Finasteride has been used in women to reduce hirsutism and acne (Fruzzetti et al., 1994; Kohler et al., 2007). It significantly decreases dihydrotestosterone levels and hair growth in hirsute women or in women with acne, without negatively affecting gonadotropin secretion.

Increased concentrations of endogenous sex steroids, both estrogens and androgens, are associated with an increased risk of estrogen receptor+/progesterone receptor+ breast cancers in postmenopausal women (Misserer et al., 2004). Moreover, hirsutism and acne increase the risk of female breast cancer (Baron et al., 2001).

Finasteride induces gynecomastia. Gynecomastia is a well-documented, common complication of finasteride therapy in men (Volpi et al., 1995; Green et al., 1996; Carlin et al., 1997). Moreover, gynecomastia doubles the risk of male breast cancer (Casagrande et al., 1988). However, the overall incidence of male breast cancer in clinical trials for 5 mg finasteride was not significantly increased – 7.8/100 000 patient-years for patients exposed to more than 1 year of treatment versus 8/100 000 patient-years for patients not exposed to the drug – despite the gynecomastia produced by finasteride. As of November 2009, there were only 50 case reports worldwide of male breast cancer in benign prostatic hypertrophy patients aged between 54 and 88 years (mean age of 71 years) who received 5 mg finasteride, despite its very widespread use and the fact that finasteride became generic in 2006 (Shenoy and Prabhakar, 2010). In the Prostate Cancer Prevention Trial, with 141 009 person-years of follow-up, there were two cases of male breast cancer, one in the finasteride treatment group and another in the control group (Walsh, 2013). These data suggest that finasteride may reduce the risk of male breast cancer.

Male breast cancer most closely resembles postmenopausal female breast cancer. For example, low nuclear grade, and estrogen and progesterone receptor positivity are more common among men and postmenopausal women than among premenopausal women (Anderson et al., 2004). Therefore, as 5α-reductase inhibitors, such as finasteride, can prevent male breast cancer, they might be useful in preventing breast cancer in postmenopausal women.

References


Finasteride for postmenopausal breast cancer prevention

Steven Lehrer, Fermata Pharma Inc, New York, New York, USA

Correspondence to Steven Lehrer, MD, 30 West 60th Street, New York, New York 10023 USA

Tel: + 212 785 7132; fax: + 212 245 9708; e-mail: steven@fermatapharma.com

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A recent report has indicated that exemestane could be one part of the chemopreventive spectrum for estrogen-receptor-positive breast cancer (Dunn et al., 2013). Finasteride is another drug that might be used for the same purpose.

Finasteride is a 5α-reductase inhibitor for the treatment of benign prostatic hypertrophy and male pattern baldness. 5α-Reductase is an enzyme that converts testosterone to the highly active dihydrotestosterone. Finasteride can prevent prostate cancer (Lucia et al., 2007).

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Conflicts of interest

There are no conflicts of interest.

References


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Tel: + 212 785 7132; fax: + 212 245 9708; e-mail: steven@fermatapharma.com

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