ASSESSMENT OF HORMONAL PARAMETERS IN LONG-TERM KARATE PRACTITIONERS

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Introduction: Karate is a Japanese martial art which is widely practiced in the Western world as a form of self-defense, as well as a discipline to achieve physical and mental balance. However, little is known with respect to its specific psychobiological effects, particularly in relation to the influence that karate may exert on the endocrine system. Thus, in the present study we analyzed the effects of regular karate practice on several hormonal parameters.
Methods: 27 healthy volunteer subjects participated in the study, of whom 15 were allocated to the experimental group, and 12 were assigned to the control group. Experimental subjects were karate players with a minimum of 3 years of practice in this discipline. Blood samples for the quantification of hormonal parameters (TSH, T3, T4, PTH, ACTH, cortisol, and DHEA) were taken in both groups. To compare the means of the control and experimental group, a t-test for independent groups was performed in each dependent variable.
Results: Significant differences between the experimental and control group were found in T3, T4, and cortisol, with karate players showing lower blood levels of these hormones than control.
Conclusions: These findings reveal that long-term karate practice is associated to a significant endocrine modulation, which suggests interesting psychobiological implications, and lends itself to potential clinical considerations. Further research is needed to properly assess the scope of the peculiar hormonal profile displayed by advanced karate practitioners.

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