

THE ROLE OF REMOTE DIAGNOSTICS IN MEDICINE.

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Abstract:

the work presents information about the technology of remote diagnostic systems, highlighting the stages of allowing you to identify various diseases and assess the patient's condition in advance without direct contact with the doctor. The principle and limitations of multichannel cardiography are looked at.

Keywords: remote diagnostics, multichannel, cardiography, heart, neurology, coronary, cardiomyopathies, arter, cardiologist.

Remote diagnostics, intelligent monitoring and disease prediction systems are based on the use of machine learning algorithms and large-scale data analysis. They allow you to collect information about the state of the

human body, analyze it and determine the relationship between various health indicators.

Remote diagnostic systems use a variety of data to determine the state of technology or human health.



Picture-1. Types of remote treatment

Some of this information may include:

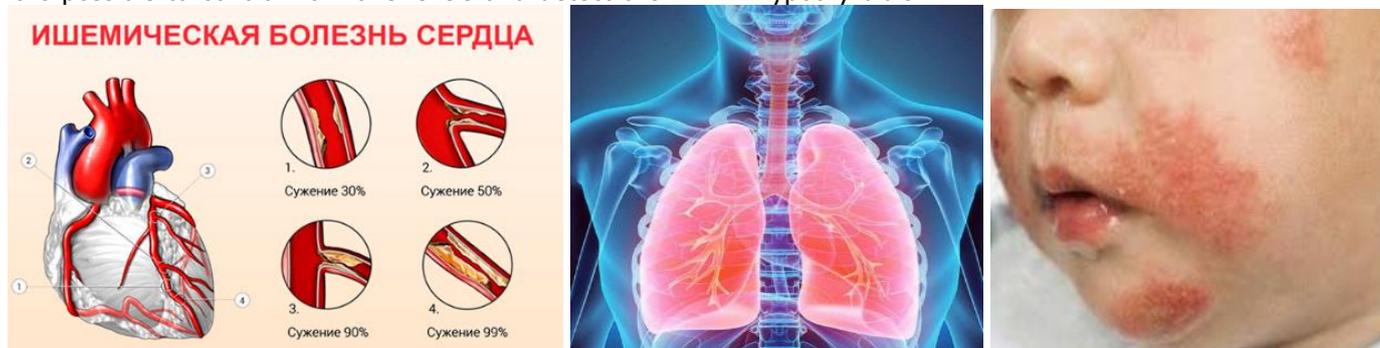
- Measurement of physiological indicators such as body temperature, pulse, pressure and breathing;
 - * Results of examination of blood, urine and other biological materials;
 - * Images obtained using medical equipment such as X-ray and ultrasound machines;
 - Equipment performance data such as temperature, pressure, speed and vibration;
 - Information about hardware settings and parameters.
- These data are processed and analyzed to identify potential problems or abnormalities. The results can be used to prevent equipment failure or to diagnose diseases.

Remote diagnostic systems allow you to identify various diseases and assess the patient's condition in advance without direct contact with the doctor.

- Some diseases that can be detected using such systems include:
1. Heart disease: with remote diagnostic systems, it is possible to monitor the heart rhythm, measure blood pressure and detect cardiac dysfunction.
 2. Respiratory diseases: remote diagnostic systems allow you to control respiratory activity and detect the presence of diseases such as asthma or chronic obstructive pulmonary disease.
 3. Neurological disorders: with remote diagnostic systems, it is possible to assess the nervous system and determine the presence of neurological disorders such as Parkinson's disease or epilepsy.
 4. Dermatological diseases: remote diagnostic systems allow you to visually assess the condition of the skin and determine the presence of various dermatological problems, such as eczema or psoriasis.

5. Endocrine disorders: with remote diagnostic systems, it is possible to control hormone levels and detect the

presence of endocrine disorders such as diabetes or hypothyroidism.



Picture-2. Types of sickness

However, it should be noted that remote diagnostic systems do not replace full medical advice and diagnostics. They serve as an auxiliary tool for pre-checking and monitoring the patient's condition. If any abnormalities are found, it is recommended to consult a doctor for a more accurate diagnosis and treatment.

Multichannel cardiography is a cardiac examination method that allows the electrical activity of the heart to be recorded at multiple points using multiple electrodes at the same time.



Picture-3. Exterior of electrocardiograph

Multichannel cardiography (MEKG) allows simultaneous recording of electrical activity of the heart at different points in the chest, allowing for a more complete picture of cardiac activity and detection of disorders that can be missed in a regular ECG. In addition, the Megg allows a detailed analysis of changes in the electrical activity of the heart during exercise or in the conditions of everyday life. In general, the Megg is a more accurate and informative method of examining the heart than the normal ECG.

Multichannel cardiography (ICC) is one of the most common methods of examining the heart. With its help, many heart diseases can be detected, for example:

- Koroner arter kasalligi (SAPR)
- Cardiac arrhythmias
- Cardiac conduction disorders
- Heart valve diseases
- Cardiomyopathies
- * Congenital heart defects

ICC provides a more accurate and detailed account of cardiac activity than simple single-channel cardiography. In addition, it can be used to control the treatment of heart disease and assess the effectiveness of therapy. The multichannel cardiography (ICC) procedure is performed using a special apparatus called a cardiograph. During the procedure, the patient is placed electrodes in the chest, which record the electrical activity of the heart. Then the patient is offered to lie on the couch, after which the car begins to register information about the activity of the heart within a few minutes. These data are then analyzed by a cardiologist to identify possible disturbances in cardiac activity. The multichannel cardiography procedure is safe, non-invasive and does not cause pain.

Before performing multichannel cardiography, the following restrictions should be taken into account for patients:



- Large meals should be avoided 2-3 hours before the study.
- It is not recommended to consume caffeine, alcohol and nicotine 12 hours before cardiography.
- All metal items such as jewelry, glasses, etc. must be removed before the study.
- During cardiography, the patient should be calm and calm, so exercise and stress should be avoided before the examination.

If the patient has a chronic illness or is taking medication, it is very important to inform the doctor who will do the cardiography.

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