Randomized, Placebo-Controlled Trial Showing that Finasteride Reduces Blood Loss and Prostatic Vascularity Rapidly Within 2 Weeks

Introduction and Objective: To measure expression of vascular endothelial growth factor (VEGF) and microvessel density (MVD) in the prostates of men after transurethral resection of the prostate (TURP) following 2 weeks of treatment with finasteride.
Materials and Methods: Forty men scheduled to undergo TURP were randomized to receive 5 mg of finasteride or placebo daily for 2 weeks before surgery. Sections of prostatic urothelium were stained for VEGF expression and for CD31 to assess MVD. Ten consecutive, non-overlapping high-power fields were analyzed in a blinded fashion. Also their blood loss was measured by calculating Hb. of irrigant fluid.
Results: In all, 18 men received finasteride and 20 placebo; the groups were similar in patient age, resected prostate weight, preoperative catheterization, prostate-specific antigen level, aspirin use, spinal anaesthesia and postoperative diagnosis of prostate cancer. Blood loss was significantly lower in finasteride group. The mean (95% confidence interval) MVD was significantly lower in the finasteride group (60, 55-65) than in the placebo group (71, 64-78; $P < 0.01$). Similarly, the mean expression of VEGF was significantly lower in the finasteride group (47, 43-52 vs 61, 54-67; $P < 0.001$)
Conclusion: Finasteride inhibits angiogenic growth factors leading to reduced vascularity, and this is the basis of its action in reducing haematuria of prostatic origin. The present study shows that finasteride influences the prostatic microvasculature after only 2 weeks' exposure.