

## ORIGINAL ARTICLE

## ASSESSMENT OF THE QUALITY OF CARE FOR PATIENTS WITH MYOCARDIAL INFARCTION

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### ABSTRACT

**The aim** of the work was to study and evaluate the quality of medical care provided to patients with myocardial infarction.

**Materials and methods:** A sociological survey was conducted in 310 people with myocardial infarction and the copying of data from 318 statistical maps of patients who left the hospital.

**Results:** It was defined that the majority of patients,  $57.7 \pm 2.8\%$ , were not offered psychological rehabilitation, only  $42.3 \pm 2.8\%$  were recommended the consultation of a psychologist; most of patients,  $89.3 \pm 1.78\%$ , were unaware of the possibility of self-monitoring of their health status after myocardial infarction and  $10.7 \pm 1.8\%$  kept self-control diaries;  $88.4 \pm 1.9\%$  of patients were under monitoring supervision, while  $11.6 \pm 1.9\%$  were not under it.

**Conclusions:** Identification of the quality of care makes it possible to optimize the system of providing health care for patients with myocardial infarction.

**KEY WORDS:** myocardial infarction, medical care, quality of care

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### INTRODUCTION

The relevance of presented topic is obvious. Among non-epidemic diseases, cardiovascular maladies are the leading cause of morbidity and mortality worldwide. This also applies to pathologies such as myocardial infarction, about 50,000 cases of this disease are reported annually in Ukraine [1]. Mortality rates from acute myocardial infarction in Ukraine are much higher than those in Western countries [2]. The organization of health care for patients with myocardial infarction makes it possible to reduce the morbidity and mortality among patients with this pathology [3, 4, 5]. In order to increase the priorities for the prevention and control of non-epidemic diseases under the WHO leadership in 2013 the Global Action Plan for the Prevention and Control of Non-Epidemic Diseases for 2013-2020 was developed.

Therefore, one of the priorities of the healthcare system is to improve the quality of care delivery for patients with myocardial infarction.

### THE AIM

The aim of this research was to study and evaluate the quality of medical care for patients with myocardial infarction.

### MATERIALS AND METHODS

The following methods were used: data copying, medical and statistical, analytical. According to specially designed questionnaires 310 patients after myocardial infarction were interviewed and data from 318 statistical maps were copied (form № 066 / o).

### RESULTS AND DISCUSSION

Organization of primary care facilities plays a major role in the treatment of patients with myocardial infarction. The early diagnosis of this disease reduces mortality and disability, improves the results of treatment of patients with this pathology, which, in turn, increases the duration and improves the quality of life of patients. Thus, during the last 12 months, in average, 3.6 visits have been made to the district therapist in connection with this disease. Among the patients with this illness  $11.9 \pm 1.8\%$  have never sought medical help,  $72.5 \pm 2.5\%$  asked for care 1-3 times, and  $15.6 \pm 2.1\%$  needed help of a doctor 4 or more times. In frames of routine control, visits were made in average 2.9 times,  $12.8 \pm 1.9\%$  of patients had never visited checkups,  $81.4 \pm 2.2\%$  participated in them for about 1-3 times, and just  $5.8 \pm 1.3\%$  were under control examinations 4 or more times.

During the last 12 months, in average, 2.8 visits of patients have been made to the cardiologist in connection with this disease,  $22.5 \pm 2.4\%$  ones have not visited such specialist,  $61.7 \pm 2.8\%$  of them asked for help 1-3 times, and  $15.8 \pm 2.1\%$  needed doctor's care 4 and more times. For the purpose of routine control, 2.4 visits were made in average,  $13.4 \pm 1.9\%$  did not ask for medical aid,  $69.8 \pm 2.6\%$  asked for it 1-3 times, and  $16.8 \pm 2.1\%$  of patients needed help of cardiologist 4 or more times.

Emergency care team delivered  $77.1 \pm 2.6\%$  of patients,  $22.9 \pm 2.6\%$  used other routes of getting to a hospital. Emergency team arrival time was subdivided in such a way: up to 30 minutes in  $95.5 \pm 1.4\%$  of cases, 30-60 minutes in  $3.6 \pm 1.3\%$ , more than one hour in  $0.9 \pm 0.6\%$  of cases. Thus,

96.1 ± 1.3% of patients noted that the ambulance doctor provided first aid, 3.9 ± 1.9% did not provide assistance. Most patients, 97 ± 1.1%, noted that the emergency physician had all the necessary drugs to improve their condition, 3 ± 1.1% said that doctors did not have the necessary drugs for this case. Improvements after the help of an ambulance physician were felt by 72.9 ± 2.5%, and 27.1 ± 2.5% of patients did not feel any improvements.

The hospitalization period from the onset of the disease plays an important role in the provision of medical care for patients with myocardial infarction. The authors found that 34.3 ± 2.7% of sick people in the case of myocardial infarction were hospitalized up to 2 hours after the onset of symptoms, 58.3 ± 2.8% ones in the period from 2 up to 12 hours, 3.3 ± 1.1% were taken to hospital from 12 up to 24 hours, and later than 24 hours – 4.1 ± 1.1%.

Examination of the time of day when the condition of the patients worsened and led to hospitalization, it was found that the majority of patients, namely 47.4 ± 2.8% felt deterioration in the evening, 33.2 ± 2.7% at night, 12.6 ± 1.9% in the morning, and 6.8 ± 1.5% in the afternoon. Most of the patients (75.8 ± 2.4%) experienced deterioration in their health at home, 13.6 ± 1.0% at the workplace, 3.9 ± 1.1% in the street and 6.8 ± 1.5% in other places.

Patient confidence to the doctor is one of the most important factors that establishes productive collaboration between the patient and the healthcare professional, which in turn enhances the effectiveness of treatment and rehabilitation activities overall. According to the study, 64.8 ± 2.7% of patients reported complete trust in the doctor, 27.1 ± 2.5% partially trusted, and 8.1 ± 1.5% did not trust at all.

One of the major issues in assessing the quality of care is patient satisfaction with the organization of diagnostic and treatment processes in health care settings. Thus, 32.3 ± 2.7% of respondents rated the organization of the diagnostic process as “excellent”, 58.1 ± 2.8% as “good”, and 9.6 ± 1.7% as “satisfactory”. The following data were obtained regarding the organization of the medical process: 42.3 ± 2.8% of patients rated it as an “excellent”, 51.6 ± 2.8% as a “good” one, and 9.1 ± 2.2% as “satisfactory”.

In assessing the quality of care, the state of sanitary and living conditions plays an important role. Thus, 53.2 ± 2.8% of patients rated the condition of sanitary and living conditions as “good”, 17.7 ± 2.2% as “excellent” and 29.1 ± 2.6% as “satisfactory”.

Myocardial infarction is a disease that requires high financial costs for both the patient and the whole family, which leads to severe economic consequences. Just 18.9 ± 2.2% of patients indicated that they were able to purchase all the necessary medicines, while 81.1 ± 2.2% did not have such an opportunity.

The basis of qualitative and effective provision of medical care is compliance with the main properties of medical care. In frames of this investigation, 66.3 ± 2.7% of patients noticed that it is necessary to improve the availability of medical care, 6.8 ± 1.4% considered that the stage of providing medical care was also important, 13.3 ± 1.9% were sure that the competence of medical staff in their case was

a compulsory thing, about 2.4 ± 0.9% of interviewed sick people needed safety, and 11.2 ± 1.8% of them insisted on an efficiency of medical aid.

Medical registration and patient health monitoring play an important role in the effectiveness of the healing process for patients with myocardial infarction. Whereas, the main purpose of the monitoring is the dynamic monitoring of patients who have suffered myocardial infarction to achieve stabilization and improvement of the clinical course of the disease, prevention of complications and exacerbations, to improve the quality and life expectancy of patients with this pathology. According to the study it was found that 88.4 ± 1.9% of patients were under the regular medical observation, while 11.6 ± 1.9% were not under it. In majority of cases, a family doctor monitors about 87.9 ± 2.0% of patients, while the cardiologist just 12.1 ± 2.0% ones.

Providing detailed written recommendations (plans) to the patient for treatment and rehabilitation is an integral part of effective treatment, because doctors have to form in the patients after myocardial infarction the right attitude to their health and to this disease, which significantly reduces the risk of recurrent cardiovascular complications. According to our survey, 80.3 ± 2.3% of the respondents were given written recommendations for the organization of their lifestyle, and 19.7 ± 2.3% of them did not get such recommendations at all. In fact, 92.6 ± 1.6% of the patients who had got recommendations followed this plan, while 7.4 ± 1.6% did not follow it.

Unfortunately, myocardial infarction for the most patients is a very strong psychological factor that can lead to psycho-emotional disorders. Therefore, psychological rehabilitation is an important aspect in the treatment of patients with this pathology. According to our investigation, only 42.3 ± 2.8% of patients were recommended consultation of a psychologist, while 57.7 ± 2.8% did not receive such recommendation. Approximately 19.0 ± 3.4% of patients who had got an advice to seek for psychological help did so, whereas 81.0 ± 3.4% refused the help of this kind of specialist. Due to psychological help 80 ± 8% of patients noticed improvement of their condition, and just 20 ± 8% did not feel any changes.

Sanitary-resort rehabilitation lets patients to maintain familiar social status, continue to lead an active lifestyle and return to work. Sanitary-resort treatment was offered to 92.4 ± 1.5% of patients, while 7.6 ± 1.5% did not receive such recommendation. According to the data received by authors, 91.0 ± 1.7% of patients whom rehabilitation was offered, were treated at sanatoriums, while 9.0 ± 1.7% refused from this stage of cure. The positive effect of the spa treatment was noted by 93.2 ± 1.6% of patients, whereas 6.8 ± 1.6% did not notice any effect.

Diet therapy after myocardial infarction is a prerequisite for complex cure of patients. Dieting improves cardiac function and myocardial recovery processes, which prevents recurrence. According to this aspect of the study, authors received such results: 69.0 ± 2.6% of patients follow definite diet, while 1.0 ± 2.6% do not monitor their diet, at all. 63.9 ± 2.7% of patients are aware of the consequences

of non-treatment and diet, partially aware  $29.0 \pm 2.6\%$ , do not know of that  $7.1 \pm 1.5\%$ .

Self-control is one of the main elements of treatment and rehabilitation. The primary purpose of self-control is to provide the patient with knowledge about the illness that will let him/her to act independently in many situations, to change his/her lifestyle, and plan the treatment in advance. Patients keep diary of self-control and regularly use it in  $10.7 \pm 1.8\%$  of cases,  $89.3 \pm 1.78\%$  do not even know about this type of control.

In the course of the study, 318 statistical maps of patients who left the hospital (form No. 066/o) were studied to define the quality of inpatient care. Emergency hospitalization of myocardial infarction patients was observed in  $73.9 \pm 2.5\%$  of cases, planned one was in  $26.1 \pm 2.5\%$ . The ambulance team delivered  $62.6 \pm 2.1\%$  of patients, while by referring of other medical institutions there were  $37.4 \pm 2.7\%$  of sick people such kind of health problem. According to the study, hospitalization in the first 6 hours was performed in  $21.1 \pm 2.3\%$  cases, from 7 up to 24 hours – in  $51.3 \pm 2.8\%$  ones, and finally, later than 24 hours in  $27.6 \pm 2.5\%$  of cases.  $91.1 \pm 1.6\%$  of patients were hospitalized for the first time about this disease in the current year, while  $8.9 \pm 1.6\%$  were re-hospitalized. Number of hospital days spent in the hospital: from 1 up to 5 days in  $3.1 \pm 0.9\%$  of cases, from 6 up to 10 days –  $27.4 \pm 2.5\%$ , from 11 up to 15 days –  $66.7 \pm 2.6\%$ , and more than 15 days in  $2.8 \pm 0.9\%$  of cases. After treatment,  $94.9 \pm 1.2\%$  of patients were discharged with improvement,  $4.2 \pm 1.1\%$  without changes, and  $0.9 \pm 0.5\%$  with deterioration.

## CONCLUSIONS

1. It was found that the majority of patients were not offered psychological rehabilitation. Only  $42.3 \pm 2.8\%$  of patients were recommended the consultation of a psychologist, while  $57.7 \pm 2.8\%$  did not receive this recommendation. Later, absence of psychological help can lead to the development of psycho-emotional disorders in patients with this pathology.
2. It was noted that not all of the patients had been monitored. About  $88.4 \pm 1.9\%$  of patients were under such supervision, while  $11.6 \pm 1.9\%$  of them were not under it. It does not give the chance to observe former myocardial infarction patients in dynamics.
3. It was established that myocardial infarction is a disease that requires high financial costs. But, unfortunately, the majority of patients, namely  $81.1 \pm 2.2\%$  were not able to buy all the necessary medicines. Only  $18.9 \pm 2.2\%$  of patients had sufficient financial resources to purchase all drugs. This adversely affects the effectiveness of the treatment.

4. It was established that the vast majority of patients were unaware of the possibility of self-monitoring of their health status after myocardial infarction. Only  $10.7 \pm 1.8\%$  of patients kept self-control diaries,  $89.3 \pm 1.78\%$  of patients did not even know about this type of control. As a result, it led to the deterioration in the quality of life of patients after myocardial infarction.

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## Conflict of interest:

*The Authors declare no conflict of interest.*

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