

Stopping the cycle of recurrent urinary tract infections in women

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A study by UT Southwestern Medical Center researchers is the first to demonstrate the long-term efficacy of electrofulguration, a minimally invasive outpatient procedure that treats chronic urinary tract infections

(UTIs) among postmenopausal women.

Researchers reviewed the [medical records](#) of 96 women treated at UT Southwestern for recurrent UTIs (three or more a year) with electrofulguration between 2006 and 2012. Telephone interviews, conducted by a third-party researcher, were performed with patients who had not recently been seen by a physician. Their [median age](#) was 64, and the median length of follow-up was 11 years.

Among the patients, 72% were considered to have had successful treatment, with no more than one UTI annually; 22% had improved, with fewer than three UTIs annually; and 6% were unchanged, according to the study published in [The Journal of Urology](#). In addition, [antibiotic usage](#) declined significantly, with only 5% still on continuous antibiotics at their last follow-up compared with 74% pre-electrofulguration.

"Recurrent UTIs are a serious issue for many postmenopausal women, affecting their [quality of life](#) and putting them at risk of serious complications," said study leader Philippe Zimmern, M.D., Professor of Urology and Director of the John and Felecia Cain Center for Bladder Health at UT Southwestern.

"The [standard treatment](#) for a UTI is antibiotics, which often provide relief. But some women will develop another infection within a few days or weeks, which requires another round of antibiotics, and the process continually repeats itself. Over time, these patients can build up resistant strains of bacteria or develop allergies to antibiotics, making their UTIs extremely challenging to treat. The result can be a life-threatening bout of sepsis and in some cases require the surgical removal of the bladder."

Electrofulguration targets superficial areas of chronic infection (cystitis or inflammation of the bladder) inside the bladder wall.

"Cystitis is most often the result of a UTI, so it's a [vicious cycle](#)," Dr. Zimmern said. "The UTI creates cystitis, and the cystitis can lead to chronic lesions deep in the bladder wall where bacteria thrive, protected from the effects of antibiotics."

The research builds on previous UTSW studies that identified the presence of bacterial reservoirs in these inflammatory bladder lesions as well as the short-term efficacy of electrofulguration to prevent recurrent urinary tract infections.

"These findings demonstrate that electrofulguration provides a durable clinical cure that enables many [postmenopausal women](#) to remain UTI-free with minimal to no continued need for antibiotic therapy," Dr. Zimmern said. "Just as important, electrofulguration is a well-tolerated procedure. Given the rise in recurrent UTIs among an [aging population](#) and the growth in [antibiotic-resistant bacteria](#), electrofulguration could help treat this condition much earlier in many patients and prevent the cascade of events leading to extensive lesions of cystitis."

Dr. Zimmern holds the Felecia and John Cain Distinguished Chair in Women's Health, in honor of Philippe Zimmern, M.D.

Other UTSW researchers who contributed to this study are Shivani Gaitonde, M.D., Urology Chief Resident; Alana L. Christie, Biostatistical Consultant, Harold C. Simmons Comprehensive Cancer Center; and Feras Alhalabi, Database Manager.

More information: Shivani Gaitonde et al, Very Long-term Outcomes After Electrofulguration for Antibiotic-refractory Recurrent Urinary Tract Infections in a Predominantly Menopausal Cohort of Women, *Journal of Urology* (2023). [DOI: 10.1097/JU.0000000000003612](https://doi.org/10.1097/JU.0000000000003612)

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