

A Mathematical Model for Autonomic Control of Heart Rate Variation

邱泓文

Hung-Wen Chiu and Tsair Kao

Abstract

The aim of the study presented was to develop a mathematical model that could demonstrate the characteristics of beat-to-beat fluctuations in heart rate under simultaneous sympathetic and vagal controls. By this model, we attempted to illustrate the relation between autonomic activity and HRV, and to explain those controversies in interpreting HRV under certain physiological and pharmacological conditions.