

Comparative toxicological evaluation of the combined therapy of finasteride and alfuzosin to lauric acid and myristic acid in male rats

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Benign prostate hyperplasia (BPH) is a urological disorder caused by the noncancerous enlargement of the prostate as men age. As the prostate enlarges, it can constrict the urethra, inducing various symptoms including a weak urinary stream, incomplete bladder emptying, nocturia, dysuria and bladder outlet obstruction. Conventionally used drugs like 5 α -reductase inhibitors and α adrenoceptors antagonists are used to treat benign prostatic hyperplasia, but they possess various side effects like impotence, decreased libido, ejaculation disorder, gynaecomastia, dizziness, upper respiratory tract infection, headache, fatigue and chest pain, also it was found in our previous study combination of fatty acid like lauric and myristic acid can be used for treatments of benign prostatic hyperplasia with minimum side effects so present study undertaken to compare side effects of conventionally used drugs and fatty acid, and hence so present study investigated to compare toxicological potential of combined therapy with doses of finasteride and alfuzosin to lauric and myristic acid orally administered for 28 days to

male Sprague Dawley rats. Male animals were randomized into three groups of six animals each one: a control group treated only with the vehicle and two groups treated with combination of, Finasteride (50 mg/kg)+Alfuzosin (50 mg/kg) {FA}, and Lauric acid (180 mg/kg) + myristic acid (70 mg/kg) {LA}, respectively. The variables analyzed were done like mortality, clinical signs, body weight, food consumption, hematology and blood parameters, relative organ weight and histopathological findings. Treatment with FA and LA combined therapy significantly reduced the relative organ weight of sex organs in animals treated. In conclusion, the combined therapy orally administered to male rats did not induce toxicological effects except the atrophy of the accessory sex organs related to FA administration, weight gain in fatty acid treatment groups so results show both combinations are relatively safe for the treatments of benign prostatic hyperplasia.

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