

# *Understanding of senile Vertigo from blood stasis*

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**Abstract:** since ancient times, vertigo has been a difficult problem for people to solve. Vertigo frequently occurs in people's daily life. With the continuous increase of population ageing all over the world, Vertigo has become a serious problem, the incidence of vertigo is also increasing dramatically, and the diagnosis and treatment of senile vertigo are also widely concerned. Yang Renzhai initiated the theory of "Dizziness caused by blood stasis"<sup>[1]</sup>. Modern medicine inherited and carried forward the theories of predecessors, and put "Blood stasis" throughout the diagnosis and treatment of senile dizziness, and achieved good results in diagnosis and treatment. The purpose of this paper is to summarize the knowledge of senile vertigo from blood stasis. Through reading and studying the theories of the Ancients and the clinical experience of modern doctors, it is found that most of the senile vertigo patients have the signs of blood stasis, and "Stasis" is the key factor in its etiology and pathogenesis, so we should add the method of removing stasis in the treatment of senile vertigo, in order to make the clinical effect more satisfactory conclusion.

## **1. Introduction**

Dizziness is characterized by dizziness and blurred vision<sup>[2]</sup>; dizziness is the sensation of rotation about oneself or one's surroundings and instability in standing<sup>[3]</sup>. Both often appear at the same time, it is called Vertigo<sup>[4]</sup>. Light eyes closed so far, the heavy can not even stand, suddenly fainted<sup>[5]</sup>. The instability of vertigo attacks seriously affects the daily life of patients, and even threatens life. Senile Vertigo is a chronic and recurrent disease with Vertigo as the main symptom in the elderly population. Its etiology involves multi-system diseases<sup>[3]</sup>. With increasing population ageing around the world, and with the increasing incidence of vertigo in the elderly due to changes in modern dietary habits, age-related vertigo is also receiving increasing attention throughout society. Since ancient times, many doctors have comprehensively and systematically studied and summarized senile vertigo from the perspectives of "Wind, fire, Phlegm and blood stasis", "Deficiency and excess", and "Liver, spleen and kidney", it is worthy of further discussion and summary, it is quite effective in recent years through the treatment of senile vertigo. The learning outcomes are summarized as follows.

## 2. Thought of dizziness caused by blood stasis

The idea of dizziness caused by stasis originated from Yang Renzhai's viewpoint of "Dizziness is caused by stasis" in the Song dynasty. In the Jin and Yuan dynasties, a hundred schools of thought contended. On the basis of inheriting and carrying forward the theories of predecessors, modern traditional Chinese medicine combined with clinical treatment and summary of insights, the thought of dizziness caused by blood stasis was increasingly valued. For example, Danxi xinfu pointed out that harmonizing qi and blood, the importance of promoting blood circulation and removing blood stasis in clinical treatment<sup>[6]</sup>, that is, "The Qi and blood are red and harmonious, the diseases are not healthful, if they are depressed, the diseases will be healthful"<sup>[7]</sup>. In the Ming dynasty, the theory of blood stasis leading to dizziness began to flourish. For example, in Yu Tuan's "The true story of Medicine-xuan Yun"<sup>[8]</sup>, it is said that "There are people who suffer from dizziness due to vomiting of blood outside, and there is dead blood in the chest that clogs the heart. However, it is advisable to practice serum and self-tranquilization"<sup>[9]</sup>, clearly put forward the "Blood stasis caused dizziness," said that the blood stasis and dizziness are closely related<sup>[10]</sup>. In the Qing dynasty, the idea of treating Vertigo from blood stasis has been mature. In the "Medical lamp continues to burn", it is pointed out that "When blood dies, the pulse will coagulate and cry, and the pulse will coagulate and cry, and the strength of the upper injection will be thin, and the thinness will be weak and vertigo will arise"<sup>[11]</sup>. "Ye Tianshi diagnosis and treatment of daquan" also mentioned that "Blood stasis, liver wind upside down, symptoms of dizziness and tinnitus... treatment from the blood vessels, appropriate Quyu Pinggan"<sup>[12][13]</sup>. It can be seen that the thought of blood stasis was clearly put forward in the Song dynasty, flourished in the Ming dynasty, and became more and more mature in the Qing dynasty<sup>[7]</sup>.

On the basis of the understanding of the past dynasties, we can realize the more comprehensive progress of modern research on the treatment of senile Vertigo from stasis. Sharla Cheung et al. (2002) suggested that the "Blood stasis" in the theory of "No blood stasis without dizziness" can not only be used as a direct factor to cause vertigo attacks, but also be produced by the interaction of various factors in the process of vertigo, which in turn aggravates the effect on vertigo. Qi and blood deficiency, phlegm turbid internal resistance, etc. , or virtual or real, may lead to blood stasis internal resistance, Qingqiao dystrophy and hair for vertigo<sup>[10]</sup>. That is to say, no matter what kind of inducement causes the attack of vertigo, the pathological factor of "Blood stasis" is inevitably involved in the development of the disease, "Blood stasis" is closely related to other etiology and pathogenesis of vertigo. Through many years of clinical diagnosis and treatment experience, professor Shao Jing has also found that in the clinical treatment of senile vertigo, it is often reasonable to use drugs based on syndrome differentiation, but the clinical effect is not good enough. Therefore, the method of removing blood stasis is added in the treatment, and the curative effect is doubled. Therefore, Wang Xiangyu, a student of Professor Shao Jing, concluded that the different syndromes of dizziness are closely related to blood stasis, such as blood stasis caused by falling and flapping injury in blood stasis dizziness Deficiency of Qi, blood and kidney essence in deficiency vertigo can easily lead to unfavorable blood circulation, deficiency and blood stasis. Professor Shao Jing believes that senile vertigo has the characteristics of "Deficiency" and "Stasis", and the treatment of senile vertigo can achieve twice the result with half the effort by adding the product of removing stasis<sup>[12]</sup>. Zhang Xiaolong also found that most of the past doctors from the Wind, fire, Phlegm, and other aspects of the treatment of senile vertigo, although there is a certain effect, but always unsatisfactory. Therefore, they carefully experience in clinical treatment, so as to find that no matter what type of senile vertigo patients, most of them have signs of blood stasis, so in the treatment of both stasis, good results<sup>[14]</sup>. Therefore, according to the experience of modern doctors

in the clinical treatment of senile vertigo, the treatment of senile vertigo, no matter what type of syndrome, add the product of promoting blood circulation and removing blood stasis, from the clinical efficacy can be reasonably verified “Because of blood stasis-induced vertigo” point of view.

### **3. Syndrome differentiation of blood stasis and senile vertigo**

According to traditional Chinese medicine, vertigo can be divided into five syndromes, namely, Liver-yang hyperactivity syndrome, phlegm obstruction syndrome, blood stasis obstruction syndrome, qi and blood deficiency syndrome, kidney essence deficiency syndrome, and senile vertigo. The following, the blood stasis and senile vertigo five types of closely related were discussed.

#### **3.1. Syndrome of stasis and hyperactivity of liver-yang**

“Su Wen Zhi Zhen Yao da lun” contains “Zhu Feng Chu Xuan, all belong to the liver”<sup>[15]</sup>. The dizziness caused by hyperactivity of liver-yang is mainly due to poor emotion<sup>[16]</sup>. Qi stagnation turns into fire, and the evil of fire heat burns Yin liquid, which causes liver-yin depletion. Yin deficiency leads to hyperactivity of Yang, so liver-yang hyperactivity occurs. The internal movement of liver wind disturbs the clearance of orifices, dizziness<sup>[17]</sup>. The clinical manifestations are tinnitus, irritability, head pain, etc.. Acute attacks can even lead to sudden fainting, limb numbness tremor and other symptoms, tongue coating is often yellow, pulse string or several. Blood stasis and hyperactivity of liver-yang are related to each other. The liver governs blood and qi is the commander of blood, so stagnation of liver-qi can easily lead to blood stasis.

#### **3.2. Syndrome of blood stasis and phlegm-turbid obstruction**

Zhu Danxi, a famous doctor in Yuan dynasty, advocated “No phlegm, no dizziness”. When the body eats improperly for a long time, or drinks excessively, or is tired and hungry, or eats too much spicy, greasy, fat, sweet and tasty food, it will inevitably damage the spleen and stomach, making the function of the spleen and stomach weak and the fine operation of water and grain weak, water wet stop inside, for a long time into Phlegm, phlegm in obstruction, clear orifices dystrophy, then cause dizziness<sup>[18]</sup>. The performance is the head heavy like wraps<sup>[19]</sup>, or accompanies vomits the phlegm saliva, the Moss White Greasy, the pulse moistens slippery and so on symptoms. Phlegm and blood stasis are also related to each other. Because “Body fluid and blood are of the same origin”, they can breed and transform each other<sup>[20]</sup>. The pathogenic factors of Phlegm and dampness are easy to stagnate blood and cause blood stasis. If blood stasis accumulates for a long time, it can also be transformed into phlegm water<sup>[11]</sup>, therefore, in the treatment, if simply using the method of removing dampness and phlegm, it is difficult to achieve satisfactory clinical therapeutic effect. Therefore, in the treatment of dizziness caused by turbid phlegm and dampness-phlegm, it is also necessary to take into account the treatment and conditioning of “blood stasis.”

#### **3.3. Syndrome of blood stasis and obstruction of orifices**

Blood stasis blocking orifices are generally related to head trauma, etc. , blood stasis blocking meridians, blood flow, Qi and blood can not transport, dizziness caused by head malnutrition. “Blood stasis” is the direct key factor that leads to Vertigo attack of this syndrome. Clinical manifestations are often accompanied by headache, and pain fixed, dark tongue, there are ecchymosis, sublingual veins can also be seen dark thickening, pulse more astringent or fine

astrigent<sup>[21]</sup>. There is no doubt that the method of activating blood circulation and removing blood stasis is used to treat vertigo caused by blood stasis blocking orifices.

### 3.4. Stasis and deficiency of Qi and blood

“Xuanyun” in the jingyue complete book contains: “Xuanyun one card, deficiency in its 89.” This conclusion is in line with the characteristics of the elderly vertigo disease, “No deficiency without dizziness”, in the treatment should also be based on deficiency. The pathological process of dizziness caused by Qi and blood deficiency is due to prolonged illness, or weakness of the spleen and stomach, weakness of water and grain transportation, and abnormal qi and blood biochemistry, resulting in deficiency of both qi and blood<sup>[22]</sup>, which can not be replenished in the brain, resulting in dizziness<sup>[23]</sup>. Clinical expression usually has mental lassitude, little spirit lazy speech, Giddy and dizzy, complexion is cadaverous or chlorosis, tongue is weak wait. “Qi is the commander of Blood, blood is the mother of Qi”<sup>[10]</sup>, Qi has the function of metaplasia, promotion and control of blood. First, Qi deficiency is unable to promote blood flow, resulting in poor blood flow and miscellaneous blood stasis; second, Qi deficiency can not control blood, bleeding outside the vessel leading to blood stasis<sup>[11]</sup>. Correspondingly, blood on Qi have nourishing, metaplasia effect, blood deficiency can not nourish the veins, resulting in poor blood flow and miscellaneous blood stasis, Qi and blood can not reach the head, brain loss of nutrition, so see dizziness<sup>[11]</sup>. Therefore, in the treatment, we should not only give the method of tonifying qi and blood, but also pay attention to the mixture of deficiency and excess. At the same time, we should take into account the method of removing blood stasis, so as to get twice the result with half the effort and achieve remarkable curative effect.

### 3.5. Blood stasis and deficiency of kidney essence

The Huangdi Neijing contains: “The kidney governs the bone and produces marrow, which leads to the brain”. The essence produces marrow, and the brain is the sea of marrow. Depletion of kidney essence can lead to insufficient production of marrow, which in turn fails to nourish the brain, resulting in dizziness<sup>[24]</sup>. Clinical common dizziness with mental malaise, waist and knee weakness, less sleep and more dreams and so on. Blood stasis also exists in the kidney essence deficiency vertigo disease, kidney master essence, kidney deficiency is essence deficiency, “Essence and blood homologous”, essence and blood deficiency, Meridians lost moistening, blood stasis caused by blockage, hair for vertigo<sup>[11]</sup>. Therefore, kidney essence insufficiency-related dizziness is characterized by a mixture of deficiency and excess. In clinical practice, treatment should primarily focus on replenishing the deficiency while also taking into account the transformation of blood stasis.

In addition, Liu Xun et al. found in clinical observation that “Blood is water” plays an important role in the occurrence and development of senile vertigo, the method of promoting blood circulation and removing blood stasis, invigorating spleen and warming yang is effective in the treatment of senile vertigo. They believe that blood stasis resistance, a long time will be born water; water stop for a long time, will lead to blood stasis. Blood stasis and water evil are the cause and effect of each other, and they run through the pathological process of the occurrence, development and evolution of senile Vertigo<sup>[25]</sup>. To sum up, although there is deficiency and excess in vertigo disease, the pathogenic factors of excess syndrome are easy to block and form blood stasis, and the deficiency syndrome can also form blood stasis. Therefore, vertigo of any syndrome can be treated with the combination of deficiency and excess, we just need to prioritize. The above points all provide a reasonable and effective demonstration for the key role of “Blood stasis” in the pathological factors of senile vertigo.

#### 4. Treatment of senile vertigo based on blood stasis

The understanding of senile vertigo disease in modern medicine still follows the theory of “Wind, fire, Phlegm and blood stasis”. Its pathogenesis is root deficiency and superficial excess, and the deficiency and excess are mixed<sup>[3]</sup>, the person that simple fill empty is less, or dispel evil is first, or attack fill concurrently apply. Vertigo location in the brain, zang-fu syndrome with liver, spleen, kidney-based<sup>[26]</sup>. Tonifying the liver and kidney, nourishing yin and removing Yang, activating blood circulation, removing phlegm and dredging collaterals are the main methods of treatment<sup>[3]</sup>. “No blood stasis do not make vertigo”, therefore, the clinical blood circulation method into the treatment of vertigo five symptoms. Lu Weimin and others put forward the four methods of removing blood stasis for senile vertigo. In addition to the four methods and the syndrome of blood stasis blocking orifices, which is a syndrome directly caused by blood stasis, the treatment ideas of removing blood stasis are summarized as the method of calming the liver and removing blood stasis, the method of removing phlegm and removing blood stasis, and the method of removing blood stasis, yiqi huoxue method, Yishen Tongluo method<sup>[27]</sup>. This corresponds to the syndrome of dizziness with hyperactivity of liver-yang, obstruction of phlegm, deficiency of Qi and blood, and deficiency of kidney essence, which reflects the close pathological relationship between “Blood stasis” and senile vertigo. First of all, the treatment of liver qi and Yang at the same time by adding *Achyranthes bidentata* and other harmonizing qi and blood, leading blood downwards, can dredge the liver stagnation and fire caused by blood stasis<sup>[27]</sup>; second, the clinical phlegm and blood stasis are often combined, blood syndrome theory of Tang Rongchuan contains the theory that “Removing blood stasis is the way of Phlegm”, which explains that removing blood stasis is the way of Phlegm without attachment. Third, elderly patients with qi and blood deficiency, airway astringency, blood line obstruction for a long time to see blood stasis blocking collaterals<sup>[28]</sup>. Therefore, the treatment of Yiqi huoxue, to increase qi line of blood, Qingyang was developed, Marrow Sea was raised and dizziness removed<sup>[27]</sup>. Fourthly, the elderly will inevitably have kidney essence deficiency, which is not enough to carry the blood, and the blood line is blocked to form blood stasis, which aggravates dizziness. Therefore, in clinic, the main method is to enrich the kidney and fill the essence, with the help of activating blood and dredging collaterals to help qi and blood run, when the pulse channel is smooth, dizziness stops<sup>[27]</sup>. The above four points, together with the symptomatic treatment of promoting blood circulation and removing blood stasis, all understand and grasp the diagnosis and treatment of senile vertigo from “Blood stasis”, which makes the clinical diagnosis and treatment work more comprehensive and meticulous, so as to achieve more significant treatment results.

Through reading many doctors' diagnosis and treatment experience summary, also one by one confirmed the blood stasis in the senile vertigo attack process key function. In the clinical treatment of 67 cases of recurrent vertigo, Wang Hezhen used *Pinellia Rhizoma Tianma* Decoction combined with Puerarin injection. The results showed that 48 cases were significantly effective, 15 cases were improved, and the total effective rate was as high as 94%.<sup>[29]</sup> Sheng Li used *Xuefu Zhuyu* decoction to treat vertigo due to vertebrobasilar insufficiency, and divided 150 patients into treatment group and control group. The total effective rate of treatment group was 96.3%, which was much higher than that of control group<sup>[30]</sup>. Wang Xiuying used *Huayu Tongluo* decoction to treat 75 cases of vertigo, and divided them into 4 types according to the standard, the overall response rate was as high as 97.3%<sup>[31]</sup>.

#### 5. Conclusions

The incidence of senile Vertigo is high, the course of the disease is long, the clinical incidence is easy to repeat, the onset time and degree of vertigo are unstable, and most of them are accompanied by other physical discomfort, which seriously affects the normal life and work of patients, it is



urgent to add the treatment of “Blood stasis” to the treatment of senile vertigo on the basis of symptomatic treatment. In addition, senile vertigo clinical often mixed with excess and deficiency, but regardless of excess and deficiency, “Blood stasis” is one of its pathological factors, therefore, in the correct clinical syndrome classification, based on the division of the primary and secondary, dialectical treatment, in order to obtain more satisfactory curative effect, we should not only tonify deficiency and eliminate real evil, but also activate blood circulation and remove blood stasis.

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