients but significant improvement was seen only in knowledge and practice.

Keywords: Attitude, counselling, health messages, knowledge, lifestyle modification, myocardial infarction, practice.

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Introduction

Myocardial infarction (MI), popularly known as heart attack, occurs due to reduction of blood supply to a part of myocardium resulting in its ischaemia and consequent permanent damages to its structure and function.[1] MI is one of the emerging causes of morbidity and mortality in both developed and developing countries, accounting for 16.7 million deaths per year globally.[2] No statistics are currently available regarding the exact prevalence of Ischaemic Heart Diseases in Pakistan. According to a collaborative study conducted in Karachi, Pakistan, by the National Institute of Cardiovascular Disease (NICVD), Pakistan, and the National Heart, Lung and Blood Institute (NHLBI), USA, the prevalence of CHD was 6.2 % to 4.4 % in over 30-year-old subjects.[3] Healthy lifestyle modifications and patient compliance of cardio protective drugs are the only known means of primary prevention to avert the advancement of the consequences and recurrence of MI.[4] With modern technologies altering the active nature of occupation to deskbound activities, the incidence of heart diseases is on the rise. Although the disease is treatable by secondary preventive measures such as angiography, modifications in a person's lifestyle can prevent the aftermath of its occurrence.

Providing the patient with guidelines regarding heart diseases and the modifiable risk factors is of utmost importance in changing the persons' attitude, conduct, and lifestyle practices.[5] After MI, most of the patients are advised by the cardiologists to make healthy alterations in their lifestyle. The Joint Task Force of the European Society of Cardiology and other Societies have highlighted the significance of pre-emptive interventions in this regard.[6] In addition, in 2006, the American Heart Association laid down the guidelines that can be followed for preventive cardiology. They recommend consumption of healthy diet, maintenance of healthy body weight, normal blood pressure and sugar levels, regular exercise, and abstinence from use of tobacco products. Reduction in stress levels is crucial as chronic stress increases the risk of premature coronary artery disease (CAD).[7] The burden of the disease can be reduced by adherence to these adaptations.[8] Nevertheless, these preventive measures are limited as the patients are unaware of the association of these modifiable risk factors with heart diseases and their unwillingness to comply with these guidelines. Inadequate understanding of the disease is one of the major causes of disease complications and failure to follow behavioural changes.[9]

Awareness about the significance of the contributing factors is mainly procured from the developed countries, although the global burden of the disease is mainly contributed by the developing countries.[10] In Pakistan, generally, the knowledge, perception, and attitude toward lifestyle changes after MI is deplorable and needs immediate attention/intervention to improve the management outcome. This study was conducted with

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the primary aim to encourage the prevention of progression of disease meticulously and rationally.[11]

The aim of the study was to first assess the level of knowledge and attitude of post-MI patients and to later evaluate the effect of counselling the same subjects on lifestyle modifications. Because awareness amongst the patients is considered important for maximising health benefits and health care delivery, this may allow for the combination of effective and culturally sensitive interventions with supporting environmental changes. Counselling of the patients and their subsequent compliance to the laid-out guidelines, are of paramount importance for successfully managing the cases of MI.[11]

Patients and Methods

This was a quasi-experimental study, conducted at the Armed Forces Institute of Cardiology, Rawalpindi, from December 2018 to February 2019. Data was collected from 50 post-MI patients through purposive sampling technique. Sample size of 50 was identified by using online sample size calculator, OpenEpi, with a two-sided significance level of 95%, power of 80%, with outcome as 35%.[12] Approval from the ethical review committee was obtained before the start of the study. Informed written consent was taken from the patients. People above the age of 25 years, who had the first attack of MI and who consented to participate in the study were included. People who already had undergone cardio protective rehabilitation, unwilling patients, those who had not been informed of their disease by their family members/doctors, and those who had chronic or congenital heart diseases were excluded from the study.

Knowledge, attitude, and practice regarding lifestyle was assessed using a self-designed, pre-tested validated questionnaire consisting of 27 items with seven demographic questions, 13 multiple choice questions regarding knowledge, 8 multiple choice questions regarding the patients' attitude towards MI and lifestyle modification, and 6 questions regarding their practice. The survey was initially designed in English and then translated into Urdu, as most people in Pakistan are Urdu speaking. However, an English version was made available to patients at their request. The questionnaire was filled via interview after obtaining informed consent and all information voluntarily given by the patients was kept in strict confidence. The patients were then given health messages regarding lifestyle modifications for 20 minutes based on WHO guidelines[13] on the nature of the disease, diet, exercise, smoking cessation, weight and blood pressure monitoring, and salt intake. A patient was identified as having sufficient knowledge, positive attitude, and healthy practice if he/she gave at least 50% correct answers to the questions related to these three domains. The patients were followed after two weeks through their contact numbers and were again asked to fill the questionnaire.

The data was analysed using SPSS version 22. McNemar Chi Square test was applied to ascertain the significant difference in the pre- and post- counselling sessions. A p-value of less than or equal to 0.05 was taken as statistically significant.

Results

The mean age of the patients was 57.20±10.8 years. There were 43 (86.0%) males, and 7 (14.0%) females. There were 40 (80.0%) literate and 10 (20%) illiterate patients. Among the 50 patients, 12 (24.0%) were smokers, 14 (28%) were ex-smokers, while 24 (48.0%) said that they had never smoked. A total of 33 (66.0%) patients reported a history of hypertension, while 15 (30%) were diabetic.

Before counselling, 23 (46%) patients had sufficient knowledge about MI, which improved to 50 (100%) after counselling. Attitude of 42 (84.0%) patients was positive before counselling which improved to 49 (98.0%). Only 12

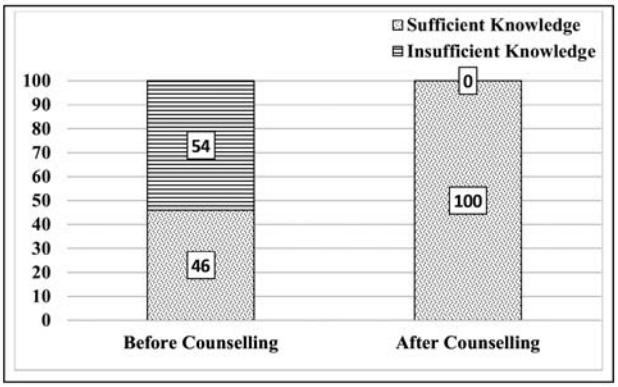

Figure-1: Effect of counselling on post-MI patients' knowledge.

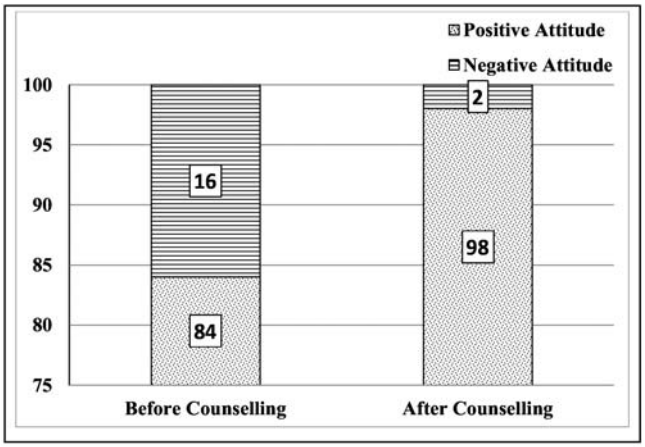

Figure-2: Effect of counselling on post-MI patients' attitude.

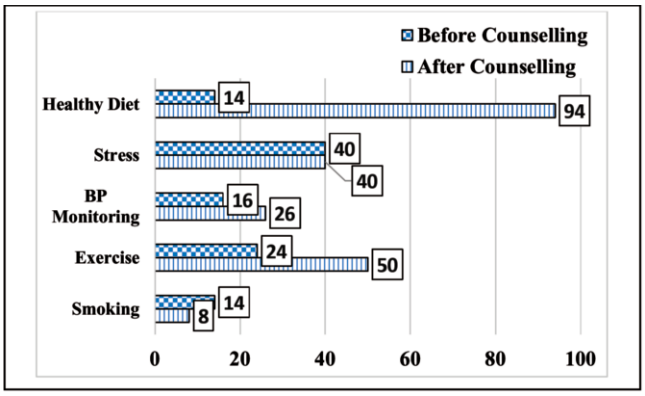

Figure-3: Effect of counselling on post-MI patients' practice.

(24.0%) patients had healthy practices, which improved to 45 (90.0%) and this was a significant improvement at a p-value of <0.001. This is illustrated in Figures-1, 2 and 3.

Discussion

This is the first study ever carried out in Pakistan using telephonic follow-up intervention for MI patients after an acute episode. The study established that this patient-centred intervention was successful two weeks after pre-discharge educational instructions which was implied by significant improvement in knowledge, attitude, and practice of the patients.

In the previously conducted studies on one-to-one interaction between the counsellor and the patient, results were pragmatic.[14] The findings of the study were similar to a research conducted in Guanzho, China,[15] in which the patients, after a telephonic follow-up intervention on sixth and twelfth week after discharge, had significantly positive knowledge about the symptoms, duration, and causes of their illness, had more positive beliefs about the ability to control and also had improved nutritional practices and physical activity. Another randomised control study conducted by Hannsen T. A.[16] revealed improvement in the physical dimension of health-related quality of life in patients as well as positive behavioural changes after a telephonic follow-up intervention. Our findings were consistent with a study conducted by Bakhshan M.,[17] which used two pre-discharge educational sessions as an intervention in cardiac pacemaker patients and demonstrated improved illness perception in subjects without using a control group. A comparable study conducted in New Zealand[18] demonstrated improvement in the patients' insight regarding the disease conforming to the current study.

The results of registry and performance programme for patients hospitalised with heart failure in the Organised Programme to Initiate Lifesaving Treatment in Hospitalised Patients with Heart Failure (OPTIMIZE-HF) - a comparison of conventional management programme with modified programme that included counselling[19] — are consistent with our findings, i.e. counselling does have a positive response in the form of improvement in the knowledge, attitude, and practice of lifestyle modification amongst post-MI patients. The results of the current study were concordant with another study, primarily based on cardiac health behaviours (exercise, diet, stress, and smoking), that showed overall better performance of MI patients following education compared to the control group that were discharged after routine management only.[20] In a study conducted in England and Wales[21] Copenhagen County (BMJ)[22] no significant difference in mortality was observed between patients referred to rehabilitation and controls, which is contrary to the current study.

The main strength of this study is that it brought into practice individually tailored patient-centred counselling that was appropriate to the individuals' age, socioeconomic factors, and their religious and social culture. Another merit attributed to this study is that the counselling time had been scheduled a few days before discharge which is considered the most receptive and compliant period for implementing lifestyle modification as mentioned by the European Guidelines.[23] The use of electronic media for the purpose of inculcating awareness regarding lifestyle modification shows significant improvement as consistent with another study.[24] There are some limitations to the elucidation of the results. Non-compliance of the patients and their reluctance to have telephonic conversation for their post-counselling evaluation were the major limitations faced during this study. Presently, no standardised instrument is available to assess the knowledge, attitude, and lifestyle practices. Thus, a data collection tool was instrumented/designed in our study by utilising the present literature that would be applicable for use in our population. Another limitation was the small sample size but the target was to focus on a group of post-MI patients to evaluate their knowledge, attitude, and practice to prevent disease progression. The results in this study were not discussed using a score[9] because each question in our questionnaire provides some information and does not necessarily contain equal weight of significance. Other limitations included the purposive sampling technique and cross-sectional descriptive study design. Further, this study was limited to a single centre i.e., the Armed Forces Institute of Cardiology, Rawalpindi. Therefore, it is suggested that multi-centre-based research should be carried out using a larger sample size and wider geographical distribution throughout Pakistan using standardised measures for a better analysis of the current situation and the needed

amendments to the care being provided to the MI patients. Future research would be advised to improve recommendations for lifestyle modification according to their individual biologic profile as suggested by another research.[25]

Health professionals and physicians are the beacon of knowledge who are generally looked up to by the general masses for guidance regarding preventive measures of post-MI care. This implies the need for inculcation of such counselling sessions along with pharmacological and surgical interventions for better prognosis.

Conclusion

Lifestyle-modification counselling improved the knowledge, attitude, and practice among post-MI patients but significant improvement was seen only in knowledge and practice. The importance of nutritional and lifestyle modifications as highlighted by NICE guidelines has always been underemphasised. The study highlights the need for the development of highly individualised lifestyle-modification counselling at tertiary health care centres.

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Conflict of Interest: None

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