

Kidney essence deficiency and the relationship with alzheimer's disease



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Pathologies of Kidney essence deficiency and its possible further development into Alzheimer's disease

Abstract

Syndrome pattern differentiation in Traditional Chinese medicine can sometimes be quite challenging. While, different aspects of parameters complicate it even more it is essential to make a correct diagnose with the help of previous studies and differentiation methods.

This essay discusses the available research and standards on Kidney essence deficiency and its further development to Alzheimer's disease. This disease, mainly related to the brain and developmental problems, yet considered to have the root connection in the Kidney deficiency.

A numerous acupuncture studies about Alzheimer's disease have shown patients improvement in some level, but still further research is needed.

Introduction

According to Traditional Chinese medicine (TCM), Kidney essence originates from the two sources hereditary and the diet after the birth. Those two sources are inseparable and will be stored in the kidneys together (Liu, 2011, 69). Along with TCM theory, Kidney essence is the foundation of reproduction, development, and growth. Therefore, Kidney essence deficiency (KIED) can develop as a result of hereditary insufficiency, overconsumption, aging, immoderation of sexual life or disorders of Zang-Fu organs (Ling and Xu, 2013).

The signs of KIED by Miller are thinning of hair, problems with the bones and tooth, dizziness, poor memory, neurological decline, lower back pain and weakness, spermatorrhea, osteopenia, osteoporosis and weakness of the limbs.

Furthermore, stress can be worsening the symptoms of the Kidney essence deficiency and together with aging and poor digestion there can develop Spleen dampness and disturbance of the flow of essence causing adrenal fatigue and deficiency of hydrochloric acid in the stomach (Miller, 2013). Besides, according to Ling Shu Ying Wei Sheng Hui (Cited in Songlin, 2015) aging is related to the Qi and Blood deficiency, causing congestion and cloudy Phlegm what are the features for the development of Alzheimer's disease (AD) (2015).

Clinical manifestations in Kidney essence deficiency pattern can be divided into four groups: developmental problems for children, sterility problems for males, infertility problems for females and dementia for adults (Chen and Wilson, 2011, 258).

Discussion

Kidney essence deficiency pattern development in relation to the basic TCM theories

To gain a deeper understanding of how KIED pattern may develop it is essential to look at the broader picture about TCM syndrome pattern differentiation.

Classically syndrome pattern (Zheng) differentiation in TCM according to Yang et al. 1998 (cited in Yeung et al., 2016, 2) is done by evaluating individual's symptoms and signs of disharmony using eight basic parameters: Yin and Yang, hot and cold, external and internal, excess and deficiency. Also, keeping in mind other assessment parameters like Qi, Blood, body fluids and organs (Zang-Fu) (2016, 2).

One of the theories that can contribute to the syndrome pattern differentiation is Yin and Yang theory about the opposites like heat and cold, motion and stillness and it is used to describe how imbalance is developing in the body. However, these opposites only arise concerning each other and are indivisible (Lozano, 2014, 14 -17).

Kidney essence is the material base of the primordial Yin and Yang, and when there is a pathology, then they both are mutually affected (Wu et al., 2103, 106 -108). Furthermore, alternative study shows how Kidney essence pattern can be divided into two, where one is Kidney Yin-essence pattern and the other is Kidney Yang-essence pattern, whilst they both are responsible for the body water metabolism. Namely, Kidney Yin-essence controls how water is separated into the pure and the impure. Kidney Yang-essence controls the heat and how water is distributed in the body. Subsequently, the water integrates almost 80% of all our body system; this means that the importance of Kidney Yin is apparent (Hammer, 1999, 10).

Another essential part of the differentiation is Qi and how it is moving around the body. Ancient Chinese philosophers always believed that everything contains Qi and Qi is in continuous movement and transformation.

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Specifically, Qi follows four movements: ascending, descending, entering and exiting and these take place between earthly and heavenly Qi. Another important aspect is a relationship between Qi, essence, and spirit. To be precise, Qi may transform into essence and essence into Qi, furthermore they together can generate spirit and spirit can control them. Unbalanced emotions can hurt the spirit, and this can lead to the weakness of the physical body (Wu et al., 2013, 30).

Subsequently, there are several features in TCM what are establishing picture how disease can start and develop in the human body system. However, one of the central concepts in TCM is Holism. Regarding to this idea, the body is a whole, and its parts are inseparable and interdependent (Wu et al., 2013, 21-22). Pathological change can disturb the balance in whole body system leading to the complex disease development.

Furthermore, one of the contemporary holistic worldviews suggests that the Kidney is working like network what is related to the water element and it is also a source of prenatal essence (Jing) what comprises Adrenals. It was found that Adrenals control how we are using essence and simultaneously maintain body with its functions. This study describes Kidney network as a net what contains essence, bone marrow, brain and neuroendocrine system (Adrenals). It was also stated that when we were born, then we get a certain quantity of essence what rebuilds us every moment at the rest of our life (Miller, 2013, 5).

The Chinese National Diagnostic standard gives classification for kidney deficiency where it can be divided into three categories Kidney-Yin deficiency

syndrome, Kidney-Yang deficiency syndrome and concurrent existence of both syndromes. Another study was made to make differentiation even more manageable, and there were only two groups of kidney deficiency syndrome left namely Kidney-Yin deficiency and Kidney-Yang deficiency. Patients were separated conferring 24 different symptoms using Kidney deficiency syndrome questionnaire. At the result they got that Kidney-Yin deficiency syndrome group consisted of four symptom patterns: Kidney essence deficiency, malfunction of the genitals and the ears, Deficiency Heat, malfunction of the Urinary Bladder in excreting urine. Kidney-Yang deficiency group consisted of Kidney-Qi Deficiency, Deficiency Cold, malfunction of the Kidney and the Urinary Bladder in excreting urine, malfunction of the genitals and the ears, malfunction of the anus, malfunction of the Kidney distributing water (Chen et al., 2008, 457).

To summarize, there are a few different aspects in TCM to keep in mind when deciding the root cause of the disease. For Kidney essence deficiency it can be rather challenging. Therefore, to make it easier, it is possible to use some diagnostic standards.

Kidney essence deficiency a possible root cause of Alzheimer's disease

In Traditional Chinese Medicine, Alzheimer's Disease is one of the diseases what is closely associated with the Kidney essence deficiency. Then again Western medicine is describing AD as an age-related progressive brain disease. However recent studies show that AD may have much wider connections to the human body system in general and western medicine may also adapt some holistic viewpoints from TCM in the close future.

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By the definition of western medicine AD is a neurodegenerative brain disease, and its main characteristics are a continuous loss of memory, language decline and decay of other cognitive skills due to the neuronal damage (May and Feng, 2018, 1). AD is recognized as the most common form of dementia, besides Vascular Dementia and mixed dementia. The main difference between them is the disease location and the way how they cause brain cell damage. Differently from other forms of dementia Alzheimer's disease leads to the neuron's loss in the hippocampus area at the first place and this is also the reason why patient starts to develop poor memory and learning difficulties. Since the exact cause of AD in western medicine remains unknown there are several other factors what have believed to lead to the disease development and these are aging, inflammation, oxidation, and accumulation of specific proteins like β -amyloid and tau in the human brain (Fillit, 2017).

However, there can be some confusion between two different terms like Alzheimer's disease and dementia. Since the diagnosis of AD can be verified only with the help of invasive tests or autopsy, then it is acceptable to use term dementia and senile dementia when referring to AD (May and Feng, 2018, 2).

Although, besides the idea that KIED is the main factor for AD in TCM, there have been a quite a few different suggestions for Alzheimer's disease development. For example, Chen 1687 proposed (cited in Asakava and Xia) that losing intelligence and developing dementia was connected to the lack of interaction between the heart and the kidneys. However, then again by the more advanced theory, dementia is mainly dysfunction of the brain <https://assignbuster.com/kidney-essence-deficiency-and-the-relationship-with-alzheimers-disease/>

accompanied with dysfunction of the other organs like liver, spleen, heart and kidneys. Also related to the factors like fire, wind, stagnation, phlegm and weakness (2012, 255-301).

But numerous studies suggest, as discussed earlier, that Alzheimer's disease is related to the Kidney essence deficiency only (Songlin, 2015). For instance, Yi Xue Xin Wu stated that (cited in Asakava and Xia): "...intellect is based on the kidney. Kidney deficiency leads to the mental retardation, and insufficiency of kidney essence leads to the brain marrow dystrophy and dementia." (2012, 255-301).

Why there are different interpretation for AD development in TCM and Western medicine? To answer this then it is necessary to look more thoroughly to the link between the brain and the kidney essence. It is explained in Traditional Chinese medicine with the aid of the holistic view that kidney essence is a source of the bone marrow and brain is a sea of marrow. More strictly, after Ling Shu (cited in Maciocia, 2010) marrow is the transformation of the Jing from Kidneys and it impacts the brain, the spinal cord, and the bone marrow. The brain is called the sea of marrow, and when it is filled up with marrow, then it is healthy. Otherwise, when there is deficiency then symptoms of the dizziness, tinnitus, unclear vision, weakness of the legs can happen (2010).

Furthermore, a recent study may prove that TCM opinion about Kidney deficiency causing Dementia can be closer to the definite cause of AD than the western medicine view currently is.

It was found that the vascular injury and the neurotoxicity from uremic toxins like parathyroid hormone in AD has the same mechanism what originates from Chronic Kidney disease.

There have been numerous epidemiological studies collected showing the close connection between AD and Chronic Kidney disease (CDK). (However, CDK is not identical to the KIED, but it is closely related to the KIED and Kidney deficiency).

Furthermore, according to Guo (cited in Shi, 2018), MRI images showed that patients with KIED syndrome had similar brain imaging patterns like patients with AD.

Besides, a systematic meta-analysis done by Etgen in 2012 (cited in Shi, 2018) consisted of 54779 showed that cognitive impairment what is one main criterion to detect AD was significantly higher in the case of Chronic Kidney Disease (2018).

To summarize, with the help of new discoveries about the connection between the brain and the kidneys, already considered by the Western medicine, there can be developed new strategies for AD. In addition, as stated in TCM, aging process leads to the Kidney deficiency and emotional disbalance while pathological change in brain leads to the mental loss, but the root cause remains in the Kidney essence deficiency (May and Feng, 2018, 28).

What are the best acupuncture points for a treatment of the Alzheimer's disease?

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There is no promise that acupuncture can treat Alzheimer's disease, instead many studies suggest that it can help to improve the person's life quality.

Acupuncture and other TCM approaches are focusing to the slowing down cognitive decline and the management of psychological problems of the AD patients (May and Feng, 2018, 241).

The most common acupuncture points according to Xia for treatment of Alzheimer's disease are from Governor, Heart, and Kidney meridian. The aim of the treatment is the opening of the intelligence and re-establishing the consciousness (Asakava and Xia, 2012, 255-301).

Moreover, several studies show that there is an inseparable linkage between Governor Vessel (GV) and the brain. While, acupuncture can help to improve distribution between GV and brain and as a result function of the brain.

To illustrate this more precisely, the study was done on mice where acupuncture points GV20 (Baihui), GV29 (Yingtang), GV26 (Shuigou) were used with Electric acupuncture (EA) applied 20 min each day once a day, following 15 days. They found that EA was improving memory, spatial learning and the intensity of glucose metabolism in the hippocampus area. Brain glucose hypometabolism is also considered as a part of the pathogenesis of AD. This study may also indicate that EA can regulate qi and blood supply in the brain, leading to the restoration of the consciousness (Cao, 2017, 2-7).

Similarly, according to Maciocia main points for treatment of Kidney essence deficiency are from Governor Vessel. GV is balancing Yin and Yang in the

head and the brain because it is carrying the Kidney essence. While Kidney essence is the source of the marrow, and it flows inside of the spine with the direction to the brain. Furthermore, due to Kidney essence deficiency person may be more susceptible to emotional stress and then it is most beneficial to use GV20 as it is nourishing Shen and the sea of marrow at the same time (Maciocia, 2010).

Also, a study was done to find out most common acupuncture points from classical literature for possible Alzheimer's disease. In this study 164 citations were collected from 44 different books written between years 282 AD to 1923. As a result, most frequent needling and moxibustion acupuncture points found were HT7 (Shenmen) 53 citations, BL43 (Gaohuang) 25 citations, GV20 (Baihui) 17 citations, KI4 (Dazhong) 17 citations and KI21 (Youmen) 14 citations (May and Feng, 2018, 66-68).

Although, frequency of point usage does prove their efficiency over others. Since suitability of these points for certain syndromes are still undecided. Further research may solve this problem (May and Feng, 2018, 215).

As a final point, the most beneficial combination of acupuncture points for AD can be only selected with the help of TCM syndrome pattern differentiation. But the research about Alzheimer's disease development is still ongoing process and according to this there will be always new acupuncture points combinations suggested.

Conclusion

There has been research in TCM about dementia for an extended time period, and there has been established systematic theories about its development. Although, making the diagnosis is still complicated, often related to the experience and personal understanding.

This study shows possible connection between KIED and Alzheimer's, confirmed from both sides Traditional Chinese medicine and Western medicine.

While the exact cause of the AD in western medicine is still unknown, there are several biological processes like aging, inflammation, and accumulation of toxic proteins considered to grant to its development.

Many studies suggest that acupuncture can help to improve the life quality of the Alzheimer's patients. However, due to Alzheimer's disease complex nature, further studies need to be done to find the most efficient treatment method. Therefore, combination from both TCM and western medicine can be the future of the Alzheimer's study.

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