J Clin Exp Cardiolog 2017, 8:12(Suppl)
DOI: 10.4172/2155-9880-C1-087

Cardiometry as a new fundamental scientific field in cardiology

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Our fundamental research in hemodynamics allows us developing a new mathematical model of blood flow in the cardiovascular system that fits actual data in practice. It offers to obtain new data on the performance of various cardiovascular system segments responsible for the circulation maintenance. Our research resulted in the development of an innovative technology and device for accurate non-invasive measuring of hemodynamic parameters that was not possible before. The use of the device supplies us with new information that is the basis for a radically new ECG and Rheo classification. It is based on the cardiac cycle phase analysis. It is precisely the methodology that is capable of revealing the heart performance mechanism, which could not be explored before and investigating the progression of various pathological processes. Mechanisms of sudden cardiac death and those of energetic resources responsible for maintaining the normal hemodynamics have been detected by our R & D team. The method for non-invasive assessment of cardiac muscle metabolic processes has been developed. The core principles which form the basis of cardiometry as a new scientific field have been formulated in our research.

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