THE STUDY OF VESSEL STRENGTHENING CREAM WITH POLYPHENOLIC CULTURAL GRAPE CONCENTRATE

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Introduction

It is known that under the skin lesions at an early stage of wound healing start vascular changes caused by a disturbance of microcirculation, vascular permeability and integrity of membranes in the mechanism of development of which some biogenic amines play the role, prostaglandins, the initiation of lipid peroxidation processes and decrease of antioxidant defenses.

One of the promising areas of the modern pharmacology is the use of biologically active substances (BAS) of vegetable origin. In particular, there is an interest of the extracts of grape seed culture which contain polyphenols demonstrating reparative, antiinflammatory, antioxidant properties, which can provide the wound healing effect for creating the antipsoriatic means. For getting the concentrates of grape polyphenols in Ukraine, there is a sufficient resource base. These factors have become a prerequisite for pharmacological study of the cream with polyphenol concentrate of Grape cultural codenamed " Enopsor ."

In damaged tissues of the wounds there are the processes with the accumulation of cellular debris with getting oxidized products and microcirculation disorder. In this regard, it has become interesting to study the effect of the cream " Enopsor " on vascular permeability state of the membranes, cytolysis processes, lipid peroxidation and antioxidant protection.

The purpose of this study has been to investigate the vessel strenthening action of the new cream with polyphenol concentrate of Grape cultural.

Materials and Methods

We have studied the effect of the cream " Enopsor " on the vascular permeability of the anterior abdominal wall of the rats by subcutaneous injection of

different phlogauguin agents such as kaolin, histamine, formalin, egg protein, carrageenan. The experiments have been conducted on 40 white male rats weighing 200-220 g. 10 minutes later after the intravenous administration of the dye to increase the permeability of the vessels of the abdominal wall in the area of the abdomen we have injected subcutaneously with various phlogauguin agents: 0.02 ml of a suspension of kaolin, 0.02 ml 0.1 % histamine solution, 0.02 ml of 3 % formalin solution, 0.02 ml of egg white , 0.02 ml of a 0.1 % solution of carrageenin .

The effect on vascular permeability of the cream " Enopsor " has been evaluated by the changing rate of staining the papules under the influence of phlogauguin compared with the control group pathology. The comparator in the study of the pharmacological activity of the cream " Enopsor " has been chosen
" Kamagel ".

Results

The analysis of the data indicates that according to the rate of vascular permeability disorders the phlogauguins can be positioned in this order: egg albumen (5.14 min.) , Histamine (5.87 min.) , Carrageenan (6.01 min.), Kaolin (6.14 min.) and formalin (8.09 min.). The cream " Enopsor " compared with the control group, has helped to reduce the rate of staining papules in 46-138,5 % depending on the type of phlogauguin, indicating varying degrees of severity of this vessel strenthening effect of the active ingredients of this substance. The last fact indicates the speed reduction of papules staining compared to the control group in violation of vascular permeability induced by formalin - by 109.8 % , carrageenan - by 138.5 % , kaolin - by 83.4 % , egg white - 59.9% and histamine - 46.3 %.

Conclusions

Thus, the results of this study confirm the ability of the cream "Enopsor’ to inhibit the activity of histamine, serotonin, bradykinin, prostaglandins and thereby reduce vascular permeability and to show vessel strenthening actions that reduce edema and inflammatory process.