

4. Metabolism and Endocrine Diseases

Reference

You WK, Lee MJ, Oh JG. The effects of auricular acupuncture for obesity on the change of hormone and energy metabolism during weight control of veteran taekwondo players. *Hanbang-Jaehwal-Uihakgwa-Hakhoeji (Journal of Oriental Rehabilitation Medicine)* 2000; 10(1): 133–45 (in Korean with English abstract).

1. Objectives

To evaluate the effect of auricular acupuncture on energy and hormone metabolism.

2. Design

Randomized controlled trial (RCT).

3. Setting

One Oriental hospital (details not mentioned), Republic of Korea.

4. Participants

Twenty male and female national taekwondo athletes.

5. Intervention

Arm 1: Treatment with two rounds of auricular acupuncture (three days per round) (n=10).

Arm 2: Control (no treatment) (n=10).

6. Main outcome measures

- 1) Urine levels of electrolytes (Na, K, and Cl), cortisol, epinephrine, and norepinephrine.
- 2) Blood levels of glucose, total cholesterol, low density lipoprotein (LDL)-cholesterol, high density lipoprotein (HDL)-cholesterol, and leptin.

7. Main results

- 1) The urinary Na level was significantly lower in the treatment group than the control group, but the between-group difference in urinary K and Cl levels was not significant.
- 2) The urinary cortisol and epinephrine levels were increased, and urinary norepinephrine level was decreased in both groups, However, there was no significant between-group difference in these levels.
- 3) There were no significant between-group differences in blood glucose and lipid levels.
- 4) The blood leptin was significantly decreased in the treatment group.

8. Conclusions

The treatment increases urinary Na, K, Cl, cortisol, and epinephrine levels, but decreases leptin level significantly.

9. Safety assessment in the article

Several athletes complained of slight headache or insomnia after treatment.

10. Abstractor's comments

This study is about the influence of auricular acupuncture on the levels of urinary electrolytes and blood hormones in national taekwondo athletes. The treatment increased urinary levels of Na, K, Cl, cortisol, and epinephrine, but decreased leptin level significantly, so it is expected that the auricular acupuncture causes body weight loss without excessive food restriction. But to arrive at a definitive conclusion on the effectiveness of this treatment, a large long-term controlled clinical trial should be carried out.

11. Abstractor

Lee BC, 21 June 2010.