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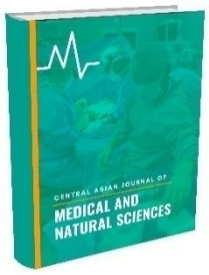

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UVB Therapy for the Treatment of Patients with Chronic Dermatosis

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Abstract: This article summarizes the study of selective phototherapy (SFT) with an emission peak at a wavelength of 311 nm is actively used in the treatment of psoriasis, vitiligo, atopic dermatitis, scleroderma. In the treatment of psoriasis, treatments are performed 5 times a week, starting with a UVB dose of 0.05–0.1 J/cm2. In the absence of erythema, the dose is constantly increased in each subsequent procedure by 0.05–0.1 J/cm2. The course of treatment is 10-20 procedures. The aim of our work was to generalize the experience of using narrow-wavelength UVB therapy with an emission peak at a wavelength of 311 nm in the treatment of patients with chronic dermatoses.

Key words: dermatoses, treatment, uvb-therapy.

Introduction: Dermatosis (from Greek δέρμα means "skin") is the name of various skin diseases. The term denotes skin lesions, which are characterized by special manifestations and causes of appearance. They can be both congenital and acquired. Dermatosis has no age restrictions. There are many different types of dermatosis. The most common are dermatitis, eczema and psoriasis. Often, people are prone to skin lesions such as neurodermatitis, which develops in the case of neurological abnormalities, disruptions in the endocrine system, or weakened immunity. Another form of dermatosis is scabies. It most often occurs due to a weakened immune system. Many types of skin diseases occur as a result of damage to internal organs. Each type of dermatosis needs a separate treatment program.

With dermatosis, different parts of the body are affected. The development of diseases is influenced by both external (mechanical skin damage, the effect of plant poison, insect bites, etc.) and internal (allergies, infection, internal inflammation, metabolic problems) factors that affect to a greater or lesser extent on the human body. In addition, dermatosis can occur as a result of severe stress or any illness that affects the functioning of the immune system.

Purpose: to summarize the experience of using narrow-wavelength UVB therapy with an emission peak at a wavelength of 311 nm in the treatment of patients with chronic dermatoses

Materials and methods: selective phototherapy (SPT) with an emission peak at a wavelength of 311 nm is actively used in the treatment of psoriasis, vitiligo, atopic dermatitis, scleroderma.

In the treatment of psoriasis, treatments are performed 5 times a week, starting with a UVB dose of 0.05–0.1 J/cm2. In the absence of erythema, the dose is constantly increased in each subsequent procedure by 0.05–0.1 J/cm2. The course of treatment is 10-20 procedures.

A suppressive effect of the medium wave spectrum on the production of Staphylococcus aureus antigens was noted, which significantly increases the effectiveness of the treatment of atopic dermatitis. Irradiation according to the SFT method is carried out 3-5 times a week, the initial dose is 0.1 J/cm2 with a subsequent increase, in the absence of erythema, by 0.1-0.2 J/cm2. The course of treatment is 10-20 procedures.

Narrow-band medium wave UVB therapy has also been used in the treatment of patients diagnosed with vitiligo. The duration of the disease in this group of patients varied from 4 months to 6 years (median 3 years). The affected area ranged from 1 to 60% of the entire body surface (median 10%). Irradiation was started with a dose of 0.2-0.25 J/cm2 and carried out 2 times a week. Each subsequent procedure, the dose was increased by 5-20% of the initial dose until moderate erythema appeared, after which the dose was left constant.

Insufficient efficacy, the development of resistance and intolerance of the drugs used in the treatment of localized scleroderma led to the search for new therapeutic approaches to the treatment of this disease; for this purpose, the method of selective phototherapy (general and local) was also used. Irradiation was carried out 3-4 times a week, in total for a course of 10-25 sessions. We started with a dose of 0.05-0.3 J/cm2. The duration of treatment was individual and depended on the sensitivity of the patient to treatment and the dynamics of the skin process.

Results: in the course of treatment of patients with psoriasis, usually after 4-5 procedures, in most patients around psoriatic papules and plaques, an anemic, lighter zone 2-3 mm wide compared to the surrounding skin, resembling a Voronov's rim, appeared. After its appearance on the 5-6th procedure, the regression of rashes began. Subsequently, the rashes continued to regress. Their color became less intense, peeling decreased. With the complete resolution of the rashes, hyperpigmented or depigmented spots remained in their place. Rashes on the lower extremities were more torpid to the treatment than on the trunk and upper extremities. In about 1/3 of the patients, the rashes on the scalp regressed or significantly decreased, but, in general, scalp psoriasis was resistant to SFT treatment. After the treatment, the duration of psoriasis remission from 1 month to 2 years was observed in 40% of patients. Maintenance therapy was not given to these patients.

As a result of the treatment in patients with atopic dermatitis, clinical cure was achieved in 70% of patients, significant improvement in 17%, and improvement in 13%. There was no dependence of the rate of regression of the manifestations of the disease on the prevalence of skin lesions.

As a result of UVB treatment of patients diagnosed with vitiligo, clinical remission was observed in 23% of patients, a significant improvement was noted in 25%, improvement in 37%, no effect was observed in 15% of patients. The patients tolerated the treatment well. During the course of therapy, 6 patients developed moderately severe erythema, 2 patients complained of skin itching and dry skin. These reactions disappeared after lowering the radiation dose and applying an emollient cream. The duration of therapy ranged from 2 to 8 months.

Conclusions: thus, our studies indicate the high efficiency of the use of medium-wavelength UVB radiation in the treatment of patients with vitiligo, psoriasis, and atopic dermatitis. It should be noted not only the effectiveness, but also the safety of the methods of medium wave UVB therapy, in particular, the absence of serious side effects.

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