

Cause and result of blood deficiency in brain

1. Function and blood requirement of the brain

There are more than 100 billion neurons (nerve cells) in human brain. They control the central and peripheral nerve systems, regulate not only the cardiovascular, respiratory, digestive and eliminative functions, but also hormone secret as well as movement of limbs, language, memory, recognition, thinking and etc.

The nerve cells use the nutrients provided from blood to synthesize neurotransmitters. Once the released neurotransmitters bind to corresponding receptors on the cell membrane of the efferent, the above-mentioned regulations begin.

Brain is the most complicated organ in human beings. The brain weight is only 2% of the body weight, but it needs 15~20% of the total blood supply. The brain cells can only function well when they receive enough nutrients from the blood.

2. Result of blood deficiency in brain

As we know, if the blood vessel in brain blocked or leaking, the person would either become paralyzed, vegetative, or even died due to the deficiency of blood in brain. But have you ever thought that the un-detected blood deficiency in brain may cause many problems that people are commonly suffering?

As a scientist who have spent more than 20 years on herbal study and research involving chemistry, biochemistry, pharmacology and clinical practice, I believe that insomnia, anxiety, poor memory, tinnitus, depressant, some types of headache, Alzheimer and Parkinson are all related to blood deficiency in brain. The meaning of blood deficiency in brain here refers not only to the quantity, but also the quality of the supplied blood. As mentioned above, the neurotransmitters are synthesized within the nerve cells using the nutrients provided by the blood, usually called precursor of the neurotransmitters. If the blood could not provide nerve cells enough nutrients or precursors, there will be no enough neurotransmitters to carry out the functions of nerve system, causing problems as mentioned.

The obvious evidence to support the above hypothesis is that all of the problems mentioned above involve in the deficient neurotransmitters, for example, GABA to insomnia and anxiety; serotonin to tinnitus, depressant, migraine, tension headache, and cluster headache; acetylcholine to Alzheimer; dopamine to Parkinson; serotonin and noradrenaline to depressant, etc. The Western medicines work for the above diseases either as agonists, reuptake inhibitors or metabolic enzyme inhibitors, with the purposes to increase the numbers of the neurotransmitters binding to the receptors on efferent cell membranes.

3. Causes of the blood deficiency in brain

The brain cells require nutrients from blood not only in quantity but also quality. If there is no enough blood supply, the nerve cells in brain will not function well or even shrink slowly till die. In addition to trauma, hypertension and fragile of blood vessel can cause bleeding, thus blood loss in brain as we know, the following are also reasons causing brain blood deficiency either in quality or quantity.

- 1) The heart fails to function well to pump out enough blood due to heart diseases. The quantity of the blood from the heart depends on both the output of each heart-beat and the rate of the heart heat. The pulse diagnosis in my clinic indicated that most of the patients

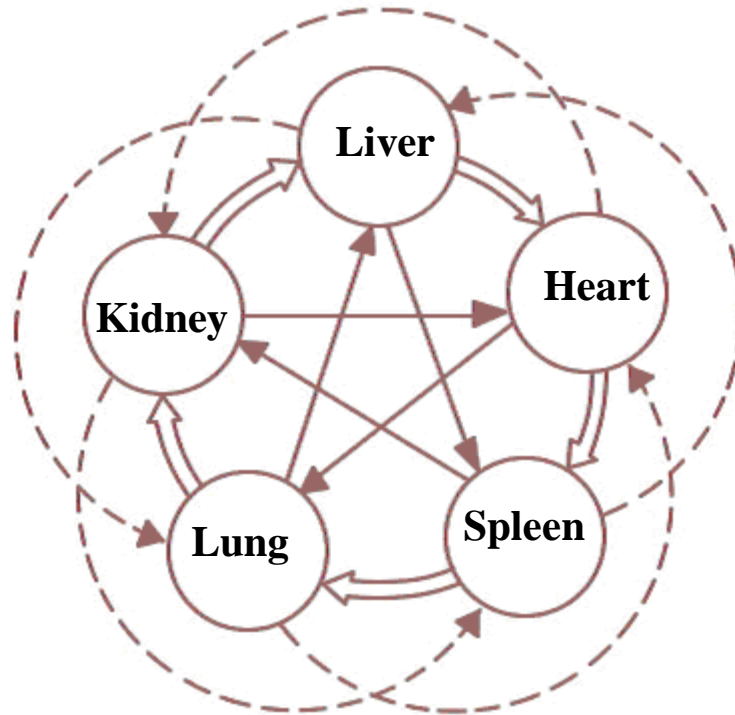
complained about chronic insomnia have a relatively weak pulse with the exception of hypertension.

- 2) The blood vessel is blocked or narrowed somewhere on the way into the brain. The results of the symptoms depend on the location of the blockage. Stroke is known due to the blockage or bleeding of the blood vessel. I would say that there may be many undetectable blockage or bleeding in the peripheral vessels that can cause the death of cells in some areas. This is especially more common to old people while the metabolism of the cells become slower, gradually resulting clots deposit in the blood vessels and the wall of the blood vessels become more fragile. The anatomy of the patients with Alzheimer and Parkinson's demonstrated my point.
- 3) Blood viscosity is higher, so the blood flow to the brain is slower.
- 4) Anemia patients may complain about dizziness due to the deficiency of the nutrients in blood cells.
- 5) Poor appetite, improper dieting, indigestion, stomach or duodenal ulcer, excessive eating caused stomach problems, dysfunctions of intestine, pancreases or liver may all result in poor nutrient absorption or insufficient metabolism, then consequently blood deficiency. Many of patients in my clinic with chronic insomnia have digestive problems. This is consistent with a recent prevalence study on about 100 thousand people concluded that people in the IBS cohort had a 40% to 80% higher prevalence odds of migraine, fibromyalgia, and depression.
- 6) Stress can also lead to the release imbalance of neurotransmitters and hormones, and if the stress continues, it will affect the sleep, result in the depression and other problems.

When the nerve cells in brain sense the deficiency of nutrients (particularly neurotransmitters) that necessary to the brain, the nerve system will send signal as feedback to regulate the corresponding organs work harder to make up the deficiency. For example, when the myocardial muscles (muscle on heart) fails to contract strong enough to pump out enough blood, the autonomic nerve system will force the heart beat faster to compensate the less output of each beat. If this continued, such compensation will gradually make the heart exhausted.

4. Prevention and treatment with TCM

In traditional Chinese medicine, the heart is thought to control the intelligence. Meanwhile, according to the five elements theory, the heart function also related to the functions of lung, spleen, liver and kidney. These are not difficult to be explained with modern science.



When the patients come for the treatment of insomnia in my clinic, many of them complained about digestive problem or heart uncomfortable and were diagnosed as Qi or blood deficiency based on the TCM diagnosis. In most of the cases, the sleep was improved after the cardiovascular and digestive systems were tonified with herbs and acupunctures. The other problems accompanied with the sleeping problem, for example, headache, tinnitus, dizziness and poor memory were mostly disappeared. This is called “treating the root”, e.g, treating the cause of the problem rather than the symptoms.

5. Tri-rejuvenator regulate the cardiovascular, digestive and metabolite systems

Tri-Rejuvenator is a new anti-aging herbal product. The ingredients in the capsules have been scientifically reported to enhance the functions of the digestive, cardiovascular and metabolite systems to ensure the vital organs function well, thus improve sleep quality, provide energy for those experiencing stress and fatigue syndromes and lower hyperlipidemia. It can also protect the wall of blood vessels from fragility to prevent stroke and stimulate immune system to prevent cancers.

The feedback from patients demonstrated that after taking Tri-Rejuvenator 1~2 weeks, their poor sleep and digestion as well as constipation obviously improved. Consumers also reported the decrease of their higher cholesterol or tri-glycerol and better memory after ingestion of 2~3 months .