# Impact of Medical Therapy on the Zinc-A2-Glycoprotein and Ischemia Modified Albumin Levels in Patients with Hypothyroidism

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## ABSTRACT

**Background and objectives: Hypothyroidism is a clinical condition that needs primary care. It is increased with age and is more prevalent in females. Hypothyroidism is diagnosed biochemically, being overt primary hypothyroidism defined as serum thyroid stimulating hormone (TSH) concentrations above and thyroxin concentrations below the normal reference range.**

**Methods: For this purpose, 180 subjects (40 control groups and 70 patients with hypothyroidism underwent treatment for 3 months) were selected for the study. The study materials were registered from the laboratories in Kirkuk city.**

**Results: The results are summarized in the following points: zinc-α2-glycoprotein was highly significantly increased ($p<0.001$) in hypothyroid patients compared to the control group, according to before and after treatment. Serum Level of Ischemia Modified Albumin (IMA) was non significantly difference (0.852) in hypothyroid patients compared to the control group, according to before and after treatment. Serum Level of Human TPO (Thyroid Peroxidase) in Women was significantly difference (0.0001 significant) in hypothyroid patients compared to the control group, according to before and after treatment. The parameters of Thyroid hormones TSH, T3 and T4 were highly significantly increased ($p<0.001$) in the serum of hypothyroid patients compared to the control group, according to before and after treatment.**

**Conclusions: Zinc-α2-glycoprotein levels were significantly higher in patients with hypothyroidism, and no significant differences in IMA levels before and after treatment with levothyroxine in hypothyroid patients, indicating that the differences in IMA levels were due to hypothyroidism itself.**

**Keywords: Ischemia Modified Albumin, Zinc-α2-glycoprotein, Thyroid hormone, Thyroid Peroxidase.**

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