THE ROLE OF IMMUNITY IN THE DEVELOPMENT OF CLINICAL VARIETIES OF CUTANEOUS LEISHMANIASIS

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ABSTRACT

The study examined the efficacy of aloe extract in the topical application of zoonotic leishmaniasis. To date, specific drug prevention of leishmaniasis has not been developed. One of the important problems in dermatology is the search for effective, low-toxic agents and methods of therapy for cutaneous leishmaniasis, since the drugs used have cardio-, hepato-, and nephrotoxicity.

Relevance.

The prevalence of leishmaniasis is one of the highest among diseases of parasitic etiology. Up to 1 million people are affected worldwide every year(1).

The causative agent of cutaneous leishmaniasis was first identified in 1898 in Tashkent by P.F. Barovsky (2). In 1898, P. F. Borovsky accurately determined the systematic position of Leishmania, classifying it as a protozoan. Many articles describe, which carefully describes the pathogen, which the authors refer to protozoa, close to trypanosomes (3).

By the beginning of the 20th century, the use of various cauterizing and astringent agents became a common method of treatment: red-hot iron and caustic potash (Heidenreich), chromium (Cherepnin), lapis (Rapchevsky), lactic acid (Manotskov, Shulgin), zinc chloride (Mish-kin, Satinsky) (Dobrotvorskaya N.V. 1940). E. I. Martsinovsky also used a surgical method of treatment, removed "under cocaine, ulcers and acne in four patients, and after a few days complete healing occurred. There were no relapses." (four). Professor VL Yakimov wrote in 1913 that there is no specific treatment for cutaneous leishmaniasis (5). In world healthcare practice, according to WHO recommendations from 2010, pentavalent antimony drugs are used for the specific treatment of cutaneous leishmaniasis (6), an antitumor agent for local use: Miltefosine (Impavido, Paladin - Canada), antibacterial drugs: Amphotericin B, AmBisom ; Paromomycin (India), Monomycin (Uzbekistan), drugs of non-specific, auxiliary action: antiseptics, the action of which is aimed at combating secondary infection that has joined (7) In this regard, the publications of authors who empirically treated patients with antibiotics of various pharmacological groups are valuable. These are doxycycline (8) and cefotaxime (Claforan - 3rd generation cephalosporin) (9). At the same time, there are no data on preclinical studies of these drugs in the literature. Considering that cefotaxime (claforan) is an imported drug (France), it is relevant for research with the aim of import substitution to study in vitro and in vivo a domestic antibiotic from the same group -

ceftriaxone. A universal drug for the treatment of leishmaniasis are preparations of 5-valent antimony. Therefore, meglumine antimonate (glucantim) can be used as a control when evaluating the effectiveness of other drugs.

Studies by foreign experts indicate that the etiological factor of the disease may not be the leishmania itself, but the virus in them (LRV - leishmanial RNA virus), found in 1988 in a patient infected with L. Guyanensis (10). It was later found in L. braziliensis and was associated with a more severe course of CL, up to the development of mucocutaneous leishmaniasis (11). When hamsters are infected with Leishmania containing LRV, a strong inflammatory response is noted due to an increase in the level of IFN-β, as well as an extension of the survival of parasites with the virus (12).

In 1928, the treatment of patients with cutaneous leishmaniasis with autohemotherapy without effect was reported (2).

Aloe is known as a medicinal plant. The enhanced antimicrobial properties of aloe vera are attributed to aloe-emodin, present in aloe latex, in the exudate of the aloe plant, which has antibacterial, antifungal, and antitumor effects (13).

Aloe has been used for traditional medicinal purposes in several cultures. Extracts of A. vera in vitro stimulate the proliferation of several cell types. Many studies have shown that treatment with A.vera gel extracts leads to faster wound healing, can have a direct effect on the wound healing process in general, which is manifested in an increase in the rate of wound contraction and increased collagen synthesis. (14).

Aloe vera is well known for its antioxidant, anti-inflammatory, anti-diabetic, pain-relieving, immune, anti-aging, and anti-cancer properties (15).

Various parts of the plant contain about 75 nutrients as well as 200 active compounds, including amino acids, sugars, enzymes, vitamins, minerals, saponins, anthraquinones, lignin, and salicylic acid (16). Volatile components and ascorbic acid are present in the flowers, while polysaccharides, lignin, pectin, hemicellulose and cellulose are present in the peel. Similarly, the leaves are a source of various organic acids, enzymes, phenolic compounds, minerals, and vitamins (17).

Aloe vera as an ingredient is defined as a preparation that maximizes the desired components while maintaining them in an active and unchanged form, minimizes the amount of ingredients that have a negative effect, retains the benefits, and is present in the final product in quantities sufficient to obtain the desired results. (18.21)

A number of antioxidants such as alpha-tocopherol, carotenoids, ascorbic acid, flavonoids, tannins, vitamin C and E are present in aloe vera (19,20). Many authors report on the antioxidant potential of aloe vera extracts (leaves and flowers). (21,22,23).

Because of its unique composition,, various industrial applications of Aloe Vera have begun to be applied. This article summarizes the therapeutic use of aloe vera as well as its use in the topical treatment of cutaneous leishmaniasis.

Purpose of the study. The aim of this study was to evaluate the effect of aloe vera leaf exudate on Leishmania major in lesions. To assess clinical and laboratory change in topical treatment of zoonotic leishmaniasis with aloe extract**.**

Material and research methods. A study was made of 50 stationary cards of sick children, men and women with zoonotic leishmaniasis for 2 months, average age from 3 to 56 years. Patients complained of necrotic foci, leishmaniomas accompanied by an increase in

regional lymph nodes and lymphangitis (usually painless) and wounds with complications of purulent infection with the development of phlegmon, erysipelas. A microscopic examination of the material from the wound was made in order to diagnose the Borovski's body. All patients had positive parasitological parameters.

To evaluate the geometric model, patients with zoonotic leishmaniasis (Karakulsky district) were divided into 2 groups according to the course of the disease and according to the method of application of the aloe extract. Patients of group 1 (main group) To study the effect of aloe extract with 4 times local application for 20 days in patients with wound size from 0.5 to 2 cm or more, and with complications in regional lymph nodes.

Patients of the 2nd group (patients of the control group) received conventional therapy.

Results and discussions: In the 1st group (32 people) with a wound size of 0.5 to 2 cm or more, and with complications in the regional lymph nodes.

The remaining patients of the 2nd group, regardless of the size of the wound, received traditional therapy. Normal epitilization of wounds with almost perfect smooth scars in the 1st group occurred in (2 people), in the 2nd group in (1 person).

The following results were obtained after 20 days of application of aloe extract. Changes in the geometry of wounds among patients with leishmaniasis disease (patients of the 1st group) were detected in the largest number of patients with the formation of mild atrophic scars in 21.9% of cases (7 people). A scar with keloid-like growths was identified in an equal number of patients - 31.3% (10 people). In 47% (10 people) of patients who have scars with screenings: an irregularly shaped scar is located in the center, surrounded on the periphery by small scars caused by seeding tubercles, and with scars-keloid-like growths, they were identified in 28% (3 people). Patients of the 2nd group (patients of the control group) received traditional therapy in 22.22% (4 people) with mild atrophic scars, with keloid-like growths were detected in 26.66% (3 people), the rest of the patients who had not yet begun epithilization during the study 55.5%(10 people).

The following results were obtained that the timing of cleansing and healing of leishmania wounds depend on the clinical form of the disease.

Comparative results of topical application of aloe extract in patients with CL. Patients of the 1st group, who used aloe extract, the scarring process began on the 16-20th day, patients of the 2nd group, the scarring process began after 2 months of applying the traditional medical procedure.

Cutaneous leishmaniasis is a significant, potentially modifiable risk factor for enlarging the geometric boundaries of wounds, which in turn increases scar area. Thus, the increase in the size of the scar is a more significant factor in the formation of the social complex. Topical application of aloe extract has shown that the use of this compound in the initial stages of CL wound formation reduces the size of the lesion

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