MATHEMATICAL ANALYSIS OF SFYGMOGRAMMY

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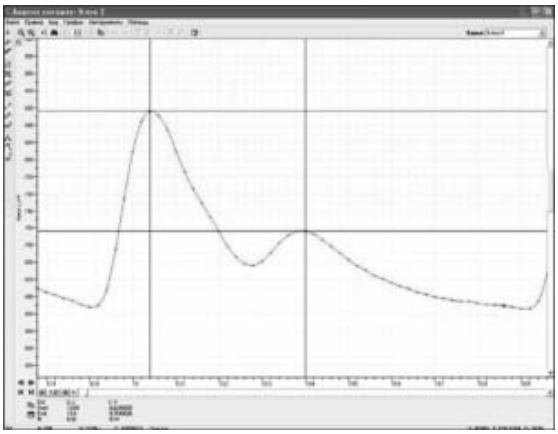
Sfygmografy is the method of graphic registration of pulses oscillations, which is allowing to judge about their resiliently-viscid properties. Sfygmogramm registers by the sensors, which set on the areas of body with the distinctly expressed pulsation of arteries. The data allow to judge about atherosclerosis of certain areas of vessels, hypertensive illness and row other pathological processes which elasticity of vessels is violated.

The basic systole wave of sfygmogramm (see a picture) is begun with the steep getting up - anakroty, blood conditioned by the rapid receipt from a left ventricle in an aorta in the period of banishment. The top of systole wave corresponds to the moment of achievement of maximal pressure in an aorta. After it there is the smooth decline of basic systole wave (katakrota), which at the end of phase of banishment passes in inzisury (minimum on the graph). The lowest point of inzisury corresponds to the moment of closing of valve of aorta.

The analysis includes the temporal analysis of separate elements of sfygmogramm and description of form of curve which is very characteristic at some diseases.



Parameters of sfygmogramm are:

1. Index of augmenters.
2. Index of reflection.
3. Sharpness of pulse wave.
4. Indexes of peripheral resistance.
5. Relative size of dykroty wave.

There were made the temporal analysis of a few sfygmogramm.