ANALYSIS OF VARIABLE OF HEARTY RHYTHM

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The hearth system executes an important role in an organism, which is necessary for normal functioning. Diagnostics of functioning of the system is one of above all places in medicine.

One of new methods of study of the state of the hearth is mathematical analysis of cardiointervalgram. I studies the change of rhythm of heart as reaction of organism on external influence. This method is characterized by simplicity of registration of signals, which can be cardiograms or other signals, caused by operation of heart are signals of registration of pulse, graphic arts of change of pressure of blood in time.

The traditionally measured middle frequency of result of numerous influences on the vehicle of circulation of blood. The different states of organism can correspond to the same frequency of pulse. Research of variations of rhythm can give necessary information the explored object. The dynamics of indexes of in many cases passes ahead the changes of laboratory information. In the sequence of intervals there is information about processes, not only in a heart but also in the different links of the control system of organism: nervous interlacements, ductless glands, nerve-centres of brain.

Measuring of period of must be conducted during the interval of time from a few minutes to a few days. The slow changes of rhythm show up at such time of analysis – with a period from a few seconds to a few days.

In medicine methods are developed also the diagnosticians, based on the analysis of spectrum of electrocardiograms, electroencephalograms and other signals at the inspection of man.

By these methods the analysis of two ten-minutes rows of information was conducted about the rhythm of man, when an organism was at peace and at after loading. On the basis of the measured some generalized parameters were calculated - frequency of reductions, coefficient of variation, level, index of tension, is built and analysed histogram of distributing of values of periods of pulse. On the basis of spectral analysis, distributing of spectral closeness of signals is found between, low and very low high-frequencies and the such generalized parameters of the state of organism: index of centralization, index of activating of nerve-centres characterizing the state of organism.