

Bioregulatory Treatment of Urinary Tract Infections

By Bert Hannosset, MD

A urinary tract infection (UTI) is defined as an infection of any part of the urinary system: urethra, bladder, ureters, or kidneys. Lower UTIs are infections in the lower part of the urinary tract, which includes the bladder (cystitis) and urethra (urethritis). Upper UTIs are infections of the upper part of the urinary tract, which includes the kidneys (pyelonephritis) and the ureters. Upper UTIs are potentially more serious than lower UTIs because of the possibility of kidney damage.

Recurrent UTIs will occur at least twice in six months or three times in one year (usually these are reinfections). *Interstitial cystitis* (IC) is a chronic disease of unknown origin that affects the urinary bladder. The symptoms of IC overlap with those of a wide range of other disorders, including UTIs. IC should be suspected when a patient complains of pressure or pain in the pelvis or reports bladder discomfort. The pain or discomfort typically increases as the bladder fills and decreases during voiding, is associated with urinary frequency or a persistent urge to void, and appears in the absence of infection or other pathology.

Incidence and prevalence

Approximately 8 to 10 million people in the United States develop a UTI each year. Women develop the

condition much more often than men; the reasons are not fully known, although the much shorter female urethra is suspected. The condition is rare in boys and young men. 20 percent of women in the United States will develop a UTI during their lifetimes, and 20 percent of those will experience a recurrence.

Symptoms

The symptoms of a lower UTI can include: pain or burning sensation during or at the end of urination (dysuria); frequent (pollakisuria) or urgent (urgency) urination; need to urinate at night (nocturia); a sensation of being unable to urinate fully; cloudy, bloody or foul-smelling urine; and pain in the lower abdomen. Low-grade fever (37-38°C or 98.6-101.0°F) may also be present.

The symptoms of an upper UTI can include: any of the symptoms of a lower urinary tract infection, a high fever (over 38°C or 101.0°F), nausea or vomiting, shaking or chills, and pain in the lower back or side (renal angle pain), usually on one side only.

Causes and risks factors

Escherichia coli causes about 80 percent of UTIs in adults. These bacteria are normally present in the colon and may enter the urethral opening from the skin around the anus and genitals. Women may be more susceptible to UTIs because the female urethral opening is closer to the source of the bacteria (anus or vagina) and the urethra is shorter than in men, allowing bacteria easier access to the bladder.

Other bacteria that cause urinary tract infections include *Staphylococcus saprophyticus* (5 to 15 percent of cases), *Chlamydia trachomatis*, *Mycoplasma hominis*, *Klebsiella* and (more rarely) various species of *Proteus* and *Pseudomonas*. *Chlamydia* and *Mycoplasma* can be transmitted through sexual intercourse.

For unknown reasons, sexual intercourse triggers UTIs in some women. Diaphragm users develop infections more often, and condoms with spermicidal foam may cause vaginal growth of *E. coli*, which can then enter the urethra.

DET-phase	Basic and/or symptomatic	Regulation therapy*		Optional
Endodermal, urogenital Inflammation	<ul style="list-style-type: none"> • Berberis-Homaccord • Spascupreel 	D&D	<ul style="list-style-type: none"> • Basic detoxification and drainage 	<ul style="list-style-type: none"> • Echinacea compositum (for severe infection)
		IM	<ul style="list-style-type: none"> • Cantharis compositum 	
		OR	<ul style="list-style-type: none"> • Solidago compositum 	

Notes: In recurrent UTIs, Mucosa compositum and Solidago compositum are used (also as injection therapy; see Figure 1) for three months to strengthen the urinary tract.

Table 1: Treatment for lower UTIs

Urinary catheterization can also cause UTIs by introducing bacteria into the urinary tract. The risk of developing a UTI increases when long-term catheterization is required.

In infants, bacteria from soiled diapers can enter the urethra and cause UTIs. *E. coli* may also enter the urethral opening when young girls do not wipe from front to back after a bowel movement.

Other risk factors include: bladder outlet obstructions (e.g., bladder stones, benign prostatic hypertrophy), conditions that cause incomplete bladder emptying (e.g., spinal cord injury), congenital abnormalities of the urinary tract (e.g., vesical ureteral reflux), changes in the immune system (e.g., HIV and diabetes), and being uncircumcised.

The causes of IC remain unknown and the underlying pathology has not yet been fully elucidated. Recent studies, however, have shown a possible relationship to production of autoantibodies to the muscarinic M3 receptor, located in the detrusor muscle cells of the bladder (which mediates cholinergic contraction of the urinary bladder).

Diagnosis

Differential diagnosis is made by laboratory analysis of a sample of mid-stream urine (the most reliable sample is obtained via suprapubic puncture), followed by a urine cul-

DET-phase	Basic and/or symptomatic	Regulation therapy*		Optional
Mesodermal, nephrodermal Inflammation	<ul style="list-style-type: none"> • Berberis-Homaccord • Spascupreel 	D&D	<ul style="list-style-type: none"> • Advanced supportive detoxification and drainage 	<ul style="list-style-type: none"> • Reneel • Belladonna-Homaccord (for high fever) • Mercurius-Heel (if there is frank pus in the urine)
		IM	<ul style="list-style-type: none"> • Echinacea compositum • Cantharis compositum 	
		OR	<ul style="list-style-type: none"> • Mucosa compositum 	

Notes: Mucosa compositum contains a Colibacillinum nosode. Solidago compositum contains Equisetum, which strengthens the entire renal tract. Because upper UTIs affect a mesenchymal structure, treatment is deeper and includes more medications.

Table 2: Treatment for upper UTIs

- * Antihomotoxic regulation therapy consists of a three-pillar approach:
- Detoxification & Drainage (D&D)
 - Immunomodulation (IM)
 - Organ regulation (OR)

ture, if needed, to determine the specific bacteria and obtain an antibiogram. When leucocytes are elevated and the urine culture is negative, chlamydial urethritis, prostatitis, and IC are possibilities. In recurrent UTIs, ultrasound exams of the urinary tract and intravenous urography can be helpful diagnostic tools. A diagnosis of IC can be confirmed through cystoscopy with hydrodistention.

Treatment

In allopathic medicine, lower UTIs are most commonly treated with antibiotics (e.g., trimethoprim-sulfamethoxazole and amoxicillin), but bioregulatory therapy alone is also effective in treating this type of infection. According to homotoxicological guidelines, one or more basic symptomatic products should be added to the “three pillar approach” of drainage and detoxification (D&D), immunomodulation (IM),

and, if necessary, cellular activation and organ regulation (OR). (See Table 1.)

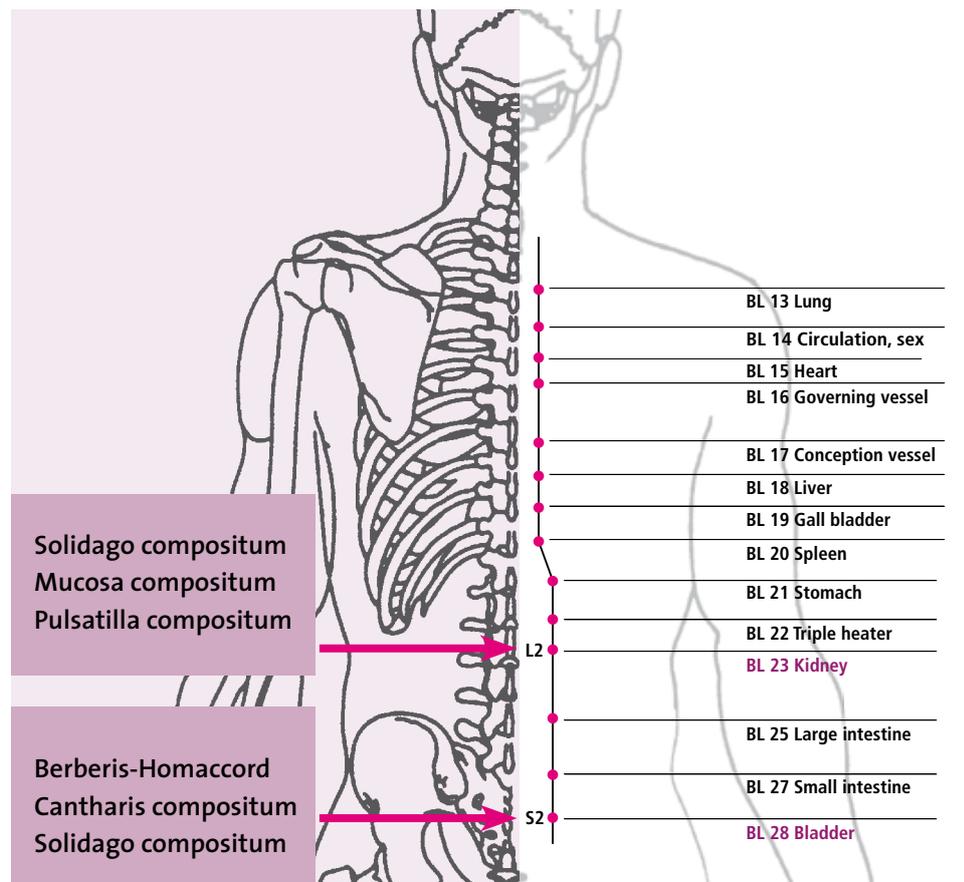
In upper UTIs, antibiotics are unavoidable and antihomotoxic treatment should be seen as adjuvant therapy. The full range of antihomotoxic products should be used (see Table 2).

Injection therapy

Injection therapy can be administered subcutaneously into the back shu points for the bladder and the kidney respectively (see Figure 1). This is useful either in acute treatment before a lower UTI patient is sent home with oral therapy or several times during the first week of an upper UTI.

For IC and recurrent UTIs, once or twice weekly treatment over several weeks is helpful. In IC, however, due to the possibility of autoimmune disease, treatment should always include administration via the oral mucosa to induce oral tolerance to that tissue. Thus, small amounts of *Mucosa compositum* and *Solidago compositum* are injected into the AP point and the remainder is administered orally. ■

Figure 1:
Back shu points for the bladder
and kidneys



References

1. van de Merwe JP. Interstitial cystitis and systemic autoimmune diseases. *Nat Clin Pract Urol.* 2007;4(9):484-491.
2. Bergogne-Bérézin E. Lower urinary tract infections: bacterial epidemiology and recommendations [in French]. *Prog Urol.* 2008;18(1 Suppl FMC):F11-14.
3. Hooton TM. The current management strategies for community-acquired urinary tract infection. *Infect Dis Clin North Am.* 2003;17(2):303-332.
4. Talan DA, Krishnadasan A, Abrahamian FM, Stamm WE, Moran GJ; EMERGENCY ID NET Study Group. Prevalence and risk factor analysis of trimethoprim-sulfamethoxazole- and fluoroquinolone-resistant *Escherichia coli* infection among emergency department patients with pyelonephritis. *Clin Infect Dis.* 2008;1;47(9):1150-1158.