

## **Acupuncture May Break Cycle of Urinary Tract Infections**

By Michael Devitt

It is estimated that up to 11 million people in the United States experience an acute urinary tract infection (UTI) each year.<sup>1</sup> Although they also occur in men, the overwhelming majority of urinary tract infections are seen in women, for reasons not altogether understood.

UTIs can occur in any part of the urinary system, and are usually caused by bacteria that enter the urethra and begin multiplying. Whatever the cause, the condition is quite debilitating; some women have reported that having a UTI can be at least as, if not more, painful than childbirth.

Antibiotics are the most commonly prescribed remedy for UTIs in the U.S. Given the growing resistance of bacteria to antibiotics, however, some women choose not to take their medication and let the infection run its course, which can lead to serious health problems elsewhere in the body. Worse yet, women who are especially prone to UTIs often take large doses of antibiotics before an infection sets in, which only hastens bacterial resistance.

The emerging threat of antibiotic resistance has led researchers to investigate other, nonpharmaceutical means of reducing the frequency and duration of urinary tract infections. One researcher, Terje Alraek, of the University of Bergen in Norway, conducted a study using acupuncture to treat the condition in women. The results, published in the October 2002 issue of the *American Journal of Public Health*,<sup>2</sup> found that the therapy was highly successful, and reduced the infection rate by more than 50% in the six months following treatment.

Alraek and a team of medical doctors recruited 94 women aged 18-60 for the trial. To be included in the study, each woman had to have experienced at least three urinary tract infections in the previous 12 months, at least two of which had been diagnosed and treated as a UTI by a physician. Women were excluded if they were pregnant or had other complications.

After obtaining written consent, the women were given a traditional Chinese medicine diagnosis and randomized into acupuncture and control groups. Control subjects received no treatment. Acupuncture patients received needling at points on the lower abdomen or back (CV 3 or 4 and BL 23 or 28) or the lower extremities (KI 3; SP 6; SP 9; ST 36; or LR3) according to their TCM diagnosis. Treatments were given twice weekly for four weeks.

The researchers documented any incidence of UTI for six months following the last treatment. They also collected urine samples and measured the amount of residual urine in each women's bladder at two-, four- and six-month follow-up examinations.

## Results

While there were no statistical differences among patient groups in the 12 months leading up to the start of the trial, the scientists found a significant decrease among groups after the acupuncture sessions began. Seventy-three percent of the women treated with acupuncture were "free of UTIs" during the six-month followup period, compared to only 52% of women in the control group. For the women in the acupuncture group, this translated into a 55% reduced risk of getting another urinary tract infection in the six months following the last treatment session.

Women treated with acupuncture also experienced a 51% reduction in the average amount of urine remaining in the bladder at the six-month examination compared to baseline, while the untreated women exhibited "no significant change in residual urine." In addition, the number of women in the treated group with residual urine levels of 10 milliliters or below more than doubled by the six-month exam; in the untreated group, there was no change. These findings were especially important, as residual urine is one of the primary risk factors for recurrent urinary tract infections, particularly for postmenopausal women.

Residual urine levels, acupuncture vs. control group		
Group	Residual urine level, baseline (ml)	Residual urine level, six-month followup (ml)
Acupuncture (n=67)	35.4	18.2
Control (u=27)	35.5	38.8

Alraek surmised that the reduction in UTIs could be due to acupuncture reducing the residual urine level in a woman's bladder. "Ancient Chinese medical theory would have used other terms to describe this change," he said in a statement to Reuters Health. "One possibility would be better circulation of *qi* in the lower abdomen."<sup>3</sup>

Previous studies done by Alraek and others<sup>4,5</sup> suggested that acupuncture could reduce the severity of UTIs and prevent them from recurring for several months. The *AJPH* study reinforced these earlier findings and, in doing so, added another important piece to the mosaic of acupuncture research.

"Our results showed that acupuncture reduced the recurrence rate among cystitis-prone women to half the rate among untreated women," the researchers noted in their conclusion. "Also, women in the acupuncture group exhibited reductions in residual urine. In summary, our results, as well as previous findings, indicate that acupuncture treatment may be effective in preventing recurrent lower UTIs in healthy adult women."

### References

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