Research on regimen furniture based on the theory that acupuncture can cure chronic diseases

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Abstract. In recent years, the development of the economy has prompted the furniture industry to diversify, and massage furniture is constantly emerging. Many massage products are relatively limited in design, and prone to problems such as general body massage, acupuncture points that are not symptomatic, and popularization of the use of the crowd. As a result, massage products can only solve "temporary problems" and do not cure the symptoms. This article summarizes and researches on the previous achievements of acupuncture points for chronic diseases. The acupoint-dense area is refined and designed as a machine with a grid-like massage path. The treatment effect is enhanced by the "point-to-point" method, so as to achieve the concept of "prevent diseases" in Chinese medicine. This type of furniture not only has health functions, but also increases the added value of the furniture. Health-care furniture can increase the added value of furniture and design new directions for the furniture industry.

1 Introduction

Driven by artificial intelligence, the furniture industry is moving towards intelligence. There are few theories about health-care furniture at home and abroad. Most of them are massage chairs and massage beds. Many furniture with massage and health care functions are limited and the treatment effect is not satisfactory. This article researches and summarizes the cases of traditional Chinese medicine acupoint treatment of chronic diseases, and proposes a design method of health-care furniture to solve problems such as insufficient treatment and too general massage.

2 Acupoints can cure chronic disease theory

2.1. Chronic disease concepts and types

Chronic. It refers to a general term for diseases that are not a source of infection and cause damage to part of the body or organs due to long-term accumulation of toxins, not just a certain disease. If not treated in time, it can cause damage to the heart, brain, and organs, which can seriously endanger life. According to the "China Health Survey Report", in 2012, the number of deaths due to chronic diseases in China accounted for 86.6% of the total deaths. Among them, 22% of middle-aged people died of cardiovascular and cerebrovascular diseases. The elderly have a high prevalence of chronic diseases and there are many factors such as complications in clinical practice. In addition, the obese population will reach 325 million and will double in the next 20 years. Recently, there have been frequent cases of sudden death of young people at work, and many chronic (acute) diseases have gradually become younger. In Wang Zhaoxin's research, it was found that diabetes, blood, and endocrine system diseases are being transferred to young people aged 30-50.

According to the body's functional system, chronic diseases can be divided into: respiratory system diseases, circulatory system diseases, urinary system diseases, blood system diseases, digestive system diseases, metabolic system diseases, rheumatic system diseases, and neurological diseases. Using literature collation methods, sort out the acupuncture points in the clinical cases of traditional Chinese medicine treatment of the above chronic diseases.

2.2. Acupoints for the treatment of chronic diseases

2.2.1. Respiratory disease. As shown in Table. 1, according to Guo's winter disease and summer acupoint application therapy, the proportion of respiratory diseases is the highest accounting for 34.73% of the total in the 60-74 years old, and common such as chronic bronchitis, asthma. “Su Wen · Cough Theory” mentioned, “People who treat organs, treat their acupoints.” Choosing the right acupuncture points can help treat and prevent this type of disease. In clinical practice, multiple
back-shu points, lung-shu points, Dazhui and Tiantu points are often used. Chronic cough and asthma bronchitis: Feishu, Pishu, Weishu, Shenshu, Zhishi and Zhongfu. According to Hu Zhiguang's treatment of 61 cases of bronchial asthma patients with acupuncture at Dazhui, Dingchuan, Fengmen, Feishu, Tsusanli, Sanyinjiao, and Kongkong, the efficiency reached 81.97%. According to Zhang Yali's records: cold: desirable lung, inner nose, lower screen tip, cough: bronchus, lung, Shenmen, asthma: asthma, lung, lower foot end, lower screen tip. Commonly used for cardiopulmonary treatment: The urinary bladder channel of Foot-Taiyang, Gaohuangshu, Du shu. Zhao Zhihong treated 200 cases of chronic bronchitis for three consecutive years with a total efficiency of 85.5% by taking acupuncture points such as Feishu, Xinshu, Geshu, Fengmen, Shenshu, Jueyinshu, Tiantu, Dazhui, Shanzhong, Gaohuang, Zhongwan, Zhongfu, Neiguan, Dingchuan, etc. Hu Ping chooses Feishu, Pishu, Shenshu, Gaohuang with drugs to achieve a total treatment efficiency of 86.5%. Table 1 are acupuncture points for treating the disease.

Table 1  Gender and age composition of respiratory diseases

| Gender | cases | total ratio | men | women |
|--------|-------|-------------|-----|-------|
| 18-44  | 322   | 24.52       | 144 | 178   |
| 45-59  | 366   | 27.88       | 113 | 253   |
| 60-74  | 456   | 34.73       | 179 | 277   |
| <75    | 169   | 12.87       | 92  | 77    |
| total  | 1313  | 100         | 528 | 785   |

After comparing the therapeutic effects of the two groups, Li Jie concluded that massage Shenjue point has a better effect on chronic cardiac insufficiency and is worthy of clinical promotion. In his research, He Zhiming explained that treatment of coronary heart disease focuses on both the root and branch aspects and take acupuncture points such as Gongsun, Neiguan, Lieque, Zhaohai, Waiguan, Tsulinchi Houxi, Shennai. Because of different clinical conditions, adding individual acupoints on the basis can improve the treatment effect, such as acupoint Spleen Shu, Shanzhong, Qihai, Tsusanli, Shenshu for deficiency of vitality; acupoint Sanyinjiao, Taichong, Fuliu, Renzhong for deficiency of Yin; acupoint Dazhui, Guanyuan, Suyu for Cardiodyangpenia; acupoint Gongsun, Neiguan, Geshu, Rangu, Fenglong, Yinlingquan for coagulation of blood; acupoint Rangu, Fenglong, Yinlingquan, Spleen Shu for phlegm obstruction. Liu Wanning concluded that acupuncture Quchi, Tsusanli, Taichong, Shenmen, Ganshu, Guanyuan, and Neiguan had significant reduction effects on systolic blood pressure.
2.2.3. Urinary system disease. The system diseases include: chronic renal failure, chronic glomerulonephritis, and nephrotic syndrome. Nephrotic syndrome belongs to the category of “edema” in the theory of traditional Chinese medicine. Depending on the clinical situation, it is sometimes related to “turbid urine”, “Lumbago”, “consumption” and “obstruction and rejection”. “Su Wen: Water-heat Acupuncture Theory” mentioned, “Those who are brave and hardworking sweat out of the kidney and then meets the wind, do not enter the viscera inside and do not go beyond the skin outside, it is said to be bloated, which is inherent in the kidney. Its name is Feng Shui.” Pan Yuting summarizes the pathogenesis of nephrotic syndrome in the past doctors: Deficiency of the five internal organs, including lung, spleen and kidney disorders, deficiency of spleen and kidney, deficiency of kidney, and spleen and stomach disorders; evil pathogen is caused, including rheumatism, endoretention of damp heat and stagnated heat in xuefen. In recent years, due to irregular personal habits of modern people, the incidence of chronic kidney disease has increased. Factors such as obesity, drug abuse, and hypertension can increase the risk of kidney disease. According to Wang Huan, the acupuncture points of this type of disease are summarized: Chronic nephritis: Shenshu, Tsusanli, Yongquan; Chronic renal failure: Shenshu, Qihai, Shuifen, Sanyinjiao; Nephrotic syndrome : Shenjue, Double renal pelvis, Shuifen,Shuidao, Sanjiaoshu, Weiyang, Yinlingquan, Bladder Shu, Gaohuangshu; Diabetes mellitus: Taichong, Taixi,Tsusanli, Huantiao, Shangjuxu, Yishe, Qihai, Shenshu, Small intestine shu, Rangu, Xingjian. Acupuncture points can be used to improve chronic kidney disease such as nocturnal clearance, lumbar debility, fatigue and lack of strength etc.

2.2.4. Hematological disease. Chronic diseases of the hematological diseases have various causes of anemia. Anemia is a clinical syndrome with a lower red blood cell capacity. It is not an independent disease, but may be an important clinical manifestation of a basic or sometimes more complicated disease. “Su wen: abdominal theory” mentioned, “People who have a full chest and threatened disease should be protected from food…the limbs are clear, the eyes are dazzled…and the disease name is blood exhaustion,” “Medical science: medical science or questions” mentioned, “The cause of weakness is from the kidneys.” means kidney deficiency does not store essence and no hematopoietic effect. Therefore, from the perspective of traditional Chinese medicine, chronic aplastic anemia lies in the deficiency of the spleen and kidney and is mainly in the kidney. In addition to traditional Chinese herbal enema and way of pasting therapy, it is also necessary to massage acupoints. Articles on the treatment of chronic aplastic anemia by external treatment of Chinese medicine first appeared in the 1960s, Zhao Guixiang selected acupoints such as Yintang, Xuehai, Yuji, and Dazhui to achieve 90% of the therapeutic effect. Yang Zhiwen used internal administration plus acupoints such as Mingmen, Shenshu, Pishu, Tsusanli and other acupoints to treat 36 cases of the disease with an efficiency of 86.1%. On the basis of researching her tutor to treat leukopenia, Wang Hui concluded that anemia due to leukopenia is related to "Weiyang". Massage Qi Hai, Guan Yuan, Tsusanli and other acupuncture points can replenish vital energy and treat clinical manifestations such as white face, fatigue, sweating, and susceptible pathogen.
2.2.5. **Digestive system disease.** Cirrhosis, chronic hepatitis, and peptic ulcer are the main clinical manifestations of this system disease. Cirrhosis is the last stage of the development of liver fibrosis, with mild symptoms at the early stage and a series of complications due to liver insufficiency, such as hepatic encephalopathy, peritonitis, and hepatorenal syndrome. Ascites due to cirrhosis have become a worldwide refractory disease. Xu Jie summarized that kidney deficiency is caused by spleen deficiency, which affects liver and kidney function by a long time and eventually leads to excessive splanchnic fluid and swelling. In his research, Shenjue, Qimen, Zhangmen were selected for the application treatment. There are 30 acupoints related to the treatment of cirrhosis in Duan Yinghua's statistical literature: Tsusanli, Ganshu, Qimen, Shenjue, Sanyinjiao, Taichong, Zhangmen, Yanglingquan, Pishu, xiahe and bahui are commonly used for conditioning viscera. Peptic ulcer is a gastrointestinal dysfunction, while hepatogenic gastrointestinal insufficiency is a dysfunction in urinary tract secretion, absorption and exercise circulation caused by hepatic insufficiency. Deng Jingjing mentioned the daily electroacupuncture at Tsusanli, Sanyinjiao and Taichong after observing the acupuncture effect of 40 gastrointestinal patients with cirrhosis. These three acupoints are one of the "Jin San Acupuncture" created by Lingnan acupuncture expert Professor Jin Rui. Zusani is the point of stomach meridian and Sanyinjiao is the point of spleen meridian. Combination of two points can relieve liver and qi.

2.2.6. **Rheumatic disease.** Rheumatoid arthritis is a systemic autoimmune disease mainly characterized by erosive arthritis, polyarticular synovitis and extra-articular lesions. Chinese medicine believes that this type of disease is the clinical manifestations of wind, cold, dampness, heat and other evil gases invading the human body, resulting in poor flexion and extension. Although various famous medical experts have different acupuncture methods and acupoints, their total efficiency is quite high. Such as Yin Baishun's acupuncture therapy, acupoints of Great Slaughter, Ganshu, Shenshu, bladder Shu, Weizhong, Kunlun, Waiguan, Fengshi, Xuehai, Taixi, Sanyinjiao, achieving a total efficiency of 96.8%. Wang Xihua used fire acupuncture therapy, taking Tianying, Jiaji, partial acupoints on the extremities, and Zhongwan, Qihai, Guanyuan, Tsusanli, Huantiao, Yinlingquan, Yangling,Bafeng, Baxie, reached the total efficiency is 97%. Guo Aihua used catgut implantation at acupoint to take Hegu, partial calendar, Quchi, Zusani, Jiexi, Huantiao to treat 6 cases of the disease. Sun Wenshan taking points Ganshu, Pishu, Shenshu, Mingmen, Quchi,Tsusansli, Taixi, and local joints acupoints. The symptoms of half-month treatment were significantly reduced. Tan Sanchun taking points Shenshu, Yingu, Taixi, Guanyuan, Xuanzhong, Geshu, Xuehai, Fengchi, Yinlingquan, Tsusanli and other local points. Zhang Kuo selected 143 acupoints to treat this kind of disease, and summarized the most commonly used acupoint for different parts. Based on the above, the common points are summarized as follows.
3 The furniture of regimen

A furniture of regimen is evolved according to the development process of human beings. China’s bed was produced in Yin Shang dynasty and began to sat on the chair in Song dynasty. When modern design began, electric massage tables for nursing homes appeared in 1910, the first massage bed appeared in the late 1920s and then various massage products appeared in the 1940s. In 2002, health-care furniture appeared abroad such as temperature-adjustable beds, hypnotic and wake-up beds, magnetic therapy chairs, mandatory brain chairs, and so on. Chinese traditional furniture pays attention to the health function of materials, such as red sandalwood for sleeping, rosewood for sitting and lying, carry sea yellow on oneself, chicken wing wood for daily use, ebony for decoration, camphor for decorate. In 2009, Wei Qingqing specifically discussed the definition and innovative decoration, camphor for decorate. In 2006 and found that differences were mainly due to the connotation of regimen between China and the West. Zhang Genlei studied health-care furniture in 2018 with reference to the term "rehabilitation" in biomedicine and "rehabilitation landscape" in environmental psychology. The development direction of the furniture industry is more diversified and the furniture of regimen facing specific illnesses can be developed.

3.1. The concept of regimen

“Regimen” was proposed by American doctor Dr. Halbert Dunn in 1961 and interpreted as “wellbeing” and “fitness”. Other foreign scholars have successively proposed regimen-related theories. For example, Adams proposed four basic points for regimen: multi-dimensional, relative subjectivity, maintenance-oriented, and balanced. In addition, septuple space about regimen proposed by Puczko and Bachvarov. In China, the concept of regimen was first seen in the “Chuang-tzu's inner chapter”. Regimen has the meaning of maintenance, life and growth and recuperation. It is an activity to achieve physical fitness through various methods such as fostering spirit, adjusting diet, practicing body shape, and adapting to cold temperatures, the most common ways are acupuncture, massage, diet health care.

Li Li, a domestic scholar, defined the differences in the connotation of regimen between China and the West in 2006 and found that differences were mainly due to their View of nature and way of thinking. The sprouting of health-care ideas in China appeared in the Yin and Shang dynasties, and gradually developed during the Western Zhou Dynasty until the Spring and Autumn Period. According to “Zuo Zhuan”, a treatment incident of a doctor from Qin dynasties have shown that people noticed the relationship between daily living and health. In the same year, Liang Yanli pointed out a series of Taoist health regimens. Yang Jianhua studied the Confucian health philosophy. After the precipitation of history. Chinese traditional health culture has gradually developed into a culture of Confucianism, Taoism, Buddhism, and medicine.

3.2. Elements of furniture design of regimen

The elements of furniture of regimen design are as follows:

Swing and rotation: The common postures of the human body are standing, sitting, and lying. In order to meet different postures, the structure of furniture of regimen must have transformations such as swing, rotation and translation.

Appearance changes: The design of the product's appearance changes in various ways depending on the internal structure of the product.

Components conversion: There are inevitably many furniture parts with massage function, so the design should be as clever as possible.

Size setting: The furniture has formed a fixed size. Health-care furniture needs to be more accurate according to different body groups, and divided into several commonly used sizes.

Massage intensity: "diarrhea" and "tonic" in acupoint massage refer to the intensity and method of massage. Different degrees of force achieve different effects and have a direct relationship to the prevention and treatment of diseases.

Length of time: it is a necessary condition for treating diseases, which needs to be considered when designing.

Temperature: The appropriate temperature can improve the treatment effect.

Avoid extreme populations: For example, elderly people with cervical spondylotic myelopathy, cervical spondylotic radiculopathy, fracture or joint damage, arteriosclerosis, hypertension, osteoporosis need careful massage. Patients with severe cardiovascular and cerebrovascular, acute and chronic infectious diseases, menstruation and pregnant, skin ulcer, spinal injuries should avoid massagers.

4 Furniture of regimen based on acupuncts for chronic diseases

4.1. Acupoint dense area

Massage furniture mainly includes: massage chairs, massage beds, and small massage devices for local use. According to the types of furniture in different use spaces, There are several types that are extracted from furniture that has a large contact area with the human body and has been used for a long time: beds, stools, chairs, sofas. Furniture of regimen is designed by combining acupuncture points with several commonly used furniture. The size can be divided into large, medium and small according to the average size of the human body to meet the needs of different tall, short, and fat people. The human body performs acupuncture therapy massage during daily use of furniture, and finally achieves the purpose of prevention and treatment. As shown in tables, designers can design furniture of
regimen according to the distribution of acupoint-dense areas on furniture. Through these areas, the health effect can be maximized scientifically and the purpose of this article is to be studied.

4.2. A machine with a grid-like massage path

There are four bladder meridians on the back of the human body, corresponding to four vertical working lines of a grid-like path. Common points for treating diseases can be found in square areas. As the picture shows, the concentric circles in the picture are manipulators (massage points). Different manipulators can be controlled for targeted treatment for different diseases. Start all the manipulators can massage the diseased area to the greatest extent; The manipulator can massage four bladder meridians up and down at the same time, half of the manipulator can be retracted for alternating left and right massages. If you need to massage the thoracic vertebra and waist, you can start local massage; The top of each manipulator has a device that can heat, vibrate, rotate itself and tap to cover more points and improve the treatment effect.

5 Summary

Modern people are gradually paying attention to their body. After research in this article, we found that more than half of the chronic diseases can be prevented in daily life. Furniture is the longest time in the items we come in contact with daily. Through the acupoint-dense areas and grid-like massage paths extracted from this article, designers can use it in the design of furniture to achieve the effect of auxiliary treatment or prevention. In addition, for the entire furniture industry, the furniture of regime is a new direction that can be broken through and it is an inevitable way to improve the use of furniture.

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