

## **EXPERIMENTAL DESIGN OF TUBERCULOSIS AND HIS FEATURE FOR GUINEA-PIGS FOR INTRODUCTION OF ISONIAZIDUM AND GKP- 305**

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The paper presents the results of clinical, pathoanatomical and histological studies of tuberculous inflammation and non-specific changes in guinea pig organs in the experimental model of tuberculosis in the comparative treatment of isoniazid and GCP-305. The optimum place of introduction of the drug GKP-305 has been determined.

At reproduction of tuberculosis in guinea pigs of the control group visually observed ulcers at the place of introduction of culture. In the lungs, liver, kidneys and spleen there is a significant specific inflammatory process with the formation of epithelioid-cell granules that include multicellular cells, in addition there are caseous necrotic and dystrophic changes. We did not detect pathoanatomical changes in clinically healthy animal rice. The focal points of specific inflammation consist mainly of epithelioid and lymphoid cells, among which single giant multi-nucleus cells of the Pirogov-Lanchang type are determined. In addition, there are histiocytes and plasma cells with eccentrically located nuclei, single mononuclear macrophages.

In preparations of the liver, dystrophic changes in hepatocytes, the focal point of a specific inflammation with caseous necrosis, on the periphery of which are determined by lymphoid and epithelioid-cell infiltration and giant multi-nucleus macrophages.

Significant dystrophic changes in the epithelium of the right tubules. In the zone of direct tubules, giant multi-nucleus cells such as Pirogov-Lanchangs are identified, indicating significant tuberculous changes in the kidneys. The spleen tissue contains numerous foci of tuberculous inflammation in the form of zones of caseous necrosis. On the periphery of the foci, there are large, multi-nucleus macrophages of the type of Pirogov-Lanchangs cells, indicating a pronounced specific inflammation.

In the organism of animals infected with M.bovis 100 passages (control) characteristic pathological changes occur - in the lungs of the cells of the primary

pneumonia with granuloma necrosis in the center, perifocal inflammation and tuberculous tubercles. In the liver, fatty infiltration and fatty degeneration were detected, diffuse and nodular histo-lymphocytic infiltrates, nonspecific vasculitis were found. The spleen tissue contains numerous foci of tuberculous inflammation in the form of zones of caseous necrosis. On the periphery of the foci, there are large, multi-nucleus macrophages of the type of Pirogov-Lanchangs cells, indicating a pronounced specific inflammation. In the spleen, tuberculosis (miliary tuberculosis), coarse-modified changes, tuberculous splenomegaly, amyloidosis. Pathological changes in lymph nodes and kidneys have also been detected. So in the lymph nodes there are inflammatory foci with the presence of giant Pirogov-Langhans cells of the elongated form and epithelial cells typical of infectious granules; and in the kidneys - cells of circulatory infiltration, growth zones of connective tissue capsules, vascular sclerosis, hyalinosis, granular and fatty degeneration of tubules. Changes have the character of nodular histolympocytic infiltrates, in the glomeruli infiltration and necrosis of epithelium of capillaries. We carried out a comparative analysis of the effect of 1% solution of isoniazid and GCP-305 on the organism of mollusks infected with M.bovis 100 passages, under different methods of treatment (subcutaneously and internally). As a result of observation during 90 days, we found that with the internal application of isoniazid in the lungs of the cells of the primary pneumonia - in the center of granuloma necrosis, and around periochronous inflammation and tuberculosis tuberculosis; in the liver - fatty dystrophy of hepatocytes; In the spleen, small cells of caseous necrosis, splenomegaly. In lymph nodes, inflammatory foci were detected with the presence of giant Pirogov-Langhans cells; in the kidneys - fatty dystrophy of the convoluted tubules. In our opinion, such a method of using isoniazid results in intoxication of an organism of a diseased animal, although a tuberculostatic effect is detected in relation to the control group (infected animals). Therefore, treatment with isoniazid significantly reduced the intensity of tuberculous lesion, but did not completely eliminate it, which was confirmed by the presence of small foci of tuberculous lesion in the lungs, lymph nodes and spleen. The use of isoniazid subcutaneous animal infected M. bovis 100 passage led to a permanent tuberculostatic effect: in the lungs, spleen, lymph nodes, we did not detect pathological changes characteristic of tuberculous lesions, although in the liver revealed fatty degeneration of hepatocytes, and in the kidneys - protein degeneration of the winding tubules Positive results are obtained with the use of the drug GCP-305, with even using 1% solution internally affects tuberculostatics, only in the liver and kidneys, insignificant protein degeneration of hepatocytes and convoluted tubules. Subcutaneous administration of the drug GKP-305 confirms possession of

tuberculostatic effect better than isoniazid, without pathological changes in the lungs, liver, spleen, lymph nodes and kidneys.

**Keywords:** TUBERCULOSIS, MODEL, TREATMENT, PREPARATION GKP-305, ISONIAZID, EXPERIMENT, CHANGES.