CLINICAL AND ORGANIZATIONAL ASPECTS OF CARDIAC ARRHYTYMIAS AT THE HOSPITAL STAGE OF MEDICAL CARE

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Abstract*. This article highlights the clinical and organizational aspects of heart rhythm disturbances at the hospital stage of medical care, as well as the features of rhythm and conduction disturbances in patients with chronic pulmonary heart disease.*

Keywords*: cardiac arrhythmias, diagnostic tool, chronic cor pulmonale, clinical practice, healthcare, heart failure.*

Introduction

Heart rhythm disturbances have a wide range of clinical manifestations from asymptomatic or minimally symptomatic to severe, from prognostically insignificant arrhythmias to those that determine the nature of the long-term outcome [1]. If previously malignant ventricular tachyarrhythmias were considered the main direct causes of sudden death, today supraventricular arrhythmias, especially atrial fibrillation, are placed on a par with them due to the high probability of its fatal complications [5, 6, 98].

Timely diagnosis of cardiac arrhythmias is the most important task in practical healthcare [10]. The ECG, without a doubt, is a very powerful and accessible diagnostic tool. However, this method has weaknesses. One of them is the short duration of the recording - about 20 seconds [2]. The method of daily ECG monitoring is absolutely safe for the patient, and a cardiologist has a natural desire to perform it on every patient [3]. However, economic aspects force the selection of patients for whom 24-hour monitoring is indicated first. Therefore, conducting a comparative analysis of diagnostic tactics for managing patients with cardiac arrhythmias from the standpoint of clinical and economic efficiency is an important task for the development of differentiated approaches to the use of methods in general therapeutic hospitals [1, 2].

To carry out effective treatment and preventive measures, there is a need to know the clinical and social characteristics of patients, as well as the epidemiological aspects of heart rhythm disorders [4].

Features of rhythm and conduction disturbances in patients with chronic pulmonary heart disease

In most countries of the world, over the past decade there has been an increase in the incidence of chronic obstructive pulmonary diseases (COPD), which is the main cause of the development of chronic pulmonary heart disease (XJIC). In economically developed countries, COPD firmly ranks 3-4 as a cause of death, second only to cardiovascular diseases and cancer, and sometimes injuries [7].

Data from the World Health Organization expert committee show that in more than half of COPD patients, the course of the disease is complicated by the development of cor pulmonale [8]. Cor pulmonale is one of the most pressing problems of modern medicine. In terms of prevalence and frequency of deaths in recent years, it is almost on a par with heart diseases of other etiologies

and ranks third after acute myocardial infarction and hypertension. [9] Among all cases of heart failure, cor pulmonale accounts for 25% and is the cause of hospitalization in 16-38% of inpatient cases. [10]. Large statistical material - 7947 autopsies - indicates the presence of CLS in 8.9% of all deceased patients [130]. In the USA, 30 thousand people die annually from cor pulmonale, in Germany about 13 thousand people [11].

The pathogenetic factors contributing to the occurrence of arrhythmias and blockades are ambiguously perceived and assessed. Researchers point to a number of cardiac and extracardiac factors. Data are also contradictory regarding the leading role of pulmonary hypertension in the development of dysrhythmogenesis [6]. So Abdurasulov K.D. et al. (1988) emphasize the dominant role of pulmonary hypertension, while Paleev N.R. et al. (1988) consider this factor to be less significant [1]. In addition, if rhythm and conduction disturbances are detected in patients with CHL, their drug treatment often causes difficulties in clinical practice.

The use of antiarrhythmic drugs in this category of patients has not been sufficiently studied. Clinical trials have shown that the most effective antiarrhythmic drugs are beta-blockers, which reduce the risk of sudden death from fatal arrhythmias [10.11]. However, in patients with XJ1C of bronchopulmonary origin, drugs of this group are of limited use due to their ability to cause bronchial obstruction [6,9].

In the available literature, there are attempts to determine correlation interactions between pathogenetic factors, but in none of the works have we come across a mathematical analysis of the causes of rhythm and conduction disturbances in patients with XJIC using multivariate analysis applications [3].

According to 24-hour ECG monitoring, 95% of patients with chronic pulmonary heart disease were diagnosed with various rhythm and conduction disturbances. As the clinical and functional class of chronic pulmonary heart disease increases, the percentage of dysrhythmogenesis increases, ventricular extrasystoles are recorded more often, extrasystoles of high gradations appear, a permanent form of atrial fibrillation, and the frequency of combinations of various types of arrhythmias and blockades increases. The significant frequency of rhythm and conduction disturbances in patients with chronic cor pulmonale requires the widespread use of 24-hour ECG monitoring, especially in patients with high clinical and functional classes of chronic cor pulmonale.

Dividing patients into clinical and functional classes of chronic pulmonary heart disease allows us to study dysrhythmogenesis with great accuracy depending on certain clinical and instrumental indicators and metabolic disorders.

It is recommended to use the superselective beta-blocker Nebilet in patients with frequent, polytopic and group supraventricular and ventricular extrasystole, as well as to normalize the heart rate in the tachysystolic form of atrial fibrillation. To identify the complex interaction of pathogenetic factors and their influence on the development of arrhythmias and blockades in patients with chronic pulmonary heart disease, it is recommended to use correlation and cluster analysis.

Practical recommendations

Health care authorities at the regional and municipal levels are recommended to plan programs for organizing medical care for patients with diseases of the cardiovascular system, taking into account the results obtained in the study.

To assess the need for invasive methods for diagnosing and treating cardiac arrhythmias, healthcare authorities at the regional and municipal levels, together with heads of healthcare institutions and primary care physicians, are recommended to use the developed clinical guidelines with the criteria for absolute and relative indications for cardiac interventions prescribed in them .

Managers of medical institutions are recommended to use the method of clinical and economic analysis to justify the choice of diagnostic tactics for managing patients with arrhythmias.

It is recommended that medical and preventive institutions, together with the clinical departments of universities, form expert structures to monitor the tactics of managing patients with cardiac arrhythmias; compliance with recommendations on the tactics of managing patients with cardiac rhythm disorders" and selection for cardiac surgery with the subsequent development of proposals for their updating based on an analysis of the causes of deviations.

Conclusions

The detection of rhythm disturbances depends on the resource provision of the hospital. Holter ECG monitoring, taking into account indications, was performed in a departmental hospital in 91.4% of patients, while in a municipal hospital only in 55.3%. The proportion of patients with cardiac arrhythmias in the cardiology department of a departmental hospital was 85%, and among patients with acute forms of coronary artery disease in a municipal hospital - 82.3%. Life-threatening and hemodynamically significant arrhythmias were identified in 28.9% and 26.0% of patients.

The results of HM and standard* ECG turned out to be completely comparable in 30% of all types of arrhythmias and absolutely not comparable in 27.5% of cardiac arrhythmias. Holter monitoring is more frequent and statistically reliable compared to standard ECG) - it detects arrhythmias such as supraventricular (more often by 15.9%) and ventricular extrasystoles (more often by 1.9%-6.1%) for all gradations, paro - xysmal supraventricular tachycardia (more often by 7.2%).

The probability of death in acute forms of coronary artery disease is significantly higher with sinus tachycardia (odds ratio - 3.9); ventricular extrasystole (0111=2.4), paroxysmal ventricular tachycardia (0111=6.1), atrial fibrillation (0111=2.3), ventricular fibrillation (OR=71.8). In patients with dizziness and syncope, 0111 = 2.1.

The need for surgical correction of arrhythmias in the sample of patients at a departmental hospital was 18.6% (21.8% among patients with cardiac arrhythmias; of which absolute indications - class 1 - were recorded in 6.6% of patients). Among municipal hospital patients with acute forms of coronary artery disease, the need was 15.1% and 18.3%, respectively (absolute indications in 6.8% of patients).

Coronary angiography was performed in 0.3% of patients with acute forms of coronary artery disease, but the need for this diagnostic method, according to international recommendations, was 72.1%, of which absolute indications were recorded in 58.5% of patients.

International recommendations for selecting patients for invasive methods of diagnosis and treatment are used by 38.0% of doctors; 74.0% of specialists believe that doctors should be provided with them. Doctors' opinion about the advisability of performing invasive diagnostic and treatment methods did not fully correspond to the indications prescribed in international recommendations (the kappa index value varied from 1 to 0.30 depending on the type of intervention).

The most common reasons for late referral for surgical treatment are: incorrect assessment of the condition by the doctor observing the patient (8.0%), lack of information from the doctor where and how to refer the patient (16.0%), conflicting information about indications and contraindications for surgical treatment (29.0%), organizational problems (36.0%). 53.0% of doctors believe that after surgical treatment, during observation in the clinic, patients do not receive adequate treatment.

The majority of patients (76.0%) agree to undergo cardiac surgery. Refusals to intervene are associated with possible co-payment for treatment (8.0%), fear of intervention (1.0%), and insufficient information about the features of the intervention (15.0%).

More than half of doctors and patients believe that a psychologist should work with patients who are indicated for invasive cardiac surgery.

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