

Using vegetable proteolytic enzym cucumazimum in treatment trophic ulcer of the lower limbs in patients with sugar diabetes

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Summary. It was learnt the influence of kukumazim to treat trophic ulcer on foot to 49 sick people with diabetes mellitus. Kukumazim shortened the period of cleaning the surface of ulcer to 3,6 days, the period of appearing granulation to 3,8 days. The period of treatment is $23,7\pm 3,0$ days. Good influences of kukumazim was approved by morphological checking.

Применение протеолитического фермента растительного происхождения кукумазим в лечении трофических язв нижних конечностей у больных сахарным диабетом

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Ключевые слова: протеолитический фермент растительного происхождения, кукумазим, трофические язвы, сахарный диабет, лечение.

Резюме. Изучены результаты лечения трофических язв нижних конечностей 49 больных сахарным диабетом с применением протеолитического фермента растительного происхождения кукумазим. Отмечено сокращение сроков очищения поверхности язвы на 3,6 дней, появления грануляции на 3,8 дней. Продолжительность лечения составило в среднем $23,7\pm 3,0$ дней. Результаты лечения подтверждались морфологическими исследованиями.

Introduction

The treatment of trophic derangement under complicated current of the sugar diabetes presents difficult and not solved problem (2). Pathogenesis of this disease vastly complicates the therapy and requires the using of number medicine. So naturally tendency to searching for new, more efficient ways of the treatment (1).

Empirical was established that favourable termination of the process of the healing of wounds depends on velocities of the secondary wound cleansing from festering-necrotic contents, developments of granulations and epithelization (1,3). The process of secondary wound cleansing from festering fabric - a microbe environment is an enzymatic, so exogenous reinforcement of this natural and biologically goal-directed mechanism by using of proteolytic enzymes open the new possibilities in festering surgery. At present proteolytic enzymes of animal and bacterial origin are

broadly used. There are single messages in literature about using proteolytic enzymes of the vegetable origin.

In persisting work we bring the results of the treatment trophic ulcers of the lower limbs in patients with sugar diabetes by using proteolytic enzymes of the vegetable origin cucumazimum.

Objective: to study the results of the treatment of trophic ulcers of the lower extremities in patients with diabetes mellitus using the proteolytic enzyme of plant origin cucumazim.

We examined 72 patients with sugar diabeteses trophic ulcers of the lower limbs (I-II stage by Wagner) at age from 30 to 74. All patients have gotten the complex medical action, directed on correction carbohydrate, protein and lipid [fat] exchange. 23 patients (the checking group) used the bands with antiseptic drugs. The bands changed once in day. 49 patients (the main group) used proteolytic enzymes of the vegetable origin cucumazimum.

Cucumazimum - proteolytic enzyme of the vegetable origin is received in the institute of vegetable material chemistries of Academies of the Sciences of the Republic of Uzbekistan from melon tree *Carica papaya* (is registered by Pharmacological committee of the Republic of Uzbekistan 98/331/2 - July 6 1998). The active substance of this medicine are papainum enzyme, chemypapainum and proteinaza-3, referring to proteinas group. The optimal conditions of the action of the medicine: pH 4,5-6,5 at the temperature 37°C. Cucumazim is used local in dose 10 mg. The medicine dissolved in 10ml 0,5% solution of novocaine before it using. The napkins moistened by solution of cucumazimum, super-imposed on trophic ulcers. The bandagings produced 1-2 times in day.

The disappearance of inflammation signs around trophic ulcers observed on $9,0 \pm 0,8$ day of the treatment. At the average with $11,4 \pm 1,1$ day was noted cleaning the surfaces of the ulcers from festering-necrotic substances. The appearance to granulations and epithelization registered on $14,1 \pm 0,9$ and $19,8 \pm 1,5$ day accordingly. The duration of traditional therapy has formed $34,0 \pm 3,3$ day in this case. Using cucmazimum has resulted in reduction of edema and cleaning the surface of ulcers on 3,3 and 3,6 day earlier ($5,7 \pm 0,5$ and $7,8 \pm 0,8$ day of the treatment) than in checking group ($p < 0,05$).

The Appearance to granulations under local using of cucumazimum observed on 3,8 day earlier ($10,3 \pm 0,2$ day of the treatment) in contrast with checking group ($p < 0,05$). Epithelization is noted with $15,2 \pm 1,2$ day of the treatment with cucumazimum. Duration of the treatment with using cucmazimum has formed $23,7 \pm 3,0$ days ($p < 0,05$).

The positive results of the local treatment of the trophic ulcers of the lower limbs in patients with sugar diabetes was confirmed also by morphological studies.

So we has got the following **findings**:

- 1.The using of cucumazimum give good results in patients with sugar diabet and trophic ulcers of lower limbs;
- 2.Cucumazim reduces the time of the cleaning of trophic ulcers surface and thus stimulate the process to regeneration earlier in contrast with traditional therapy.

The Literature:

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