Scandinavian Journal of Primary Health Care

ISSN: 0281-3432 (Print) 1502-7724 (Online) Journal homepage: informahealthcare.com/journals/ipri20

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To cite this article: W. R. Riser, Margaret R. H. Nusbaum, David Ellis, Guy Runkle & John Kugler (1993) Symptomatic lower urinary tract infection induced by cooling of the feet, Scandinavian Journal of Primary Health Care, 11:4, 289-289, DOI: 10.3109/02813439308994846

To link to this article: https://doi.org/10.3109/02813439308994846

Published online: 12 Jul 2009.

Letter to the Editor

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In their article (1) Baerheim and Laerum assert the existence of an association between cooling of the feet and the subsequent development of symptomatic lower urinary tract infection in their sample of cystitis prone women. Upon careful review of the methodology employed, we submit that this association is unwarranted.

The authors state that a *one sided* McNemar's test was chosen «as the noxious intervention cannot be supposed to improve the condition of already healthy, symtom-free subjects». This assuption is incorrect. It is certainly possible that some of the 24 women who were symptom free at the conclusion of the study, all of whom had been exposed to cooling of the feet, were somehow protected from developing symptoms by the «noxious intervention». This notion carries the same degree of biologic plausibility as the notion that cooling of the feet causes UTI in this population. A *two sided* test, which should have been done in this study, yields P = 0.06; a *non-significant* difference assuming the traditional alpha of. 0.05.

The identification of individuals with UTI in the study is also problematic. Since women were to culture their urine only if they became symptomatic, and a strong cultural bias exists that individuals *should* develop UTI symptoms after being cold, it seems plausible that subjects would tend to report their symptoms more frequently following the intervention than they would before the intervention. Even though the women «who developed UTI... did not regarded being cold as a provoking factor more often than the others», how can one be sure that this intellectual insight alone would enable the subjects to put aside long held cultural biases?

The claim that 5 women had «bacteriologically verified» urinary tract infections following the cooling of the feet, compared to 0 women during the control period, is also questionable. The *true* incidence of bacteriuria, either before or after the intervention, was not examined in this study. Urinary nitrite was measured of bacteriuria, has a reported sensitivity between 92% and 100%, but a reported sensitivity as low as 35% (2). It is likely that more women had bacteriuria in the study than the nitrite determination alone revealed.

Of the 5 subjects who developed symptoms following cooling of the feet, 3 had positive cultures (interestingly enough only 2 of these with positive urine nitrite), but 2 failed to culture their urine at all. How can these 2 women have «bacteriologically verified» lower urinary tract infections if no cultures were obtained?

The methodological and statistical weaknesses of this study are such that it should not be taken to support the belief in the Norwegian lay population that cystitis can be introduced by cooling of the feet.

References

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