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Gout Treatments

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Treatment of Gout

Introduction

Called the "disease of kings," gout is a disease that may have changed the course of history. As early as 2640 BC, the Egyptians were describing the condition we now call gout. Later, Hippocrates referred to podagra (gout of the first metatarsophalangeal joint) as the "unwalkable disease." Throughout history, gout has been associated with an opulent lifestyle. For centuries, it was mainly the privileged who could afford to consume the rich foods and excessive alcohol associated with gout or hyperuricemia. Therefore, it was the rich who typically suffered from gout. So, how could a disease like gout possibly have changed the course of history?

In 1528 shortly after Spanish conquistadors conquered the Incan and Aztec empires of the New World, 28 year old King Charles I of Spain, who also suffered from epilepsy, experienced an acute bout of gout. Most likely, he celebrated the New World conquests with excessive alcohol. It is documented he also enjoyed consuming rich foods and meat. In 1530 at the age of 30 years, King Charles I inherited the title Holy Roman Emperor and the Hapsburg throne from his grandfather, Maximillian II. King Charles I of Spain, as a consequence of his inheritances, became a very influential European ruler at a relatively young age. Overtime, however, his gout condition became worse and to the point where he couldn't lead his armies into battle. By 1552, his gout condition was so severe that he postponed a campaign to recapture Metz, a Flemish city. Eventually, the gout situation became severe enough for King Charles to ask his son, Prince Philip II, to lead Spanish military forces into battle. In 1556, Charles abdicated his throne. As history records, Charles retired to the Monastery of Yuste, where he lived in solitude until contracting malaria and dying in 1558.

At the Museo del Prado (Madrid, Spain), a painting by Eduardo Rosales depicts Charles, King of Spain Charles I and Holy Roman Emperor Charles V seated in a chair with his right leg elevated and resting on a pillow. History documents King Charles eventually had a special chair with a footrest built for his problematic foot. Instead of a special chair, Charles would have been better off modifying his diet.

Section 1 - Western Biomedicine

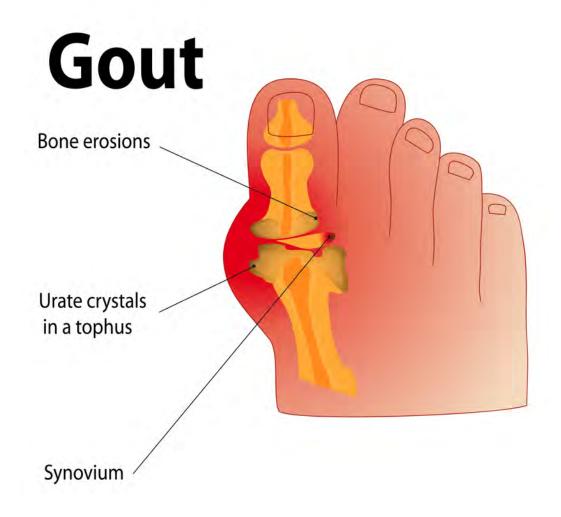
Mechanism:

Gout or gouty arthritis is a metabolic disease involving abnormally high levels of urates in the body. Gout is closely associated with hyperuricemia. Hyperuricemia is the term for elevated serum levels of urate or uric acid, and it can manifest as a primary or secondary disease. Primary hyperuricemia or primary gout involves increased production of purines either idiopathically or due to an enzyme defect. Purines metabolize into uric acid. Secondary hyperuricemia or secondary gout involves increased catabolism and turnover of purines. In both primary and secondary diseases, decreased renal clearance of uric acid occurs. Gout disease includes several conditions:

- Acute gouty arthritis with severe joint inflammation
- · Crystals or tophi in the bones or soft tissue
- Gouty nephropathy (a Kidney disease)

In general, the disease occurs because of overproduction and/or excretion of uric acid and buildup of urate. Either too much uric acid is being produced or the kidneys are not properly handling what is produced. Uric acid is a metabolite of amino acids. Normally, about two thirds of the uric acid produced by the body is excreted in urine. The rest of the uric acid is eliminated through the digestive system. When the kidney does not clear urate or uric acid properly, the serum or blood levels increase. In this case, the uric acid is often eliminated through the digestive system. However, when the digestive system fails to excrete uric acid, the excess metabolite forms as urate crystals throughout the body. The urate crystals are needlelike and often deposit in joints. Gout can occur anywhere in the body, such as the fingers, insteps, heels, wrists, and knees. The most common location for gout is in the first metatarsophalangeal joint (the big toe).

A relationship between diet and gout has been well established. Excessive alcohol, rich foods and particularly organ meats seem to trigger the disease. Purine-rich fish and meats (e.g., shellfish, kidneys, and liver) seem to contribute to gout more so than other types of meat products because the body has difficult metabolizing the purine. Medications like immunosuppressant drugs, diuretics, and even low dose aspirin can also trigger gout. Because gout is often caused by rich foods, it is called the "the rich man's disease" or "disease of kings."



Incidence:

Gout occurs mostly in men over 30 years of age. Only about 10% of those affected are women, and in women, rarely does it strike before menopause. The condition is also more common in obese people, Pacific Islanders, individuals with a family history, and persons suffering from the following other conditions:

- Kidney failure
- Hypertension
- Hyperlipidemia
- Diabetes
- Blood diseases

Diagnosis:

Gout usually manifests as abrupt pain, redness, and swellings. The pain may be debilitating, and attacks may last for days and or even weeks. After an initial attack, gout can recur following an asymptomatic period. Gout complications can include:

- Permanent joint deformity (degenerative joint disease)
- Joint fractures
- Secondary infections
- Nerve impingement
- Renal stones
- Urate or uric acid nephropathy

Western diagnosis usually involves blooding testing, synovial fluid analysis, and a 24-hr composite urinalysis. *The doctor will look for elevated uric acid levels and symptoms.* If the uric acid levels are elevated the patient will be given medication to lower the levels. If the levels are slightly elevated but the patient is asymptomatic, the patient usually may not be treated to lower the levels. Besides serum and urine testing, other tools may also be used in the diagnosis. Imaging such as radiography, ultrasonography, magnetic

resonance imaging, and computed tomography are common.

During testing, patients should follow a normal diet and avoid eating any purine meats. The doctor will evaluate the results of the urine and blood samples determine if the patient is overproducing uric acid or urate. Hyperuricemia is closely related to development of renal stones, and about 5 - 10% of gouty arthritis patients have uric acid kidney stones.

Serum Values

The serum value for elevated uric acid is >7.4 mg/dL. The urinalysis value for overproduction of uric acid is >800 mg excreted in a 24-hour period with a regular diet. Patients who excrete >1100 mg of uric acid over the 24-hr period require additional renal evaluation. Patients who have a serum value greater than 11 mg/dL *and* over-excretion are at high risk for developing renal problems, including stones and impairment. These patients require further evaluation.

Treatment:

Western biomedical treatment of gout often involves resolving and preventing acute attacks. An emphasis is placed on managing the pain and inflammation. The physician may also seek to correct high serum levels of urate and inhibit further deposition of urate crystals in bodily tissues. Usually, high serum levels of uric acid, joint destruction, and kidney problems are treated after relieving any pain or inflammation.

The patient may be prescribed various medications for gout. Non-steroidal anti-inflammatory drugs (NSAIDS), such as ibuprofen, may be given for acute gouty arthritis. Chronic gout or elevated serum uric acid levels may be treated with a variety of drugs including, but not limited to, allopurinol, feboxostat, and oruricase.

Colchicine or low-dose NSAIDs may be given as a prophylaxis in some cases. Oral corticosteroids, such a low-dose prednisone, may also be given

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to the patients that cannot take colchicine or lower dose NSAIDs. Vitamin C therapy has been shown in some studies to reduce serum uric acid levels. However, it is contraindicated in patients with nephrolitiasis, urate nephropathy, or cystinuria.

While pharmacological treatments are effective in treating gout, education is the **key** to managing and preventing the disease. Lifestyle changes are essential. According to the American College of Rheumatology, gout patients can have a good prognosis if they do several things:

- Maintain an ideal body weight
- Consume alcohol in moderation
- Avoid purine-rich meats and fish
- Avoid sugary and greasy (rich) foods

Common Foods with High Purine Content

Anchovies Grains Herring Kidneys Liver Mackerel Mussels Sardines Sweetbreads Yeast

Common Foods with Slightly Elevated Purine Levels

Asparagus, Bacon, Beef, Bluefish, Carp, Cauliflower, Chicken, Codfish, Crab, Duck, Goose, Halibut, Ham, Kidney Beans, Lamb, Lentils, Lima beans, Lobster, Mushrooms, Mutton, Navy Beans, Oatmeal, Oysters, Peas, Perch, Pork, Rabbit, Salmon, Sheep, Shellfish, Snapper, Spinach, Tripe, Trout, Tuna, Turkey, Veal, Venison

Section 2 - TCM Treatment of Gout

Mechanism:

As a general rule of thumb, gout should be treated as a damp-heat condition. Poor diet and excess alcoholic beverage intake create damp and heat conditions that obstruct the Qi flow through joints. The function of the Spleen may be poor because of rich greasy foods and its ability to transform fluids is impaired. Diet and alcohol can also create damp-heat conditions in the urinary tract and Kidneys. In this case, the San Jiao, Kidney, and Urinary Bladder's ability to handle turbid fluids is impaired. In both patterns, fluid transformation is impaired. Heat may be encased in dampness. With gout, consider treating based on these two patterns:

- Damp-heat Painful Obstruction Syndrome Gouty Arthritis (Bi Gouty Arthritis)
- Urinary Painful Obstruction Syndrome Gout (Lin Gout)

Diagnosis and Treatment:

Differentiation is important for the two types of gout. So, before treating the case, the acupuncturist should determine if the patient is suffering more from a bi (joint) obstruction or urinary painful obstruction. Both cases involve damp-heat, but the acupoints used will differ. Also, the herbal formulas will differ.

- Damp-heat Bi Gouty Arthritis: Initial acute attack or recurrent attacks, fixed pain, swelling, redness at a joint, obesity or overweight, dull complexion, scanty urine, dark urine, feeling of general heaviness, nausea, poor appetite, bloating
 T – Normal color or red with gray or thick, yellow greasy coat
 P – Slippery, wiry, fast
- Lin Gout: Recurrent attacks, severe lower back pain, burning with

urination, scanty urination, difficult urination, may discharge sand or stones, may have constipation, thirst for cold drinks, may have no desire to drink, nausea, no appetite, may be irritable

- T Red color or thick, yellow greasy coat (especially in the rear)
- P Slippery, wiry, fast

Acupuncture Treatment and Point Analysis:

This section covers specific and basic points for treating the two gout patterns. Some basic points for either pattern include:

- ST 40 Luo Connecting point, resolves dampness and phlegm, calms the mind, treats any swelling anywhere in the body
- SP 6 Tonifies the Spleen and Stomach, resolves dampness, harmonizes the lower jiao, unblocks channels, stops pain
- SP 9 Resolves dampness (especially in the low burner), treats edema, alleviates retention of urine
- GB 34 Promotes the smooth flow of Qi, resolves damp-heat, relaxes sinews, unblocks the channels, treats bi syndrome pain
- LI 4 Unblocks the channels, treats pain anywhere in the body
- LI 11 Resolves dampness, clears internal heat, cools blood, benefits the sinews and joints

Specific treatment plans are as follow:

- 1. *Damp-heat Bi Gouty Arthritis*: Clear the heat, resolve dampness, promote Qi and blood circulation; stop pain (by promoting Qi and blood circulation).
 - SP 2 Local point for gout, clears excess heat (Ying Spring point)
 - SP 3 Resolves dampness in the three burners (San Jiao)
 - SP 10 Removes blood stasis, cools blood

- UB 17 Removes blood stagnation anywhere in the body
- Ba Feng Local point for gout, clears heat, reduces swelling
- 2. *Lin Gout*: Clear heat, promote urination, stop pain (relax body tissues)
 - ST 28 Opens water passages of the lower burner, promotes urination
 - HT 8 Treats difficult urination and dark urine, clears heat in the Heart, calms the mind
 - Ren 3 Regulates bladder function, clears heat, treats urinary problems (Note: Ren 4 treats Kidney disorders)
 - Ren 9 Controls the water passages, use for damp or phlegm conditions anywhere in the body, treats retention of urine or fluids in the body as opposed to generalized dampness (e.g., brain fog)
 - UB 22 Resolves dampness, opens water passages, local point for lower back pain
 - UB 28 Regulates the bladder, resolves dampness, opens the water passages, clears heat, stops pain, strengthens the lower back pain
 - UB 63 Clears heat, great for acute bladder problems
 - KD 2 Clears deficiency heat primarily, also can be used to clear excess heat (especially lower burner heat)
 - LV 3 Promotes the smooth flow of Qi, calms mind, treats urinary retention, local point
 - LV 4 Promotes the smooth flow of Qi (especially in the lower burner), treats urinary difficulties accompanied by Liver Qi stagnation

Herbal Medicine

Xuan Bi Tang

(Disband Painful Obstruction Decoction)

Xuan Bi Tang is a traditional formula for damp-heat painful obstruction originally described in the *Systematic Differentiation of Warm Diseases* (Wen Bing Tiao Bian). This text dates back to the 18th century and was written by Wu Ju-Tong. Besides expanding on previous works which covered differentiation of diseases, a special feature of *Systematic Differentiation of Warm Diseases* of this text described the three-burner system of diagnosis.

Dampness obstructs the channels, and when treating dampness, it is also important to address all three burners. *Xuan Bi Tang is a great choice for damp-heat bi gouty arthritis*. Ba Zheng San is better for Lin Gout.

Xuan Bi Tang not only unblocks the channels and clears the damp-heat, it also stops the pain. Its chief herb, Guang Fang Ji enters all three burners and helps to release the heat externally. **Xuan Bi Tang is commonly used along with the damp-heat formula Er Miao San (Two-marvel decoction).**

Avoid Adverse Reactions

A difficulty exists with the use of Guang Fang Ji. Guang Fang Ji (Radix Aristolochiae Fangchi) is cold, bitter, and pungent. It promotes urination and expels wind damp bi pain. Guang Fang Ji contains aristolochic acid and is therefore considered toxic and is to be avoided. It is advised to use Fen Fang Ji (Radix Stephaniae Tetandrae), which is not toxic, and is regarded as safe for medicinal use. Substitute Guang Fang Ji with the preferred Fen Fang Ji. Guang Fang Ji may be illegal for internal consumption in some areas.

Similarly, the diuretic herb Guan Mu Tong has similar toxicity issues and it

is to be avoided. Chuan Mu Tong (Caulis Clematidis Armandii) strongly promotes urination, promotes lactation, and treats bi pain by unblocking blood stagnation in the channels. Chuan Mu Tong treats damp-heat, bloody, and stone dysuria. Chuan Mu Tong contains no aristolochic acid and is therefore considered a safe herb for medicinal use. Guan Mu Tong (Caulis Aristolochiae Manshuriensis) is toxic because it contains aristolochic acid.

Ingredients and Functions

The *traditional* ingredients for Xuan Bi Tang are:

- **Guang Fang Ji**, Radix Aristolochiae Fangchi, 15 g: Guang Fang Ji is the chief herb. This herb stops pain and treats dampness in all three burners. It dispels damp-heat in the upper burning by releasing or venting the heat externally. In the middle burner, it dries dampness and tonifies the Spleen. In the lower burner, it drains damp-heat through the urine and reduces swelling. Use Fen Fang Ji (Radix Stephaniae Tetandrae) as a substitute because it is non-toxic.
- *Xing Ren*, *Semen Pruni Armeniacae*, 15 g: Xing Ren helps by regulating the Lung's function of water metabolism. It is one of the three deputies in the formula.
- **Yi Yi Ren**, Semen Coicis Lachryma-jobi, 15 g: Yi Yi Ren and Can Sha work together to resolve dampness, tonify the Spleen, and treat painful obstruction. It is another one of the three deputies in the formula.
- **Can Sha**, Excrementum Bombycis Mori, 9 g: Can Sha and Yi Yi Ren work together to resolve dampness, tonify the Spleen, and treat painful obstruction. It is the third of the three deputies in the formula. Ensure that patients are amenable to the use of animal products prior to use.
- **Ban Xia**, *Rhizoma Pinelliae Ternatae*, 9 g: Ban Xia is a major herb for eliminating phlegm and dampness. It dries dampness and transforms turbidity.
- Lian Qiao, Fructus Forsythiae Suspensae: Lian Qiao clears heat

and toxins.

- *Hua Shi, Talcum*, 15 g: Hua Shi works with Zhi Zi and Chi Xiao Dou to clear heat and drain dampness through the urine. Hua Shi clears qi level heat. These three herbs also assist the chief herb in ridding the body of heat and dampness through the urine. **Note: Hua Shi a very cold herb and should be used with caution.**
- **Zhi Zi**, Fructus Gardeniae Jasminoidis, 9 g: Zhi Zi works with Hua Shi and Chi Xiao Dou to clear heat and drain dampness through the urine. These three herbs also assist the chief herb in ridding the body of heat and dampness through the urine.
- **Chi Xiao Dou**, Semen Phaseoli Calcarati, 9 g Chi Xiao Dou works with Zhi Zi and Hua Shi to clear heat and drain dampness through the urine. These three herbs also assist the chief herb in ridding the body of heat and dampness through the urine. Chi Xiao Dou dosage may be increased as much as three times the amount listed here.

Combinations

Xuan Bi Tang formula can be combined with Er Miao San for clearing heat and draining dampness as mentioned above. Er Miao San contains:

- Huang Bai, Cortex Phellodendri, 9 12 g
- Cang Zhu, Rhizoma Atractylodis, 6 9g

If the pain is severe, the following herbs may also be added to Xuan Bi Tang:

- Sang Zhi, Ramulus Mori Albae
- Jiang Huang, Rhizoma Curcumae Longae
- Hai Tong Pi, Cortex Erythrinae

At the Healthcare Medicine Institute, we publish news and research for acupuncturists. The service online at healthcmi.com is free and provides information about the most recent advances in acupuncture and herbal medicine. The following is from a news article and the title of the article is *Fight Gout with Acupuncture - New Research*.

Researchers conclude that acupuncture is effective for the treatment of gouty arthritis. A meta-analysis of ten studies with a total of over 850 test subjects reveals that acupuncture helps to reduce uric acid levels for patients with gouty arthritis. In addition, subjects demonstrated clinical improvements by means of the visual analogue scale.

Acupuncture Needles

Historically, acupuncture has been documented to treat several forms of arthritis including osteoarthritis, rheumatoid arthritis and gouty arthritis. The new research, taken from controlled trials, investigated the measurable effects of acupuncture on uric acid levels. In gouty arthritis, elevated levels of uric acid in the blood lead to its crystallization in the tendons, joints and sinew. This triggers a powerful and often painful inflammatory response. The great toe is often affected at the metatarsal-phalangeal joint. Biomedicine treatments for gouty arthritis include medications including steroids, colchicine and nonsteroidal anti-inflammatory drugs. The new research concludes that acupuncture is an effective complementary modality to biomedical treatments.

Biomedicine physicians and Chinese medicine licensed acupuncturists both recommend dietary modifications for patients who are prone to gouty arthritis inflammatory episodes. Dietary causes account for over 10% of gouty arthritis attacks. Specific foods tend to trigger this type of gout, especially those with high levels of purine. Foods high in purine include organ meats, sardines, anchovies, mackerel, liver, scallops, mussels, herring and yeast. Alcohol and fructose sweetened foods are also associated with the triggering of gout. Many vegetables contain purine but vegetable source purine acts differently upon the body and does not contribute to gout. Although dairy products contain purine, they have been shown to reduce the incidence of gout. The new findings are complemented by additional research demonstrating that electroacupuncture reduces the inflammation and damage to joint cartilage associated with arthritis. The research demonstrates that the application of electroacupuncture reduces articular joint degeneration. The level of joint cartilage preservation was confirmed with X-ray imaging.

There is an aging populace in the USA with a high prevalence of joint damage due to arthritis. Gouty arthritis affects approximately 2% of the population. The good news is that gout is treatable. Manual and electroacupuncture have proven to be an important part of a treatment regime to help prevent and treat gout.

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