

Pearls from TCVM Practice

The Importance of *Bian Zheng* (Pattern Differentiation) in TCVM

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ABSTRACT

Bian Zheng is a system of Pattern Differentiation unique to TCVM used to make a TCVM diagnosis. *Bian Zheng* is not equivalent to a Western Biomedical diagnosis. A canine clinical case of inflammatory bowel disease is used as an example of differentiating between *Bian Zheng* and Western Biomedical diagnosis. Treating a disease which was non-responsive to conventional Western therapy on the basis of *Bian Zheng* led to a complete resolution of clinical signs and a positive outcome. The approach to making the correct *Bian Zheng* is discussed.

Key words: *Bian Zheng*, Chinese disease pattern differentiation

Bian Zheng, translated as Pattern Differentiation, is at the core of diagnosis and treatment in all of Traditional Chinese Veterinary Medicine (TCVM), but particularly herbal medicine and food therapy. There are a variety of TCVM diagnostic systems used to differentiate patterns. The major eight are: Eight Principles, Zang-Fu Syndromes, Six Phases/Stages, Four Levels, San Jiao Patterns, Pathogen Patterns, Qi/Blood/Body Fluid Patterns, and Channel Patterns.¹ Most introductory courses in TCVM focus on the Eight Principles and Zang-Fu patterns of disharmony, although each of the other six systems has great importance.

TCVM, like western biomedicine, is heteropathic.² Once a pattern of disharmony is differentiated, a treatment strategy that is opposite to the pattern is usually chosen. Thus cold disorders are treated with warming strategies and hot disorders with cooling strategies. A *Zang-Fu* pattern of Spleen *Qi* Deficiency is treated heteropathically by Tonifying Spleen *Qi*. The

salient point is that TCVM is a reliable, internally consistent medical system that is successfully used to treat a *Bian Zheng*. TCVM should not be used as a “natural” alternative to a western biomedical diagnosis and subsequent treatment. For example, a Western Biomedical diagnosis of “inflammation” does not necessarily correlate with a *Bian Zheng* of “excess heat”. The following clinical case will illustrate this important principle.

A six and one half year old male neutered pug presented to Murdoch University’s Veterinary Hospital with a diagnosis of inflammatory bowel disease (IBD) and protein-losing enteropathy (PLE). An endoscopic examination and biopsy revealed mild erythema of the stomach, while the duodenum was grossly abnormal with a cobblestone appearance and marked erythema. There was profuse watery diarrhea throughout the procedure and foul smelling odor from the small intestine. The endoscopic exam along with low plasma proteins, clinical signs of abdominal pain, ascites, and diarrhea formed the basis of his western biomedical diagnosis.

During a two month treatment with a combination of prednisone (7.5 mg BID), azathioprine (12.5 mg EOD), spironolactone (12.5 mg BID), and metronidazole (100 mg BID), the dog had lost weight, muscle mass and strength and had become depressed and lethargic. His abdomen

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was quite enlarged and firm, and he was almost unable to ambulate. When his caretakers asked to see me, the internal medicine doctor managing his case was about to begin yet another immune-suppressive drug (cyclosporine) and thought that he was an unresponsive patient and had a grave prognosis. In his medical records after I examined him, I found the following comments: “deteriorating condition - poor control of IBD and PLE, suspect may have refractory disease or other underlying neoplastic disease”.

If we merely think of TCVM as being supportive of western biomedicine and its diagnoses, what acupunctural and herbal treatment strategies would we have chosen? It would seem to make sense to treat the “disease” of IBD, a seemingly “inflammatory” or “hot” disease, with acupuncture points and herbal medicines that Clear Heat and Drain or Dry Damp-Heat.³ Thus an herbal formula such as *Di Yu San* Sanguisorba Powder^a might seem appropriate to treat IBD⁴. But this dog’s actual TCVM pattern or *Bian Zheng* must first be considered.

A TCVM *Bian Zheng* is made on the basis of *Si Zhen* or Four Diagnostic Methods (4 “Questions”); *Wang* or Looking, *Wen* or Hearing, *Wen* or Asking, and *Qie* or Touching.¹ The dog had a cold nose, pale, slightly moist tongue, cold ears, cold *Zhong Wan* (CV-12), cold *Bai Hui*, deep, slow pulse, swollen abdomen, loose stools, lethargy and muscle mass loss. The lethargy, pale tongue, loose stools and reduced muscle mass suggest Spleen *Qi* Deficiency. The cold nose, moist tongue, cold ears, cold *Zhong Wan* (CV-12), cold *Bai Hui*, deep, slow pulse and swollen abdomen are all cold signs that implicate Spleen *Yang* and possibly Kidney *Yang* Deficiency. So, unlike the “cooling” strategy suggested by his western biomedical diagnosis of IBD, this dog’s pattern required a heteropathic treatment strategy of Tonifying and Warming his *Yang* Deficiency.

At his first visit, acupuncture points were chosen to tonify the Spleen/Stomach, regulate the water passages, and reinforce the lower *Jiao* (*Lie Que* LU-7, *Jue Yin Shu* BL-14, *Gan Shu* BL- 18, *Wei Shu* BL- 21, *Bai Hui*, *Hou San Li* ST -36, and *Yin Ling Quan* SP-9). The TCVM herbal formula *Li Zhong Wan* (Regulate the Middle Pill)^b was chosen to warm the middle burner and strengthen the Spleen and Stomach.⁴ *Li Zhong Wan* Regulate

the Middle Pill consists of *Gan jiang* *Zingiberis officinalis* (warms the Spleen and Stomach *Yang* and stops bleeding from *Qi* and *Yang* Deficiency), *Ren shen* *Radix ginseng* (strongly tonifies the *Yuan Qi* and reinforces the *Yang*), *Bai zhu* *Atractylodis macrocephalae* (tonifies SP/ST and dries damp), and *Zhi gan cao* *Glycyrrhizae uralensis* (augments the middle burner *Qi*).⁴

At the time of the first treatment, the clients were instructed to stop the metronidazole and azothiaprime and give one half dosages of spironolactone and prednisone. They were also instructed to cook a Spleen *Qi* and *Yang*-tonifying TCVM food recipe. This meant to avoid most cooling foods and focus on neutral (e.g. beef, sweet potato) and warm (e.g. chicken, pumpkin) *Qi* tonics. The clients were also instructed to add 5-10% damp-draining foods (e.g. adzuki beans, miso) to his diet and to give a rather high dose of *Li Zhong Wan*, 0.5g Q8H, until instructed otherwise.^{5,6}

The dog presented one week later with better *Shen*, ability to ambulate, reduction in abdominal swelling and normal stools. His pulse was slightly stronger and his tongue was light pink. He was acupunctured again (*Zhong Wan* CV-12, *Fei Shu* BL-13, *Gan Shu* BL-18, *Wei Shu* BL-21, *Shen Shu* BL-23, *Bai Hui*, *Hou San Li* ST-36, and *Yin Ling Quan* SP-9) and the clients were instructed to stop the spironolactone and give one half of the prednisone dosage yet again. He continued to take the *Li Zhong Wan* herbal formula as previously instructed.

At his third presentation 2 weeks later, the dog’s abdominal swelling had completely resolved, his tongue was pink, he had gained muscle mass, had a stronger pulse and an almost normal *Shen* with strong ambulation and investigatory behavior when allowed to explore the exam room. He was acupunctured again (*Zhong Wan* CV-12, *Gan Shu* BL-18, *Wei Shu* BL-21, *Da Chang Shu* BL-25, *Bai Hui*, *Hou San Li* ST-36, and *Qian San Li* LI-10), and his *Li Zhong Wan* was changed to 0.5g Q12H. His caretakers were instructed to use an every-other day regimen to completely stop his prednisone during the following two weeks.

At his examination three weeks later, he appeared as a relatively normal Pug. All of his vital signs and body mass were within normal limits. His only unusual clinical sign was mild, dry, flakey

skin. His tongue was pink-red and his pulse was normal. The clients reported that the dog had become healthy and apparently normal once again. A complete blood cell count showed a hemtocrut of 41% and total protein of 53g/DL with a mild neutrophilia of $72.4 \times 10^9/L$. His chemistry profile revealed mild hypoproteinemia of 46.8 g/DL (normal range 56-80 g/DL). The dog's pattern of disharmony had changed to mild Blood Deficiency. He was prescribed *Ba Zhen Tang*^c for 3 months (0.25g Q12H) and at that point he will have his *Bian Zheng* reassessed.

This dog was successfully treated for a TCVM pattern of Spleen *Qi* and *Yang* Deficiency by a warming strategy. He was not treated for a "hot" western biomedical disease or diagnosis of IBD. Treating him with a cooling strategy would have only exacerbated his cold signs and almost certainly led to a catastrophic treatment failure. As a corollary it is important to note that, although most acupuncture points have a harmonizing effect in the body, foods, herbs, and drugs have an energetic directional effect in the body.

The energetic effects of drugs have not been well-researched nor do they have a consensus of historical agreement that herbal energetics do. Many practitioners agree that non-steroidal anti-inflammatory drugs are generally "cooling" and "heat-clearing" as well as resolve Qi and Blood Stagnation. Other drugs have more complex actions depending upon dosage and duration of use. Flaws and Sionneau suggest that corticosteroids such as prednisone clear heat by out-thrusting it and stop pain by forcefully invigorating the Qi, similar to *Chai Hu* Buplerum. *Chai Hu* Buplerum is a cool, acrid herb, so it might be argued that the initial effects of prednisone are cooling.^{7,8} This cooling effect of prednisone is one more reason that it may have been contraindicated in this dog's pattern of Yang Deficiency. Thus, such directional actions should be utilized by decreasing contradictory drugs and herbs and properly prescribing correct ones when there is an accurate TCVM Pattern Differentiation.

Foot Notes

^a*Di Yu San Sanguisorba Powder*

Di yu sanguisorba

Qian cao gen cordifolia

Huang qin scutellaria

Huang lian coptis

Zhi zi gardenia

Fu ling poria

Actions: Cools Blood, stops bleeding, clears Heat, dispels Damp

^b*Li Zhong Wan Regulate the Middle Pill*

(Product used in this clinical case was by Sun Ten Herbs and re-named *Ren Shen Tang*)

Gan jiang Zingiberis

Ren shen ginseng

Bai zhu Atractylodes

Zhi gan cao Glycyrrhiza

Actions: Warms the middle *Jiao* and strengthens the Spleen and Stomach

^c*Ba Zhen Tang Eight Treasures*

Dang Shen, Codonopsis

Bai Zhu, Atractylodes

Huang Qi, Astragalus

Fu Ling, Poria

Bai Shao Yao, Paeony

Dang Gui, Angelica sinensis

Shu Di Huang, processed Rehmannia

Chuan Xiong, Ligusticum

Actions: Tonify Qi, nourish Blood

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A Chinese Veterinary Medicine Approach to Chronic Urinary Tract Inflammation

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Chronic urinary tract inflammation (UTI) is one of the most challenging and frustrating conditions seen in small animal practice. Biomedically, chronic UTI is defined here as the recurrent or persistent bacterial infection of the urinary bladder in the absence of neoplasia, urolithiasis, concurrent disease, and or structural and functional abnormalities of the bladder. It can also include the condition of sterile inflammation of the urinary tract and absence of a documented bacterial infection. The clinical signs include dysuria, stranguria, pollakiuria, hematuria, pyuria, crystalluria, foul smelling urine, urine dribbling and pain. Chinese medicine defines urinary tract infection as *lin zheng* (dysuria syndrome) and many patterns exist; the form described here is commonly referred to as Urinary Bladder Damp Heat. The primary pathogenic factor seen in chronic UTI is Damp Heat which affects the lower *jiao* and can be generated from multiple causes which include inappropriate diet, obesity, and underlying *Zang-Fu* organ dysfunction which facilitate exogenous pathogen (bacterial) invasion of the bladder.

There are often multiple overlapping patterns responsible for the chronic nature of the disease which will vary depending on the individual animal. Chinese medicine is often effective to treat and resolve chronic UTI because it is able to accurately identify the underlying patterns of disease responsible for the development and recurrence of chronic UTI. A Chinese medicine treatment plan for chronic UTI includes herbal medicine, acupuncture and food therapy. Conventional diagnostics are typically used to monitor the condition, in addition to serial tongue and pulse evaluation. It is common to use pharmaceutical drugs in combination with Chinese

medicine to treat acute exacerbation of the disease as needed for an integrative approach.

ETIOLOGY AND PATHOPHYSIOLOGY

Conventional medicine attributes acute and chronic urinary tract infection to invasion of the urinary bladder by bacteria. In acute uncomplicated UTI a single course of antibiotics is usually sufficient to resolve the infection. However, because it is unable to recognize other contributing disease factors responsible for the development of chronic UTI, conventional treatment is typically restricted to chronic antibiotic therapy. Low dose chronic antibiotic therapy is often prescribed for the life of the animal, with an increased potential for the development of antimicrobial resistance and superinfection over time (Figure 1).

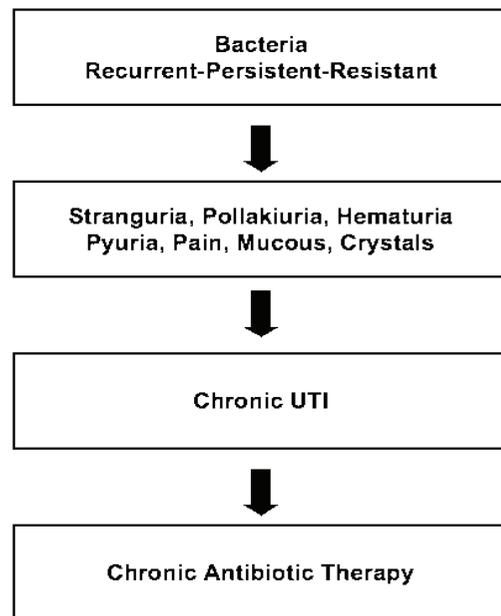


Figure 1: Conventional Medicine Mechanism and Treatment of Chronic UTI

From:
Integrative Veterinary Center, Sacramento, CA

In Chinese medicine chronic UTI is considered multifactorial in nature and develops from exogenous and endogenous causes. The basic pathophysiology seen in UTI revolves around the presence of Damp Heat. Damp Heat can result from invasion of exogenous Damp Heat pathogens (bacteria) or generated internally from *Zang Fu* organ dysfunction. Damp Heat obstructs the normal *Qi* activity of the urinary bladder resulting in stranguria, pollakiuria, pyuria, and pain. Damp Heat can transform into Fire and damage the blood vessels of the bladder causing hematuria and long term Damp Heat can congeal into crystals and stones. If the condition is not appropriately treated during the acute phase, it then becomes chronic. It should be noted that it is not necessary to have a documented bacterial infection to make a diagnosis of Urinary Bladder Damp Heat; there are animals which exhibit classic signs of cystitis and have sterile urine on laboratory evaluation.

Chronic UTI typically develops from an underlying dysfunction of the internal organs in conjunction with bacterial infection, thus there is typically a mixture of both excess and deficiency seen at presentation. The recognition and appropriate treatment of these underlying patterns in addition to the treatment of bacterial infection is essential to prevent continued development or persistence of Damp-Heat and recurrence of the disease. TCVM patterns are as follows:

- *Chronic Liver Qi stagnation* can generate *Liver Fire* and is often seen in animals that are constitutionally predisposed, chronically medicated and stressed from isolation, lack of exercise, boarding, grooming etc. When the Liver becomes stagnant and hot it can invade and over-control the Spleen impairing its normal functions with production of Damp. Heat or Fire is attracted to and combines with Damp and is then transmitted through the Liver channels in the lower *jiao*.

- *Spleen Qi deficiency* results in the accumulation of chronic Damp due to consumption of species inappropriate diets made of energetically “hot” meats (lamb, venison), large amounts of Damp-engendering processed carbohydrates (grains), dyes and preservatives, chronic antibiotic use, and as a result of normal aging. Damp readily combines with Heat in the middle *jiao* which then sinks to the

lower *jiao*. Once Damp forms it is very difficult to dislodge from the body.

- *Kidney Deficiency (Jing, Qi, Yin)* can lead to Damp Heat in the lower *jiao*; a weakness or disease of the wife (Kidney) can easily lead to a deficiency of the husband (Bladder). Poor Kidney *Jing* (genetics) can lead to overall weakness of the Kidneys and increased susceptibility to infection and poor immune function. Deficiency Fire secondary to Kidney *Yin* Deficiency can easily attract Damp. Kidney *Qi* deficiency results in urinary dribbling and incontinence and increased susceptibility to ascending bacteria. The Kidneys are the basis for the *Yin* and *Yang* of the body. Any chronic disease will eventually affect the Kidneys and lead to Kidney deficiency and increased potential for development of chronic Damp Heat in the lower *jiao*.

- *Heart Fire descending to the Small Intestine* can be easily misdiagnosed as a chronic UTI. Heart Fire can develop in animals which are constitutionally predisposed and live in stressful conditions. Pre-existing Liver Fire can also invade the Heart causing the development of Heart Fire. The Heart is in the upper *jiao*; it is the nature of Heart Fire to travel upwards to scorch the mouth and tongue and affect the *Shen*. Heart Fire also has a strong tendency to move downwards through the connecting channels to its *Fu* partner, the Small Intestine, with whom it shares an interior-exterior relationship. The Small Intestine functions in the production and excretion of urine in the body along with the Urinary Bladder and the *San Jiao*. Heart Fire descends to the Small Intestine channel and accumulates to cause Excess Heat, which then empties into the Urinary Bladder, damaging the vessels and causing hematuria. This pattern can correspond to the biomedical diagnosis of feline lower urinary tract inflammation and idiopathic renal hematuria. The primary pathogenic factor in this pattern is Heat, not Damp. Many animals will show hematuria and signs of UTI without a documented bacterial infection of the bladder. The principles of treatment for this condition are to induce diuresis which will allow Heat to exit the body with the urine, instead of focusing treatment on elimination of Damp Heat pathogens. A thorough history and examination is necessary to

accurately identify this pattern. That said, it is possible for Heart Fire descending to the Small Intestine to eventually weaken the bladder and secondarily allow the development of Damp Heat.

- *Blood Stagnation* will eventually be seen to some degree in all chronic urinary tract infections. A lack of nourishment and adequate perfusion of the bladder leads to thickening of the bladder walls and impaired *Qi* activity. In severe cases there can be tissue destruction with toxin accumulation. Blood Stagnation is commonly seen in animals with prolonged chronic UTI (especially with multiple bacteria), post-operatively after bladder surgery, with concurrent chronic disease, and in geriatric and/or obese animals. The movement or invigoration of Blood is often necessary to effectively dispel Damp from the body. “When Blood moves so will fluid” (Figure 2).

DIAGNOSIS AND OVERVIEW OF TREATMENT

For the treatment of chronic UTI to be effective, an accurate Chinese medicine diagnosis must be made; it is common to have overlapping

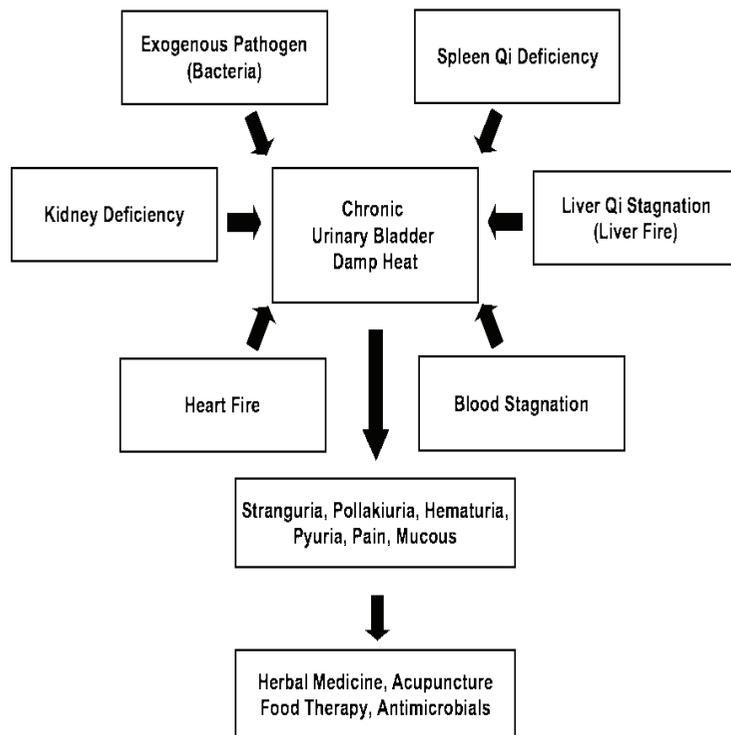


Figure 2: Chinese Medicine Disease Mechanisms and Treatment of Chronic UTI

patterns of disharmony responsible for the development of the disease and attending clinical signs. These overlapping patterns are typically a combination of excess or deficiency; in general it is best to treat excess patterns first and then deficiency.

In Chinese medicine a disease is not traced back to a single cause, but rather to a combination of body signs and symptoms that are carefully analyzed to determine a pattern. The ability to recognize patterns of illness is fundamental to the practice of Chinese Medicine. Two animals may both have the same disease according to Western medicine, but the pattern of signs and symptoms can be different in each individual and require a different treatment strategy. The most common pattern seen in long-standing infections of the urinary bladder in the dog and cat is dual deficiency of the Kidney and Spleen. These patterns commonly develop in animals that are: purebred and Kidney *Jing* deficient, fed a species-inappropriate diet or overfed, not regularly exercised (weakens the Spleen), kept isolated for long periods of time (stress-induced), confined indoors or in conditions which necessitate holding their urine for prolonged periods of time.

The process of normal urination flushes out ascending bacteria and debris within the urinary tract. Any situation which prevents regular micturition and the healthy flow of urine can weaken the kidney and bladder and facilitate the development of UTI. The Kidney (the source of prenatal *Jing*) and Spleen (the source of postnatal *Jing*) mutually support and protect each other; when one is weak the other will soon follow. Most diseases of the Kidney will affect the Spleen because of this relationship and vice versa. Deficient Kidney and Spleen results in the continued accumulation of Damp and failure to produce adequate amounts of *Qi* and *Yin*-Blood to nourish the body and support the immune system. Ultimately these factors can promote bacterial colonization of the bladder. A broader discussion of the patterns of chronic UTI is beyond the current scope.

In chronic infections of the urinary tract, Damp Heat eventually consumes *Qi*, *Yin* and Blood. Therapy

should be directed toward replacing these substances and nourishing the organs responsible for their production. The use of Chinese herbal medicine is indispensable for this purpose. In all chronic cases it is necessary to tonify the Spleen to prevent Damp accumulation and to "feed the Kidney" and conserve pre-natal *Jing* to some degree. During acute exacerbations of the disease, it is often necessary to use conventional drugs to control and or eliminate bacterial infection of the bladder. Chinese herbal medication may be safely combined with conventional medicine as needed with modification. In the time intervals between active bacterial infections, the management of chronic UTI should focus on the pattern (or patterns) of disease that are primary at the time of reevaluation i.e. "treat what you see".

The effective treatment of chronic UTI includes the control and resolution of the sources of Damp Heat. Once Damp Heat has been cleared and the body is strengthened, further bacterial invasion will be prevented and the opportunity to resolve the condition emerges. Specifically, this requires the tonification of Kidney and Spleen, resolution of Liver *Qi* Stagnation, clearing of Liver Fire, Heart Fire, exogenous pathogens, and resolution of Blood stagnation. A Chinese medicine treatment plan may include the use of herbal medications, acupuncture, food therapy, and conventional medications as needed. Antibiotics are energetically cold and bitter and effectively clear Heat. Chronic antibiotics easily injure the Spleen, cause Liver *Qi* stagnation, and negatively impact the normal bacterial flora of the gastrointestinal and urinary tracts. Acute UTI often becomes chronic because residual Damp is not cleared and/or continues to be produced. The use of cold, bitter herbal medications should be undertaken carefully in weak patients. This is especially true if the animal is already on long term antibiotic therapy and on a prescription diet.

Tonify the Spleen to improve *Yun-hua* function.

This promotes production of *Qi* and Blood, strengthens the immune system, prevents Damp accumulation, and nourishes the Kidney.

Tonify the Kidney to improve *Qi-hua* function which prevents and controls incontinence, supports the Spleen, and prevents re-infection.

Move and tonify *Qi* and Blood as needed to treat

and prevent Blood stagnation. It is critical to regularly monitor urine and blood parameters (in addition to serial tongue and pulse evaluation) to modify or change existing herbal, acupuncture and food therapy treatment plans.

Acupuncture as a sole therapy is typically unable to resolve chronic UTI. Acupuncture is commonly used for gastrointestinal upset, pain relief, strengthening the immune system and to help restore normal organ function. The use of herbal medications and acupuncture in combination is superior to using either therapy alone in the treatment of chronic UTI. Chinese herbal medicine and appropriate diet are essential for the prevention, management, and/or resolution of chronic UTI.

Chinese food therapy and nutritional supplement plans are an integral part of treatment. They are specifically designed to treat the individual animal and pattern of disease present just as herbal medicine and acupuncture are. In general, a diet is formulated which will nourish *Qi*, *Yin*-blood, drain Damp and promote normal healthy urination. The longer the UTI has been present, the more difficult it will be to manage and or resolve. Therapy is often prolonged and client education is essential in this regard. Unless appropriate treatment is given for the prescribed period of time, clinical signs will recur. In general, it can take four to six weeks to see the beneficial effects of Chinese medicine and up to one year to resolve chronic urinary tract infection.

SUMMARY

Although not a panacea, Chinese medicine should be considered for the management and treatment of chronic urinary tract infection. A Chinese treatment regimen for chronic UTI includes herbal medicine, acupuncture and dietary therapy. Chinese medicine is able to recognize and treat the root causes of chronic urinary tract infection to resolve the condition and avoid lifelong administration of antimicrobial therapy. Treatment is often prolonged due to the chronic nature of the disease, and once therapy has begun, it must be continued for an appropriate length of time to achieve success. Chinese herbal medication may be safely combined with conventional medicine to control acute exacerbations of chronic UTI as needed. The long term prognosis for the resolution

of chronic UTI is good using Chinese medicine in an integrative approach.

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