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POLYPHARMACY AND TESTES

Ёдгоров И.Ф.
Бухарский государственный медицинский институт

Abstract
The article presents data on the effects of over-the-counter light analgesics on the testes of white outbred rats.

Keywords: testes, analgesics.

There has been great concern in the medical community about the deterioration of male reproductive health, and it is assumed that the disruption of male endocrine hormones plays a central role [1-13]. Male reproduction and overall health depend on androgens as well as other hormones, which are mainly produced by Leydig and Sertoli testicular cells. In addition to the testicles, androgens act in many somatic organs, for example, having an anabolic effect on muscle mass and affecting cognitive functions
So-called "over-the-counter" mild analgesics, such as paracetamol, aspirin, and ibuprofen, are among the most commonly used pharmaceutical compounds worldwide (6, 7). . In recent years, there has been increasing evidence suggesting that exposure to analgesics may cause negative endocrine and reproductive effects

The aim of the study was to study the effect of nonsteroidal anti-inflammatory drugs on the testis and its appendages in white rats.

Material and methods. During the experiment, 50 purebred male rats were selected. They were kept in standard vivarium conditions and quarantined for 2 weeks before the experiments.
On this group of rats, the effect of the following anti-inflammatory drugs was studied: Aspirin (the active ingredient is acetylsalicylic acid, belongs to the clinical and pharmacological group of NSAIDs, antiplatelet agents), Paracetamol (the active ingredient is paracetamol, belongs to the clinical and pharmacological group). pharmacological group of NSAIDs, analgesics-antipyretics). Aspirin 31.3 mg/kg and paracetamol 94.1 mg/kg mixed with 0.5 mL of distilled water were administered to rats intragastrically through a metal tube for 10 days.

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Research results and conclusion. In our research paper, the same changes are observed as a result of oral administration of the drug aspirin + paracetamol to rats. As a result, the sequence of ordered differentiation of spermatogenic cells is relatively reduced. Microscopic examination found that 3/2 of the convoluted tubules of rats have the same size, the walls of most tubules are normal, the location of the myoid cells is not changed, the relief of the basement membrane is flat.

Sertoli cells are located on the inner surface of myoid cells, some of them are located along the basement membrane. As you move towards the ductal cavity, abrupt changes in the sequence and hypercellularity of spermatogenic cells are not detected. Depending on the type of spermatogenic cells in the tubular cavity, relatively intermediate enlarged foci are detected in sequential order. The variable arrangement of the 1st and 2nd spermatogenic cells did not change during this period. Between the 3rd and 4th orders of spermatogenic cells and mature spermatozoa, enlarged foci are detected. As a result of changes that occur with the use of nonsteroidal anti-inflammatory drugs, the activity of Leydig cells from the interstitial cells of this testicle is inhibited, and the activity of Sertoli cells in the tubule depends on this. The invariance of the number of spermatocytes of the 1st and 2nd order cells of the spermatogenic line stimulates the synthesis of FSH in Sertoli cells, and there are no abrupt changes. But, as we mentioned above, due to the fact that the "reconnection" system associated with Leydig cells does not work, myoid cells shrink and hypertrophy under the influence of biologically active substances produced by Sertoli cells.

This, in turn, leads to a decrease in the differentiation of spermatogenic cells into 3rd and 4th order cells. These changes lead to the development of mild infertility from a clinical and morphological point of view.

Most of them lead to a decrease in the number and size of differentiating spermatogenic cells in the tubules. It is characterized by a decrease in the number of acariotic spermatozoa in the cavity of the seminiferous tubules and the appearance of longitudinal cavities in the tubular cavity. This leads to relative hypertrophy of myoid cells, which are involved in the formation of the wall of the convoluted tubules during ejaculation. This process is explained by a decrease in the number of spermatogenic cells in the cavity of the convoluted tubules and compensatory mechanisms that arise for the transport of sperm. Part of the spermatogenic cells that are not fully matured by Sertoli cells in the convoluted tubules are reduced and are involved in phagocytosis. As a result of this kind of

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change, the macrophagic characteristics of Sertoli cells are enhanced, and their size increases. As a result, enlarged cystic cysts develop between undifferentiated spermatogenic cells located in an ordered tubular space.

In the cavity of the tubules of the testis, focal proliferation of secretory cells is determined. This characteristic indicates a process aimed at diluting and improving the nature of the variable mixture of morphologically condensed and reduced spermatozoa.

As a result of the research, a decrease in the sequence of differentiation of spermatogenic cells was revealed.

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