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ARTICLES

Serum and urinary androgens and risk of breast cancer in postmenopausal women

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Serum levels of testosterone, dihydrotestosterone, androstenedione, dehydroepiandrosterone sulfate, and sex hormone-binding globulin and urinary levels of testosterone and androstanediol were compared in 75 women with breast carcinoma and 150 age-matched healthy controls. Odds ratios for quartiles of hormones, adjusted for known potential confounders, were computed using conditional logistic regression. Risk of breast cancer was positively associated with levels of all androgens in serum and urine but appeared stronger for testosterone (for trend, $P = 0.03$) and dehydroepiandrosterone sulfate (for trend, $P = 0.06$) in serum and for testosterone (for trend, $P = 0.001$) and androstanediol (for trend, $P = 0.04$) in urine. The adjusted odd ratios for high versus low quartiles were 2.7 (95% confidence interval, 1.1-6.5) for serum testosterone, 2.8 (1.1-7.4) for dehydroepiandrosterone sulfate, 4.7 (1.8-12.1) for urinary testosterone, and 3.4 (1.4-8.7) for urinary androstanediol. These observations suggest that endogenous androgenic hormones may play an important role in the epidemiology of postmenopausal breast cancer in women.

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