

research an activity of the *Prunus Domestica* extract in the comorbidities of several relevant pathologies and experimentally substantiate the perspectives of its use to treat constipation in patients with digestive system pathologies as a choice remedy.

Materials and methods. Dry extract from *Prunus Domestica* fruits containing fiber selected as the object of research. The experiment was carried out in incremental steps. At the first stage, experimental subacute alcoholic liver damage was induced in animals. In the second stage of the experiment, functional constipation was modeled in animals. During the period of subacute hepatitis and during the second phase of the experiment, the investigated extract at a dose of 200 mg/kg and the reference drug hepatoprotector Silibor at a dose of 25 mg/kg were administered. In the second phase of the study, the drug Senadexin was administered at a dose of 14 mg/kg. The experimental animals received all substances *per os*.

The method of Sagar et al. modified by Choi et al. was used to assess the intestinal motor activity.

The motor activity of the small intestine was determined by the appropriate calculation formula.

The functional state of the liver was assessed by biochemical parameters in the serum: the content of total protein, urea and ALT activity.

Results. Analysis of the experimental data showed that the investigated extract exhibits a moderate laxative effect.

In the animals of the intact group, the corresponding symptoms (a pronounced laxative effect) indicate the development of diarrhea, which is not an adequate solution to the treatment of constipation.

Administration of the extract from *Prunus Domestica* fruits throughout the entire period of the experiment leads to normalization of all indicators that characterize intestinal motility.

Analysis of the experimental data showed that the investigated phyto-object has a soft laxative effect mainly through the improvement of intestinal motility.

Study of the liver functional state at the introduction of the investigated extract from *Prunus Domestica* showed positive changes in the content of liver damage markers (decrease in urea concentration and decrease in ALT activity in the blood serum of animals) in comparison with the control group animals.

Conclusions. The obtained experimental data on the study of the correlation mechanisms of hepatoprotective and laxative activities of the extract from *Prunus Domestica* fruits, containing fibers, indicate the presence of a soft laxative effect, which realized by enhancing intestinal motility, as well as the presence of pronounced hepatoprotective action. These effects of the investigated extract were detected when it was used in the treatment of constipation in experimental subacute liver damage, while not yielding to the studied effects with the complex use of hepatoprotective and laxative reference drugs.

The key conclusion is the fact that laxative effect of the investigated extract, unlike the reference drug Senodexin, did not cause signs of diarrhea, which can be a distinctive, positive feature in further clinical studies.

This plant object can be promising and rational in use with single-stage complex therapy, as a hepatoprotective and laxative agent in the treatment of comorbidities in gastroenterology associated with liver diseases and intestinal congestion.

SEARCH NEW SUBSTANCES OF HERBAL ORIGIN FOR THE TREATMENT OF PSORIASIS

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Introduction. Psoriasis is a chronic inflammatory disease, dermatosis, which is characterized by scaly papules on the skin. In the pathogenesis of which, a distinct role is played by heredity and various precipitating factors. Psoriasis is characterized by violation of reproduction and maturation of basic skin cells – keratinocytes, as well as diverse biochemical, immunological and vascular changes in the skin and a certain connection with the functional state of the nervous system. Recently, great importance is attached to a compromised immune system in the pathogenesis of psoriasis. The therapy for psoriasis should be integrated and it should combine the use of drugs for local (outer), and systemic therapy.

The choice of the local action of the drug depends on the stage of the disease. During such kind of pathology it is advisable to use anti-inflammatory agents and local hormonal drugs that reduce inflammation, accelerate regeneration, but there is a high probability of complications such as allergic reactions or dermatitis with prolonged use of these drugs.

Arsenal of modern antipsoriasis means of local therapy, which is presented at the Ukrainian pharmaceutical market, does not meet modern requirements for effectiveness, particular properties of technology, harmlessness and price. A significant role belongs to the anti-inflammatory drugs, reparative activity among the elements of the comprehensive treatment of psoriasis. In this regard, the search for new effective means for the local use that influence to facilitate the course of psoriasis remains topical.

One of the promising areas of the modern pharmacology is the use of biologically active substances (BAS) of herbal origin. In particular, for creating the antipsoriasis means we should look precisely to the extracts of grape seed culture which contain polyphenols demonstrating reparative, antiinflammatory, antioxidant properties, which can provide the wound healing effects. There is a sufficient resource base for receiving the concentrates of grape polyphenols in Ukraine. These factors have become a prerequisite for pharmacological study of the cream with polyphenol concentrate Grape cultural codenamed « Enopsor.»

Aim. The purpose of this research has been the investigation of the influence of the new cream with Grape cultural polyphenol concentrate on the mechanisms of wound healing and safety in the treatment of skin pathologies .

Materials and methods. The influence of the cream « Enopsor» on the wound process with prevailing alterative changes has been studied on a model of ultraviolet erythema in guineapigs. As a comparison we have used the gel with Camomile

«Kamagel .») The coat has been preliminarily removed on the abdomen of animals, guinea pigs have been fixed belly up, skin has been covered with a plate, impervious to UV rays with four holes of 1 cm² each (air temperature above the surface of the skin should not exceed 30 °C and, if necessary, we should blow the skin with the fan), and irradiated with ultraviolet light. Source has been a mercury- quartz lamp 400 watt, placed at a distance of 10 cm from the surface of the skin, exposure – within 60 seconds. 5 hours later, we have assessed the degree of congestion of each spot with a 4- point system (the maximum possible degree of redness of each animal has been 16 points). We have taken into account the degree of suppression of skin redness in the treated animals compared with the control indexes, and expressed in a percentage.

The examine of the potential allergenic effect of the cream concentrate Grape with polyphenol cultural has been carried out according to the guidelines. In the experiment, we have used some outbred guinea pigs weighing 350-410 g. The animals have been divided into 2 groups: the 1st group has been the control one, the 2nd Group has been for the animals which have been applied with the cream "Enopsor " on shaved skin daily. Testing has been performed in the 1st and 2nd phase of the dermal sensitization. In the 1st phase the skin sensitizing properties have not been identified. The lack of sensitization phenomena has allowed to continue drawing applications to the 2nd phase. The testing has been repeated on the 20th day. At the site of application of the dose there has been noted a skin condition in the 1st hour, and 24 hours later and expressed everything in points: 1 point is for weak point hyperemia; 2 points are for the expressed point hyperemia; 3 points are for solid moderate hyperemia; 4 points are for solid pronounced hyperemia and infiltration.

All the obtained results of the researches have been processed by using a special program Statistica 5,0 for Windows PC. Statistical processing of the results of studies has been carried out by using the coefficients by Student's (t) and the Wilcoxon -Mann- Whitney (w).

Results and discussion. Ultraviolet irradiation of the skin area in the experimental animals has caused the damag, which is characterized by hyperemia and edema. Restoration of skin of the guinea pigs of the control pathology group has lasted 10 days in this experiment.

The obtained results indicate the pronounced inflammatory and reparative properties of the cream « Enopsor» and « Kamagel». We have observed the reduction of the intensity of injury compared to the control pathology group by 32% and 13 %, respectively, on day 5 – by 42% and 34 %, respectively, on the 7th – by 74 % and 59 %, respectively on the 3rd day after ultra violet radiation under the influence of the cream «Enopsor» and «Kamagel».

The latest data have proved the healing of ultraviolet erythema. This is confirmed by the results of macroscopic examination of the experimental animals: under the influence of the cream «Enopsor» and

«Kamagel» – on the 2nd day there is a reduction of swelling injured areas, on the 4- 5th day –peeling has started, and 6 – 7th day – the complete healing has occurred, whereas the decrease of edema has occurred at 3-4 days for the control animals and the complete healing has occurred at 9-10 days .

The research of the potential allergenic effect of the cream «Enopsor» has been conducted according to the guidelines, using the method of skin applications.

The studies have shown that daily application of the study drug has no effect on the general condition of the animals. The guinea pigs have been active, the skin has been normal , any changes such as in the form of congestion, infiltration, desquamation, edema have not been observed. Skinfold thickness has also been almost unchanged in both the control and the experimental groups.

Conclusions . Thus, the cream «Enopsor» has shown a marked anti-inflammatory and reparative properties on the model of skin inflammation with a predominance of alterations – ultraviolet erythema. The obtained results on this model allow us to make a supposition that the stabilization of cell membranes plays an important role, mediated by inhibition of lipid peroxidation and reduction of antioxidant defense in the mechanism of anti-inflammatory and reparative actions, due to the content of polyphenols. The visible changes in the form of congestion, infiltration and other violations have not occurred, indicating the absence of sensitizing of the cream of polyphenol concentrate Grape cultural, in studying the allergenic effect of the cream «Enopsor» from the point of view of the skin .

APPLE POLYPHENOL EXTRACT DECREASED CHOLESTEROL LEVEL IN RATS UNDER INSULIN RESISTANCE

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Introduction. The number of cardiovascular diseases is constantly increasing. A key factor in the development of these pathologies is a violation of cholesterol metabolism, and, subsequently, atherosclerosis. Therefore, the search for new drugs that will regulate cholesterol levels is an important and urgent problem. Previously, we showed that apple fruit polyphenols demonstrated antioxidant and hepatoprotective activity. Apple fruit polyphenol extract reduced the processes of lipid peroxidation in the liver and normalized the permeability of hepatocytes membranes.

Aim. Taking together these facts and taking into account the key role of the liver in cholesterol metabolism the aim of our study was to investigate the effect of apple fruit polyphenolic extract (APE) on the cholesterol content in the blood of experimental rats under insulin resistance.

Materials and methods. The studies were conducted on female rats weighing 190 ± 15 g, kept under standard conditions in the vivarium NUPh. Insulin resistance (IR) was modeled by keeping animals on the high-fat diet enriched by fructose for 5 weeks. APE was administered from the 3rd week of the experiment intragastrically for 14 days. Rats were decapitated, blood was collected for serum. Total cholesterol (Ch) level and Ch-LDL and Ch-HDL levels were measured in serum. The data obtained were processed statistically.

Results and discussion. The development of experimental IR was accompanied by an increase in the total Ch content from 4.53 ± 0.024 (intact) to 6.67 ± 0.97 mmol/l (group IR), Ch-LDL from 1.09 ± 0.07 (intact) to 2.47 ± 0.56 (group IR) and a decrease of Ch-HDL level from 2.14 ± 0.72 (intact) to 1.51 ± 0.39 mmol/l (group IR). The data indicate the atherosclerosis development in these experimental conditions. APE administration to rats with IR normalized the total Ch content, decreased Ch-LDL level in 1,44 times and increased Ch-HDL level in 1,56 times. The results may be related to the improved functioning of liver cells under these experimental conditions.

Conclusions. The results indicate that the analyzed polyphenols extract exhibited lipotropic effect and modulated Ch level in blood and improved metabolism of lipoproteins. Due to data obtained APE can be used for the correction of disturbances in liver insulin resistance and related pathologies.