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Study effects of ivermectin and interaction with supplements vitamin A and vitamin C on histological structure of the liver, kidney, and testis tissue in male wistar rat

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An *in vivo* study was performed to assay the effects of ivermectin on adult male wistar rats. Twenty-five male wistar rats of 6-8 weeks old and 150-200 g, divided into five groups of five animals each were used for this study. Group's two to five received drug oral solution of ivermectin; mixture of ivermectin and vitamin A; mixture of ivermectin and vitamin C; mixture of ivermectin, vitamin A and vitamin C respectively. The treatment was performed once a week for three weeks. Group one served as the control group. At the end of the study, the rats were sacrificed and histopathological studies on liver, kidney and scrotal tissues were done. The results of this study showed that administration of free ivermectin orally causes pathological changes in the liver, kidney and scrotal tissue, including congestion and necrosis and usage of vitamin A and vitamin C as anti-oxidants improved the obtained situation of the taking free ivermectin. It can be concluded that consumption of free ivermectin has side effects on mammals, while use of the drug along with antioxidants like vitamin A and vitamin C moderate its toxic effects.

Recent Publications

1. Allen D G, Dowling P M and Smith D A (2005) Handbook of Veterinary Drugs (3rd ed.), In Lippincott Williams&Wilkins, pp.700-701. Philadelphia, USA ISBN: 978-0-781-74126-2.
2. Cha J H, Yu Q M and Seo J S (2016) Vitamin A supplementation modifies the antioxidant system in rats. Nutrition Research and Practice 10(1):26-32.
3. Plumb D C (2008) Plumb s Veterinary Drug Handbook, Sixth Edition, Blackwell Publishing Professional pp.508-511. USA: Minnesota, ISBN 978-0-8138-1097-3.
4. Ramsey I (2014) BSAVA Small Animal Formulary, 8th edition, British Small Animal. Veterinary Association pp.208-206, England, ISBN: 9781905319657.
5. Zuhair Z and Alamri H (2011) The role of vitamin C in alteration of enzymes responsible of energy metabolism induced by administration of tamoxifen to mouse. Advances in Biological Chemistry 1(2):15-23.

Biography

Alireza Bashiri was born in Mashhad, 1988. He got diploma in 2006 from a grammar high school in Sirjan and has studied veterinary medicine (DVM) in Shahid Bahonar University of Kerman. Thereafter he was accepted for the residency course (DVSc) at the University of Tehran which holds the top rank in Iran. At the moment, he is a chief resident of veterinary surgery at the University of Tehran studying in the eighth semester and as a resident have finished all courses and successfully passed the board exam in the third year. He has published several articles for my academic achievement and spent an equine surgery traineeship in Italy as a valuable practical experience during my undergraduate. Although he does research in Veterinary Surgery and Anesthesiology, Equine Surgery and Orthopedics, currently in most recent publication collaborate with Department of Basic Science.

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