

Summary:

The purpose of this research is to investigate the amount of BPA in the blood serum of dogs referred to the veterinary hospital and its relationship with the hormones testosterone, dehydrotestosterone, prolactin, FSH and LH. Bisphenol A (BPA) is an organic polymer compound that has been used in many plastic products. By affecting the body's endocrine system, this chemical can cause a decrease in sexual desire and disrupt sex hormones. In this study, 40 collars of male dogs were evaluated, among which 20 collars were kept inside the house and 20 collars were kept outside the house. Based on the purpose of the research, BPA and sex hormones (testosterone, prolactin, FSH and LH) were measured. From the point of view of blood BPA levels, the dogs under study were divided into three categories: high levels (more than 2 ng/ml), medium levels (between 1 and 2 ng/ml) and low levels of BPA (less than 1 ng/ml) were categorized. The preliminary examination of the distribution of animals in these groups showed that 40% of dogs kept at home have high levels of BPA in their blood, while in dogs kept outside the house, this figure decreases to 20%, which is from The opinion is statistically significant. The analysis of the obtained results also showed that in both groups of dogs, testosterone, FSH and LH levels in the groups with high levels of BPA decreased significantly, while prolactin showed a significant increase. These changes were similar in both groups of indoor and outdoor dogs. Also, examining the correlation of hormones with each other showed that testosterone, FSH, LH hormones had a positive correlation with each other and these hormones had a negative correlation with prolactin hormone. The results obtained from this research indicate that BPA increased the prolactin hormone in the blood serum and thus decreased the sex hormones testosterone, FSH and LH in the blood serum. This finding can indicate that BPA is effective by inducing changes in the amount of sex hormones in the reproductive system and can reduce fertility in male dogs.

Key words: Bisphenol a, testesterone, dihydrotestestrone, FSH, LH, dog.