

"Phlegm Stasis and Toxin Damage" and Cerebrovascular Disease

Yuxin Jian^{1,a}, Hui Zhang^{2,b,*}, Miao Peng^{1,c}, Caili Cao^{1,d}

¹Shaanxi University of Chinese Medicine, Xianyang 712046, Shaanxi, China

²Affiliated Hospital of Shaanxi University of Chinese Medicine, Xianyang 712000, Shaanxi, China

^a782000492@qq.com, ^b294608925@qq.com, ^c1713153437@qq.com, ^d644720773@qq.com

*corresponding author

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Abstract: With the progress of economy and society, small cerebral vascular disease has gradually become a common clinical cerebral vascular disease. Cerebrovascular disease mainly refers to a variety of causes lead to brain small blood vessel lesions caused by brain imaging, pathological changes in the disease, its in life can be asymptomatic, but also can appear cognitive disorders, gait abnormalities, mental abnormalities and stroke symptoms. In traditional Chinese medicine, there is no corresponding disease name. According to different clinical symptoms, it can be classified as "dementia", "stroke" and other categories. By referring to relevant ancient books and literature of traditional Chinese medicine, it is found that the syndromes of small cerebral vascular disease are mostly phlegm, blood stasis and poison damage. Therefore, this paper discusses the syndromes in order to provide better diagnosis and treatment ideas for small cerebral vascular disease.

1. Introduction

Cerebral small vessel disease (CSVD) refers to a variety of causes of brain through the artery, small vein, small artery, capillary lesions caused by clinical, imaging, pathological changes of the syndrome [1]. With the progress of the disease, patients have progressive cognitive impairment, dementia, stroke symptoms, gait disorders and mental disorders, which seriously affect the quality of life of patients. Traditional Chinese medicine has no corresponding disease name. Based on its different clinical manifestations, it is classified as "dementia", "stroke", "depression", "tremor", "dizziness" and "headache" in traditional Chinese medicine [2]. "Lingshu ·Sea Theory" said: "The brain is the sea of marrow", which has the functional characteristics of hiding but not catharsis; "Brain is the house of clear yang", which is mainly responsible for people's sensory movements such as sight, hearing, speech, smell and movement. Since ancient times, the focus of brain diseases and syndromes has been on the differentiation of viscera, qi and blood. With the development of economy and society, phlegm and blood stasis syndrome is one of the most common syndromes in clinical practice during the occurrence and development of brain diseases and syndromes [3]. Phlegm turbidity and blood stasis are both therapeutic factors and pathological products, and they interact with each other. Based on the key pathogenesis of "accumulation of phlegm and blood stasis", this paper emphasizes that phlegm and blood stasis stick together for a long time, the qi is

not smooth, and heat toxin is generated, which eventually leads to blood and meat decay, brain collateral damage, and even syndrome change, resulting in disease delay and repeated attacks, forming the pathogenesis evolution and transformation of "phlegm and blood stasis and toxin damage", in order to provide a new idea for the treatment of small cerebral vascular disease based on syndrome differentiation, as shown in Figure 1.



Figure 1: Cerebral vasculature

2. Theory of Phlegm Stasis and Toxin Damage

2.1. Tracing the Origin of the Theory of Phlegm Stasis and Toxin Damage

Phlegm is the pathological product of body fluid metabolism disorder. The thick and turbid ones are phlegm, and the clear and thin ones are drinking. Blood stasis is the pathological product of blood stasis in the body, including blood stasis from the meridian and blocked in the meridians and viscera tissues of the blood. In Synopsis of the Golden Chamber by Zhang Ji in the Han Dynasty, the concepts of "phlegm and fluid" and "blood stasis" were first put forward, emphasizing the use of drugs to remove phlegm and blood stasis, and pioneering the co-treatment of phlegm and blood stasis. In the Song and Yuan Dynasties, Chen Wuzhe's Theory of Three Causes and One Disease Syndrome Prescription clarified the complementary relationship among "body fluid, blood accumulation, phlegm and salivation", and then elaborated the close relationship between the mutualization and mutualization of phlegm and blood stasis. As shown in Figure 2.



Figure 2: Phlegm and turbid tongue

2.2. Characteristics of Phlegm, Blood Stasis and Toxin Damage

Phlegm can be divided into visible phlegm and invisible phlegm. The visible phlegm is visible, palpable and audible. Its invisible body can see special symptoms and signs, but not its form. Zhong

Jingzhi's Synopsis of the Golden Chamber - Combined Treatment of Phlegm and Cough Disease and Pulse Syndrome proposed that "all diseases are caused by phlegm", which shows that the pathogenesis of phlegm is extensive and changeable. Phlegm is easy to obstruct the meridians of Qi and blood, block qi machinery, affect water and liquid metabolism, its disease is lingering, the course of disease is long. Blood stasis is caused by blood stasis and blood stasis, and blood stasis is caused by etiology, pathological product and disease. Blood stasis is the pathogenesis, pathological state, caused by blood stasis. Blood stasis is caused by qi deficiency, qi stagnation, blood cold, blood heat, trauma, bleeding, emotional internal injury, phlegm turbidity and blood stasis, which is easy to block Qi machinery, affect blood circulation, affect new blood generation, and there are many diseases with fixed disease location. Poison is an accumulation of external and internal injuries. You Zaijing's "Synopsis of the Golden Chamber - Treatment of Yin and Yang Poisonous Diseases by Lily and Fox" says: "Poisonous people, evil spirit is inexplicable [4]." Poisons can be roughly divided into internal and external two categories: external poisons are introduced into the body by the outside world, such as the synthesis of six sexual accumulation, or the sensory transmission of epidemic; Internal toxin is the product of turbid paste, phlegm dampness and blood stasis. Human beings exist in the space between heaven and earth, and nourish their bodies with the essence of heaven and earth and the water of nature. When the body's healthy qi is insufficient, the poison of external evil will take advantage of the deficiency. External evil and internal injury intertwine with each other, accumulate over the years and corrode the body, and then gather into poison. Deficiency, phlegm and blood stasis often interact with each other, and they are often seen together [5].

3. The Etiology and Pathogenesis of "Phlegm Stasis and Toxin Damage" in Cerebrovascular Disease

At present, the etiology and pathogenesis of small cerebral vascular disease have not been clarified. Studies have found that the occurrence of cerebral small vascular disease is related to atherosclerosis, cerebral amyloid vascular degeneration, reduced cerebral blood flow, impaired automatic regulation of the brain and increased blood-brain barrier permeability, etc. [2], among which the most common cause is atherosclerosis [6]. Studies have found that [1], cerebrovascular disease is a chronic inflammatory disease. The inflammatory response damages the vascular endothelium and decreases the vascular repair function. If there are bad habits in life, such as smoking, drinking, poor mood, etc., the increase of blood lipid and blood viscosity can aggravate the inflammatory response. Atherosclerosis is a pathological reaction of vascular wall to various injuries, which leads to vascular degeneration, exudation and hyperplasia[7]. Inflammatory response can occur at various stages of atherosclerotic disease, which may be the common link or pathway leading to the pathogenesis of atherosclerotic small cerebral vascular disease. Studies have shown that small cerebral vascular disease occurs in the elderly and is a common cause of stroke and vascular dementia[8]. Stroke and vascular dementia correspond to "stroke" and "dementia" in traditional Chinese medicine. The study believes that the cause of this disease is hidden, due to old age and inactivity, excessive eating and smoking, drinking and so on.

3.1. Disease Caused by Deficiency, Blood Stasis and Phlegm Obstruction

"Deficiency" is the fundamental cause of cerebrovascular disease, mainly involving the heart, liver, spleen, kidney and brain. "The brain is the sea of marrow" is put forward in "Lingshu ·Sea Theory", and "Medicine Classic Jade Scraps" says: "The vital gate of the inner kidney is also the vital energy for generating marrow and nourishing the brain..."; "Lingshu ·Sea Theory" records that "if the marrow sea is insufficient, the brain will turn to tinnitus, the shin acid will be dizzy, the eyes

will not see, and the patient will lie down in peace". It can be seen that the main disease of small cerebral vascular disease is in the brain, caused by the loss of the heart, liver, spleen and kidney. Kidney is congenital, the main accumulation of essence, pulp, brain; If the kidney essence is not hidden, it will lead to premature aging, deafness, tinnitus, tooth shaking off. The spleen is the acquired origin and the source of qi and blood biochemistry. If the spleen is not healthy and the acquired biochemistry is not source, it will lead to insufficient cerebral and pulp nourishment, dysplasia of the brain and dementia. Heart master blood, hide God, if the blood is insufficient, the heart does not hide God, distracted, spiritually lax, easy to forgetfulness. The liver is mainly empyretic, and the qi machinery is smooth. If the liver is not empyretic, the qi machinery is not smooth, the body fluid transport is abnormal, the blood operation is blocked or weak, and the phlegm is wet and the blood stasis is everywhere. Thus, if a physiological function of the viscera is abnormal, not found in time, its body can affect his viscera one after another, during the Qi, blood, body fluid influence each other, fetters, and eventually lead to blood stasis sputum.

3.2. Phlegm and Blood Stasis Gradually Accumulate into Poison

In the incidence of cerebrovascular disease, the heart, liver, spleen and kidney lose their duties, resulting in the loss of nourishment of the brain marrow, stasis of blood, stagnation of phlegm in the brain, smoking, eating spicy alcohol and other bad habits easily lead to fire, heat and phlegm, blood stasis and phlegm become more serious, and gradually become toxic over the years. Ye Tianshi mentioned in his Clinical Guide Medical Records Volume VII: Bi: "Over the years, external evils remain, and qi and blood are injured. It turns into blood stasis, coagulates phlegm, and confuses the meridians. For many years, qi declines, and then it is abandoned." When people absorb the essence of heaven and earth, they are also attacked by external evil forces. If they are full of healthy qi, they will be fearless. If they are not enough of healthy qi, evil forces will take advantage of the weakness and damage the body, turning into blood stasis and phlegm. The body will spread along the meridians, and can be everywhere through the years, If the positive qi fails to recover, both internal and external evils will end up in the body, and the brain will attack the brain due to brain deficiency, which will gradually become cerebrovascular disease. As shown in Figure 3.



Figure 3: Bad eating habits

3.3. Coupling between Cerebrovascular Diseases and Degenerative Diseases

Vascular dementia (VD) is the damage of brain tissue caused by various cerebrovascular diseases[9]. Traditional Chinese medicine classifies VD into the categories of "dementia" and "stupidness", and regards kidney deficiency and brain marrow as the root of its pathogenesis [10], and phlegm turbidity for obscuring bodily organs and blood stasis for blocking cerebral collaterals as its basic pathogenesis. Professor Lv Jiduan combined with the prescription "Yiling" to reduce dioscorea pills to replenish deficiency and remove phlegm and blood stasis treatment VD. The main clinical symptoms of VD were acquired intellectual impairment and cognitive impairment, lacunar infarction, diffuse white matter injury, myelin loss, axon abnormality and other pathological

changes. Modern medicine has shown that cerebrovascular disease refers to intracranial vascular diseases based on various pathologic and neurological processes. Its imaging features include lacunar infarction, white matter hypersignal, enlarged perivascular space, microbleeding and cerebral atrophy. In terms of the existing technical means, we found that the neuroimaging characteristics of cerebrovascular disease can include VD, and in the treatment of traditional Chinese medicine, many studies also show that vascular dementia and cerebrovascular disease treatment coincide with each other, both mainly to supplement the deficiency, eliminate phlegm and remove blood stasis and treatment. The study found that the disease should be deficiency, phlegm, blood stasis, poison differentiation and treatment, the disease onset from the micro accumulation, difficult to detect, affected by lifestyle, resulting in phlegm stasis, phlegm stasis confused, and eventually toxic damage to the body. In the early stage, small cerebral vascular disease may be asymptomatic and substantial pathological changes of various intracranial structures. Studies believe that long-term unstable blood pressure or long-term hypertension can easily lead to such lesions [11]. Professor Shen Shaogong believed that the interjunction of phlegm and blood stasis and the destruction of heart and collaterals by poison were the pathological evolution process of hypertension [12]. As shown in Figure 4.

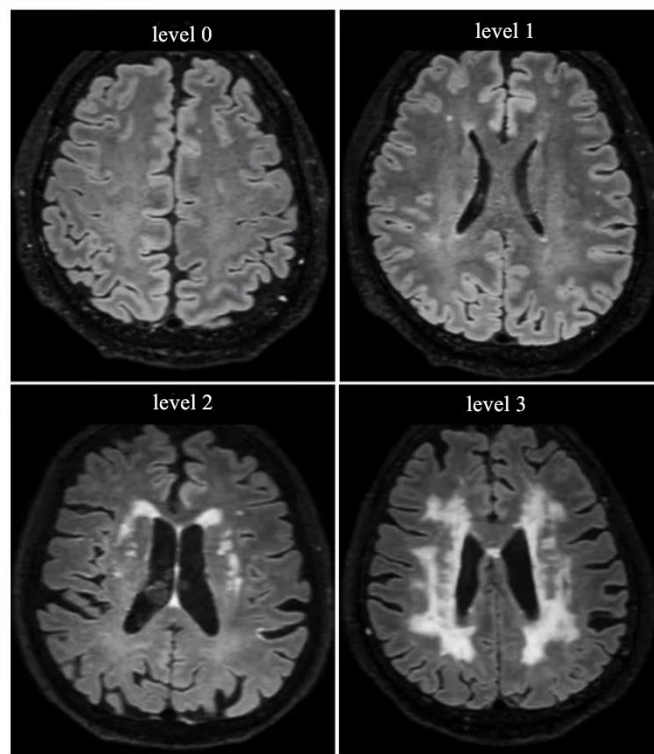


Figure 4: White matter high signal grading

4. Differentiation and Treatment of Small Cerebral Vascular Disease from Phlegm Stasis and Poison Damage

External evil invasion, qi deficiency, phlegm and blood stasis endogenous, viscera damage, long become toxic evil, damage brain, then become brain small vascular disease. The principle of treatment should be based on supplementing Zhengqi, Zhengqi foot is not evil, and the key is to reduce phlegm and turbidity, promote blood circulation and remove blood stasis, detoxifying and regulating veins. According to many years of experience, Professor Zhang combined Gualsankyu Baibanxia Decoction and Danshen decoction into the decoction of detoxifying and removing blood

stasis and Tongmai. The formula takes Danshen as the king medicine, which has the functions of promoting blood circulation, removing blood stasis, channeling menstruation and relieving pain [13]. Professor Yan believed that the core of the disease was phlegm, blood stasis and poison damage, and the solution to the disease was to resolve stubborn phlegm and dead blood. Wormlike drugs such as Earth dragon, scorpion and rigidworm were used to purify phlegm and remove blood stasis, search for wind and remove collaterals [14]. Dr. Wu Qinfeng observed that the addition of Xingxin SAN He Tongqiao Huoxui Decoction on the basis of conventional western medicine treatment can improve the cognitive ability, behavioral ability and memory ability of phlegm-stasis obstructive VD patients, reduce clinical symptoms, improve the ability of daily living and clinical efficacy [15]. Professor Zhang Yan believes that "phlegm stasis toxin" is not only a pathological product, but also a pathogenic factor, which will aggravate the balance of Yin and Yang of Zang-fu organs, and the cycle is repeated, making the lesions complicated and lasting. Most of the treatment principles are Qi tonifying phlegm and detoxifying, qi removing blood stasis and detoxifying, clearing heat and phlegm removing blood stasis and detoxifying, etc. [16]. As shown in Figure 5.



Figure 5: Scorpion. - Look for the wind

5. Conclusions

Small cerebral vascular disease is a chronic disease, can be a Chinese medicine of the disease, fibrillation syndrome, the name of the disease is different, but most of the pathogenesis of deficiency, phlegm, stasis, poison. Phlegm turbidities can be lipids or toxins. When the excess lipids or toxins are deposited in the blood vessel wall, an inflammatory stimulus will be formed on the blood vessel wall, thus stimulating the body's own immune response. A large number of inflammatory factors and cells will gather here, resulting in blood stasis. Therefore, the clinical work should pay attention to supplementing qi, removing blood stasis and eliminating phlegm and detoxifying.

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