

Determining the expression level of Bcl 2 marker by immunohistochemical method in epididymis in chronic light disease and under the influence of biostimulant

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Annotation: In this study, the control group, the 20-day chronic irradiation group, the 20-day chronic irradiation and post-irradiation ASD 2F biostimulant group, and the simultaneous chronic irradiation and ASD-2F biostimulant groups of white outbred rats isolated Bcl Data obtained based on the level of expression of 2 markers are presented.

Key words: testicular hypertrophy, chronic radiation, ASD-2F, Bcl-2 marker.

Purpose of the study: To study the expression of Bcl 2 marker in the testicular tissue of the control group, which received chronic radiation, and after receiving chronic radiation and simultaneously receiving ASD 2F biostimulant.

Materials and methods. To carry out this scientific work, a control group of 3-month-old white outbred rats, 20 days of radiation alone, 20 days of radiation and 20 days of radiation followed by ASD-2F biostimulant, and 20 days of radiation and 20 days of ASD-2F biostimulant. a total of 16 prepared paraffin blocks of the testis were selected. The level of Bcl-2 marker expression was evaluated by immunohistochemical method. Marker expression staining was quantified by relative percentages and graded as mild, moderate, and strong expression, and these scores were, 0 (no staining); 1+ (<20% cells, faintly stained); 2+ (20-60% cells, moderately stained); 3+ (>60% cells, strongly stained).

The results obtained and their discussion.

Bcl-2 is a protein coded by the Bcl-2 genome in the human body, and it is a protein that ensures cell death, i.e. apoptosis. This protein is located in the outer membrane of mitochondria in the cytoplasm of the cell. In the study, when the data obtained from white outbred rats in the control group were analyzed, a low expression of the Bcl 2 marker was found in the epididymis of 3, 6, 9, and 12-month-old rats. Expression was mainly detected in some of the columnar cells located in the basal layer of the epididymis, and the average expression was found to be 0.443% at 3 months, 1.74% at 6 months, 1.78% at 9 months, and 1.825% at 12 months. 0.2 Gray for 20 days Based on data from rats in the group that received radiation at the same dose and received ASD-2F during irradiation, the average was 2.58% at 3 months, 3.41% at 6 months, 3.48% at 9 months, and 3.55% at 12 months did. After 20 days of radiation at a dose of 0.2 Gray, the testes of the rats receiving ASD-2F were 3.32% at 3 months and 3.57% at 6 months. In 9 and 12 months it was 3.89% and 3.91%. Testicular hypertrophy of rats irradiated with a dose of 0.2 Gray for 20 days was 3.69% at 3 months and 3.59% at 6 months. At 9 and 12 months, it was 4.2% and 6.19%

CONCLUSION. The expression of Bcl 2 marker in the epididymal tissue of white outbred rats in the control group increased from 3 months to 12 months, and this increase was 23%. In the group receiving radiation for 20 days, expression of Bcl 2 marker increased by 2-3 times compared to the control group.

When ASD-2F bstimulant was used after radiation, it was found that the expression of Bcl 2 marker decreased by 1.14 times compared to the radiation group and by 1.4 times when used simultaneously with radiation.

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