CARDIOMETRY: A New fundamental scientific field in cardiology

Of the new theory in practice allows increasing the efficacy of the cardiovascular system diagnostics under a significant reduction in economic costs. For the first time it is possible to measure the following main hemodynamic parameters with the highest accuracy:

- SV - stroke volume of blood, (ml);
- MV - cardiac output, (l/min);
- PV1 - the volume of blood entering the ventricle of the heart in early diastole (ml);
- PV2 - the volume of blood entering the ventricle of the heart during the atrial systole (ml);
- PV3 - the volume of blood ejected from the ventricle during rapid ejection phase, (ml);
- PV4 - the volume of blood ejected from the ventricle during slow ejection phase, (ml);
- PV5 is the volume of blood pumped by the ascending aorta as peristaltic pump during the systole, (ml).

The cardiovascular system functions, such as the coronary blood flow performance, are also qualitatively assessed. For the first time it is possible to evaluate the following metabolic processes occurring in the cardiac muscle fibers:

1. Aerobic biochemical reactions, concentration of oxygen.
2. Glycolic reactions (lactate concentration).
3. The concentration of phosphocreatine.

Biography

Mikhail Y Rudenko has completed his PhD in 1978 from Taganrog University of Radio Engineering and postdoctoral application studies from Russian New University. He is the director of Cardiocode Ltd., a developer of medical devices. He has published more than 20 papers in reputed journals and has been serving as an editorial board member of Cardiometry journal

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