

Clinical Speculation for Treatment of Dementia Based on the Perspective of Spleen and Kidney Harmony

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Abstract: Dementia is a chronic neurodegenerative disease. The main clinical manifestations are memory disorders, cognitive dysfunction, personality changes, language disorders, and so on. Its basic pathogenesis is the deficiency in origin and an excess in superficiality. Deficiency in the source is the insufficiency of marrow sea and disuse of the spirit mechanism. Excess in superficiality mainly contains blood stasis, turbid phlegm, and toxins. The spleen and kidney are the first and acquire the foundation of each other and nourish the brain. Treatment should be based on the spleen, kidney, and marrow as the main principle. This article will explain in detail the etiology, pathogenesis, and treatment methods of dementia in traditional Chinese medicine, and explore the theoretical basis and clinical efficacy of traditional Chinese medicine in the prevention and treatment of dementia, to develop the advantages of traditional Chinese medicine in the treatment of dementia and improve the clinical symptoms of patients.

Dementia is an unexplained progressive neurodegenerative disease of the central nervous system, characterized by memory loss and cognitive dysfunction, behavioral abnormalities, social disorders, and even the development of life's inability to take care of themselves in the later stages. The incidence is mostly older people (Table 1 and Figure 1). The treatment for dementia is not only long but also expensive. Dementia was first seen in the Hua Tuo doctor secret Hua Tuo cure dementia God, edited by Hua Tuo in the Tang Dynasty [1]. Alzheimer's disease, which is Western vascular dementia, belongs to the category of this disease. In recent years, the incidence of dementia increased, so have increasingly people have paid attention to the prevention and treatment of this disease. It is about 50 million people who have dementia in the world. The number of people is expected to increase to 152 million by 2050; two-thirds of the people live in low-and middle-income countries [2] Therefore, dementia patients will bear tremendous economic and health pressure. Therefore, the prevention and treatment of dementia patients are critical. Western medicine has made some achievements in treating dementia, but there are still some difficulties in the treatment, mainly due to the long treatment time and the high cost of treatment. Although medical conditions are constantly improving and developing, the targeted treatment of dementia is still in the exploratory stage. Traditional Chinese medicine has particular experience accumulation and apparent advantages in treating this disease. Chinese medicine considers the kidney as the congenital foundation, storing essence and generating marrow, which can nourish the brain; the

spleen is the foundation of acquired and the source of qi and blood, which can change blood into marrow. If the kidney deficiency or spleen deficiency, it will be an empty sea of marrow disuse and dementia.

Table 1: Factor analysis of dementia

Influencing factors		Morbidity (%)
Age	<65	3.03%
	≥65	5.73%
Sexual Distinction	Male	4.37%
	Female	3.92%
Living alone	Living alone	6.73%
	Not Living alone	3.83%
Character	Outgoing	3.52%
	Introverted	5.98%
Education	Low educational level	6.37%
	High educational level	2.12%
Physical exercise	Regular exercise	2.91%
	Lack of exercise	4.99%

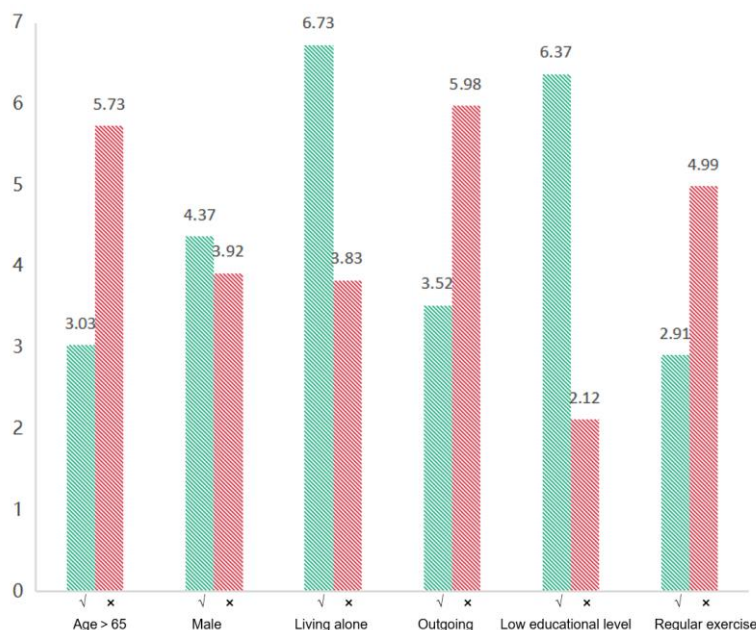


Figure 1: Influence of various factors on the prevalence rate.

1. Pathogenesis of Dementia

1.1. The Dementia Coion of Ancient Physicians

1.1.1. Spleen Kidney Deficiency is Deficiency

The dementia was first seen in the book 'Hua Tuo's secret biography of God Medicine Hua Tuo 's treatment of dementia ' which was edited by Hua Tuo in Han Dynasty. ' Ling Shu 'contained those human-born first refined, refined, and brain-born. 'Lingshu Wulongjinyebie ' expresses that the grain of body fluid and the cream infiltrated in the bone empty, tonic brain marrow , emphasizing

the formation of brain marrow derived from the kidney essence and spleen and stomach transport from the grain essence. Moreover in the 'Inner Classic' we also recorded the cause of the disease, it was said that lack of sea of marrow, the brain turn, tinnitus, tibial acid dizziness, see nothing, slack sleep in 'Ling Shu sea theory'. Human essence and ambition are hidden in the kidney, kidney essence deficiency is weak. Therefore, with confusion and forgetfulness, this view has laid a sufficient theoretical foundation for the pathogenesis of dementia. Thus, human essence sealed in the kidney, kidney essence is sufficient or not will directly affect the normal function of the human brain or not. If the kidney essence deficiency, lack of marrow sea will appear dizzy, tinnitus, lethargy, forgetfulness, lassitude, etc. As 'lingshu kouwen' contains that lack of qi, the brain is dissatisfied, the ear is bitter, the head is bitter, and the eyes are dazzled, it is proposed that if the spleen is weak, the transportation is not enough, and the water and grain cannot be filled in the brain, there will be symptoms of dizziness, tinnitus and other brain dissatisfaction. Li Hui et al. [3] proposed that human learning -memory belongs to the category of "spleen giving up meaning" in traditional Chinese medicine, and the pathogenesis of learning - memory impairment belongs to a deficiency in origin and excess in superficiality. Deficiency in origin mainly refers to deficiency of kidney essence, loss of filling of brain marrow, deficiency of qi and blood, deficiency of spleen and stomach, and loss of nourishment of brain orifices. Therefore, it is proposed that the spleen is directly related to the thinking and cognitive activities of the human body dominated by the brain.

As early as 'Plain Questions · Ancient naive theory' explains that: eight and eight, Tianguai exhaustion, lack of essence, kidney failure, the body is extremely in the essence of the five viscera and six fu organs and hidden, so the five viscera sheng, which is told that the rise and fall of the body function are closely related to the strength of the kidney, and the old people, spleen, and kidney essence Qi is a deficiency, brain marrow loss, marrow sea gradually empty, which will be resulted in dementia. The above view shows that spleen and kidney deficiency is the fundamental cause of dementia (Figure 2).

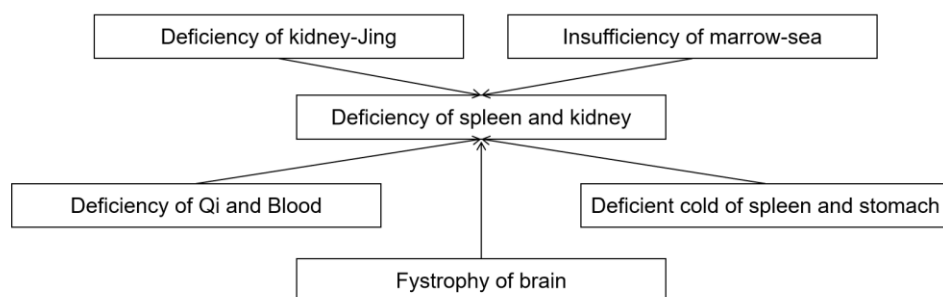


Figure 2: The etiology and pathogenesis of dementia.

1.1.2. Phlegm Stasis and Toxin are Real Standards

The spleen is the acquired foundation, the main transport of water valley is subtle, 'simple question · adverse regulation theory' says that kidney water masters the body fluid, the kidney is the acquired basis, mastering body fluid distribution metabolism, spleen, and kidney two dirty mutual coordination, jointly regulate the body's water metabolism. If the spleen is weak, biochemical passive lacks transport, marrow sea emptiness, breeding phlegm is evil. Moreover, in 'Jing Yue Quan Shu. 'Dementia syndrome, where there is no phlegm, or to depression, or failure, thinking, or panic, and gradually to dementia, words upside down, act [4]. The elderly kidney qi deficiency, transpiration, gasification, weakness, water without owner, water metabolism disorders, brewing, phlegm, wet evil, 'medical understanding · amnesia chapter' said 'main kidney intelligence, kidney deficiency is lack of intelligence, so forget its preface. 'Huiqin Zhang [5], etc. Think that phlegm, blood stasis, turbidity, and poison are the pathological product of viscera

deficiency, qi and blood deficiency, and the pathological product of the formation of the abnormal rise and fall of qi activity, and the syndrome differentiation of senile vascular dementia There are kidney essence deficiency syndrome, phlegm turbidity obstruction syndrome, blood stasis obstruction syndrome, liver yang hyperactivity syndrome, heat toxin syndrome, viscera stagnation syndrome, qi and blood deficiency syndrome, which can be summarized as qi and blood deficiency, phlegm turbidity, blood stasis, turbidity, and toxin stagnation, etc., its essence is the essential characteristics of the deficiency of the standard. Ming Zhao [6] from ascending clear and descending turbidity to explore the pathogenesis of AD, stressed that viscera deficiency will affect the body's regular ascending clear and descending turbidity, easy to cause qingyang not to rise, unable to reach the brain and the brain; or turbid yin does not fall, and it is difficult for the dregs and filth to be discharged from the body. They accumulate for a long time and produce phlegm, blood stasis, toxins, etc., and flow with qi, dry the brain, and harm the brain. Wei Huang [7] believed that the pathological nature of VD in traditional Chinese medicine is the deficiency in origin and excess in superficiality. The deficiency of essence and qi leads to the deficiency of marrow sea. At the same time, the excess in superficiality is mainly based on the deficiency of marrow sea and the deficiency of essence and qi to form the pathological characteristics of deficiency in origin and excess in superficiality. Jingxian Han [8] pointed out that if any one of the triple energizer (fu-organ) gasification function abnormalities, it will eventually lead to triple energizer overall gasification disorders, blood and body fluid up and down into the channel is not smooth, resulting in the endogenous wind, fire, dampness, heat and phlegm, blood stasis, turbidity, and other pathological products, and dysfunction is the root cause of many elderly diseases, emphasizing that only the triple energizer gasification function normal, blood and body fluid up and down into the path unobstructed, to ensure human health disease-free. Therefore, viscera function deficiency, body fluid distribution, metabolic abnormalities and ultimately lead to phlegm dampness, blood stasis, deficiency, interlaced disuse, leading to dementia.

In summary, ancient physicians' understanding of the etiology of dementia is a process of continuous exploration and development. It is a disease with the essential characteristics of deficiency in origin and excess in superficiality. The basic pathogenesis is marrow sea deficiency and spirit's dysfunction. The deficiency in the source is the deficiency of viscera function, and the excess in superficiality is phlegm and blood stasis and toxin evil. Phlegm Stasis and Toxin are both Pathological Products of Visceral Dysfunction and Pathogenic Factors of Dementia.

1.2. Modern Doctors' Understanding of Dementia

Yunzhi Ma [9] believes that dementia generally belongs to deficiency in origin and excess in superficiality, to deficiency and excess, deficiency and excess mixed, with kidney qi deficiency as the basis and phlegm dampness block as the standard. Lack of kidney essence is the sea of marrow emptiness, lack of nourishment, spleen deficiency breeds phlegm dampness, evil phlegm on the brain, long-term illness appears dull. Chenhua Yang [10] pointed out that the disease occurs in five internal organs, the kidney is basic, elderly body failure, kidney essence deficiency, which is resulted in a sea of empty marrow, the loss of the use of the spirit, the gradual loss of memory. The toxin is an important pathogenic factor, emphasizing the clinical evidence to detoxify turbidity, phlegm, and blood circulation, ventilating Xuanfu. The deficiency should be tonifying the kidney and marrow, nourishing qi and blood.

In summary, the dementia etiology and pathogenesis understanding of ancient and modern doctors is constantly developing and improving. To understand this disease, it is generally believed that the essential pathogenesis characteristics of dementia are deficiency in origin and excess in superficiality. It is believed that this disease is due to the following common factors, the deficiency

of viscera function, the deficiency of essence and qi, and the interaction of phlegm and blood stasis and toxin. Clarifying the pathogenesis of this disease can be targeted for treatment, guiding clinical medication, solving the patient's pain, and achieving satisfactory results.

2. Treatment

2.1. Treatment Based on the Spleen

The occurrence of dementia is closely related to the spleen, so the treatment should be based on the spleen. The treatment of dementia based on the spleen has been recorded in ancient medical books for a long time. For example, 'Miraculous Pivot · Jueqi Theory' records that the valley enters the qi fullness, the Naoze is injected into the bone, the bone is flexion and extension, the catharsis supplements the brain marrow, the skin moistens, and is liquid. Jingyue Zhang, who were in the Ming Dynasty, said miscellaneous disease, Mo, dementia syndrome, usually without phlegm, but with depression, or with failure, or with thinking, or panic and dementia in his book 'Jing Yue Quan Shu Miscellaneous Disease'. Wu Yang et al. [11] emphasized that the spleen is the root of the five viscera organs, and believed that the source of dementia treatment is the spleen and stomach; strengthening the spleen and strengthening the stomach, the qi and blood are biochemically active, the brain marrow is nourished with this, phlegm can not be generated, stasis can not be located, poison can not be left, so that the head is clear and dementia does not occur. Dongyu Min et al. [12] pointed out that the spleen plays a vital role in human activities. The dysfunction of the spleen's transportation and transformation can lead to the deficiency of qi and blood, mental disorders, and brain marrow loss.

2.2. Treatment Based on Kidney

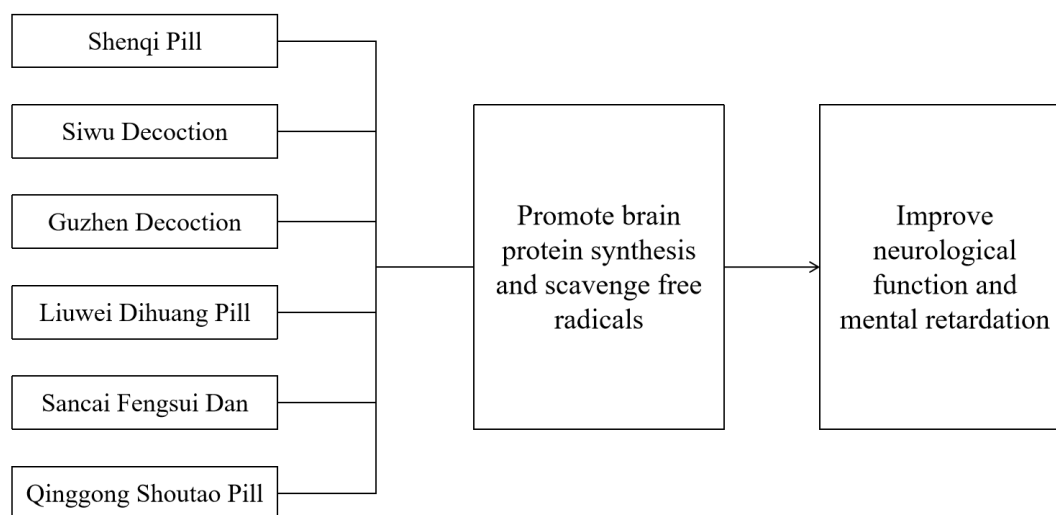


Figure 3: Classical prescriptions for dementia.

The occurrence of dementia is most closely related to the kidney. Kidney treatment has been recorded in ancient medical books for a long time. Such as, it was recorded that people are born first, first, become refined, refined, and brain marrow is born in a miraculous pivot Meridian'. Therefore, the treatment should be based on tonifying the kidney and filling the lean marrow with the main principle. In the 'medical comprehended' 'kidney governing wisdom, kidney deficiency is a lack of understanding. For example, the famous classical prescriptions contain the Shenqi Pill, Siwu

Decoction, Guzhen Decoction, Liuwei Dihuang Pill, Sancai, Fengsui, Dan Qinggong Shoutao Pill, and so on; these traditional famous prescriptions can promote brain protein synthesis, scavenge free radicals, improve neurological function and mental retardation[13].(Figure 3)Mingchang Gu pointed out that the main factor of memory impairment in the early stage of Alzheimer's disease is kidney essence deficiency; he advocated to use the of traditional Chinese medicine of kidney, such as Heshouwu, Huangjing, Dihuang, walnut kernel, Ligustrum lucidum, mulberry, etc. to kidney essence replenishment received good results, and proposed kidney and essence replenishment through the beginning and end of the disease [14]. It is clear that the kidney is the primary treatment of dementia from the clinical research of modern medicine.

2.3. The treatment of spleen and kidney homology is based on their relation

We should not only pay attention to tonifying the kidney and filling the lean marrow but also pay attention to tonifying the spleen based on the pathogenesis characteristics of dementia in the treatment of dementia-related diseases. For clinical use of both attack and tonify, it is necessary to adopt tonify qi and spleen, kidney and fill the pulp, but also consider opening orifice phlegm, a blood circulation treatment strategy. Only the spleen's main transport harmony, its transformation of the subtle material into the source of visceral activity, brain marrow, is nourish. Thus, the mind can be maintained normally. Kidney essence and generation are sufficient, it will be marrow sea abundant, and body activity will be normal. The treatment of the spleen and kidney is based on the treatment principle of treating the disease, and it is also the core of the treatment of dementia(Figure 4). It embodies the overall concept of traditional Chinese medicine, the concept of positive and evil, and the concept of urgent treatment and slow treatment. Bingqian Cao et al. [15] combined traditional Chinese medicine treatment of dementia, multi-target, multi-channel, multiband -directional regulate VD-related signal transduction pathways and gene targets. Combing with traditional Chinese medicine of the ancient dementia treatment. It is used by astragalus, ginseng, codonopsis, atractylodes, and poria for invigorating the spleen. It is used polygonal rhizoma, cistanche, deserticola, and epimedium to replenish the kidney and fill the marrow, it is achieved for the purpose of treating deficiency through the spleen and kidney. It achieved the treatment purpose of phlegm resuscitation, blood od circulation by using Polygala tenuifolia, Acorus tatarinowii Schott, Angelica sinensis, and Ginkgo biloba. Some relevant research [16] found that the method of filling lean marrow, tonifying the heart and spleen, resolving phlegm, and removing blood stasis can effectively improve AD patients' cognitive and, learning and memory abilities and delay the process of dementia. Ying Wang et al. [17] found that Jianpi Yishen Huazhuo Decoction can improve the cognitive function of patients, especially in memory and language ability.

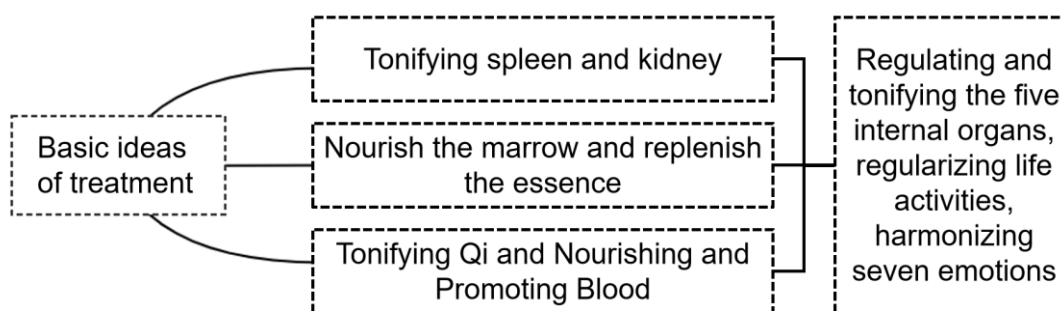


Figure 4: Basic ideas of treatment for dementia.

3. Thinking and Prospects

With the aging of the population, the incidence of dementia is also increasing year by year, which seriously affects the quality of life of patients and brings great mental and economic pressure. For the treatment of dementia, there is no cure method at present. According to this article, traditional Chinese medicine has great potential and advantages in preventing and treating dementia. It has good clinical effects in the treatment of the spleen and kidney and has broad prospects for development and application. However, there are still some shortcomings, such as the etiology and pathogenesis are not uniform, some specific mechanisms of pharmacological effects are not clear, and so on, to be further studied and researched. In addition, there are some points that should be paid attention using traditional Chinese medicine to treat this disease, such as treating the disease according to the individual condition and disposition to evidence. It should not be ignored the role of acupuncture, moxibustion, and other traditional Chinese medicine therapies to better play the advantages of traditional Chinese medicine; these will provide a new theoretical basis for the treatment of this disease.

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