

Urol Int. 2006;77(3):269-74.

Pumpkin seed oil and phytosterol-F can block testosterone/prazosin-induced prostate growth in rats.

Tsai YS, Tong YC, Cheng JT, Lee CH, Yang FS, Lee HY.

Institute of Clinical Medicine, Department of Urology, College of Medicine, National Cheng Kung University, Tainan, Taiwan.

Abstract

INTRODUCTION: This study was undertaken to investigate the effects of pumpkin seed oil alone or combined with Phytosterol-F on testosterone/prazosin-induced (T-P) prostate growth in rats.

MATERIALS AND METHODS: Forty adult Wistar rats were divided into five groups, including: one control group, rats treated with vehicle only, one group treated with T-P, and two groups of T-P-treated rats, one receiving orally pumpkin seed oil alone and one group receiving orally pumpkin seed oil combined with Phytosterol-F. Two weeks later, the prostatic weight-to-body weight ratio was determined after sacrifice. The total protein concentration was measured by using a protein assay. Some ventral prostatic tissues were histologically examined after hematoxylin-eosin staining.

RESULTS: Histological sections of the ventral prostate showed that the architecture of the prostate glands became hyperplastic in the T-P rats, but not in the control or vehicle-treated animals. As compared with the control or vehicle group, T-P rats had a significantly higher prostatic weight-to-body weight ratio for the ventral prostate ($p=0.05$ and $p=0.007$, respectively), but not for the dorsolateral prostate ($p=0.53$ and $p=0.73$, respectively). The T-P rats had significantly higher protein levels within both lobes (ventral lobe, $p=0.02$ and $p<0.0001$, respectively; dorsolateral lobe, $p=0.06$ and $p=0.005$, respectively). As compared with the T-P-alone rats, the TP rats treated with pumpkin seed oil alone or pumpkin seed oil combined with Phytosterol-F had a significantly lower weight ratio for the ventral prostate ($p=0.01$ and $p=0.004$, respectively) and significantly lower protein levels within both lobes ($p=0.03$ and $p=0.003$, respectively; $p=0.007$ and $p=0.002$, respectively). In addition, Phytosterol-F had some additive effect on the total protein synthesis within the ventral prostate ($p=0.02$).

CONCLUSION: Pumpkin seed oil alone or combined with Phytosterol-F can block the T-P-induced increases in prostatic weight-to-body weight ratio and protein synthesis.

Copyright (c) 2006 S. Karger AG, Basel.

PMID: 17033217 [PubMed - indexed for MEDLINE]

Publication Types, MeSH Terms, Substances

LinkOut - more resources