



HIGH MONOCYTE/ HDL-CHOLESTEROL RATIO IN MEN WITH HYPOGONADOTROPHIC HYPOGONADISM

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Introduction

Hypogonadotropic hypogonadism (HH) is a rare disease characterized by delayed/absent puberty and infertility due to an inadequate secretion or action of gonadotrophin-releasing hormone (GnRH), with of an otherwise structurally and functionally normal hypothalamic-pituitary-gonadal (HPG) axis.

In a previous study, we demonstrated elevated mean platelet volume in isolated hypogonadotropic hypogonadism is associated with high cardiovascular risk. Monocyte count/HDL-cholesterol ratio (MHR) is a new inflammatory marker showing cardiovascular risk. The purpose of this study is to evaluate MHR in men with hypogonadotropic hypogonadism.

Method

This study includes 31 men with isolated hypogonadotropic hypogonadism without previous treatment (mean age 22,5±7,2 year; BMI 21,6±4,9 kg/ m²) and 44 healthy men who have similar age and body mass index (BMI) (mean age 22,9±6,4 years; BMI (19,5±3,2 kg/ m²).

HH was defined as total testosterone being below 229 ng/dl because of the absence or inadequacy of hypophyseal gonadotropins.

All of hormonal biochemical and hematological parameters were measured by automatic analyzer after 12 hours fasting.

Results

In our data, we detected statistically significant differences in total testosterone level (mean total testosterone levels 43,9± 43,9 ng/ dl in HH group vs. 524.6± 275,1 ng/dl in control group, respectively, p=0.000).

There was no statistically a significant difference between HH group and control group interms of mean HDL-C (49,3±16,6 mg/ dl in HH group vs. 46,7±8,3 mg/ dl in control group, respectively, p=0,7), monocyte count (mean monocyte count 0,5±0,3/ mm³ in HH group vs. 0,6±0,2 / mm³ in control group, respectively, p=0,2) and MHR(mean MHR 0,015±0,014 in HH group vs. 0,081±0,4 in control group, respectively, p= 0,57). MHR also was not correlated with hematological parameters and total testosterone.

Conclusion

Previous studies have shown that, IHH patients with low testosterone levels, leading to impaired glucose metabolism, and increased cardiovascular risk . MHR also has been shown to be an indicator of cardiovascular risk in previous studies. But we did not any detect in MHR value in our patients with IHH. Therefore we do not suggest to calculate of monocyte count/ HDL cholesterol ratio for determining of cardiovascular risk in men.

