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Symptomatic lower urinary tract infection induced by cooling of the feet

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Letter to the Editor

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Dear Editor,

We thank Kiser et al. for interesting comments on our article (1). We are fully aware that our work is too sparse to document any final connection between cold feet and urinary tract infection (UTI) (1, 2), but both studies indicate the same possible association.

Our article deals with symptomatic lower UTI (1). Dysuria, urinary frequency, and suprapubic discomfort were registered on a 5-step scale. Dysuria was in addition registered at each urination on a VAS-scale, and urinary frequency was calculated from the timing of the urinations. Subjects who got a UTI developed typical symptoms, registered both subjectively and objectively. None of the other subjects (except the one mentioned in our paper) recorded any lower urinary symptom.

The sensitivity of the nitrite test is low, and we therefore cannot know whether other subjects in our study developed bacteriuria (3). The specificity of the nitrite test is however high, so we do know that the 5 of our 6 symptomatic subjects had bacteriuria. The sixth symptomatic subjects had a negative nitrite test, hence we chose to put her in the asymptomatic group. A symptomatic, bacteriologically verified lower UTI did then occur in 5 of 29 subjects.

Kiser et al. state that healthy, symptom-free women who did not develop a UTI, but whose feet were cooled, might somehow be protected from the effects of this noxious procedure (4). We do agree. We had never expected that all 29 subjects would develop a symptomatic, lower UTI.

As to whether we should have used a one-sided or two-sided McNemar's test, we supposed that a given subject had the same probability for developing a symptomatic UTI in any two subsequent 3-day periods. By introducing the cooling between the preceeding 3-day control period and the subsequent 3-day intervention period, we can only expect a change in the probability for an infection after the procedure, not before. Thus we feel justified in using a one-sided test.

Kiser et al. also touch on the interesting problem of whether the traditional significance level of $\alpha = 0.05$ constitutes an absolute division between true and untrue. When we found that 5 of 29 subjects developed a symptomatic, bacteriologically verified, lower UTI 55 $\pm$9% hours after the cooling of their feet, we felt that this close time connection and a low P value were sufficient for the association to be of general interest, and to warrant further research in the area.

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