

THE TREATMENT OF KIDNEY FAILURE AND URAEMIA WITH CHINESE HERBS

Heiner Fruehauf

Chronic renal failure marks the most severe of the potential end stages of chronic kidney infection and other systemic diseases involving the kidneys, such as diabetes. Patients with renal failure essentially suffer a near complete collapse of kidney function and become internally poisoned by nitrogenous compounds as a result. If kidney function is not restored, which in chronic cases is virtually impossible with modern medical treatments, or if the body's toxic load cannot be expelled by other means, this condition is severe and usually quickly leads to death. Since the advent of the modern medical procedures of kidney dialysis and kidney transplants, chronic renal failure has lost much of the immediacy of its life threatening quality. For most dialysis and transplant patients, however, the quality of life remains low. Much time has to be spent in dialysis (often three days per week, each treatment day being accompanied by a recovery day after the procedure), and both dialysis and transplant patients need to take strong medications which are usually accompanied by side effects.

The technical accomplishments of modern medicine in the field of renal failure contrast with an obvious lack of preventative or curative approaches in both the allopathic and holistic arenas of Western medicine. It may therefore be of value to take a look at traditional approaches in China, where the occurrence and treatment of 'Kidney exhaustion' has been reported for 2,000 years.

According to a recent survey, renal failure is the third most prominent cause of death in the People's Republic of China (PRC), outranked only by cancer and chronic lung disease¹. Until recently, expensive treatment options such as dialysis or transplant surgery were reserved for government cadres or high-paying foreign clients. Due to the urgency of this situation, the PRC Ministry of Health has actively encouraged research into traditional treatment methods. In the absence of other opportunities moreover, many Chinese patients have long turned to traditional methods, especially Chinese herbal medicine. We are therefore able to consult both 2,000 years of recorded experience in the treatment of renal failure and various conditions preceding the condition (most notably chronic glomerulonephritis), and a prolific body of modern medical litera-

ture on treating both acute and chronic renal failure with Chinese herbs.

Although Chinese clinical textbooks remain cautious in regard to curative treatment outcomes (average remission rate reported to be around 11%-13%), all studies strongly convey the message that herbal treatments can significantly improve the patients' sense of well being and extend their life span. Positive results are usually reported in 75%-80% of all cases². In a Western context, the knowledge and application of traditional Chinese treatment methods may help to prevent a patient's deterioration to the state of kidney failure or, if dialysis has already commenced, to reduce the frequency of haemodialysis or haemofiltration. In transplant patients moreover, herbal treatment may address the underlying cause of the condition which has not been resolved by the surgery, thus preventing a potential recurrence of dysfunction in the new kidney.

With these goals in mind, this article attempts to provide an overview of traditional Chinese views on chronic kidney failure, as well as to introduce modern clinical approaches that have been inspired by the knowledge of Western medicine.

Traditional aetiology and pathogenesis

Classical Chinese clinical handbooks are generally organised according to a traditional system of disease classification. Since the systems are based on different diagnostic parameters, there is no direct link between modern and traditional systems of nomenclature, and one needs to search a variety of traditional categories to find the equivalent of the modern condition, in this case kidney failure/uraemia. The most relevant categories found in traditional Chinese textbooks are urine retention (longbi), [urine and faeces] retention and [food] rejection (guange), Kidney wind (shenfeng), and Kidney exhaustion (shenlao). These concepts were defined 2,000 years ago in fundamental texts such as *The Yellow Emperor's Classic of Medicine* (Huangdi Neijing) and the *Treatise on Diseases Caused by Cold* (Shanghan Lun).

To understand the traditional reasoning for urinary problems, it is useful to first take a look at how premodern

physicians in China viewed the physiology of healthy urination. Zhang Jingyue, the famous Ming Dynasty compiler of classical Chinese medical thought, writes in the "Urine Retention" section of his *Collected Works*

Since the Bladder is the fu organ in charge of storing water, water naturally enters into this organ. And since water is always transformed by qi, meaning that if there is qi there will be [moving] water, we can understand how water gets expelled from this organ. In other words, if water encounters qi it turns into exiting urine. The Classic states "Once the qi transforms [water], it can come out". It is the process of transformation, therefore, that causes water to end up in the Bladder, and once it is in there, it is transformation that causes it to come out. If water comes out without having undergone any transformative processes, it must also have entered the Bladder without the application of transformative force. Qi transformation, in other words, is involved in both the ingoing and the outgoing processes. This is the true meaning of what the Classic refers to as "qi transformation", a comprehensive term that does not just apply to things coming out. Due to these intricately intertwined dynamics between qi and water, the following can be said: as long as there is qi within water, qi is water; as long as there is water within qi, water is qi. All pathologies, therefore, that involve a deficiency of qi and result in urine retention are always caused by an exhaustion of true yang in the lower burner [source qi] and a fundamental depletion of the original ocean [source water], by fire and water not communicating, by yin and yang breaking apart. Qi, in this case, is just qi, and water is just water. The solitary water thus accumulates and does not move. Potential outcomes of such a situation in which qi does not transform water may be atrophy of the water fu organ [Bladder], or, if water accumulates but is not excreted, processes of decay and putrefaction. Always remember, therefore, that it is the inability of source qi to transform [water] that is at the root of this condition, and that diuretics will thus not be able to force the gates open; that it is the absence of yang within yin that is the true reason, and that bitter and cold medicines will only cause the patient to deteriorate even further³.

In the light of this assessment, most traditional approaches to kidney failure focus on rectifying deficiencies of qi, yang, yin, or a combination thereof. Traditional organ networks involved are primarily the Kidney which, once deficient, loses its ability to differentiate the "clear and the turbid"; the Spleen, which is recognised as the body's main generator of qi and thus governs all post-natal (metabolic) processes of transformation, especially those involving moisture (due to the Spleen's earth/taiyin nature); and the Liver, which is in charge of "smooth flow," "expulsion of the old," and in conjunction with the Kidney "stores prenatal water." Modern approaches tend to focus more on dispelling excess poisons such as uric acid from the bloodstream, a fact that traditional commentators did not know as such, but based

on their own diagnostic parameters had early on described as "turbid damp toxins entering the blood."

As for the causative origins of renal failure, traditional aetiology gives a variety of reasons, the most prominent being the following: i. constitutional deficiency of Spleen and Kidney; ii. mental and physical exhaustion; iii. unhealthy dietary habits which further injure a constitutionally weak Spleen; iv. repeated "wind invasion" (cold/influenzas, infections) from external sources, which further weaken a constitutionally weak Spleen and Kidney.

Traditional clinical texts report a wide variety of diagnostic and therapeutic approaches to the condition. Below, I will list the most important traditional categories, including the diagnostic features which define each category and the representative remedies which are most often referenced⁴. I would like to underscore, however, that these categories (and their representative treatment suggestions) should be understood as very general guidelines only. Most patients suffering from chronic renal failure present with much more complex symptom pictures, involving both deficiencies (Spleen, Kidney or Liver) and excess (water, turbid damp, phlegm or blood stasis) at the same time.

1. Qi deficiency of Spleen and Kidney

Typical symptoms: pale complexion, physical weakness, shortness of breath, heavy extremities; poor appetite, bloating, diarrhoea or loose stools; sticky mouth, poor taste sensation, no thirst or some thirst but little desire to drink; sore lower back and knees; cold extremities; nocturia; pale, fat and toothmarked tongue; deep and weak pulse.

Representative remedies: Bu Zhong Yi Qi Tang (Tonify the Middle and Augment the Qi Decoction), Bao Yuan Tang (Preserve the Basal Decoction).

2. Yang deficiency of Spleen and Kidney

Typical symptoms: very pale or ashen complexion, mental and physical fatigue; poor appetite, diarrhoea, oedema; sticky mouth, poor taste sensation, no thirst; sore and cold lower back and knees or general aversion to cold; profuse nocturia; pale and fat tongue with obvious toothmarks; deep and weak pulse.

Representative remedies: Zhen Wu Tang (True Warrior Decoction), Shi Pi Yin (Bolster the Spleen Decoction).

3. Yin deficiency of Liver and Kidney

Typical symptoms: yellowish complexion, hollow features, dry mouth with bitter or unpleasant taste, liking to drink with a general preference for cold drinks, dry eyes, constipation, sore lower back and knees, heat sensations in palms/soles, dizziness, tinnitus, pale pinkish or red tongue with no coating or thin yellow coating, fine or fine and wiry pulse.

Representative remedies: Qi Ju Di Huang Tang (Lycium Fruit, Chrysanthemum and Rehmannia Pill), Zhi Bai Di Huang Tang (Anemarrhena, Phellodendron and Rehmannia Pill), San Jia Fu Mai Tang (Three Shell Decoction to Restore the Pulse).

4. Qi and yin deficiency

Typical symptoms: combination of a) qi deficiency symptoms of Spleen and Kidney, and b) yin deficiency symptoms of Liver and Kidney.

Representative remedies: Shen Qi Mai Wei Di Huang Tang (Rehmannia Six Pill with Ginseng, Astragalus, Ophiopogon and Schizandra), Da Bu Yuan Jian (Great Tonify the Basal Decoction) plus.

5. Deficiency of yin and yang

Typical symptoms: combination of a) yang deficiency symptoms of Spleen and Kidney, and b) yin deficiency symptoms of Liver and Kidney.

Representative remedies: Shen Qi Wan (Kidney Qi Pill), Di Huang Yin Zi (Rehmannia Decoction), Ji Sheng Shen Qi Wan (Kidney Qi Pill from *Formulas That Aid the Living*).

6. Turbid damp obstructing the centre

Typical symptoms: nausea and vomiting; sticky mouth with urine taste, no thirst; greasy white tongue coating; slippery or soggy pulse.

Representative remedies: Wu Zhu Yu Tang (Evodia Decoction), Xiao Ban Xia Jia Fu Ling Tang (Minor Pinellia Plus Poria Decoction), Xuan Fu Dai Zhe Tang (Inula and Haemate Decoction), Wen Pi Tang (Warm the Spleen Decoction).

7. Damp heat obstructing the centre

Typical symptoms: nausea and vomiting; sticky / dry mouth with urine taste, possibly bitter taste, preference for cold drinks; burning sensation with (inhibited) urination; greasy yellow tongue coating; slippery, possibly rapid pulse.

Representative remedies: Huang Lian Wen Dan Tang (Coptis Decoction to Warm the Gallbladder), Ban Xia Xie Xin Tang (Pinellia Decoction to Drain the Epigastrium), Su Ye Huang Lian Tang (Perilla Leaf and Coptis Decoction), Fang Feng Tong Sheng San (Ledebouriella Decoction that Sagely Unblocks).

8. Water effusion (due to Spleen and Kidney yang deficiency)

Typical symptoms: obvious oedema; fat tongue with moist coating; soggy pulse.

Representative remedies: Wu Ling San (Five-Ingredient Powder with Poria), Fu Ling Gui Zhi Bai Zhu Gan Cao Tang (Poria, Cinamon Twig, Atractylodis Macrocephalae and Licorice Decoction).

9. Blood stasis (in the lower burner)

Typical symptoms: dark lips and complexion; fixed, stabbing lower back pain; numbness of the extremities, rough skin; tongue presents with purplish color and stasis in the sublingual veins; congested pulse.

Representative remedies: Gui Zhi Fu Ling Wan (Cinnamon Twig and Poria Pill), Dang Gui Shao Yao San (Tankuei and Peony Powder), Xue Fu Zhu Yu Tang (Drive Out Stasis in the Mansion of Blood Decoction).

Modern case studies

It is important to understand that the categories outlined above are very general in nature and list constitutional formulas that have not been specifically designed for kidney failure. Due to the complexities of the condition, both traditional and modern Chinese medicine physicians would rarely prescribe these traditional “Kidney deficiency”, “oedema” and “nausea” remedies in unmodified form, but rather utilise them as informational quarries that provide the basic material for a more individualised approach. To more concretely illustrate how modern Chinese TCM Kidney experts address uraemia and kidney failure, I have selected a variety of representative case studies published in Chinese medical journals. Note that many of these studies have incorporated Western knowledge of renal pathology and laboratory research of Chinese herbs. The prominent use of Da Huang (Rhizoma Rhei) especially, is due to the recent discovery that this herb can lower nitrogen compounds in the blood. Many Chinese medicine Kidney specialists like to prescribe Da Huang both internally and externally (as an enema) to induce diarrhoea, attempting to purge toxins (that are usually excreted in the urine) via the “big exit”. Almost all contemporary TCM physicians therefore instruct their patients to take Da Huang (a cooling, detoxifying, blood moving, and purgative herb) in powdered form if their constitutional remedy, which is usually of a more tonic nature, does not already include this herb.

In a similar fashion, the modern realisation that kidney failure is accompanied by compromised microcirculation in the kidneys has caused many TCM physicians to include blood moving herbs, especially Dan Shen (Radix Salviae Miltiorrhizae), in their formulas. As is the case with so many “discoveries” in modern TCM however, both the use of Da Huang and blood moving herbs for kidney failure has precedents in classical herb usage. The 6th century remedy Wen Pi Tang (Warm the Spleen Decoction) for instance, features the unusual combination of the cooling herb Da Huang and the warming herb Fu Zi (Radix Aconiti Carmichaeli Praeparatae). This brilliantly designed formula, in turn inspired by herbal combinations first mentioned in the 2nd century herbal classic, Shanghan Lun, reflects the early realisation that Kidney collapse, in addition to the patient’s constitutional yang deficiency, most often involves toxic heat that must be purged urgently.

1. Source: *A Clinical Handbook for Diagnosis and Treatment in Chinese Western Combination Medicine*, 1994.

Indications: uraemia, renal failure.

Ingredients and administration: powdered (and encapsulated) Da Huang (Rhizoma Rhei), take 3-9g per day along with constitutional Kidney tonics. At the same time, the book recommends a regimen of daily retention enemas with a decoction of the following herbs: Da Huang 15-30g, Mu Li (Concha Ostreae) 30g, Huai Hua (Flos Sophorae Japonicae Immaturus) 30g, possibly processed Fu Zi (Radix Aconiti Carmichaeli Praeparatae) 15-30g⁵.

2. Source: *Clinical Experiences of Diagnosing and Treating Diseases of the Kidney and Bladder and Monograph On Nephritis and Uraemia*.

Indications: uraemia.

Ingredients and administration: Zi Su Ye (Folium Perillae Frutescentis) 30g, Dang Shen (Radix Codonopsis Pilosulae) 15g, Bai Zhu (Rhizoma Atractylodis Macrocephalae) 15g, Ban Xia (Rhizoma Pinelliae Ternatae) 9g, Huang Lian (Rhizoma Coptidis) 3g, Liu Yue Xue (Serissa Foetida) 30g, Lu Dou (Semen Phaseoli Radiati) 30g, Dan Shen (Radix Salviae Miltiorrhizae) 30g, processed Fu Zi (Radix Aconiti Carmichaeli Praeparatae) 9g, Da Huang (Rhizoma Rhei) 9-15g, Sha Ren (Fructus seu Semen Amomi) 3g, Sheng Jiang (Rhizoma Zingiberis Officinalis Recens) 6g; decoct, divide into 2 doses, and drink in one day.

Typical modifications

- for mild oedema in the legs, add Ban Zhi Lian (Herba Scutellariae Barbatae).
- for itchy skin, add Bai Xian Pi (Cortex Dictamni Dasycarpi Radicis) and Di Fu Zi (Fructus Kochiae Scopariae).
- for lower back pain and cast urination, add Qian Qian Huo (Sambucus).
- for ascites and severe obstruction of both stools and urination, grind up equal amounts of the following herbs, encapsulate the herb powder, and take 3.6g per day (in 4 doses) along with the standard decoction: Hei Chou (Semen Pharbitidis Nigri), Bai Chou (Semen Pharbitidis Albi), Xiao Hui Xiang (Fructus Foeniculi Vulgaris), Da Huang (Rhizoma Rhei).

Notes: this formula has been designed on the basis of the classic formula Warm the Spleen Decoction (Wen Pi Tang) by Dr. Xu Songnian, one of China's eminent authorities on the traditional treatment of Kidney disease. He labeled it Wen Shen Jie Du Tang (Warm the Kidney and Resolve Toxin Decoction), as which it is often quoted as a representative formula for the treatment of life threatening uraemia (in both acute and chronic renal failure patients). Dr. Xu's approach focuses on the expulsion of toxic pathogens from all three burners, putting into action the "excess priority" theory which asserts that the deficiency symptoms of renal failure patients cannot be rectified unless excess toxins are resolved first.

Clinical trial outcome: 17 patients with uraemia due to renal failure were treated with Wen Shen Jie Du Tang. 2 reported obvious results (symptoms improved, kidney functions restored), 6 good results (symptoms improved, kidney functions improved), and 4 showed no improvement (5 patients apparently unaccounted for in the source that I was translating from)⁶.

3. Source: *New Traditional Chinese Medicine*, 1986.

Indications: uraemia.

Ingredients and administration: Da Huang (Rhizoma Rhei) 15g, Fu Zi (Radix Aconiti Carmichaeli Praeparatae) 15g, Fu Ling (Sclerotium Poriae Cocos) 15g, Su Ye (Folium Perillae Frutescentis) 10g, Ban Xia (Rhizoma Pinelliae Ternatae)

10g, Sheng Jiang (Rhizoma Zingiberis Officinalis Recens) 10g, Huang Lian (Rhizoma Coptidis) 5g, Sha Ren (Fructus seu Semen Amomi) 5g; decoct and drink in one day. Concurrently, administer a daily retention enema with a decoction of the following herbs: Da Huang 15g, Huai Hua (Flos Sophorae Japonicae Immaturus) 15g, Zi Hua Di Ding (Herba Violae cum Radice) 15g, Pu Gong Ying (Herba Taraxaci Mongolici cum Radice) 30g, Mu Li (Concha Ostreae) 30g, Mu Dan Pi (Cortex Moutan Radicis) 10g; boil down to 300 ml, administer once per day, which ensures that the patient has diarrhoea 3-5 times per day. Continue this combined regimen for 7-10 days, rest for 3-5 days, then start the next treatment period.

Note: This approach, reported by Dr. Chen Xian, is comparable to the previous study. It employs the traditional method of "warming the Kidneys while purging the turbid" (wenyang xiezhuo).

Clinical trial outcome: Of 45 uraemic patients, 14 markedly improved, 13 improved, 12 showed no results, and 6 died⁷.

4. Source: *Shanxi Journal of Medicine and Pharmacology*, 1982.

Indications: nephrogenic azotemia.

Ingredients and administration: Sheng Di Huang (Radix Rehmanniae Glutinosae) 15-30g, Shan Yao (Radix Dioscoreae Oppositae) 20g, Fu Ling (Sclerotium Poriae Cocos) 15-20g, Che Qian Zi (Semen Plantaginis) 15g, Zhi Shi (Fructus Citri seu Ponciri Immaturus) 10g, Sang Bai Pi (Cortex Mori Albae Radicis) 10g, Du Zhong (Cortex Eucommiae Ulmoidis) 10g, Ze Xie (Rhizoma Alismatis Plantago-aquaticae) 10g, Jiu Da Huang (alcohol treated Rhizoma Rhei) 6-10g (boil separately for 15 minutes and add to the rest of the decoction at the time of consumption); decoct, divide into two doses, and drink in one day.

Note: This remedy is called Renal Azotemia Drink (Shen Dan Jian). Based on the traditional Liu Wei Di Huang Wan (Six Ingredient Pill with Rehmannia), it is a typical example of the yin deficiency approach to renal failure. Note that even this tonic prescription still has a strong focus on purging excess heat and toxic damp.

Clinical trial outcome: In a case trial, 30 patients with uraemia due to kidney failure (presumably both chronic and acute types) were treated with this remedy. At the end of the study, 17 were reported to have gone into remission, 7 basically into remission, and 6 improved⁸.

5. Source: *New Traditional Chinese Medicine*, 1987

Indications: chronic renal failure.

Ingredients and administration: Ban Xia (Rhizoma Pinelliae Ternatae) 12g, Zhu Ru (Caulis Bambusae in Taeniis) 12g, Pei Lan (Herba Eupatorii Fortunei) 12g, Chen Pi (Pericarpium Citri Reticulatae) 9g, Zhi Ke (Fructus Citri seu Ponciri) 9g, Fu Ling (Sclerotium Poriae Cocos) 20g, Ji Xue Cao (Centella Asiatica) 30g, Hu Zhang (Radix et Rhizoma Polygoni Cuspidati) 30g, Yi Mu Cao (Herba Leonuri Heterophylli) 30g, Dan Shen (Radix Salviae Miltiorrhizae) 30g, Can Sha (Excrementum Bombicis Mori) 15g; decoct

and drink in one day. Concurrently, do a daily retention enema with a decoction of the following herbs: Da Huang (Rhizoma Rhei) 30g, Huai Hua (Flos Sophorae Japonicae Immaturus) 30g, Ji Xue Cao (Centella Asiatica) 30g.

Typical modifications: for yang deficiency, add processed Fu Zi (Radix Aconiti Carmichaeli Praeparatae) and Sheng Jiang (Rhizoma Zingiberis Officinalis Recens); for qi deficiency, add Huang Qi (Radix Astragali); for damp heat, add Huang Lian (Rhizoma Coptidis); for constipation, add Da Huang (Rhizoma Rhei); for loss of consciousness, add Sedate the Palace Pills With Ox Gallstone (Angong Niuhuang Wan).

Note: This formula was reported by Dr. Hong Tiegua, and reflects another version of the “excess priority” approach to renal failure. Virtually none of the herbs used are tonic in nature. The focus is clearly to remove phlegm, toxic damp, and stagnating blood.

Clinical trial outcome: At the conclusion of treatment, of 156 chronic renal failure patients participating in the study, 34 were reported as in remission, 75 as improved, and 47 as without results. Some of the patients also received Western medications, depending on their symptom profile⁹.

6. Source: *The Journal of Traditional Chinese Medicine*, 1988.

Indications: Kidney dysfunction in chronic nephritis patients.

Ingredients and administration: Dan Shen (Radix Salviae Miltiorrhizae) 30g, Yi Mu Cao (Herba Leonuri Heterophylli) 30-60g, Chi Shao (Radix Paeoniae Rubrae) 15-30g, Dang Gui (Radix Angelicae Sinensis) 15-30g, Chuan Xiong (Radix Ligustici Wallichii) 15-30g.

Typical modifications: for yang deficiency of Spleen and Kidney, add processed Fu Zi (Radix Aconiti Carmichaeli Praeparatae), Yin Yang Huo (Herba Epimedii) and Ba Ji Tian (Radix Morindae Officinalis); for qi and yin deficiency, add Huang Qi (Radix Astragali), Dang Shen (Radix Codonopsis Pilosulae), Bai Zhu (Rhizoma Atractylodis Macrocephalae), Xuan Shen (Radix Scrophulariae Ningpoensis) and Mai Men Dong (Tuber Ophiopogonis Japonici); for yin deficiency of the Liver and Kidney, add Shan Zhu Yu (Fructus Corni Officinalis), Sang Shen Zi (Fructus Mori Albae), Gou Qi Zi (Fructus Lycii Chinensis) and Sheng Di Huang (Radix Rehmanniae Glutinosae); for blood stasis obstructing the collaterals, add Chuan Shan Jia (Squama Manitis Pentadactylae), Da Huang (Rhizoma Rhei) and Lu Lu Tong (Fructus Liquidambaris Taiwanianae).

Note: This formula was designed by Dr. Hong Shuyun. The design is based on Four Things Decoction (Siwu Tang), replacing Shu Di Huang (Radix Rehmanniae Glutinosae Conquatae) with Dan Shen, which enhances the blood moving properties of the original formula and has shown some promise in trials with nephritis patients, and adding Yi Mu Cao, a herb with an affinity to the lower abdomen which enhances water metabolism, breaks up blood stasis, and guides the effect of the formula specifically to the Kidneys. This remedy is a typical example for the clinical approach of

the blood moving school, which generally assumes that a) all serious and “strange” diseases involve blood stasis (see especially Wang Qingren’s influential Qing Dynasty text, *Rectifying Mistakes in the Medical Classics*, Yilin Gaicuo), and b) all structural change and atrophy in the body needs to be addressed by improving microcirculation.

Clinical trial outcome: Of 21 patients treated, the average clearance of urinary creatinine was 36.51% before treatment, and 70.53% after treatment¹⁰.

Footnotes

- 1 See Jiang Sulì, ed., *A Collection of Famous and Experimental Formulas for Difficult and Recalcitrant Diseases* (Yinan Bingzheng Ming Yan Fang Jiyao), Beijing: Hualing Chubanshe, 1990, vol. 1, p.444.
- 2 See He Shaoqi, ed., *An Internal Medicine Handbook for Contemporary TCM Physicians* (Xiandai Zhongyi Neike Xue), Beijing: Zhongguo Yiyao Keji Chubanshe, 1991, p.372.
- 3 Quoted in Chen Guiting and Yang Sishu, eds., *A Clinical Handbook for Diagnosis and Treatment in Chinese Western Combination Medicine* (Shiyong Zhong Xi Yi Jiehe Zhenduan Zhiliao Xue), Beijing: Zhongguo Yiyao Keji Chubanshe, 1994, p.500-501.
- 4 For formula ingredients and herbal amounts in the traditional remedies mentioned, see one of the many Chinese herbal formula textbooks, such as Bensky and Barolet, *Chinese Materia Medica: Formulas and Strategies*.
- 5 Chen Guiting and Yang Sishu, p. 503.
- 6 As quoted in Zhang Haoliang, ed., *Clinical Formulas for the Diseases of the Urinary Tract and the Reproductive System* (Miniao Shengzhi Xi Bing Shiyong Fang), Yangzhou: Jiangsu Kexue Jishu Chubanshe, 1994, p. 123-24.
- 7 *New Traditional Chinese Medicine* (Xin Zhongyi) 3/1986, p.23.
- 8 Zhang Haoliang, p. 124.
- 9 *New Traditional Chinese Medicine* (Xin Zhongyi) 7/1987, p. 40.
- 10 *Journal of Traditional Chinese Medicine* (Zhongyi Zazhi) 4/1988, p. 271.

This article first appeared in *Herbal Transitions*, Fall of 1998 and later in *Journal of Chinese Medicine*, May 1999