AGRP (augotiv related peptide)

AGRP (also known as neuropeptide Y) is a peptide that plays a role in appetite regulation and energy balance. It is synthesized in the arcuate nucleus of the hypothalamus and is involved in the regulation of body weight and energy expenditure.

In the context of the International Congress on Physical Education and Sport Sciences, the role of AGRP in the regulation of body weight and its potential therapeutic applications in weight management are discussed. The presentation highlights recent findings on AGRP's role in appetite regulation and its implications for the development of new weight management strategies.

The presentation also includes a discussion on the use of transgenic approaches to study body weight regulation, emphasizing the role of AGRP in the context of obesity and its potential as a target for therapeutic intervention.

In addition, the presentation covers recent advancements in the understanding of AGRP's role in energy homeostasis, including its interactions with other appetite-regulating hormones such as leptin and ghrelin.

The presentation concludes with a discussion on the potential for AGRP to serve as a novel target for the development of obesity treatments, highlighting the importance of further research in this area.

References:
2. PHARMACOLOGICAL REVIEWS. 52(1):35-61

چکیده مقالات هفتمین همایش بین المللی تربیت بدنی و علوم ورزشی
7th International Congress on Physical Education and Sport Sciences
March 2010 - Tehran, Iran

کشتی گیران تمیز کرده

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1. BACKGROUND: A 30-year-old male with a history of bodybuilding has been referred for an evaluation of his weight gain over the past year. He reports an increased appetite despite a stable diet and activity level. His physical examination reveals a body mass index (BMI) of 32 kg/m².
2. METHODS: Anabolic-androgenic steroids (AAS) have been ruled out due to a negative urine test. A MRI of the brain revealed no structural abnormalities. A 24-hourydrochlorothiazide (HCTZ) stimulation test showed a reduced thirst response. A computerized tomography (CT) scan of the abdomen ruled out the possibility of a gastrointestinal tumor.
3. RESULTS: Endoscopy revealed no abnormalities in the gastrointestinal tract. A 3-day food diary was obtained, indicating a consistent intake of macronutrients. Dietary counseling was recommended, and a follow-up visit was scheduled in 3 months.
4. DISCUSSION: The patient's history and physical examination findings, along with the results of the tests performed, suggest a possible hypothalamic obesity. A further evaluation with a hypothalamic-pituitary-adrenal axis (HPA) stimulation test is recommended to rule out primary hypercortisolism.

References:
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Investigation and compare the effect of two weight loss protocol on the plasma AGRP levels in trained wrestlers

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Introduction: AGRP, which is secrete from central part of arcuate nucleus in the hypothalamus, is a candidate gene for human fatness, an appetite stimulator peptide and an acute motivator for appetite. It has effective role on reception and selecting food, weight control and energy homeostasis (2,3). Since the discovery of this peptide by Shattle, many studies have investigated the effect of different exercise on plasma AGRP concentrations, but a few studies have investigated the effect of different protocol of weight loss on plasma AGRP concentrations (1). The purpose of this study is to investigate the effect of two weight loss protocol on plasma AGRP concentration of trained wrestlers.

Material and method: total 30 trained wrestlers (age 24±5, 4/05 and BMI 24±3/3) recalled and randomly assigned into three groups (two experimental groups and one control group). Experimental group I: used twelve days regime protocol which was suggested by researchers followed by three wrestling exercise sessions on week. Experimental group II: used traditional one day regime protocol and Sauna and Control group was without regime. Blood samples (10 cc from brachial vein) were collected before and twelve hours after doing protocol (all subjects were fasting). Also subject’s percent of body fat were measured with five point method. After separation of plasma, the levels of plasma AGRP were measured with special kit using ELISA method. One way analysis of variance (ANOVA) was used for data processing and analysis by spss-16.

Results: although experimental groups have significant reduction on weight (p<0.001), only experimental group I has significant reduction on percent of body fat (p<0.05). Also the level of plasma AGRP in experimental group II has significantly increased in comparison with the control group (p<0.001).

Discussion and Conclusion: However in aspect of descriptive consequence that one day protocol couldn’t be suitable method for weight loss, because high level of plasma AGRP may reduce the level of hormones like GH, IGF1 by reducing of activity of hypothalamus – Pituitary – Adrenal axis. Also it may have harmful effects on wrestlers performance, and also increasing of AGRP can be a sign of reduction of muscle glycogen stores (3), also the Group II wrestlers may lose their weight in Non-academic method which this method has negative effect on their performance. Group I showed significant decrease in weight but there wasn’t significant increase in plasma AGRP levels. Also because of non-significant change in percent of body fat, the weight loss in traditional method may be due to body dehydration and it can have side effect on performance of athletes. In addition it suggested that wrestlers use the suggested weight loss protocol for weight loss.

References: