

Stones in the Urinary Bladder

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There is a curiosity in Western science regarding Chinese medicinal diagnosis of, and treatment for, urinary bladder stones, a very painful condition affecting many Americans. Since the discovery of lithotripsy (breaking down a calculus in the urinary system into pieces small enough to be washed out), the profession of urology has evolved.

Dr. Zhuoyi Qiu, professor at Emperor's College in Santa Monica, Calif., cites stones as one of nine differentiations of stranguria, known in traditional Chinese medicine as *lin* syndrome.¹ Dr. Qiu states that stones are common among patients with stranguria, second only to a diagnosis known as *heat*, which can manifest as urinary tract infections, cystitis, pyelonephritis and pylocystitis. The pathology involves "stones and sand from heat evaporating the fluids and obstructing the urinary passages."¹ Main symptoms include "painful and difficult urination with stones or sand; urination may stop suddenly; blood in the urine; severe distention and pain in the lower abdomen." Other symptoms include "colic of the abdomen or low back." Lastly, tongue diagnosis commonly reveals "red tongue and thin, yellow coating or thin, white coating." Pulse diagnosis reports "wiry or wiry/rapid pulse."¹

The treatment principle used for stones includes "clear heat, drain damp, expel the stones and unblock painful urinary dysfunction."¹ Acupuncture includes using a reducing method on UB 28 (back *shu* of UB), CV 3 (front *mu* of UB), SP 9 (damp), UB 39 (UB meridian point of Foot-*taiyang*, lower He-Sea of *san jiao*), UB 54 (local point to move *qi* and blood), ST 28 and UB 23 (local points to move *qi*).¹

He uses a modified formula version of *shi wei san* (pyrrosia powder) to promote urine, unblock stones and clear heat, adding *jin qian cao* to unblock and break up stones and *ji nei jin* to dissolve them. Other modifications include addressing the severe low abdomen and/or back pain using acupuncture and herbs for pain control.¹

Dr. Qiu states that treating stones of more than 1.2 cm or those found in high position (kidneys) is too difficult. Western medicine should instead be used.¹ It is also very difficult to treat patients suffering from stones older than six months. However, there is very good success treating stones equal to or less than 0.8 cm in the low urinary system. Drinking lots of water, jumping and other forms of invigorating exercise are recommended to increase success rates.

After three weeks of each round of treatments, Dr. Qiu recommends shifting the formula after two to four months of direct treatment to tonify *yin* or *qi*.¹ (Diuretic herbs will lead to *yin* deficiency.) Taken from Maclean's *Chinese Herbal Patent Medicine*, *zhi bai ba wei wan* is good for treating kidney *yin* deficiency with heat, *liu wei di huang wan* for kidney *yin* deficiency, and *bi xie fen qing wan* for kidney deficiency with damp. All of the above are commonly recommended for chronic pathologies. When the issue is acute, two formulas for damp heat include *ba zheng san wan* and

qing re qu shi tea.²

According to *Current Medical Diagnosis and Treatment*: "Urinary stone disease is exceeded in frequency as a urinary tract disorder only by infections and prostatic disease, and is estimated to afflict 240,000-720,000 Americans per year. Men are more frequently affected by urolithiasis than women, with a ratio of 3-to-1. Initial presentation predominated in the third and fourth decades. The ratio of men to women approached parity in the sixth and seventh decades."³

"Urinary calculi are polycrystalline aggregates composed of varying amounts of crystalloid and a small amount of organic matrix. Stone formation requires saturated urine that is dependent upon pH, ionic strength, salute concentration and complexation. There are five major types of urinary stones: calcium oxalate, calcium phosphate, struvite, uric acid, and cystine. The most common types are composed of calcium, and for that reason most urinary stones (85%) are radiopaque. Uric acid stones can be radiolucent yet frequently are composed of a combination of uric acid and calcium oxalate and thus are radiopaque. Cystine stones frequently have a smooth-edged, ground-glass appearance."³

"Geographic factors contribute to the development of stones. Areas of high humidity and elevated temperatures appear to be contributing factors and the incidence of symptomatic ureteral stones is greatest during hot summer months."³

"Diet and fluid intake may be important factors in the development of urinary stones. Those afflicted with recurrent urinary stone disease are encouraged to maintain a diet restricted in sodium [100 meq/d] and protein [1 g/kg/d] intake. Bran can significantly decrease urinary calcium by increasing bowel transit time and mechanically binding to calcium ... persons in sedentary occupations have a higher incidence of stones than manual laborers. Genetic factors may contribute to urinary stone formation. Cystinuria is an autosomal recessive disorder ... distal renal tubular acidosis may be transmitted as a hereditary trait, and urolithiasis occurs in up to 75% of patients affected with this disorder."³

In clinical findings, *CMDT*³ supports Dr. Qiu's reports, adding: "As the stone progresses down the ureter, the pain may be referred into the ipsilateral testis or labium. If the stone becomes lodged at the ureterovesical junction, patients will complain of marked urinary urgency and frequency. Stone size does not correlate with the severity of the symptoms. Urinalysis usually reveals microscopic or gross (\approx 10%) hematuria. However, the absence of microhematuria does not exclude urinary stones. Urinary pH is a valuable clue to the cause of the possible stone. Normal urine pH is 5.85. Persistent urinary pH below 5.5 is suggestive of uric acid or cystine stones ... persistent pH above 7.2 is suggestive of a struvite infection stone. A plain film of the abdomen and renal ultrasound examination will diagnose most stones. Uric acid stone formation may have recurrences within months if appropriate therapy is not initiated.

"Doubling previous fluid intake is recommended ... sleep posture may be implicated in selected recurrent stone-formers when calculi recurs on the same side; typically, such patients sleep 'stone side down.'"³

Chinese Acupuncture and Moxibustion describes a relationship between the urinary bladder and the kidney: "The main function of the bladder is the temporary storage of urine, which is discharged from the body through *qi* activity when a sufficient quantity has been accumulated. This function of the bladder is performed with the assistance of the kidney *qi*. Disease of the bladder

will lead to symptoms such as anuria, urgency of micturition and dysurea."⁶

Regarding the dysurea caused by calculi, CAM continues: "Main manifestations: Occasional presence of calculi in the urine, dysurea, dark yellow turbid urine, or sudden interruption of urination, unbearable pricking pain during urination, pain of the lumbus and abdomen, or presence of blood in the urine, normal tongue coating."⁶

"When the gravel and stones formed by damp heat fail to be discharged in the urine, dark yellow turbid urine and painful urination occur. If a large stone obstructs the outer orifice of the bladder, urination may suddenly be interrupted, accompanied by unbearable pain. In case the calculi cause internal injury, bloody urine appears. When the calculi have been formed, the signs of internal heat may sometimes become obscure and tongue coating turns to normal."⁶

CAM states four other differentiations to be aware of regarding urinary disturbance that are different from dysuria caused by calculi. They include dysuria caused by *qi* dysfunction, painful urination with blood, dysuria with milky urine and dysuria caused by overstrain.⁶

Another view expressive of the urinary bladder and kidney interrelation taken from Maciocia's *The Foundations of Chinese Medicine* is: "The kidneys control opening and closing ... like a 'gate' in relation to urination ... if kidney-*yin* is deficient (i.e., the gate is closed), urine will be scanty and dark."⁷ To remedy the concentrated urine, the kidney-*yin* tonic *zhi bai ba wei wan* could be considered.

Maciocia later states, "The salient diagnostic features to be considered here are the function, pain, color and amount of urine." He notes that retention of urine or difficulty in urination indicates damp-heat in the bladder (the latter could also be deficiency of kidney, more common in the elderly). As such, *ba zheng san wan* might be an effective formula.⁷

He continues, "Pain before urination indicates stagnation of *qi* in the lower burner, pain during urination indicates heat in the bladder and pain after urination indicates deficiency of *qi*." Dr. Qiu, CAM and CMDT also report pain at any or all of these times.^{1,3,6} "Dark urine indicates a heat pattern ... turbid or cloudy urine indicates dampness in the bladder."

According to Maciocia, "The main bladder function is that of '*qi* transformation,' i.e., transforming and excreting fluids by the power of *qi*."⁷ The cultivation of *qi* is essential for a healthy bladder and proper excretion of fluids.

Maciocia states: "Physiologically, the bladder is directly connected to the small intestine, from which it receives the 'dirty' part of fluid after separation into a dirty and 'clean' part. The bladder receives the *qi* for this function from the kidneys: in disease, therefore bladder deficiency often results from kidney-*yang* deficiency. However, the kidney does not have a pattern of excess. So all excess patterns pertaining to the urinary system fall under the category of bladder patterns ... they fill a gap within the urinary disease patterns."⁷

"Accumulation of dampness is the most common pathological factor in bladder patterns. Excessive exposure to cold and damp weather, sitting on damp surfaces, or living in damp places, can lead to the accumulation of dampness in the bladder. This can be manifested as damp-cold or damp-heat (even if it derives from exterior cold). From an emotional point of view, the bladder, like the kidneys, is affected by fear. Bladder disharmonies are often manifested with feelings of suspicion

and jealousy over a long period of time."⁷

It's unlikely that excessive sex, which depletes the kidney-*yang*, plays a role in stones, for the disease rarely shows "frequent and abundant urination, nocturia or incontinence." Regarding bladder pathology, Maciocia concludes, "In extreme cases, dampness can materialize into urinary sand or stones."⁷

Pulse diagnosis, citing Shen's *Chinese Medicine*: "If it (pulse: right *qi* [3rd position]) is thin and floating, the *qi* is low. If it is also tight, there is heat. Then the bladder may be affected by heat, possibly with difficult urination. If the right *qi* pulse is deep and fine, it is because the bladder's *qi* is weak. If the pulse is fine, tight and rapid, there may be inflammation of the bladder."⁴

Ted Kaptchuk also writes on the bladder in *The Web That Has No Weaver*:⁵ "The function of the bladder is to receive and excrete the urine. Urine is produced in the kidneys, out of the final portion of the turbid fluids transmitted from the lungs, small intestine, and large intestine. Disharmonies of the bladder may lead to urinary problems such as incontinence, burning urination, or difficulty in urinating. The coupling of the bladder and the kidneys reflects a clinical importance based on their complementary functions.

"Damp heat accumulating and crystallizing in bladder: (Signs) urine occasionally contains sandlike pieces; difficult urination or sudden urine obstruction; occasional violent stabbing pain in lower groin or back; occasional blood in urine. (Tongue) reasonably normal (pulse) reasonably normal."⁵

There is a short list of patent herbal formulas addressing this dysfunction. Most notably, *Chinese Herbal Patent Medicines* recommends *shi lin tong*, noting the formula's actions of clearing damp heat, promoting urination, and dissolving stones and small calculi.² This diuretic, composed of the single herb *Desmodium styracifolium* (*guang jin qian cao*, *desmodium* - 3.125g) is indicated for both kidney and bladder calculi, "easing the passage of small stones."² The formula usually needs to be taken for three to six months, on an empty stomach, while increasing potassium and water intake at the same time.

To address back pains caused by stones with blood stagnation, *shi lin tong* should be combined with *tong jing wan*. Combining *shi lin tong* with *li dan* tablets is recommended not as much for urinary stones, but rather gallstones due to damp heat. *Chai hu shu gan wan*, combined with the root formula, is directed at gallstones, as well and its association with liver *qi* stagnation.²

In conclusion, it is essential to know the size and location of the stone. If the pathology falls within the scope of acupuncture, then the herbal treatment principle remains to clear heat, drain damp, expel the stones and unblock painful urinary dysfunction.

A healthy lifestyle yields a healthy body. Just as a cup of dirty water when left still allows heavier particles to rest at the base, stones form in the urinary bladder. Keeping the dirty water active by continuously stirring does not solve the root issue. Decanting the vessel to yield a pure, translucent medium is the aim, leading to the highest potential for a healthy body, mind and spirit.

References

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