A randomized double-blind trial of oral L-arginine for treatment of interstitial cystitis.


Abstract

PURPOSE: Nitric oxide synthase activity is decreased in the urine of patients with interstitial cystitis compared to the urine of controls. In a preliminary trial oral L-arginine, the substrate for nitric oxide synthase, increased urinary nitric oxide synthase activity and improved interstitial cystitis symptoms. This randomized, double-blind, placebo controlled study further investigates the efficacy of L-arginine treatment for interstitial cystitis.

MATERIALS AND METHODS: A total of 53 interstitial cystitis patients were assigned to receive daily 1,500 mg. L-arginine or placebo orally for 3 months. Interstitial cystitis symptoms were assessed by interviews at 2 weeks, and 1, 2 and 3 months.

RESULTS: The trial was completed by 21 of 27 patients in the L-arginine group and 25 of 26 in the placebo group. Using per protocol analysis 29% (6 of 21 patients) in the L-arginine group and 8% (2 of 25) in the placebo group were clinically improved by the end of the trial (p = 0.07). A Likert scale showed greater global improvement in the L-arginine group (48%, 10 of 21) compared to the placebo group (24%, 6 of 25) at 3 months (p = 0.05) with a decrease in pain intensity (p = 0.04), and tendency toward improvement in urgency (p = 0.06) and frequency of pain (p = 0.09). Using an intention to treat approach to analysis there were no differences between groups.

CONCLUSIONS: Oral L-arginine (1,500 mg. daily) may decrease pain and urgency in a subset of interstitial cystitis patients.

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