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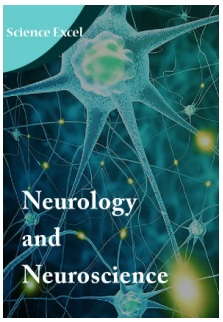

The patient-centered care for patients with acute myocardial infarction: what can be improved the disease management

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Abstract

Introduction: Cardiovascular diseases are presented as a set of diseases that affect the cardiovascular system because of inappropriate lifestyles or unhealthy, they are consistent in risk might be modifiable through a proper disease management factor.

Aim: Assess the perceptions of patients with acute myocardial infarction about this heart disease and risk factors associated. Also, identify the risk factors that can be improved to manage the disease.

Design: Observational and prospective study.

Methods: The survey was conducted in a Cardiac Intensive Care Unit of a Central Hospital, with inclusion of all patients admitted on a period of two months. Nineteen patients were studied with a clinical diagnosis of Acute Myocardial Infarction.

Results: The analysis of the questionnaires showed that, approach the subject has a justified and reasoned relevance. The high prevalence of risk factors that can be modified highlighted the need for intervention in patients with non-modifiable risk factors.

Conclusion: Patients with acute myocardial infarction do not have a correct perception of the disease and associated factors. Many of the risk factors present in patients with acute myocardial infarction are likely to be modified by an appropriate disease management, with a patient-centred care.

Introduction

Cardiovascular diseases are a public health problem, affecting both sexes and all age groups in developed and developing countries. In the last decade, cardiovascular diseases have been the leading cause of death and it is predicted that in the coming years they will be the leading cause of disability. They present as a set of diseases that affect the cardiovascular system as a result, in most cases, of inadequate or less healthy lifestyles, which are consistent with risk factors that can be modified [1]. All because the disease begins at an early stage of life, with a gradual evolution, which will have an earlier and more severe manifestation, depending on the associated risk factors and lifestyles adopted [2].

In the most industrialized countries, cardiovascular diseases are at the top of the causes of morbidity and mortality [3]. Although at national level there has been a decrease in recent years, they still have quite high levels. We can make an interpretation of this fact with the technological phenomenon and consequent improvement of the quality of life, which arose in the postmodern period. This event enhanced an adoption of less healthy lifestyles, such as sedentary lifestyle, a high-fat and hypersaline diet, smoking and stressful situations [4].

All these points are included in the risk factors described by the WHO [1], a total of more than three hundred associated with cardiovascular diseases, co-blaming them for 80% of cardiovascular diseases. The European Society of Cardiology recognizes as main risk factors for cardiovascular disease, tobacco consumption, physical inactivity, less healthy foods, overweight, high blood pressure and cholesterol, changes in glucose metabolisms, individual stress, age, gender, clinical manifestations of coronary heart disease and family history of premature coronary heart disease [5].

The European Charter for Heart Health divides risk factors into modifiable and non-modifiable. The non-modifiable risk factors are those inherent to everyone, to their genetic and phenotypic characteristics. Modifiable ones are those that are associated with the practice of inappropriate lifestyles. The interaction of both factors potentiates or increases cardiovascular risk, and the most important are, according to the Third Joint Task Force of European and other societies on cardiovascular disease

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prevention in clinical practice, smoking, hypertension (HTA), Obesity, physical inactivity, dyslipidemia, diabetes, family history or premature cardiovascular disease, microalbuminuria, and age (> 55 men and > 65 women) [6,7].

In addition to these factors, many authors refer to the evidence of professional stress as a no less important factor and others identifies stress as being almost always present in the manifestations of cardiovascular disease, and emotional stress [8,9].

The increasingly pronounced highlight in disease management is because it contributes to ensuring that patients receive adequate treatments, teaching them to be active participants in their health care through education for self-management of the disease. Self-care, as behavior, takes on different meanings, reflecting the individual style, specific adaptations, current circumstances, and future perspectives of each person [10].

The effective management of symptoms covers an essential component of nursing care practice, namely in chronic diseases, in which management is almost always described in the form of education plans, which allow self-management and self-care, concepts that present, several times, the same meaning. Self-care is the ability to take care of oneself, but also the performance of activities indispensable to achieve, maintain or promote optimal health. The implementation of self-care actions promotes a partnership between nurse and patient/family, so that they develop skills and knowledge to adapt and make informed decision-making, which justifies that the promotion and maintenance of self-care are central in the nurse's intervention [11].

The relevance of the present study is justified by the fact that patients who develop acute myocardial infarction have a significant hospitalization rate, based on the overall dimension of the problem, bringing the contributions to clinical practice at the level of individual and population prevention, in an approach to patient-centered care.

This study aimed to acess the perceptions of patients with acute myocardial infarction about this heart disease and risk factors associated. Also, identify the risk factors that can be improved to manage the disease.

Methods

This study was a prospective observational, with application of a questionnaire with open and closed questions, carried out in a hospital. Patients admitted in the Cardiac Intensive Care Unit with a diagnosis of acute myocardial infarction were used as inclusion criteria, because the patients presented the characteristics that could be studied.

The data were collected through a questionnaire, previously tested, with open questions and closed questions, through which the sociodemographic characterization and identification of risk factors associated with this cardiac pathology were aimed at.

The subjects were informed about the study in advance, requested their informed consent and the ethical-legal procedures were complied with.

Statistical tests of the outcome measures be performed using Statistical Package for the Social Sciences. Categorical variables will be presented as frequencies and percentages.

The development of the study began after approval by the hospital ethics committee and the questions applied after consent given by the patient or significant family/person, the questionnaire was applied to patients/family/significant person.

Results

A total of nineteen patients were interviewed, thirteen (68.4%) were male and six (31.6%) were female, with a mean age of 66.4 years. Regarding marital status, fourteen patients were married, so there was a significant predominance of 73.7%. About seven (36.8%) of the patients did not have any qualifications and the highest level of education was higher education in only one patient (5.3%).

The clinical diagnosis of acute myocardial infarction with ST-segment elevation was attributed to seven (36.8%) of the patients, all of which were subjected to primary angioplasty. Of these seven patients, one had a history of unstable angor and the others had no history of cardiac pathology. The remaining twelve (63.2%) patients were admitted with clinical diagnosis of acute myocardial infarction without ST-segment elevation, all of which underwent cardiac catheterization.

Regarding the history of cardiac pathology, nine (47.4%) patients did not report any history of cardiac pathology and ten (52.6%) reported a history of cardiac pathology. It should be noted that among the ten patients who had a history of cardiac pathology, more than 50% did not know what type of disease they had and those who knew, all reported at least one episode of acute myocardial infarction in the last year.

The characterization of the population in relation to the associated diseases is present in Table 1 and the characterization regarding the type of medication is discriminated against in Table 2.

Within the associated diseases, we have HTA present in sixteen (84.2%) patients, as well as dyslipidemia, which is present in fourteen (73.7%) patients. In addition, except for diabetes and smoking, all other risk factors are present in more than 50% of patients.

The type of daily medication reported by patients has incidence for the treatment of HTA, since we have antihypertensives/diuretics and beta blockers with percentages of 63.2% and 47.4%, respectively.

Within the modifiable risk factors, we have HTA as the most prevalent in this population, being the same associated with the presence of a family history of heart disease. We can infer an association between family history and risk factors such as obesity, HTA and dyslipidemia. In addition, patients with a family history always had the stress risk factor present.

Smoking was the risk factor present in a smaller number. However, we can verify that all patients who had smoking habits, had an associated family history, in addition to also being present with obesity and HTA.

All obese patients have been associated with HTA and the vast majority have dyslipidemia, and it is not possible to infer correlation to other modifiable risk factors.

Multi medication is present in six patients. They made more than five medications concomitantly, being related to the predominance of HTA and the union of multiple modifiable risk factors, with no interdependence between sociodemographic factors.

Table 1. *Population Characterization*

	Family history Disease	Diabetes Mellitus	Smoking	Obesity	HTA	Dyslipid-emia	Sedentary lifestyle	Stress
Present	13	9	6	13	16	14	10	12
n (%)	(68,4%)	(47,4%)	(31,6%)	(68,4%)	(84,2%)	(73,7%)	(52,6%)	(63,2)
Not present	6	10	13	6	3	5	9	7
n (%)	(31,6%)	(52,6%)	(68,4%)	(31,6%)	(15,8%)	(26,3%)	(47,4%)	(36,8%)
Total (n)	19	19	19	19	19	19	19	19

Table 1. *Characterization of the type of Medication*

	Present n (%)	Not present n (%)	Total (n)
Antihypertensives/Diuretics	12 (63,2%)	7 (36,8%)	19
Anticoagulants	9 (47,4%)	10 (52,6%)	19
Vasodilators	3 (15,8%)	16 (84,2%)	19
Antiarrhythmics and cardiotonic	4 (21,1%)	15 (78,9%)	19
Oral insulin/antidiabetics	8 (42,1%)	11 (57,9%)	19
Anti-Dyslipidemia	6 (31,6%)	13 (68,4%)	19
Anti-Inflammatory	3 (15,8%)	16 (84,2%)	19
Beta blockers	9 (47,4%)	10 (52,6%)	19
Other	4 (21,1%)	15 (78,9%)	19

In response to the number of years they were on medication, five (26.3%) patients did not take any medication, and thirteen (68.4%) had been on drugs for more than ten years and one patient had started taking therapy 3 months ago, when he had the first episode of acute myocardial infarction. The medication is done independently by twelve of the fourteen patients taking medication, with the remaining two patients being helped by other family members, stating that the age of these patients was 81 and 93 years respectively.

Ten (52.6%) patients have a regular medical consultation, including family medicine, four (21.1%) have a cardiology consultation and one (5.3%) patient is followed in occupational health consultation. Four (21.1%) patients are followed in the nursing consultation at the family health unit, in consultation of hypertension and diabetes, respectively. Of all the patients surveyed, seven (36.8%) did not have any type of medical or nursing consultation.

Regarding the onset of the symptoms that triggered the acute myocardial infarction, in more than half of the patients (68.4%) complaints suddenly arose, in a period of less than 24 h. In five (26.3%) patients, the first symptoms had appeared about three to five days earlier and one (5.3%) patient reported complaints of chest pain more than a week ago.

More than half of the patients (68.4%) had no knowledge of the risk factors for cardiovascular disease and the rest, four (21.1%) were able to list some of the main risk factors, namely family history, obesity, smoking, HTA and diabetes mellitus.

Discussion

Regarding the epidemiological data of patients, we can assess a significant prevalence for males, with an average age of 66.4 years. All male patients included in the study were over 45 years of age and more than 50% had a family history of heart disease, which is in line with the already studied increased risk in men over 45 years of age and increased risk in the presence of a history of coronary heart disease in direct family members. It should be noted that the risk of females is much lower than that of males, in most situations [12].

A relatively low percentage was observed for higher education levels and a significant number of patients without any level of education. There is a broad recognition of the relationship between socio-economic factors, understanding and therapeutic adherence of patients. Low level of education can be a significant barrier to effective therapeutic adherence [13].

Risk factors are considered as such because they are those

likely to promote an acceleration of cardiovascular disease. Factors such as gender, age and family history are inherent and non-modifiable, and therefore there is a need to reduce this association with modifiable risk factors. We can include smoking, hypertension, diabetes, high cholesterol, obesity, sedentary lifestyle, and stress. Among the most easily modifiable risk factors, we have sedentary lifestyle, which was present in more than 50% of patients.

The practice of regular physical exercise has its benefits greatly recognized, especially at the level of the cardiovascular system. The set of improvements that can come from this practice includes combating overweight, reducing blood pressure, diabetes, and cholesterol levels. In addition, its benefits in terms of well-being and consequent reduction in stress and depression levels are widely studied [14]. As we also noted in our study, more than 50% of patients recognized that they were subject to high levels of stress.

In fact, the risk factors that could be modified were largely present in the studied population, such as HTA, dyslipidemia, obesity, diabetes mellitus and smoking habits. Many patients took medication independently to mitigate the effects of these risk factors present, whether the simultaneous prescription of several medications may contribute to the impairment of the correct medication. Multi medication often associated with side effects in relatively young patients may contribute to non-treatment or treatment failures.

In both females and males, cardiovascular risk increases or is substantially higher in patients with Diabetes Mellitus. As high cholesterol values are substantially significant for increased cardiovascular risk, which when associated with high blood pressure values are mutually potentiated, the latter having a direct impact on cardiovascular risk [15].

Tobacco consumption, another of the associated factors, is an independent factor, and smokers are 2 to 4 times more likely to develop coronary artery diseases. Smoking increases cardiovascular risk in all age groups and in both sexes. This fact has relevance in patients who already have coronary artery disease, aiming at smoking cessation as a primary objective, significantly reducing cardiovascular risk. It is noted that the fact that you have already had an acute myocardial infarction can act as an important stimulus to quit smoking [16].

A significant majority of patients were familiar with the symptoms underlying acute myocardial infarction, so in less than 24 hours they went to emergency services and received treatment.

Regarding knowledge of risk factors, almost two thirds of the population studied had no knowledge of them and a small percentage were able to list some. We know that the greater the association of risk factors, the greater the possibility of developing an acute myocardial infarction, so the modification of these risk factors may eventually decrease the progression of the disease.

Clinical follow-up of patients was also poor. Most patients did not do any medical or nursing follow-up, so the follow-up to promote changes in health habits and lifestyles, aiming at healthy practices was almost non-existent. It is important to motivate the population to attend follow-up consultations to keep track of risk factors. As recommended by the American Heart Association, primary prevention should be made for the detection and modification of risk factors, as well as awareness of the signs and symptoms of cardiovascular disease. In addition to secondary prevention as the goal of preventing recurrence of heart problems and/or new episodes of acute myocardial infarction or sudden death [17] .

In Portugal, integrated disease management emerged based on the principles underlying the disease management models, which are based, among others, on clinical management of the disease, centered on the patient and his self-management, as well as on clarifying the best professional practices, aiming at its uniformity. It is essential that the relationship between professionals and patients is the subject of change, so that active participation of patients is achieved through the development of their main capacities. Only in this way will it be possible to motivate patients to take an active and significant role in the regression and control of the evolution of the disease. Our intervention, as specialized nurses, involves the approach, at various levels, in the lifestyles of the population, however it is essential that the health system together with scientific societies can reduce the individual and social weight of cardiovascular diseases in our country.

Conclusion

Cardiovascular diseases are responsible for the deaths of thousands of people worldwide, so the fight against risk factors should be taken very seriously. Each person may have several risk factors; however, most risk factors are related to the person's lifestyle.

The intervention of health professionals, especially nurses, assumes all relevance, since their knowledge, attitudes and behaviors are increasingly important in the current context of disease prevention, treatment, and the perception of the presence of cardiovascular risk factors. Our study revealed that patients do not have a correct perception of the disease and the factors associated with it.

The continuous approach to the individual needs of patients, showing itself to be a key aspect in our profession, with a view to promoting, maintaining, and restoring health, requiring patients to know and understand the aspects that involve their health. As such, the imperative of adequate disease management is justified, since we also conclude through our study that many of the risk factors present in patients with acute myocardial infarction can be modified through an adequate management of the disease.

In its field of interaction, nursing has been developing multiple interventions to promote the adaptation of individuals to chronic disease, for example regarding the treatment of the therapeutic regimen. It is certain that this adaptation is complex, that there are conditionings of various order, such as biological, psychosocial, socio-economic. The need for high assimilation of information regarding the disease, as well as the medication necessary and indispensable to the control of the disease, implies continuous and periodic follow-up.

In fact, the only way to avoid this need is to avoid the acute myocardial infarction itself by investing in prevention strategies at various levels. Indeed, it is at this point that our performance plays an important and desirable role. It is important to educate for the early recognition of acute myocardial infarction manifestations aiming at an effective and rapid recognition of the necessary means. The intervention of nurses in prevention is a social and ethical commitment, recognizing their abilities in patients, making them aware of their competencies to promote self-care.

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