A randomized trial to evaluate effectiveness and cost effectiveness of naturopathic cranberry products as prophylaxis against urinary tract infection in women.

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Abstract
PURPOSE: To determine, from a societal perspective, the effectiveness and cost effectiveness of concentrated cranberry tablets, versus cranberry juice, versus placebo used as prophylaxis against lower urinary tract infection (UTI) in adult women.

MATERIALS AND METHODS: One hundred fifty sexually active women aged 21 through 72 years were randomized for one year to one of three groups of prophylaxis: placebo juice + placebo tablets versus placebo juice + cranberry tablets, versus cranberry juice + placebo tablets. Tablets were taken twice daily, juice 250 ml three times daily. Outcome measures were: (1) a >50% decrease in symptomatic UTI's per year (symptoms + >or= 100 000 single organisms/ml) and (2) a >50% decrease in annual antibiotic consumption. Cost effectiveness was calculated as dollar cost per urinary tract infection prevented. Stochastic tree decision analytic modeling was used to identify specific clinical scenarios for cost savings.

RESULTS: Both cranberry juice and cranberry tablets statistically significantly decreased the number of patients experiencing at least 1 symptomatic UTI/year (to 20% and 18% respectively) compared with placebo (to 32%) (p<0.05). The mean annual cost of prophylaxis was $624 and $1400 for cranberry tablets and juice respectively. Cost savings were greatest when patients experienced >2 symptomatic UTI's per year (assuming 3 days antibiotic coverage) and had >2 days of missed work or required protective undergarments for urgency incontinence. Total antibiotic consumption was less annually in both treatment groups compared with placebo. Cost effectiveness ratios demonstrated cranberry tablets were twice as cost effective as organic juice for prevention.

CONCLUSIONS: Cranberry tablets provided the most cost-effective prevention for UTI.

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