

SEARCHING FOR ANTIDERMATIC ANTHRAQUINONES

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Creation of high-performance low-toxicity medicine preparations is one of the most important challenges for medicine, pharmacology and organic chemistry. Scientists in many countries search for biologically active compounds extracted from natural materials with synthetic methods as well as synthesized as a result of structure change in well-known biologically active compounds by inclusion of new functional groups, replacement of heteroatoms, creation of new types of chemical bonds and other processes.

Among high-performance low-toxicity medicine preparations, especially, preparations of selective action, an important place is occupied by the derivatives of anthraquinone.

This is well proven in the literature on biological activity of anthracene-containing plants, natural anthraquinones, their synthetic analogues and phytopreparations, and it should be noted that synthetic analogues have wider spectrum of biological activity.

The new Ramon anthraquinone-containing preparation is received from a plant; it is destined for external use to treat psoriasis, eczema and other skin diseases. The Ramon has antiinflammatory, antiitch, resorptional, emollient and reductional effect.

The Ramon is non-toxical, easily absorbed by skin, patients stand it well; clinic observations during 7 years have not revealed contra indications to its use for treatment grown-ups and children. This Preparation does not have allergenic activity; LD₅₀ for intraperitoneal injections for mice is 230 mg/kg.

It is possible to regenerate the Ramon on the expiry of keeping date or when it has been kept in a wrong way. This fact allows saving plant raw for receiving this preparation.

Antiitch effect is observed after 1-3 times of application for lesion seats. On the 2-4 day hyperemia decreases, infiltrate resorption, considerable diminishing or full stops of itch are observed; lesion seats are cleared up of psoriatic patches. It can heal herpes; especially effective use is at the beginning of the process.

In contrast to Synalar (Fluocinolone acetonide), Flutsinar, Larinden C, H, Flumethasone pivate, Ultralan, Oxycort, Nystatin, Kanesten, Klotrimasol it is not an inhibitor for hemopoietic and fermental systems of a man.

Supposed mechanism of the Ramon's effect is the following: participation in reduction-oxidation processes of the organism and membranate on the affectioned parts of skin and in subcellular layer.

During clinic research the patients were divided according to the remoteness of the illness, in psoriasis group from 9 up to 28 years, in eczema group of patients from 3 months up to 10 years, the rest – from 1 up to 17 years. Patient's ages were – from 5 up to 57 years. Course of treatment was 1-3 weeks; in case of recurrence the course was repeated. Concentration of ointments and solutions was from 1 to 10%. The maximal effect was noted when there was application of ointment after removal of patches with the help of thermoprocedures or mechanically.

Each 10 days blood tests and urinalysis were taken. Aldolase's and transketolase's activity was checked in blood and on skin.

Along with this antitoxical function of liver, carbohydrate (sugar in blood) and protein metabolism (common protein, fractions of protein) were studied. Researches made in dynamic have not revealed departure from the first quantities. All the patients have been discharged from hospital with considerable improvement or full clinic recovery.

Ramon preparation was tested on 1248 patients in 11 clinics in Russia, Belarus, Uzbekistan and Kazakhstan in three dosage forms with acting substance concentration ranging from 1 to 10%. The results of clinic tests are shown in the Table.

Diagnosis	Numb. of pati-s	Full dis-appear. of clin. sings	Conside rable improv.	Partial improv	Absence of effect	Side-effect
Psoriasis progressive stage stationary	510 320 67	67% 80 85	29% 13 14	2% 5 1	2% 1 -	No Light erythema
Eczema professional micotic seborrheic	145 47 29 19	60 77 82 93	33 20 7 5	6 2 9 1	1 1 2 1	0.8% 0.5% it increase - -
Herpes	29	71	25	3	1	no
Lichen ruber planus	63	54	32	11	3	no
Neurodermite eczematous	50	29	51	6	12	2%
Deverzhi lichen	16	-	50	37	13	no
Ichthyosis	9	-	-	88	12	no
Darier's dyskeratosis	6	10(1)	-	75	15	no
Hyperkeratosis of palms & soles of legs	5	-	-	90	10	no
Prurigo	9	-	78	20	2	no

As a result of clinical approbation 2% ointment on the lanoline base was chosen. The main results: complete disappearance of clinical symptoms or significant amelioration for psoriasis were observed for 96% of patients, for professional eczema improvement was observed in 97% of cases, for mycotic eczema – in 89% of cases, for seborrhea – in 98% of cases, for herpes – in 96% of cases, for lichen rubber planus - in 86% of cases, for eczema-like neurodermatitis – in 80% of cases, for vitiligo – in 78% of cases.

In the clinic test reports it was pointed out that the main advantage of the preparation as compared with traditional medicines was reduction of lesion foci infiltration in a shorter period of time (5 – 10 days), regression of psoriatic disseminated and reduced forms appearance. A disadvantage of the preparation was washing-resistant dyeing of linen.

On pastures the preparation was tested on young cattle and turned out to be efficient for damages of eye cornea and animal's udder (as anti-inflammatory and wound-healing preparation).

According to the data of the Institute of Ophthalmology, 2% ointment, 1 and 0.5% ointments were studied on chinchilla rabbits, on which not heavy burns of cornea were modeled by acid and alkaline, 5% ointment was studied on the group of real patients. No visible symptoms of irritation of mucous membrane were registered. Morphological and cytological investigations confirmed positive influence of the preparation on reparative regeneration of the cornea, acceleration of the period of cornea epithalization, increase of visual acuity by 0.1 – 0.2.