

Black chokeberry juice (*Aronia melanocarpa*) reduces incidences of urinary tract infection among nursing home residents in the long term--a pilot study.

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Abstract

Urinary tract infection (UTI) is a major problem in nursing homes, and the mainstay of treatment is antibiotics. The increasing prevalence of uropathogens resistant to antimicrobial agents has stimulated interest in specific nutrients, for example, cranberries, to prevent recurring UTI. Black chokeberry (*Aronia melanocarpa* [Michx] Elliott) is a rich source of phenolics, and thus, dietary intake of black chokeberry juice may reduce the incidences of UTI requiring medical treatment. In this pilot study, we examined the frequency of medically treated UTI among residents in 6 nursing homes who were offered black chokeberry juice or a placebo during a 6-month crossover intervention. The residents were offered a placebo drink for a 3-month period followed by chokeberry juice for the next 3 months (group A) or vice versa (group B). The juice was characterized by a high content of total phenolics (715 mg gallic acid equivalent, 100 mL(-1)), including B-type procyanidins, anthocyanins, and chlorogenic acids. Daily intake of chokeberry juice was 156 mL per resident in group A (n = 110) and 89 mL per resident in group B (n = 126). Urinary tract infection comprised 55% of all medically treated infections during the study period. The results revealed no immediate reduction in the frequency of UTI or the total use of antibiotics; however, during the subsequent 3-month period of juice administration, a reduction in antibiotics toward UTI was observed in both groups. The incidence of UTI was reduced by 55% in group A and 38% in group B. No changes in other infections or in use of prophylactics were observed.

KEYWORDS: Black chokeberry; Elderly people; Nursing homes; Phenolics; UTI

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