

Gerasimovich A.

*International Sakharov Environmental Institute of Belarusian State University,
Minsk, Republic of Belarus*

THE FUNCTIONING OF THYROID SYSTEM IN THE CASES OF A SYSTEMIC SCLERODERMA

Not long ago the systemic scleroderma (SSD) was among relatively rare rheumatologic pathologies, but nowadays the number of cases of SSD has significantly increased. In recent years, significant progress in the study of pathogenetic mechanisms of systemic sclerosis, clinical study and course of the disease, diagnosis, development and creation of pathogenetic therapy programs has been done.

The development and course of SSD is associated with the changes in general and immunological reactivity, complex enzymatic and metabolic shifts in the regulation of which the endocrine system plays an important role since hormones take part in all metabolic processes, immunogenesis, cell membrane permeability, ion transport, protein synthesis, and activity of enzyme systems.

The thyroid hormones are considered to be regulators of trophic functions of the body, metabolism, and influence the adaptive processes. Thyroid hormones increase the activity of metabolic processes, regulate the processes of development, maturation, specialization and update almost all tissues of the body, and have a more pronounced effect on cell division than on their recovery, they also stimulate lipogenesis, gluconeogenesis and glycogenolysis, and etc. Thyroid hormones increase both the resorption and the synthesis of bone proteoglycans and glycosaminoglycans in the production of connective tissue. Excessive concentration of thyroid hormones enhances the inflammatory response and metabolic disorders.

Therefore, based on these facts, the purpose of the study was a quantitative determination of thyroid hormone status in the control group and in patients with SSD.

Thyroxine, triiodothyronine and thyrotropin were determined by using kits for immunological analysis of the blood serum of healthy humans and patients with SSD.

It is shown that the content of thyroxine, triiodothyronine and thyrotropin in blood serum of healthy subjects was 110.1 ± 9.2 nmol / l and 1.6 ± 0.1 nmol / l and 7.9 ± 1.4 mIU / L, respectively.

In cases of scleroderma the thyrotropin and thyroxine levels in blood were reduced by 21.3% and 6.3%, respectively, particularly the latter, and triiodothyronine concentration was not changed.

These facts indicates that the function of the thyroid system in cases of scleroderma is oppressed and the developing disturbances in the body's immune system can occur. Using the definition of thyroid status will improve the diagnosis of SSD and will provide additional opportunities to evaluate the dynamics of the disease.