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**TO STUDY THE EFFECT ON THE AMOUNT OF IMMUNOGLOBULINS-A, M AND G WHEN USING DIS DERM CREAM IN COMBINATION WITH LOW-INTENSITY LASER THERAPY IN PATIENTS WITH POLYMORPHIC-DERMAL ANGIITIS OF THE SKIN**

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✓ **Resume**

*The aim of the work was to study the effectiveness of laser therapy and Dis Derm cream in patients with cutaneous angitis based on changes in immunological parameters. Under supervision, 25 patients were beaten with cutaneous angitis (17 men and 8 women). With the combined use of laser therapy and Dis Derm cream, positive changes were found in all patients. During treatment, the concentration of IgA, IgM and IgG decreased to normal values.*

*Key words: laser therapy, Dis Derm cream, polymorphic-dermal angitis of the skin, immunoglobulins of classes - A, M and G.*

**ИЗУЧИТЬ ВЛИЯНИЕ НА КОЛИЧЕСТВО ИММУНОГЛОБУЛИНОВ- А, М И G ПРИ ИСПОЛЬЗОВАНИИ КРЕМА DIS DERM В СОЧЕТАНИИ С НИЗКОИНТЕНСИВНОЙ ЛАЗЕРНОЙ ТЕРАПИЕЙ У ПАЦИЕНТОВ С ПОЛИМОРФНО-ДЕРМАЛЬНЫМИ АНГИИТАМИ КОЖИ**

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✓ **Резюме**

*Целью работы было изучение эффективности лазерной терапии и крема Dis Derm у пациентов с кожным ангиитом на основе изменений иммунологических показателей. Под наблюдением были 25 пациентов кожным ангиитом (17 мужчин и 8 женщин). При совместном применении лазеротерапии и крема Dis Derm положительные сдвиги выявлены у всех пациентов. Во время лечения концентрация IgA, IgM и IgG снизилась до нормальных значений.*

*Ключевые слова: лазерная терапия, крем Dis Derm, полиморфно-дермальный ангиит кожи, иммуноглобулины классов - А, М и G.*

**ТЕРИНИНГ ПОЛИМОРФЛИ-ДЕРМАЛ АНГИИТИ БИЛАН КАСАЛЛАНГАН БЕМОРЛАРДА ПАСТ ИНТЕНСИВЛИКДАГИ ЛАЗЕР ТЕРАПИЯ БИЛАН БИРГА DIS DERM КРЕМИ ҚЎЛЛАНИЛГАНДА А, М ВА G ИММУНОГЛОБУЛИНЛАРИНИНГ МИҚДОРИГА ТАЪСИРИНИ ЎРГАНИШ**

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✓ **Резюме**

*Ишнинг мақсади иммунологик параметрларнинг ўзгаришига қараб тери ангиити бўлган беморларда лазер терапияси ва Dis Derm кремнинг самарадорлигини ўрганиш эди. Кузатув остида бўлган 25 нафар тери ангиити билан касалланган беморлар ўрганилди (17 эркак ва 8 аёл). Лазер терапияси ва Dis Derm кремни биргаликда қўллаш натижасида барча беморларда ижобий ўзгаришлар аниқланди. Даволаш пайтида IgA, IgM ва IgG концентрацияси меъёрий кўрсаткичларга пасайганлиги аниқланди.*

*Калит сўзлар: Лазер билан даволаш, Dis Derm креми, полиморф – дермал тери ангиити, иммуноглобулинлар – А, М ва G.*

## Relevance

Improving the clinical effectiveness of treatment of dermatological patients is an important social task. This is due to the significant spread of a number of dermatoses and their severe course, leading to partial or complete disability. Traditional methods of treatment used in dermatology are not always effective, and are

often associated with a variety of side effects and complications. Treatment of patients is an economic problem due to the high cost and scarcity of medicines. In this regard, the great interest shown in non-drug methods of therapy is understandable. One of these methods of treatment is - Laser therapy (Fig. 1).



Fig. 1 "MILTA - F - 01"

Laser therapy is increasingly being introduced into clinical practice, as it is a relatively safe and rather effective method of treatment. In recent years, the use of laser therapy for therapeutic purposes has found increasing application in many pathological conditions. The main task of laser therapy is to modulate adrenergic and cholinergic mechanisms of regulation of metabolic and energy processes [1.2.3.4.5].

The study of the local effect with a solution of methylene blue with laser devices ALT-Vostok model-03 in patients with cutaneous leishmaniasis showed a positive effect on the duration of the disease [6].

**The purpose of this study** is to study the mechanism of the therapeutic effect of laser therapy and Dis Derm cream on immunological parameters in patients with polymorphic-dermal angitis of the skin.

## Material and methods

The aim of this work is to study the effectiveness of laser therapy and Dis Derm cream in patients with polymorphic-dermal angitis of the skin, taking into account changes in some parameters of the immune system (IgA, IgM and IgG).

25 patients with polymorphic-dermal angitis of the skin were under observation. Of these (17 - men and 8 - women, aged 19 to 45).

The diseases were distinguished by lesions, a long and persistent course, resistance to previous therapy, including in a number of patients to corticosteroid hormones, cytostatics.

In patients with polymorphic-dermal angitis of the skin (Table No. 1, Figure No.2), the mode of laser therapy was selected.

Table No. 1

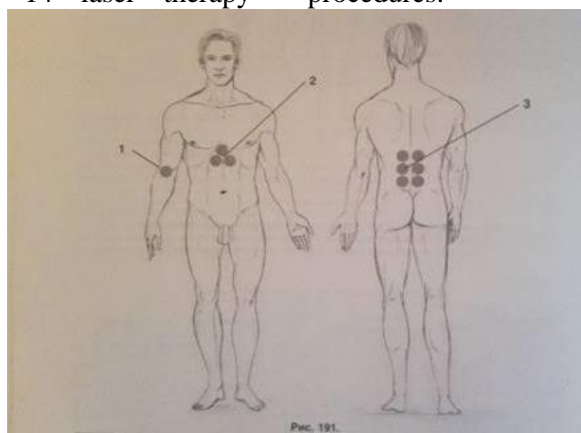
### Modes of irradiation of treatment areas in the treatment of laser therapy and Dis Derm cream of polymorphic-dermal angitis of the skin.

Irradiation area	Terminal	frequency Hz	LED power, mW (lasers, W)	Nozzle	Exposure, minutes
Skin, affected area	KTZ-4	1500-5000	50	№ 7/MN	4-10
Epigastric region	OT2-3	600	40	№ 7/MN	4-5
Spine, L2-S1	MT	150-300	30 (50-60)	BN	3-6

The duration of the laser therapy procedures was about 3-10 minutes. The procedures were carried out daily, with the exception of Sundays.

The frequency and number of procedures were determined by the dynamics of clinical efficacy

and ranged from 12 to 14 laser therapy procedures.



**Fig. No. 2**

**In addition, the patients received:** Patients with polymorphic - dermal angitis of the skin were lubricated with Dis Derm cream (lubricated 2 times a day with a thin layer and after 20 minutes washed with warm water).

The quantitative determination of immunoglobulins - IgA, IgM and IgG in blood serum was carried out by the method of radial immunodiffusion, proposed by Mancini et al. (1965). In the control obtained from 10 donors, the level of immunoglobulins - A =  $1.83 \pm 0.06$  g / l; M =  $1.06 \pm 0.04$  g / l; G =  $10.66 \pm 0.24$  g / l.

### **Result and Discussion**

Positive dynamics against the background of laser therapy and Dis Derm cream was noted in all patients. Patients with polymorphic - dermal angitis of the skin were prescribed laser therapy with the development of resistance to standard therapy with corticosteroid drugs. In the course of treatment with the method of laser therapy and Dis Derm cream, we revealed the effectiveness of the skin process - subjective pain sensations decreased, the rash turned pale, epithelialization of erosions and ulcers was noted. After 8-10 procedures of laser therapy and Dis Derm cream, there was a cessation of pain, regression of hemorrhagic rashes, epithelialization of erosions and scarring of ulcers.

Considering the fact that IgA, IgM and IgG play a significant role in the pathogenesis of polymorphic - dermal angitis of the skin, it was advisable to monitor the change in its concentration in the blood in this group of patients. IgA, IgM and IgG were determined in the dynamics of 25 patients with polymorphic - dermal angitis of the skin.

In the study of the level of immunological parameters before the start of complex treatment with the use of laser therapy and Dis Derm cream

in patients with polymorphic dermal angitis of the skin, the level of IgA was -  $2.9 \pm 0.14$  g / l versus  $1.8 \pm 0.54$  g / l in 10 healthy people; the IgM level was -  $2.6 \pm 0.16$  g / l versus  $1.01 \pm 0.54$  g / l in 10 healthy subjects; The IgG level was  $13.31 \pm 0.35$  g / l versus  $10.19 \pm 3.5$  g / l in 10 healthy subjects. The study showed that the initial level of IgA, IgM and IgG in 25 patients with polymorphic dermal angitis of the skin in all groups was increased.

After the end of complex treatment with the use of laser therapy and Dis Derm cream in patients with polymorphic - dermal angitis of the skin, the level of IgA was  $1.88 \pm 0.03$  g / l.

After the end of complex treatment with the use of laser therapy and Dis Derm cream in patients with polymorphic - dermal angitis of the skin, the level of IgM was  $1.19 \pm 0.07$  g / l.

After the end of complex treatment with the use of laser therapy and Dis Derm cream in patients with polymorphic - dermal angitis of the skin, the level of IgG was  $11.12 \pm 0.26$  g / l.

### **Conclusions**

As a result of the complex treatment carried out using laser therapy and Dis Derm cream, as well as on the basis of a laboratory study of the immune system, we came to the following conclusions:

1. Carrying out of laser therapy procedures and Dis Derm cream is indicated for patients with polymorphic - dermal angitis of the skin, in which the skin process is accompanied by severe subjective pain, the presence of erosions and ulcers.

2. Carrying out laser therapy and Dis Derm cream is especially indicated in patients with polymorphic - dermal angitis of the skin, accompanied by changes in the immune system.

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