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## Lipoprotein (a) Levels in Thyroid Dysfunction before and after Treatment

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**Aim.** To investigate the possible effects of thyroid hormones on the lipoprotein (a) (Lp<sub>(a)</sub>) serum concentration.

**Methods.** Eleven patients with hyperthyroidism (Grave's disease), 18 patients with hypothyroidism and low Lp<sub>(a)</sub> (Hashimoto's disease), and 13 patients with hypothyroidism (Hashimoto's disease) and elevated Lp<sub>(a)</sub> were examined before and after thyroid hormone normalization. The measurements included total cholesterol, HDL cholesterol (including HDL<sub>2</sub> and HDL<sub>3</sub> subfractions), LDL cholesterol, VLDL cholesterol, triglycerides, apoproteins A<sub>1</sub> and B, and Lp<sub>(a)</sub>, thyrotropin (TSH) and thyroid hormones/total thyroxine (T4), triiodothyronine (T3), free thyroxine (FT4), and free triiodothyronine (FT3).

**Results.** In patients with hyperthyroidism, serum concentrations of total cholesterol, LDL cholesterol, and apo B significantly increased ( $p < 0.05$ ) after the treatment, whereas a moderate increase in HDL (HDL<sub>2</sub> subfraction), triglyceride, and Lp<sub>(a)</sub> concentrations did not reach statistical significance. In both groups of patients with hypothyroidism, concentrations of total cholesterol, LDL cholesterol, apo B, and triglycerides significantly decreased after the treatment, whereas the changes in HDL (HDL<sub>2</sub> and HDL<sub>3</sub> subfractions), VLDL cholesterol, apo A<sub>1</sub>, and Lp<sub>(a)</sub> were not significant.

**Conclusion.** Thyroid hormones had only a moderate effect on the metabolism of Lp<sub>(a)</sub>.

**Key words:** *cholesterol; hyperthyroidism; hypothyroidism; lipoproteins; thyroid diseases*

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