

Vietnamese Medicinal Plants Useful in Treatments of Gout

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ABSTRACT

Gout is a metabolic pathology associated with an increase in the concentration of uric acid in the blood, characterized by episodes of acute arthritis or chronic arthritis caused by deposition of mononatri urate crystals in joints and connective tissue. Long ago, gout was considered a rare disease and a disease of the rich. Since the early years of the 21st century, the incidence of gout and increased uric acid is increasing rapidly around the world. Clinical manifestations of the disease, the age and gender of the patient, related diseases, response to treatment, adverse consequences of the disease, its association with cardiovascular disease, kidney disease, etc. There are many changes in the negative direction that make the disease become incurable in many patients. Even in developed countries, the disease is not managed and monitored closely, increasing the rate of illness, death, disability and quality of life. The article focuses on the causes, manifestations of gout and, most importantly, the introduction of some herbs used in Vietnam. The scientific components, its effective effects have been confirmed by some documents and trusted by patients.

Key words: Gout, Medicinal herbs, Health, Treatment.

INTRODUCTION

In Vietnam, there have been many topics on gout done, however, these topics mainly focused on the medical aspects of the disease. So far, there have not been many studies evaluating the selection and use of gout drugs appropriately. In fact, gout from arthritis can be cured by using long-term blood uric acid reducers in combination with lifestyle and diet changes. Most important is the awareness of both physicians and patients about the importance of the disease, the role of treatment, monitoring and control of gout and related diseases as well as the role of achieving and maintaining are uric acid target.

OVERVIEW OF GOUT

Definition of gout

Gout is a metabolic pathology associated with increased blood uric acid levels. The disease is characterized by episodes of acute or chronic arthritis caused by deposition of mononatri urate crystals in joints and connective tissue. This crystal is also at risk of deposition in the interstitial kidney causing kidney stones due to increased uric acid. From the increase in blood uric acid to the first gout can last 20-30 years and about 10-40% of gout patients have renal colic before arthritis.¹

Gout is a disorder of the metabolism of purines in the kidneys, making it impossible for the kidneys to filter uric acid from the blood. Uric acid is usually harmless and is formed in the body, which is then excreted in urine and feces. For people with gout, the amount of uric acid in the blood builds up over time. When this concentration is too high, small crystals of uric acid are formed. These crystals collect in joints and cause inflammation, swelling and pain to the patient.²

Gout is characterized by recurrent episodes of acute arthritis, where the person often experiences sudden pain during the night and redness of joints when an acute flare occurs, especially in the big toe joints, but can also affects other joints in the legs (such as knees, ankles, feet) and is less common in the joints of the hands (hands, wrists, elbows), the spine may also be affected.

In people with increased uric acid alone, up to 40-50% become gout. Gout occurs primarily in men but recently the incidence in women tends to increase.² Currently, the rate of men / women infected is 3 - 4/1. The age of the disease is mainly in the middle age to the middle age for men and in the postmenopausal period for women. The incidence increases with age, accounting for 7% in men over 65 and 3% in women over 85. The onset of illness at a younger age (20 - 30 years) is increasing, with a significant proportion (5 - 7%). The younger a person becomes sick, the more severe the disease is.³

The overall incidence of the disease worldwide is 1 - 10% and varies considerably between countries. High incidence (about 10%) is common in developed countries such as USA, Canada, Greece, UK, Spain, Netherlands, Australia, New Zealand, Taiwan, Hong Kong and Singapore. In particular, the country with the highest incidence is Taiwan (male 9.5%, female 2.8%), followed by the US (male 6%, female 2%) and New Zealand (male 6%, female 2%). In some countries, such as the Czech Republic and South Korea, the incidence is very low (less than 1%). Currently, Vietnam has not published the general incidence of disease and only a few small studies have estimated the number and proportion of gout patients in the population.⁴

Stages of gout

While gout can be stressful, painful and insomnia,

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gout is benign and can be controlled with medication and exacerbated by dietary changes.⁵ Based on the severity, gout is divided into 3 stages:

Stage 1: blood uric acid levels have increased but symptoms of gout have not yet appeared. Typically, patients only notice the first symptoms of gout after kidney stones.

Stage 2: uric acid concentration is very high at this time, leading to the formation of crystals appearing on the toes (nodules). Nodules usually present slowly, tens of years after the first gout, but sometimes earlier. When present, it is easy to increase in quantity and mass and can ulcerate. Nodules are often seen on the cartilage cartilage then to the elbows, big toes, heels, instep and heel tendons. During this stage, the person will feel joint pain but the pain will not last long. Some time later, the person will experience other symptoms of gout with increasing intensity and frequency.

Stage 3: the symptoms of the disease will not go away and the uric acid crystals will attack many joints. Most people with gout are only in stage 1 or 2, very rarely people with advanced disease through stage 3 gout symptoms were properly treated in stage 2.

Symptoms of gout

Many people notice the first symptom of gout is intense pain and swelling in the big toe. Symptoms of gout may also appear in other joints like ankles or knees. Gout usually affects one joint at a time, but if left untreated it can lead to other problems. Excess uric acid in the body builds up under the skin, around joints, forming nodules or kidney stones. Gout is also associated with other serious health problems like high blood pressure, diabetes, chronic kidney disease and cardiovascular disease.⁶

People at risk for gout

The following cases with risk factors are more likely to develop gout. The first is genetic factors. If our family has a member with gout, then we are more likely to get gout.⁷ Secondly, the disease is related to health problems. High cholesterol, high blood pressure, diabetes and heart disease may increase the risk of gout. The next is the use of drugs such as medications to treat high blood pressure that can increase the concentration of uric acid in the body. Some medications that suppress the immune system, which people with rheumatoid arthritis, psoriasis, or transplant recipients use, also increase the risk of gout. Besides, gender and age are also factors. Men are more susceptible to gout than women, except for menopause. The curling diet also affects the disease. Eating red meat and seafood (certain types of fish and shellfish) also increases the risk of gout. If we keep a habit of drinking alcohol and sugary drinks like soda, drinking lots of alcohol every day can also increase the risk of gout.⁵

DISCUSSION

Gout is a metabolic pathology associated with increased blood uric acid levels. Although gout is considered a treatable joint disease, it is, in fact, an unmanaged disease in many countries, including developed countries.⁸ Gout is also not closely managed and monitored such as hypertension or diabetes while the treatment principles, benefits of control and the unchecked consequences of these conditions are similar. Increasing gout is a cause of increased morbidity, mortality and reduced quality of life.

The great effect of *gomphrena celosioides*

Gomphrena celosioides cure gout is a remedy that has been widely circulated recently. These plants are being studied by some countries because they contain some anti-inflammatory, antipyretic and detoxifying active ingredients such as steroids, glycosides, alkaloids

and flavones.⁹ Because there are not many reliable research materials, so it can not be said to completely cure gout and diabetes (Figure 1).

Research results on this herb in Vietnam show that *gomphrena celosioides* is toxic, not completely harmless. The results of this research also coincide with many other studies in the world when studying on *gomphrena celosioides*. World medicine has recorded the water and alcohol extract of *gomphrena celosioides* with antimicrobial effect on three bacteria strains including *escherichia coli*, *pseudomonas aeruginosa* and *staphylococcus aureus*, some fungi and helminths. However, studies have also shown that this plant has toxins for cattle and humans. If people eat a lot, they will show signs of poisoning, which is often tremor of muscle, dizziness, disorientation, depression, fear of light, people become mentally depressed and easily die.⁹

Treatment of gout with *piper sarmentosum*

In contrast to *gomphrena celosioides*, *piper sarmentosum* has very special uses. One of the most common ways to treat gout in Eastern medicine in general and Vietnam in particular is to use leaves of *piper sarmentosum*. The reason why it is used rather popular is due to its analgesic, antibacterial and anti-inflammatory properties.¹⁰ In fact, it is often decocted into oral medicine, or used to soak feet (Figure 2).

Patients can use 5-10g dry *piper sarmentosum* leaves or 15-30g fresh *piper sarmentosum* leaves with 2 cups of water, cook until it



Figure 1: The image of *gomphrena celosioides*.



Figure 2: The image of *piper sarmentosum*.

concentrated in about half a cup, then take this condensed water to drink after dinner. Patients need to use continuously for 10 days.

Piper sarmentosum has great effects, but people who have stomach pain, heat rash, constipation should limit use. If these people use *piper sarmentosum*, the disease gets worse. In addition, according to folk experience, breast-feeding women will lose milk if using *piper sarmentosum*. Patients should only use 50g / day. The effectiveness of palm leaf treatment depends on the location and health status of each person.¹⁰

Simple remedy from brassica juncea

Brassica juncea are more spicy and aromatic than other types of *brassica juncea*. According to oriental medicine, *brassica juncea* are alkaline vegetables, almost no purines, have a very good effect in detoxifying, clearing body heat.¹¹ *Brassica juncea* is also very diuretic, helping to eliminate uric acid from the body so it is considered as one of the effective methods to treat gout. Many studies also show that *Brassica juncea* contain a lot of vitamins A, B, C, K, nicotinic acid, abumin, catotene, etc. which have very good effects on health. So patients can eat *brassica juncea* daily to prevent disease effectively (Figure 3).

To treat gout, patients need to prepare a bunch of *brassica juncea*, wash, drain, then cut into small pieces and put in a pot to cook for drinking water daily, instead of mineral water. *Brassica juncea* has a bitter taste, however, they can drink *brassica juncea* continuously for several weeks to see good results. In addition, they can eat *brassica juncea* daily as well.

Green beans (also called *vigna radiata* or mung bean) in the treatment of reducing gout joint pain

Green beans are easy to find and are natural foods which are effective in treating gout.¹² Because of the high content of green beans, it helps slow down the absorption of protein, reduces the degradation of protein metabolism to generate energy, so the formation of uric acid in the body - the factor that causes gout. In particular, green beans have a high thermal, anti-inflammatory effect, so they should be added to the menu every day to reduce inflammation caused by gout (Figure 4).

We can use green bean to treat the disease since it is really effective for gout. Green beans need to be washed, simmered with water, and remember not to add any spices during cooking. After simmering, let



Figure 4: The image of green bean.

cool each morning with a small bowl after waking up and the evening before bedtime. Patients can eat continuously for 30 days. When applying this folk remedy, it should be noted that green beans have the effect of lowering blood pressure, so during the treatment process, blood pressure should be monitored closely.

Treating gout by using betel leaves

Research shows that betel leaf helps to reduce the amount of uric acid in the blood slowly so it is safe and effective. The essential oils inside betel leaves such as eugenol, chavibetol, chavicol and estragol. It can help fight arthritis, support recovery of damaged joints, it also helps improve metabolic disorders, stimulate elimination toxins in the body. In addition, betel leaves also have analgesic effects. Therefore, betel leaves are used as drugs to control gout in Vietnam many years ago.¹³

For people with gout, the use of remedies from betel leaves is extremely effective. Because betel leaves help restore joints, in addition it has many effects to reduce nerve pain caused by gout. Betel leaf is one of the Southern herbs (of Vietnam) to support effective gout treatment. Because this leaf contains 2.4% of essential oil, it acts as an effective natural anti-inflammatory (Figure 5).

In addition, betel leaf also works to improve metabolic disorders in the body, thereby helping the body absorb minerals and vitamins better. At the same time, it also helps eliminate toxic waste easily. Therefore, betel is also considered as a panacea to treat gout extremely effectively. Every morning when patients wake up, they only need to use 100g of fresh betel leaves, finely chopped and then soaked in a coconut, then just wait for about 30 minutes and then drink it.

RECOMMENDATIONS

It is necessary to regularly update new treatment guidelines, organize training and advanced training on gout, the drugs used in the treatment of gout, and the importance of acid administration and administration of blood uric to the target level in the treatment of gout. Today, as medicine has developed, many effective medicines have been created to combine with the traditional folk remedies to improve the ability and effectiveness of treatment. With chronic and difficult-to-treat diseases such as gout, the combination of remedies as well as diet and abstinence

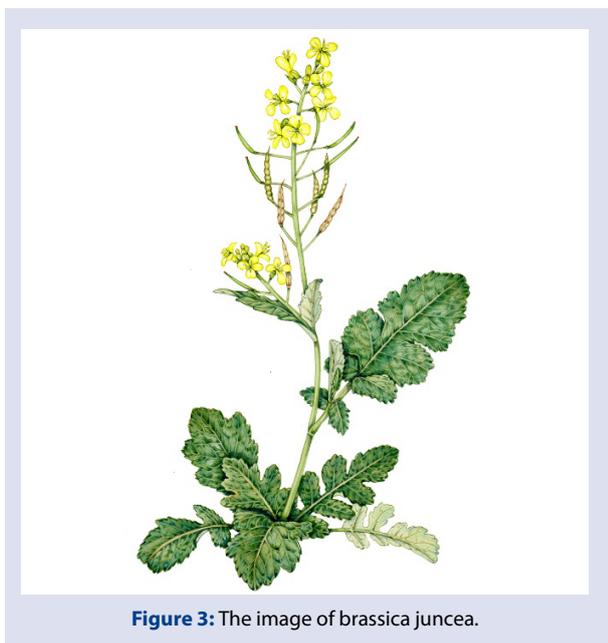


Figure 3: The image of brassica juncea.



Figure 5: The combination of coconut juice and betel leaves.

is becoming increasingly important, considered a key to improving the condition as well as improving health.

For many people and many types of illnesses, folk remedies become a miracle remedy, the belief in this remedy is greater than other scientific therapies. And gout disease causes inflammation of the joints due to problematic elimination of the kidneys, causing inflammation of the joints that is very tired and miserable, causing many inconveniences in daily life. Gout usually occurs in men who are over the age of 40. But now, the level of this disease is decreasing in age in Vietnam due to eating lots of protein and drinking lots of alcohol for a long time.¹⁴

Currently, there are many gout medications but it is difficult to treat this disease and if not treated promptly, it will cause complications of joints, tissues, blood vessels and the overall aesthetic of the patient. Here, we understand that folk remedy that does not take much effort and money, but is also easy to find and is a homegrown medicine that anyone can cure. People with gout have to live with long-term illness, the disease does not cause immediate death but the pain that it brings is persistent affecting the lives of patients.¹² For patients who have been diagnosed with gout, certain medications will be indicated for the treatment of acute gout attacks. However, using pain relievers to cut acute gout attacks, or using medications to treat this disease in an uncontrolled manner will make gout much more worse.

Gout develops in 10-20 years. In the final stage, the patient is unable to exercise, has many kidney complications, gradually weakens, and can lead to death. To prevent and limit the development of gout, it is necessary to abstain from alcohol and stimulants such as coffee or chili. Patients should limit beer and protein foods such as red meat, animal organs, and seafood.¹⁵ They should eat more fruits and vegetables; drink natural mineral water containing bicarbonate. In addition, it is important to avoid overwork and excessive eating, to avoid becoming cold or constipated.

CONCLUSION

Gout is a disease that is completely cured if the patient does not want to live with unpleasant pain and symptoms. Many people have shared experiences when applying Eastern medicine methods to reduce symptoms and control the disease. However, the effectiveness provided by these methods mainly comes from folk experience and has not been verified by reliable studies. Therefore, before applying, patients should consult a doctor or use very carefully. When using herbs, they also need to be cautious for the best effect, which means the patient must know the scientific components of the herb, its dosage as well as its side effects. Besides, keeping a healthy body, combined with a nutritious diet is also quite necessary.

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LIMITATIONS OF THE RESEARCH

The article has not been studied in depth on the ingredients of herbal medicine to treat headaches effectively and the author hopes that it will be studied in much more detailed in the near future.

ETHICAL CLEARANCE

The author ensures the quality and integrity of the research. By writing this research paper, the author read the related materials as well as books in order to have the most complete article

CONFLICTS OF INTEREST

No conflicts of interest noted in the paper.

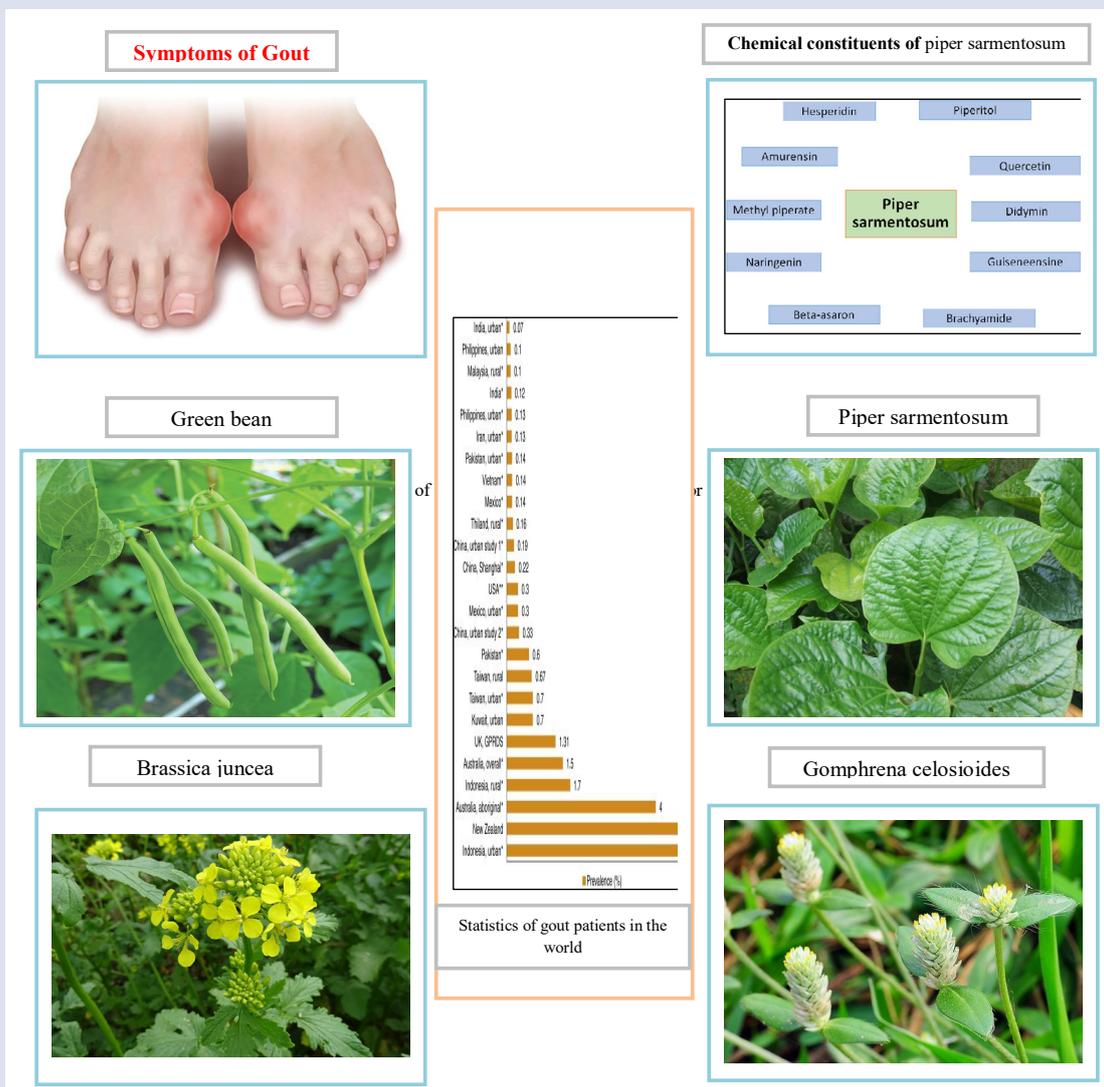
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GRAPHICAL ABSTRACT



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Some recent publications:

- Hoi, H. T. (2020). Some Kinds of Medicinal Herbs for the Treatment of Sinusitis. *Biomedical and Pharmacology Journal*, 13(2), 927-932.
- Hoi, H. T. (2020). Herpes Virus, Causes of Infections and Preventive Methods. *Jinu. M, Thankamma. P. George, NA Balaram, Sujisha. SS 2. Profile of Burn Deaths: A Study Based on Postmortem Examination of Burn Cases at RNT*, 20(3), 330.

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