Myocardial infarction was and remains a disease that leads to death and disability of the population. For a long time the smallest movements and any transportation of patients with myocardial infarction were forbidden. In 1956, Professor S. F. Oliynyk criticized these regulations at the All-Union Congress of Therapists of the USSR and in one of the central scientific journals. However, this idea was not recognized. Afterwards Prof. S. F. Oliynyk appeared with this idea in the newspapers "Lvovskaya Pravda" and "Izvestiya" (1963). In Lviv region the method of early transportation and early hospitalization of patients with myocardial infarction was approved and recognized officially. This led to a reduction in the death rate of patients with myocardial infarction, especially in rural areas. With implementation of early hospitalization and rapid transportation of patients for 10 years, mortality in the Lviv region was decreased by 14–15 %. The decrease in mortality in Lviv region was first achieved in the USSR, because, according to Prof. S. F. Oliynyk, by that time there were no such publications. Later, this experience of Lviv medicine began to be implemented abroad. In the 1960s, in Lviv, thanks to the persistence and ideas of Prof. S. F. Oliynyk, a great contribution was made to reducing mortality from myocardial infarction twice less.

In the past, patients with a myocardial infarction for no less than a month had to adhere to a strict bed rest, for at least a month, with absolutely no active motions, for maximum unloading of the heart. Such a regime had unfavorable psychological effects, contributed to stagnation in the lungs and hypostatic pneumonia, atony of the intestine, impaired urination. In 1952, Americans Levine S. A. and Lown B. proposed to use in the treatment of patients with heart attack from the first days sitting in the chair. According to A. Myasnikov, the only Soviet professor who recognized the idea of early rehabilitation was Oleynyk S. F. The success of the application of early physical rehabilitation in patients with myocardial infarction prof. S. Oleynyk made a report at the Ukrainian congress of therapists in 1965, and in 1972 in the All-Union Journal «Cardiology» it was officially acknowledged that early physical rehabilitation during myocardial infarction for the first time in the USSR began to be used in Lviv. Now, no doctor has doubts about the need for arbitrary movements, massages and therapeutic exercises, an earlier recovery from the bed, walking from the first days of the illness. Monograph «Modern diagnostics and treatment of acute myocardial infarction», the result of the work of the author’s team consisting of Antonenko L. M., Zharinova O. I., Ivaniv Yu. A., Pavlyuk V. I., Chubuchikh V. M., Yutanova V. I., devoted to «the memory of Professor Stepan Oleynyk, who for the first time in Ukraine organized the treatment of patients with acute myocardial infarction in blocks of intensive care and introduced an early rehab, bravely defeating outdated stereotypes.»

The main goal of rehabilitation of patients is to restore the fullest possible life of the patient, including the return to work. Physical, psychological and socioeconomic factors need to be taken into account during rehabilitation. The process should begin as early as possible after admission to the hospital and continue for the next weeks and months.

Conclusions. 1. In Ukraine, the incidence of illnesses in the circulatory system increases annually, and indicators of temporary and permanent loss of disability increase, which leads to significant economic costs.

2. There is a need to introduce clear programs for the rehabilitation of cardiac patients.

3. Insufficient implementation of modern cardio-rehabilitation programs is a pan-European problem, which leads to a significant spread of risk factors associated with coronary complications, low level of physical activity of patients.

4. Physical rehabilitation is a composite conservative and surgical treatment of cardiac patients. It needs to be done early in order to reduce the risk of complications and to improve the recovery processes of impaired functions. Physical rehabilitation should be comprehensive, including physical, psychological, labor and social components.

The International Practical Conference (22-23 March 2018) on cardio-rehabilitation, organized by the Ukrainian Catholic University's School of Rehabilitation Medicine, led by Dr. Bohdan Prach, with the support of experts from the European Association of Prophylactic Cardiology, professors Hugo Saner and Joppa Perca, will stimulate the further implementation of rehabilitation events in Ukraine, not only for specialized departments, but also for the primary link - family doctors.

KEY WORDS: myocardial infarction; rehabilitation of cardiac patients.
regime with absolutely no active motions for maximal heart discharge. However, such a bed regime had unfavorable psychological effects, contributed to stagnation in the lungs and hypostatic pneumonia, intestinal atony, and urinary excitation. In 1952 Americans Levine S. A. and Lown B. proposed to use in the treatment of patients with heart attack from the first days sitting in the chair. In 1964, Professor Myasnikov A. L. names the only one Soviet professor who recognized the idea of early rehabilitation – Prof. Oliynyk S. F. On the achieved successes of the application of early physical rehabilitation in patients with myocardial infarction Prof. S. F. Oliynyk made a report at the Ukrainian Congress of Physicians in 1965, and in 1972 in the Union magazine "Cardiology" it was officially recognized that early physical rehabilitation during myocardial infarction in the USSR was first introduced in Lviv. Now, no doctor has doubts about the need for arbitrary movements, massages and therapeutic exercises, an earlier lift from the bed, walking from the first days of the illness. Monograph "Modern diagnostics and treatment of acute myocardial infarction" of the author's collective of Antonenko L. M., Zharinova O. Y., Ivaniv Yu. A., Pavlyuk V. I., Chubuchnyy V. M., Yuatanov V. I. – dedicated to "the memory of Professor Stepan Oliynyk, who for the first time in Ukraine organized treatment for patients with acute myocardial infarction in intensive care units and introduced early rehabilitation, bravely breaking old stereotypes."

Chronic non-infectious diseases, overwhelming majority of which are circulatory system diseases (CSD), are the cause of death in 75 % of the cases, with 42.9 % of deaths before the age of 70. Ukraine in comparison with European countries takes one of the first places in the level of mortality from CSD, 80 % of which are due to risk factors. CSD are one of the main reasons for increasing the overall mortality and reducing the life expectancy. Therefore, there is a need to develop a comprehensive approach to tackling this problem.

Cardiovascular diseases (CVD), despite the advances in medical science in the 21st century, continue to cover the broad strata of the general population of all ages. There is a tendency to defeating more young, working population, what causes an increase in economic costs, which is due to a temporary loss of ability and an increase in population disability. Among elderly people, despite the advent of modern treatments, no noticeable progress has been made in increasing life expectancy.

In the mortality rate for CSD, CHD ranks first and accounts for 68.9 %. Among the CVD, the most negative socioeconomic significance have a coronary heart disease, stroke, arterial hypertension (AH) and heart failure, which accounts for 82 % of deaths. Over the past 15 years, the mortality from CSD has increased by 10 % – from 52.1 % to 62.5 %. More than half of the causes of death of working-age people with heart failure occur on coronary artery disease, which is why in the early 60’s it was called the epidemic of the twentieth century and the greatest medical and social burden in the developed countries of the world. The disability rate from hypertension in the structure of CSD for the period 2014–2016 increased from 3.1 % to 4.1 % among the adult population and from 4.0 % to 4.1 % among the working-age people. In Ukraine, the prevalence of hypertension among adults is 27.104 per 100.000 of population, CHD – 20076, and the incidence rate – respectively 2660 and 1766, which is 35 and 51 % more than before. Therefore, it is important to develop measures to overcome these negative tendencies, since reducing mortality from CVD is a problem not only of a health care, but also social.

In the cardiologic patient, there are no obvious pathological changes that limit the motor function, but the state of his cardiovascular system significantly limits the ability to work. Therefore, patients with CVD are in particular in need of rehab. Despite the significant progress achieved in the conservative and surgical treatment of CVD, rehabilitation of these patients is still at a low level.

In manuscripts written in China and India 3000–2000 years BC, the questions of use of breathing exercises, passive movements, massage during diseases of the internal organs and musculoskeletal system were outlined. In ancient Greece, they were considered as a compulsory components of preventive and curative medicine. As originator of medical gymnastics was considered Herodikus (484–425 BC), who treated patients with metered walking, jogging, gymnastics, massage. The prominent physician Hippocrates (459–377 BC), who is called the father of medicine, described in detail the action of physical exercises, the method of their use during lung, heart metabolism diseases, surgery and started using massage as a therapeutic remedy. Doctor Tselie prescribed physical exercises and massage for paralysis. Famous doctor of the school of gladiators Galen (131–210 AC) described the technique of therapeutic gymnastics in combination with massage in diseases and injuries of the muscular system, laid the foundations of dynamic anatomy.

In the following centuries, there is no information about the use of physical exercises in practice, and only in the XI century Avicenna (980–1037 AC) again began to study the effect of physical exercises on human health. He categorized them from a medical point of view, insisted on applying them to people of all ages and proved that the person doing physical exercise meets hygiene requirements for
The leading cardiology associations (American Cardiac Association, American Collage of Cardiology Foundation) identified the main components of modern cardiac rehabilitation, which should include patient assessment, physical training, physical activity counseling, nutrition, weight control, smoking cessation, aggressive management of coronary complications risk factors, psychosocial counseling, and, if necessary, counseling on alcohol and stress management.

In a study by Hammil V. et al. (2010), which included more than 600,000 patients hospitalized with acute coronary intervention or coronary artery bypass surgery, 73045 patients (12.2 %) participated in cardiac rehabilitation programs. A year later, the death rate in this group of patients was 2.2 %, compared with 5.3 % in patients who did not undergo rehabilitation. Further observations confirmed the benefits of rehabilitation measures: the 5-year mortality rate was 16.3 and 24.6 % in groups with and without cardio-rehabilitation, respectively. Meta-analysis of Clark A. et al. (2005), which included results from 63 randomized trials (n = 21295), revealed a 17 % reduction in the annual risk of recurrent myocardial infarction and a 47 % reduction in mortality within 2 years after the course of cardiac rehabilitation.

According to the results of the COSPEL study, the number of rehabilitation exercises (including duration, intensity of interventions and motivation of participants) correlate with better prediction, what means that long-term strategies were more effective than short-term ones.

According to EUROASPIRE IV, the tobacco smoking problem is relevant both in Ukraine and in all European countries that participated in the study. In Ukraine, the problem of smoking is more pronounced, as a significant proportion of patients with CHD are regular smokers who are not going to give up smoking after severe heart disease (24 %) and do not have the opportunity to visit specialized clinics or purposefully use pharmacological support for smoking abandonment. The prevalence of overweight in patients with coronary heart disease in Ukraine, as in Europe, was equally high (81 %), but Ukrainian patients were significantly less informed by medical staff about their excess weight and less motivated to lower it. At the same time, patients in Ukraine changed their diet more significantly than in Europe. The awareness of Ukrainian patients about their levels of total cholesterol (60 %) and blood glucose (57 %) was higher than in European patients (49 and 50 % respectively), but insufficient, as indicators of total cholesterol, low density lipoprotein cholesterol, blood glucose, glycylated hemoglobin in Ukrainian patients exceeded the European ones, and target values in most cases
Scientists emphasize that each patient with CVD undergoes rehabilitation. It is of particular importance for patients after myocardial infarction, chronic heart failure, essential hypertension, congenital and acquired heart defects.

Taking into account the tasks and methods of physical and labor rehabilitation M. M. Amosov and Bandet conditionally divided all cardiological patients into two groups:

- Therapeutic group – patients with myocardial infarction, chronic CHD, HD, compensated valvular heart defects;
- Surgical group – patients operated on congenital and acquired heart defects, coronary atherosclerosis.

Basic principles of cardio-rehabilitation:
- early onset of rehabilitation measures, which promotes faster restoration of the body’s functions, prevention of complications;
- continuous and alternate rehabilitation measures that decrease the time of treatment, reduce disability and rehabilitation costs, long-term material retention of the disabled;
- complex rehabilitation measures conducted under the guidance of a doctor with the involvement of other specialists – sociologists, psychologists, educators, lawyers, etc.;
- individuality of rehabilitation measures – rehabilitation programs are developed individually for each patient and depend on the general condition, characteristics of the course of the disease, the initial level of physical and functional state, personality of the patient, age, sex, occupation, etc.;
- the need for physical rehabilitation in the team – the physical rehabilitation together with other patients forms the patient’s sense of a member of the team, supports morally, reduces the discomfort associated with the consequences of the disease;
- returning a sick person to active work is the main goal of rehabilitation, which makes a person materially independent, morally satisfied, mentally stable and an active participant of public life.

In medical rehabilitation, according to the recommendations of WHO experts, there are two periods, each of which has certain stages:

- hospital:
  - stage I of rehabilitation – hospital (stationary);
  - after the hospital:
    - stage II – polyclinic or rehabilitation sanatorium;
    - stage III – dispensary.

Back in 1974, the WHO Working Group recognized that the purpose of rehabilitation was to restrict or overcome physical or economic dependence in order to return to everyday life, and an important function of medical rehabilitation was the prevention of disability, but under existing disability –
the return of a person to a state with the slightest disturbances of health.

The following types of rehabilitation were allocated:

• physical rehabilitation;
• psychological rehabilitation;
• social rehabilitation.

Modern rehab programs are safe, well tolerated by patients and characterized by low frequency of serious complications such as heart failure, myocardial infarction or trauma. Analysis of data from the French record of complications of cardiac rehabilitation has shown that the frequency of complications is one cardiac complication on 8484 load tests. Patients with residual myocardial ischemia, complicated ventricular arrhythmias and severe left ventricular dysfunction (less than 35 % ejection fraction, heart failure III or IV grades according to NYHA) are among the high-risk group of complications of cardio-rehabilitation. Thus, stratification of risk along with a clear definition of indications and contraindications is the basis of the safety of cardio-rehabilitation.

Rehabilitation of patients has the following objectives:

• regeneration and maintenance of a regular physical activity, which reduces the amount of visceral fat, increases the level of high density lipoprotein cholesterol, reduces the level of glycemia, blood pressure and significantly reduces the risk of death;
• identification of risk factors and their correction, which will slow down, stabilize and even cause reverse development of atherosclerosis and reduce the risk of cardiovascular complications. Achieving this goal involves not only refusing to smoke and optimizing the treatment of arterial hypertension, diabetes or dyslipidemia, but also reaching a certain level of medical literacy, which becomes the basis for lifestyle changes;
• improvement of social functioning and quality of life that helps the patient in solving psychological problems (stress control, self-control problems), mental disorders (depression, neurosis, anxiety) and professional problems, makes it possible further to individualize cardio-rehabilitation programs;
• reduction of hospitalization frequency;
• reduction of the frequency of repeated cardiovascular complications;
• mortality reduction.

Today, cardio-rehabilitation is really limited, there are no standards for medical rehabilitation; its quality is largely dependent on the qualifications of the doctor, the level of the hospital and the awareness by the patients themselves of the need for rehabilitation. For many decades, rehabilitation of cardiological patients in Ukraine has been carried out consistently on the basis of the established principles and stages which were developed and implemented in the Soviet Union. Each of the stages of rehabilitation has its own specific purpose and objectives, varies only by methods depending on the specificity of the disease, the nature and degree of disturbed functions, limitation of life and social insufficiency.

Cardio-rehabilitation – proven economically expedient interventions after acute coronary syndrome – improves the outlook by reducing re-hospitalization and, thus, spendings on health care as well as leads to increased longevity. Cardio-rehabilitation after cardiovascular complications belongs to Evidence Class 1 according to the ESC, AHA, and ACC recommendations.

Conclusions
1. In Ukraine with each coming year the incidence level on the illnesses of the blood circulatory system increases, temporary and steady loss of efficiency increases, which leads to significant economic costs.
2. Clear programs for the rehabilitation of cardiological patients need to be implemented.
3. Insufficient implementation of modern cardio-rehabilitation programs is a pan-European problem, leading to a high prevalence of risk factors associated with coronary complications, low level of physical activity of patients.
4. Physical rehabilitation is a component of conservative and surgical treatment of cardiological patients. It should be held early in order to reduce the risk of complications and improve the recovery process of the affected functions. Physical rehabilitation should be comprehensive: include physical, psychological, labor and social components.

The International Practical Conference (22–23 March, 2018) on cardio-rehabilitation, organized by the Ukrainian Catholic University’s School of Rehabilitation Medicine headed by the Doctor of the Humanities, Father Bohdan Prach, and supported by experts from the European Association of Preventive Cardiology Professors Hugo Saner and Joep Perk, will be an incentive for further implementation of rehabilitation measures in Ukraine, not only for specialized departments but also for the primary level – family doctors.
LIST OF LITERATURE


7. Газета “Львовская правда”, 1963 р.


REFERENCES


Огляди літератури, оригінальні дослідження, погляд на проблему

ОРГАНІЗАЦІЯ РЕАБІЛІТАЦІЇ КАРДІОЛОГІЧНИХ ХВОРИХ

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РЕЗЮМЕ. Інфаркт міокарда був і залишається хворобою, яка приводить до смерті та інвалідизації населення. Раніше хворі на інфаркт міокарда не менше місяця мусіли дотримувати строгого ліжкового режиму, абсолютно без активних рухів, для максимального розвантаження серця. Такий режим мав негативний психологічний вплив, сприяв застою в легенях та гіпостатичним пневмоніям, атонії кишечника, порушенню секреції. У 1952 р. американці Levine S. A. і Lown B. запропонували використовувати у лікуванні хворих на інфаркт з перших днів сидяче положення у кріслі. За словами Мясникова А. Л., єдиним радянським професором, який прийняв ідею ранньої реабілітації, був Олейник С. Ф. Про успіхи застосування ранньої фізичної реабілітації у хворих на інфаркт міокарда проф. С. Ф. Олейник зробив доповідь на Українському з'їзді терапевтів у 1965 р., а в 1972 р. в всесоюзному журналі «Кардиология» було офіційно призняно, що рання фізична реабілітація при інфаркті міокарда вперше в СРСР почала застосовуватися у Львові. Тепер в жодного лікаря не виникає сумнівів щодо необхідності використання невикористованих рухів, масажу та лікувальної гімнастики, більш раннього підйому з ліжка, ходьби вже з перших днів хвороби. Монографія «Сучасна діагностика та лікування гострого інфаркту міокарда», результат роботи авторського колективу у складі Антоненко Л. М., Жарінова О. Й., Іваніва Ю. А., Павлюка В. І., Чубучного В. М., Ютанова В. І., присвячена пам'яті професора Степана Олейника, який вперше в Україні організував лікування хворих на гострий інфаркт міокарда в блоках інтенсивної терапії та впровадив ранню реабілітацію, сміливо ламаючи застарілі стереотипи.

Основною метою реабілітації хворих є відновлення максимально повноцінного життя пацієнта, включаючи повернення до праці. Під час реабілітації потрібно брати до уваги фізичні, психологічні і соціально-економічні фактори. Процес слід починати якомога раніше після поступлення в стаціонар і продовжувати протягом наступних тижнів і місяців.

Висновки. 1. В Україні щороку зростає рівень захворюваності на хвороби системи кровообігу, збільшуються показники тимчасової і стійкої втрати працездатності, що призводить до значних економічних витрат. 2. Необхідно впроваджувати чіткі програми реабілітації кардіологічних хворих. 3. Недостатнє впровадження сучасних програм кардіореабілітації є загальноєвропейською проблемою, що призводить до значного поширення факторів ризику, пов'язаних із коронарними ускладненнями, низького рівня фізичної активності пацієнтів. 4. Фізична реабілітація є складовою консервативного і хірургічного лікування кардіологічних хворих. Її потрібно проводити на ранніх етапах, щоб зменшити ризик розвитку ускладнень і покращити процеси відновлення порушених функцій. Фізична реабілітація має бути комплексною, включаючи в себе фізичну, психологічну, трудову і соціальну складові.

Міжнародна практична конференція (22–23 березня 2018 року) з кардіореабілітації, організована школою реабілітаційної медицини Українського католицького університету, очолюваною доктором гуманітарних наук отцем Богданом Прахом, за підтримки експертів Європейської асоціації профілактичної кардіології професорів Хуго Санера і Джопа Перка, стане стимулом для подальшого впровадження реабілітаційних заходів в Україні, не тільки для спеціалізованих відділень, а й для первинної ланки – сімейних лікарів.

КЛЮЧОВІ СЛОВА: інфаркт міокарда; реабілітація кардіологічних хворих.
Огляди літератури, оригінальні дослідження, погляд на проблему настки, болів раннього початку з постії, ходьби з перших днів хвороби. Монографія «Современна диагностика и лечение острого инфаркта миокарда», результати роботи авторського колективу в складі Антоненко Л. М., Жарикова О. И., Жаворонкова Ю. А., Павлючка В. М., Ютанова В. И., посвячення «пам'яті професора Степана Олейника, який перший в Україні організував лікування хворих на оструй інфаркт миокарда в блоках інтенсивної терапії і внедрил ранню реабілітацію, сміло ломаю устарівши стереотипи».

Основною цілью реабілітації хворих є відновлення максимально полноценної життєвої активності відновлення фізичної активності хворого. Во время реабілітації важливо враховувати фізичні, психологічні і соціально-економічні фактори. Процес слідкувати начинати як можна раніше після відновлення в стаціонар і продовжувати у течіні наступних неділ і місяців.

Выводы. 1. В Україні щорічно росте рівень захворюваності хворобами системи кровообігу, що посилюється показателями темпу і стабільності утримування трудоспособності, що призводить до значних економічних затрат.

2. Необхідно впроваджувати чіткі програми реабілітації кардіологічних хворих.

3. Недостатнье впровадження сучасних програм кардіореабілітації є обшеміжна проблемою, що веде до значної інтенсифікації факторів ризику, пов'язаних з коронарними осложненнями, низькому рівню фізичної активності хворих.

4. Фізична реабілітація є складною консервативної та хірургічної лікування кардіологічних хворих. Її слід проводити на ранніх етапах, щоб зменшити ризик розвитку осложнень і ухвалити процеси відновлення втратах функцій. Фізична реабілітація має бути комплексною, включати як фізичну, психологічну, трудову та соціальну складові.

Міжнародна наукова конференція (22–23 березня 2018 року) по кардіореабілітації, організована школою реабілітаційної медицини Українського католицького університету, головними організаторами доктором гуманітарних наук Олександром Прахою, присутність експертів Европейської асоціації профілактичної кардіології професорів Хуго Сандера і Джопа Перка, стане стимулом для наступного розвитку реабілітаційних заходів в Україні, не тільки для спеціалізованих структур, а й для першої сфер – сімейних врачів.

КЛЮЧЕВІ СЛОВА: інфаркт міокарда; реабілітація кардіологічних хворих.