

CHANGING TENDENCY OF THE IMPEDANCE OF MERIDIANS AND COLLATERAL BEFORE AND AFTER QIGONG EXERCISES

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INTRODUCTION: According to the theory of Traditional Chinese Medicine distributed throughout the whole body, the meridians and collaterals are the main pathways for circulation of 'Qi' and blood in human body, linking all organs of body. They provide the connection between the exterior and interior and between the upper and lower extremities. They adjust the functional balance of physiological activity, resist pathogenic factors, reflect pathological syndromes, transmit sensation and regulate deficiency and excess. The purpose of this study was to examine the effect of Qigong, a Chinese exercise form, on changing tendency of the impedance of meridians and collateral before and after practice.

METHODS: All subjects (aged from 45 to 68 years) were recruited from a Park where the subjects exercise each morning. They were divided into three groups. 31 persons of Group A were Qigong practitioners with 1 to 4 year experiences. The subjects in Group B (35 persons) and Group C (36 persons) were non-Qigong practitioners. The subjects in Group B were accepted Qigong training for one month. The subjects in the other groups maintained their regular exercise.

Pre and Post one month Qigong training, all subjects were undergone the measurements. The measurements included the heart rate, blood pressure, impedance of the meridians and collaterals at the points of 'Neiguang', "Quze", "Sanyinjiao" and "Xuehai". The measurements were conducted at the rest condition and during practicing 'pengqiguangding', one action of Qigong respectively. The Blood Impedance Meter made in Shanghai Medical Instrument Factory was used in measurements. The reasonable difference between the measured value and normal average value must be within ± 5 ohm. The value above +10 ohm was considered too strong and -10 ohm was thought too weak. The results were presented as mean and standard deviation (SD).

RESULT AND DISCUSSION: The resistance values of Group A before exercises was higher than Group B and Group C ($P < 0.01$). Heart rate and blood pressure of the subjects in Group A were apparently lower than those measured in Group B and C. After one month training, the mean impedance of the meridians and collaterals of Group B increased but the SD decreased. All the readings from Group B were approaching those of Group A. The decrease of the heart rate, blood pressure and the changes of the impedance of the meridians and collaterals might be contributed to Qigong exercises. It was found that there was an considerable difference in impedance between Group A and C and Group B under the same frequency of doing the "Pongqiguangding." The difference between the left and right heart meridians in Group B after 40 minutes Qigong exercise increased. While no difference was found between Group A and C. The difference between the left and right spleen meridians in Group B increased after 20 minutes Qigong exercise. But the increase was observed after 40 min Qigong exercise in Group A and C. During this movement, subjects in Group B, had high tension in their legs and shoulder muscles, their breathing and heart rate were elevated. Thus the time spent practicing Qigong should be well controlled, otherwise the impedance of the meridians and collaterals might become too strong or too weak.

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