d-mannose powder for prophylaxis of recurrent urinary tract infections in women: a randomized clinical trial

Abstract

Purpose
To test whether d-mannose powder is effective for recurrent urinary tract infection (UTI) prevention.

Materials and methods
After initial antibiotic treatment of acute cystitis, 308 women with history of recurrent UTI and no other significant comorbidities were randomly allocated to three groups. The first group (n = 103) received prophylaxis with 2 g of d-mannose powder in 200 ml of water daily for 6 months, the second (n = 103) received 50 mg Nitrofurantoin daily, and the third (n = 102) did not receive prophylaxis.

Results
Overall 98 patients (31.8%) had recurrent UTI: 15 (14.6) in the d-mannose group, 21 (20.4) in Nitrofurantoin group, and 62 (60.8) in no prophylaxis group, with the rate significantly higher in no prophylaxis group compared to active groups (P < 0.001). Patients in d-mannose group and Nitrofurantoin group had a significantly lower risk of recurrent UTI episode during prophylactic therapy compared to patients in no prophylaxis group (RR 0.239 and 0.335, P < 0.0001). In active groups, 17.9% of patients reported side effects but they were mild and did not require stopping the prophylaxis. Patients in d-mannose group had a significantly lower risk of side effects compared to patients in Nitrofurantoin group (RR 0.276, P < 0.0001), but the clinical importance of this finding is low because Nitrofurantoin was well tolerated.

Conclusions
In our study, d-mannose powder had significantly reduced the risk of recurrent UTI which was no different than in Nitrofurantoin group. More studies will be needed to validate the results of this study, but initial findings show that d-mannose may be useful for UTI prevention.


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