PROSTATE PROTECTIVE ACTIVITY OF BROCCOLI EXTRACT

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Introduction. Chronic prostatitis (CP) is still quite common and poorly understood pathology. It is most often affects middle, reproductive age men causing violations copulative and generative functions, and in the late reproductive and postreproductive periods combined with benign prostatic hyperplasia (BHP) and may be the cause of prostate cancer (PC) pathology. Common approaches to the treatment CP are still not generated, and the drugs used for its treatment, have a wide range of side effects. Considering anatomical location of the prostate, rectal dosage forms shows better results. This is due to the greater bioavailability by "directional" administration of the drug to effector organs. Violation of local blood flow is one of the main pathogenic mechanisms of prostate diseases. Rectal form less susceptible to this factor and therefore are optimal for long-term treatment.

In view of the foregoing is proceed active search for modern, efficient and safe medicines for the treatment of CP and BHP. Such means may be a suppository with extract of broccoli (Brassica oleracea). The main active agent of broccoli extract is indole-3-carbinol; it increases the efficiency of the detoxification system and slowing the aging process. Also, the effectiveness of the using herbal remedies from broccoli has been shown experimentally in the treatment of BHP and PC.

The **aim** of our investigation is development of new effective means for the treatment of CP and protective prostate activity.

Materials and methods. We studied the acute toxicity of the broccoli extract and suppository mass. In the experiment we used male white rats WT 200-250 g. We divided it over 5 groups. According to the experiment plan, first group of animals intragastrically administered broccoli extract in a dose of 5000 mg/kg, second - intraperitoneally, broccoli extract in a dose of 1000 mg/kg, third - rectal suppository mass in a dose of 5000 mg/kg, fourth - oral, suppository mass at a dose of 5000 mg/kg and fifth group - intact control. Within 14 days was carried out daily monitoring of animal body weight. At the end of the period we made the macroscopic morphological assessment of the substances influence and determine mass coefficients of internal organs.

Results and discussion. The experiment found that the broccoli extract and suppository mass does not have the toxic effects of in a single administration. Internal organs mass coefficients of animals in groups 1-4 were not different from intact control group. All animals in all groups were alive. In this regard, the determination of the LD50 dose has no relevance.

Conclusion. Thus, the broccoli extract refers to class 4 toxicity and a promising pre-clinical studies of prostate protective activity.