



## Influence of a New Silicon-Containing Pyrazole Derivative of Parachlorobenzoic Acid (K-72) on Arthritis Caused by Various Irritants

Bekchanov Bakhtiyar Gafurovich <sup>1</sup>, Masharipov Otaboy Olimovich <sup>2</sup>,  
Komilova Dilrabo Rakhimboy qizi <sup>3</sup>, Masharipov Ogabek Atabaevich <sup>4</sup>

<sup>1</sup> Head of the Department of Pediatriya of Urgench branch of Tashkent Medical Academy, Uzbekistan

<sup>2</sup> Professor of the Department of Pediatriya of Urgench branch of Tashkent Medical Academy, Uzbekistan

<sup>3,4</sup> Students of the Urgench branch of Tashkent Medical Academy, Uzbekistan

**Abstract:** In the first series of experiments, conducted on white mice, the effect of oral administration of K-72 on formalin inflammation was studied. The data obtained (table 1) showed that with the introduction of K-72, the inflammatory process develops more slowly than in animals of the control group. With the introduction of formalin to animals of the control group (which received gum arabic), the average weight gain of the amputated paws on the 7th day averaged 115.7 - + 6.16 mg, then the seven-day treatment of K-72 this figure was equal to: at a dose of 50 mg / kg - 75.5 \_ + 4.10 mg, and in doses of 100 and 150 mg / kg - 64.1 \_ + 0.90 and 49.5 \_ + 4.0 mg, respectively. At the same time, the anti-inflammatory activity of K-72 in Vine 50 mg/kg was 29.7 at a dose of 100 mg/kg - 46.6%, and at a dose of 150 mg/kg - 57.4%. In the treatment of experimental animals with butadion under the same conditions, a less pronounced effect was observed. In this case, the average weight gain of the amputated paws was 101.3 - + 0.3 mg, and the effectiveness of the anti-inflammatory action was 19.4%. Comparison of these results shows that with formalin edema in K-72 mice, anti-inflammatory activity is approximately 1.5–2 times stronger than butadiene.

Effect of k-72 and butadion on formalin inflammation in white mice by oral introduction. The second series of experiments was carried out on white rats. At the same time, the anti-inflammatory effect of the drug was evaluated by changing the volume of the paws of rats, which was recorded oncometrically in dynamics. In the control group of rats, the average increase in the volume of paws 6 hours after the administration of formalten was 0.79 - + 0.34 ml, and in rats. Previously treated with K-72 at doses of 50.100 and 1150 mg/kg, the average increase in paw volume was 0.45 - + 0.028, respectively; 0.39-0.020; 0.37\_+0.030 ml. As can be seen, the anti-inflammatory activity of K-72 is 41.1% at a dose of 50 mg/kg, 49.6% at a dose of 100 mg/kg, and 52.6% at a dose of 150 mg/kg. At the same time, in the group of animals treated with butadion, the average increase in paw volume was 0.56 + 0.033 ml, and the anti-inflammatory activity was 29.1%, and in the group of animals treated with Voltaren, the average increase in paw volume was 0.44\_\_+ 0.024 ml, while the

anti-inflammatory activity was equal to 43.6%. For indomethacin, these figures were equal to 0.44 - + 0.021 and 42.8%, respectively

For clarity, as an example, the protocols are driven by one of the control and experimental series.

A male rat weighing 170 g was injected with 0.5 ml suspension of gum arabic through the mouth 72,48,24 and 2 hours before formalin injection. 30 minutes before formalin administration, the volume of the right hind paw to the level of the ankle joint was 0.73 ml (100%). Under the plantar aponeurosis of this paw, 0.2 ml of 1% formalin solution was injected. The volume of the paw was: after 6 hours 1.52 ml (108.2% of the initial volume).

A male rat weighing 170 g 72,48,24 and 2 hours before formalin injection was injected through the mouth with 0.5 ml of a suspension of preparation K-72 at a dose of 150 mg/kg. 30 minutes before formalin administration, the volume of the right hind paw to the level of the ankle joint was 0.72 ml (100%). Under the plantar aponeurosis of this paw, 0.2 ml of 1% formalin solution was injected. The volume of the paw was: After 6 hours - 1.09 ml (51.38% - from the initial Volume). The data obtained show that in the control animal, which was injected with gum arabic, the volume of the hind paw increased by 108.2% 6 hours after the injection of formalin. Under the influence of K-72, 6 hours after formalin injection, the volume of the hind paw in experimental rats was 51.38%.

Observation of the dynamics of the reverse development of inflammatory edema showed that under the influence of K - 72 the volume of the inflamed paw of rats returned to its original level on days 5-6. The reverse development of edema in the control group of animals is observed on the 11-12th day. Consequently, K - 72 not only delays the development of edema, but also accelerates its reverse development.

Comparison of the data obtained shows that the drug K-72 significantly suppresses the inflammation caused by formalin and in this respect it is approximately more than 1.5 times superior to butadione and somewhat stronger than indomethacin and voltaren.

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