

Warfarin-induced vitamin K deficiency affects spermatogenesis in Sprague-Dawley rats

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Abstract

Vitamin K is present in the testes though its actual function in male reproduction is poorly understood. This study investigated the harmful effect of extrahepatic vitamin K insufficiency on the testicular structure. Sprague-Dawley rats were fed with a diet containing warfarin for 2, 4 and 8 weeks; control animals received a standard diet without warfarin. It was found that extrahepatic vitamin K deficiency that is induced by warfarin results in histopathological features that range from delayed spermiation, presence of multinucleated giant cells in the seminiferous tubules, germ cells degeneration, asthenozoospermia, oligozoospermia and increase in the percentage of abnormal sperm morphology when compared to the controls. Data obtained from the two groups were analysed using the Student *t* test. It is concluded that warfarin-induced vitamin K deficiency has a negative impact on spermatogenesis.

KEY WORDS

male infertility, multinucleated giant cells, testes, vitamin K, warfarin

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