

# Treatment of Vascular Parkinson's Disease From "Toxic Damage to Brain Collaterals"

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## Abstract

Vascular Parkinson's disease is a secondary Parkinson's syndrome caused by cerebrovascular disease and its related pathological factors. Traditional Chinese medicine believes that this disease belongs to the brain, and physicians in the past dynasties have mostly demonstrated from the wind and blood stasis deficiency toxin. The pathogenesis of "toxin damages the brain collaterals" is that the pathogenic qi, such as visceral deficiency, phlegm turbidity, blood stasis, etc., transform each other and combine with each other, forming the pathological basis of turbid toxin attacking the brain. Vascular Parkinson's disease manifestations such as involuntary tremor of limbs, difficulty starting, and gait instability.

## Keywords

Vascular Parkinson's syndrome; Toxic damage to the brain collaterals; Fibrillation syndrome; Dialectical treatment, review.

## 1. Introduction

Vascular Parkinsonism (VP) is clinically common secondary Parkinson syndrome. Most scholars believe that the onset of this disease is related to cerebrovascular disease. VP patients are similar or slightly higher than Parkinson's disease. At the stage of middle-aged and elderly, the disease is high. Patients not only have basic diseases in cerebrovascular, but also exercise, cognition and even emotional disorders and daily life disorders. In the early stage of VP, the characteristics of both lower limbs, gait disorders, and rigid expressions were often accompanied by cone beam signs. Life left left in alleviating and lingering could not take care of themselves. The course of VP is mostly ladder progress. The significant clinical characteristics are gait disorders with symmetrical symmetry in bilateral lower limbs, which are manifested as smaller, slow, unstable, frozen phenomenon and difficulty in starting. Boutique signs are also more common. Generally, the upper limbs are not affected, and the upper limbs hold the arms are normal [1]. In addition to exercise symptoms, the most common non-exercise symptoms of VP are cognitive disorders, such as dementia and urinary incontinence.

## 2. Organization of the Text

### 2.1. Treatment of vascular parkinsonism from "toxicity"

The original meaning of "poison" refers to the general term for drugs with curative and preventive effects. The "toxic", "small poison" and "major toxicity" under the taste of traditional Chinese medicine refer to the bias or side effects of drugs, which are similar to the adverse reactions of drugs mentioned in Western medicine. Poisonous evil can be divided into external poison and endogenous poison, and external poison refers to the invasion of external evil into the human body, including feeling the qi of epidemics; External sensations such as wind, cold, heat, dampness, dryness, fire and contact with toxic substances such as bacteria, viruses,

chemical pollution, physical rays and other harmful substances to the human body; It also includes the drug poison accumulated in the human body by patients with vascular parkinsonism who have been taking drugs such as medopa, levodopa, bromocriptine, and selegiline for a long time, which is not only a causative factor of VP, but also a pathological product in the treatment process. Most of the endogenous poison is formed by the accumulation of pathological products over time, Zhang Zhongjing's "Jin Kuang Essentials Lily Fox Confused Yin and Yang Poison Disease Evidence and Treatment" "Poisoners, evil qi contains incomprehensible words. [3]" pointed out: "Evil spirits are even poisonous." "When the evil qi of the inner life accumulates to a certain extent, due to the accumulation of all evils, the yin and yang state of the body is unbalanced, and poison is brewed; Wind, fire, phlegm and stasis due to unruly diet, excessive emotions and accumulation in the human body, gradually resulting in decreased organ function, lack of qi and blood biochemistry, liver and kidney yin and yang imbalance, can also accumulate into poison. Patients with vascular parkinsonism syndrome due to cerebrovascular disease, blood stasis blocked in the cerebral network, coupled with advanced age, long-term illness and positive qi depletion, positive and false love, pathological factors intertwined into phlegm, causing stasis and sputum poison, toxic and evil aggregation leads to motor cognitive and emotional disorders, secondary VP.

## 2.2. The theoretical origin of "poisoning the brain network"

The theory of "toxic brain network" originated from the use of Qingkailing injection by Academician Wang Yongyan's team in the 70s of last century to treat patients in the acute stage of stroke disease [4]. The main effects of Qingkailing injection are to clear heat and detoxify, dissolve phlegm and circulation, and awaken the brain. Due to the many causative factors of cerebrovascular diseases, Academician Wang Yongyan believes that the traditional wind, fire, phlegm and stasis deficiency are mostly due to the limited efficacy of dialectical treatment of stroke disease, and its etiology and pathology should be studied in depth, and the theory of poison and network disease came into being [5]. The pathogenesis hypothesis of "poisonous damage to the brain network" believes that the onset of stroke is due to poisonous damage to the brain network, broken or convulsive stasis, abnormal infiltration of qi and blood, resulting in brain and mental nourishment, loss of divine machine, and the formation of a pathological state of comatose and hemibody failure [6-7]. It has been gradually applied to the clinical treatment and research of cerebrovascular diseases, headache, diabetes, Parkinson's, dementia and other systemic diseases.

The main cause of the onset of patients with vascular parkinsonism is cerebrovascular disease, after suffering from cerebrovascular disease, pathological products such as phlegm, heat, and stasis accumulate into toxic evil, further causing damage to the cerebral network, and gait disorders and cognitive impairment common to VP occur. Under the guidance of the etiology and pathogenesis of traditional Chinese medicine, it is believed that VP is based on liver and kidney deficiency, and wind and fire phlegm and stasis are the standard. Wind, fire, phlegm, and stasis are caused by the essence of the void and endogenous, and the accumulation gradually changes in quantity and quality over time, and turns into poison. Therefore, poisonous evil not only has the pathogenic characteristics of evil qi such as wind, fire, phlegm and stasis, but also has the unique pathogenic characteristics of poisonous evil. The common feature of poison and evil disease is that it is easy to cause network damage, and the clinical manifestations of damage are mainly physical damage and functional destruction. In the early stage of the disease, the evil qi of wind, fire, phlegm and stasis damaged by their corresponding pathogenic characteristics, and the overall manifestation was Qi stasis or qi and blood rebellion; In the later stage, the accumulation of evil qi for a long time, the quantitative change reaches the qualitative change [8], the clinical manifestation is not only reduced exercise, gait instability, muscle rigidity, urinary incontinence, hypotension and sleep cognitive impairment and other positive and evil

signs of positive and evil phenomena, imaging examination can show cerebral infarction or cerebral atrophy and extensive periventricular white matter damage, lacunar cerebral infarction, cerebral ischemia and other cerebral network morphological damage and functional destruction [9].

Poison and evil diseases are often sudden and sudden, severe and changeable, and the pathogenic location is deep into the cerebral network, making the disease lingering and difficult to heal. Poisoning the brain network causes damage to the brain and cannot control normal mental activities, and then the consciousness is faint or stupid; If the control of the limbs and bones is lost, motor and sensory function is lost; If the gods cannot be commanded, the functional movement of the internal organs is out of control and regulation. Therefore, for VP patients, early diagnosis, early treatment, active control of the primary disease, and prevention of complications are the best ways to delay the course of the disease, prolong the survival time of patients, and improve life treatment.

Western medicine believes that defects in the presynaptic dopamine transporter caused by ischemic or hemorrhagic injury to the substantia nigra and striatal pathway are thought to be the main cause of motor and postural abnormalities in VP [11]. At present, the recognized diagnostic criteria for VP are: 1. in line with Parkinson's syndrome 2. in the presence of cerebrovascular disease 3. There must be the following association between Parkinson's syndrome and cerebrovascular disease: (1) acute onset after stroke or Parkinsonism manifestations 1 year later, mainly causing increased motor output function in the basal nucleus area or decreased function of the thalamic cortical pathway, resulting in less movement-rigidity as the main manifestation of the contralateral limb; (2) Insidious onset, caused by subcortical white matter damage, early manifestation of cognitive dysfunction of gait disorder of both lower limbs as the main manifestation.

### **2.3. Understanding of vascular Parkinson's disease in traditional Chinese medicine**

Although the medicine of the motherland has not recorded the name of vascular parkinsonism, according to its main symptoms are involuntary continuous trembling, difficulty starting, gait instability, etc. The light is a local trembling of the limb, the heavy is manifested as the tremor of the trunk and limbs, the flexion and extension are unfavorable, and even the inability to take care of oneself can be distinguished as a tremor, or it can be called "vibration", "flutter", "tremor", belonging to the category of "internal wind" [12]. Although the "Yellow Emperor's Internal Canon" does not have the name of the disease, it has an understanding of the disease. In "Suwen. The True Truth", Yun: "All winds fall dizzy, all belong to the liver." "The subtlety of the pulse" Zhongyun: "The bone, the house of the pith, can not stand for a long time, the line will be shaken, and the bone will be exhausted." "Suwen. Five Standing Political Theory" You Yun: "Its disease shakes, falls off the peak disease, falls off the drum, and the word "drop" all contains the meaning of tremor, expounding that the disease takes limb shaking as the main symptom, which is the same as the clinical manifestation of Parkinson's disease at the beginning - resting tremor." In the Ming Dynasty, Lou Ying expanded the etiological mechanism content in the "Medical Outline - Flutter", pointing out that wind cold, heat and wet phlegm can all be used as causes to cause wind and tremor. The pathological factors of fibrillation are based on liver and kidney yin deficiency, lack of qi and blood, wind and fire and phlegm stasis. Its causes are nothing more than two types: intrinsic deficiency and evil poison. Ming Wang Kentang's "Testimony and Treatment: Tremor": "Tremor, this disease is rare in the prime of life, but it is after middle age, especially in old age." The husband's old age has insufficient yin and blood, and less water cannot make a fire. "It is pointed out that the incidence of this disease is mostly middle-aged and elderly. After covering middle age, the human spleen and stomach gradually deteriorate, the liver and kidney are deficient, the essence is dark, and the tendons and veins

are denourished; Or insufficient endowment, kidney essence deficiency, organ disorders, or suffering from depression, long-term illness and weakness, organ dysfunction, insufficient qi and blood, yin and yang, muscle and pulse denourishment, deficiency wind and internal movement, all of which are prone to tremors [13]. Its lesion site is in the tendons and veins, closely related to the liver, kidney, spleen and other organs, which is a change of the virtual standard, and the pathogenesis can be attributed to the wind, fire, phlegm, stasis at the four ends, or cause disease alone, or both. In the Qing Dynasty, Zhang Lu's "Zhang's Medical Tong.Flutter" believed that the disease was mostly caused by wind, fire, phlegm and deficiency, and listed more than ten corresponding treatment prescriptions, making this pathological prescription increasingly full.

The disease of fibrillation is located in the tendon veins, the pathological nature is the original deficiency, its deficiency is mainly Yin Jin essence blood deficiency, mostly in middle-aged and elderly people, the cause is acquired deficiency, cerebral myeloid insufficiency, the pathogenesis is based on wind and fire phlegm stasis, and liver and kidney Yin deficiency as the basis. The initial stage of the onset of tremor is manifested as head or limb shaking, trembling can not be self-controlled, limbs are anxious and other "standard" empirical evidence, virtual image is not significant, because although the wind, fire, phlegm and stasis and other standard evidence are born because of the void, but the gathering time of the evil is shorter and the disease is worse, so the pathogenic characteristics of wind and evil are temporarily combined with one or two other evil as the corresponding clinical manifestations; After a long course of the disease, the pathological factors of wind, fire, phlegm and stasis further deplete the yin and jin qi and blood, and the qi, blood, and jin liquid are caused by insufficient biochemistry and weathered fire to produce phlegm into stasis, and the interconnection and mutual transformation of the evil spirits, and the accumulation of various evil qi is excessive, then it is poisonous, and phlegm and stasis poison damage is the core of the pathogenesis. Stubborn sputum and congestion block the veins, and the accumulation of toxins in the blood cannot be discharged, and gradually become poisonous; Sputum stasis originates from the same as jin blood, jin fluid stops aggregating as sputum, blood block is stasis, sputum stasis gathers for a long time, affecting the operation of qi machine and the normal function of internal organs, to the later stage of tremor, causing patients to have head shaking, limb stiffness, sluggish movements, sluggish expression and gradually unable to take care of themselves and other clinical manifestations, this stage of clinical symptoms and vascular parkinsonism lower limb dyskinesia, dementia, urinary incontinence and other clinical manifestations are similar, the pathogenesis is toxic damage to the brain network [14]. For the type of vascular parkinsonism, Critchley [15] divides it into the following 5 types: type I: muscle rigidity, patient with mask face, walking in small steps, no resting tremor; Type II.: In addition to the clinical manifestations of type I., patients also have clinical manifestations of pseudobulbar palsy such as dysarthria, dysphagia, and forced wry smile; Type III: patients have type I symptoms plus dementia, as well as symptoms such as urinary and urinary incontinence; Type IV: patients have type I symptoms and pyramidal signs, but are not accompanied by symptoms associated with pseudobulbar palsy; Type V: Patients have related clinical manifestations of cerebellar disease in addition to type I symptoms. Since the patient has a history of cerebrovascular disease, it is not difficult to see according to the above clinical symptoms that the patient has appeared toxic damage in type II, and interventional rehabilitation and detoxification and communication therapy treatment at this time or earlier are of great benefit to improve the quality of life of patients and delay the development of the disease.

## 2.4. The correlation between toxic brain network damage and vascular Parkinson's disease

Phlegm and turbidity invade and corrode the brain network, and the qi irrigation pathway of qi and blood is damaged, resulting in the uselessness of the divine machine, and the patient may have head shaking and limb tremor, slow response, forgetfulness and indifference; With the continuous deepening of the poisonous damage, the meridians are further damaged, the toxicity accumulates to a certain extent, the frequency of limb trembling increases, and at the same time, the limb joints are stiff, heavy, flexion and extension are blocked, the movement is limited, the sensory function of the skin at the end of the limb decreases, and cognitive impairment and life cannot take care of themselves gradually appear due to the aggravation of the disease. Poison and spleen, then slow and weak; Poison damage and liver will cause limb shaking and limb anxiety; Poison damage and brain network cause the loss of the Yuan Shen, the loss of the divine machine, the patient's expression is dull, the expression is indifferent and even the consciousness is lost, and the brain Yuan God is lost to the control of the limbs, the limbs are stiff, the limbs are anxious or involuntarily shaken. The key to eliminating poison and evil is to make evil have a way out, in the process of the evolution of the symptoms of this disease, liver and kidney yin deficiency is the initial link of the syndrome, with the growth and decline of the specimen and the disease progresses and retreats, congestion internal resistance, wind and sputum knots and other signs are actually seen in the whole process of the lesion, phlegm stasis long-term disease into the network, long-term poison and damage to the cerebral pulp is the inducing factor for the progression of the syndrome. Therefore, the treatment of vascular parkinsonism should firmly grasp the consistent disease factor of "toxicity" on the basis of dialectical treatment.

Medical cases are in the corner Liu, male, resident, 70 years old, first diagnosed on September 08, 2021.

Complaints: 2 years of weakness with shaking of both lower extremities, 1 year of slow movement, 1 week of exacerbation. 30 years of previous history of hypertension, regular oral nifedipine sustained-release tablets; A history of recurrent cerebral infarction for 9 years, regular oral administration of atorvastatin calcium tablets and aspirin enteric-coated tablets; History of prostate gland for 10 years, intermittent oral administration. After two cerebral infarctions 2 years ago, the patient left both lower limbs with weak strength, can walk independently on crutches, and then gradually appeared both lower limbs involuntary shaking, static tremor, obvious shaking when emotionally agitated, accompanied by stiffness of the right lower limb, difficulty walking. In order to seek further treatment, he came to the Department of Encephalopathy of our hospital for hospitalization, and the current symptoms were: the patient was conscious, poor spirit, slightly dull answer, weakness of both lower limbs, slow movement, small steps, walking with crutches, no freezing phenomenon and panic gait, mild pitting edema of bilateral ankles, palpation of both lower limbs and ankles skin temperature lower than calves, Naco, night rest, frequent nocturia, dry stool. The tongue is red and lichen yellow, the veins are heavy, and the sublingual veins are tortuous. Western medical diagnosis: vascular parkinsonism; TCM diagnosis: fibrillation (sputum and stasis). Educate families and patients to prevent cold and falls. Patients are advised to avoid large mood fluctuations during medication, and avoid spicy and stimulating diet. The treatment is based on "dissolving phlegm, removing stasis, clearing heat, detoxifying and channeling wind" as the method. The prescription is as follows: angelica 12g Chuanxiong 6g Huai ox knee 9g tortoiseshell gum 6g calcined oysters 6g Raw ground yellow 20g Ginger peel 6g Tangerine peel 6g Campanula 3g Mulberry leaves 6g Zhejiang Fritillary 6g Fried hemp seeds 9g. 8 doses, 1 dose per day, 800ml of cold water soaked for 30min and fried, warm in the morning and evening.



The second diagnosis on September 17, the patient reported that the involuntary shaking and edema of both lower limbs were reduced, the weakness of the lower limbs was slightly reduced, and he could walk slowly for 20 meters on crutches. Naco, night break, frequent urination, normal stool. The tongue is red and moss white, the veins are heavy, and the sublingual veins are tortuous. Looking at its main complaint and tongue pulse, the patient's hypothermia gradually recedes, replaced by the image of yang deficiency, so the first side of the raw ground yellow was changed to cooked ground yellow, the prescription is as follows: cooked ground yellow 15g, angelica 12g Chuanxiong 6g Huai ox knee 9g tortoiseshell gum 6g calcined oyster 6g ginger peel 6g tangerine peel 6g bellflower 3g mulberry leaf 6g Zhejiang fritillary 6g fried hemp seed 9g fried peach kernel 10g safflower 10g hot gold retriever dog spine 10g mulberry parasitism 10g fried white peony 10g. 8 doses, 1 dose per day, decoction method as before.

On September 25, the third diagnosis, the patient reported that the frequency of involuntary shaking of both lower limbs was significantly reduced, the edema of the lower limbs basically disappeared, the weakness of the lower limbs was slightly relieved, it was easy to get sleepy after exercise, the skin temperature of the back of the foot was still small and the legs were low, Nako, night rest, frequent nocturia, and normal stool. The tongue is red and mossy, white and finely veined. Combined with the patient's current symptoms, the formula is as follows: Codonopsis 20g Astragalus 30g Bran Fried White Technique 10g Salt Du Zhong 10g Huai Ox Knee 10g Vinegar Frankincense 6g Vinegar Myrrh 6g Chicken Blood Vine 20g Laurel Branch 6g Vinegar Chai Hu 10g Vinegar Tulip 15g Calamus 10g Epimedium 10g Xian Mao 10g Fried Divine Comedy 10g Peony Peel 10g. 10 doses, 1 dose per day, fried in water, warm morning and evening. The service and precautions are the same as above. On October 6, the outpatient follow-up showed that the involuntary shaking of the lower limbs improved significantly, the symptoms of drowsiness and drowsiness were reduced, the skin temperature of the ankles of both lower limbs was basically the same as that of the calves on palpation, and the symptoms of lower limb weakness improved. Patients are advised to stop taking 6 doses of Chinese medicine according to the prescription of three consultations, and still regularly take other oral drugs to treat underlying diseases, and review them regularly.

### 3. Conclusion

With the intensification of aging, the incidence of cardiovascular and cerebrovascular diseases is increasing year by year, and VP is also increasing. Strengthening early treatment of the disease is essential. The patient is an elderly man over seventy years old with a history of recurrent cerebral infarction and hypertension. Congenital deficiency, resulting in loss of brain glory, plus the day after hunger, fullness and fatigue, weakness of the spleen and stomach, weakness of qi and blood transport, phlegm and turbidity of evil endogenous, blocking qi machine, unfavorable qi machine, poor blood operation, long-term stasis, sputum and stasis intertwined, blocking meridian limbs, causing limb weakness, bradykines, diagnosed as vascular parkinson's syndrome, TCM diagnosis as fibrillation. Combined with the patient's clinical manifestations and tongue veins, the tongue is red and lichen yellow, the pulse is heavy, and the sublingual veins are tortuous as the image of phlegm heat and stasis, so the dialectical is sputum and stasis. The treatment is based on raw ground yellow, clearing heat, detoxifying, nourishing yin and relieving tendons. Ginger, tangerine peel, bellflower, mulberry leaf phlegm circulation, angelica, Chuanxiong, raw land to live blood to remove stasis, Chuanxiong, tangerine peel combined to rationalize qi and activate blood, play the effect of "qi and blood travel", bear ox knee, tortoise shell, oyster nourish yin wind, patients are weak and dry and add hemp seeds to replenish deficiency and moisturize the intestines and laxatives, the whole party plays the role of dissolving phlegm, removing stasis and clearing heat, detoxifying and clearing the wind; Qi and blood publicity is the five internal organs, and the spleen and kidney health

luck is phlegm, heat and stasis gradually disappear, and the magic machine is used for its own use. The main symptoms of the second diagnosis patients are gradually lightened, the hypothermia has subsided, and the image of yang deficiency is gradually revealed, so the first medium raw ground yellow is changed to cooked ground yellow 15g, and then fried peach kernel 10g safflower 10g hot gold retriever dog spine 10g mulberry parasitism 10g fried white peony 10g, cooked ground, dog spine, mulberry parasitism replenishes blood and essence, nourishes liver and kidney; Peach kernel, safflower revitalizes blood stasis, and white peony nourishes the yin and soft liver. The symptoms of the three patients have improved significantly, but there is insufficient yang, can not push, warm the body, so that the skin temperature is low and drowsy performance, so the addition of codonopsis, astragalus, white art to replenish qi and strengthen the spleen, eucommia, ox knee, epimedium, fairy grass to tonify the liver and kidney and strengthen the muscles and bones, frankincense, myrrh, chicken blood vine, peony peel to activate blood, calamus to open the trick and open phlegm,; The patient has been ill for a long time and the liver qi is depressed, and the spleen and stomach are used to relieve the liver and qi, stir-fry the divine comedy to strengthen the spleen and stomach, prevent the drugs from getting greasy and hinder the stomach, and the combination of various medicines plays the function of "dissolving phlegm, removing stasis and detoxification, invigorating qi and activating blood circulation". Patients with clinical vascular parkinsonism are old and suffer from many underlying diseases, the course of the disease is long, the treatment cycle is often longer, and each stage of treatment may be different. At the same time, the patient's family is advised to pay attention to the patient's life adjustment, maintain emotional stability, and avoid depression and anger. If the patient is found to be irritable or angry, it is necessary to reassure them. In terms of living and living, we should try to ensure that the environment is comfortable, the living place is ventilated, and it is avoided from wind, heat and moisture.

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