

NEUTROPHIL/LYMPHOCYTES RATIO IN PATIENTS WHO HAVE HYPOGONADOTROPIC HYPOGONADISM

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Introduction

Congenital idiopathic hypogonadotropic hypogonadism (IHH) is a disorder of fertility caused by an isolated defect of gonadotropin-releasing hormone (GnRH) release or action. Immune system shows some differences depending on sexuality. There is a significant line of evidence for a role of androgens in the modulation of the immune system.

The effects of sex steroids on lymphocytes count and functions are well known and it is propounded that autoimmune diseases are more common in women. Neutrophil/lymphocytes ratio (NLO) is an indicator of inflammation.

In this study; it has been aimed that NLO calculation in patients who diagnosed as hypogonadotropic hypogonadism and searching that whether there is significant difference between healthy group or not.

Material and Methods

33 male patients who have been diagnosed as hypogonadotropic hypogonadism, 56 healthy men who have no statistically significant difference in point of age, BMI (body mass index) among them. It has been calculated that patient group's age average is 22.4 7.4 and control group's age average is 23.1 6.4 year (p=0.6).

Patients' neutrophile and lymphocytes values have been evaluated by studying. Patients' CRP(C-reactive protein) and testosterone levels have been registered again by studying.

Results

In the study results; patient group NLO has been founded as 1.8 1.3 and healthy group NLO has been founded as 1.4 0.3 and statistically significant difference has been determined among them (p=0.03).

Statistically significant difference has been respectively determined between patient group and healthy group in point of white blood cell count (7.9 3.1 x10³ and 6.7 1.1 x10³, p=0.04), neutrophil (4.6 2.7 x10³ and 3.7 0.7 x10³, p=0.03), lymphocytes (2.4 0.6 x10³ and 2.7 0.7 x10³, p=0.04) and CRP (2.0 1.3 and 0.9 1.0 mg/dL, p=0.01).

In the group which has hypogonadotropic hypogonadism; while positive correlation is being determined between NLO (r=0.228, p=0.03), white blood cell (r=0.564, p<0.001) and neutrophil (r=0.847, p<0.0001), negative correlation has been determined between testosterone and lymphocytes count (r=-0.395, p=0.001).

Conclusion

We can say that sex steroids can be effective on lymphocytes and neutrophil count depending on the results from this study. Whether to return to normal of sex steroids replacement with these functions must be demonstrated by more detailed studies.