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Research Progress in the Treatment of Myopia by Traditional Chinese Medicine

Chaoyi Lin[1,*], Ping Cao[2]

[1]Shaanxi University of Chinese Medicine, Xianyang, Shaanxi, 712046, China
[2]Affiliated Hospital of Shaanxi University of Chinese Medicine, Xianyang, Shaanxi, 712000, China
Correspondence Author

Abstract: ***With the development of the economy, the widespread use of electronic products, the increase of eye time, the incidence of myopia continues to rise, showing the characteristics of young age, rapid progress and high degree, the incidence of myopia in China ranks first in the world, the form is severe, and the prevention and control of myopia is imminent. The medicine of the motherland has a long history and many methods in the treatment of myopia, which has obvious advantages. This article reviews the specific contents and clinical effects of Chinese medicine in recent years, such as internal medicine, acupuncture, ear point pressure, acupressure, moxibustion, etc., hoping to contribute to the future Chinese medicine treatment of myopia.***

Keywords: Traditional Chinese Medicine, Myopia, Take Chinese medicine internally, Prick, Auricular point pressure bean, Acupoint massage**.**

1. Introduction

Myopia is a state of eye refractive error, refers to the relaxed state of the eye, parallel light refracted through the optical system of the eye before focusing on the retina, the retina can not form a clear image caused by far-vision blur. Myopia brings a lot of inconvenience to people, long-term eye fatigue, causing dry eyes, sore eyes, headaches and other discomfort, affecting the quality of learning, work and life, affecting personal career opportunities. In addition, myopia is easy to turn into high myopia, and complications often occur, including the risk of retinal detachment, retinal bleeding, macular degeneration, glaucoma, and even blindness in severe cases. In recent years, with the development of society, the digital and electronic degree is getting higher and higher, the penetration rate of electronic equipment is increasing, and people's eye time is getting longer and longer. In particular, children and teenagers use bright screen devices (mobile phones, computers, TV sets, etc.) in their study and life. The prevalence rate of myopia is increasing, and it shows the characteristics of younger age. According to the National Health Commission, the overall myopia rate of children and adolescents in 2022 is 53.6%, of which 14.5% are 6-year-olds, 36% are primary school students, 71.6% are junior high school students and 81% are high school students. Myopia has become a major public health problem affecting the eye health of children and adolescents, and has received attention from all walks of life. Therefore, it is essential to take active measures to prevent and control the development of myopia. The Traditional Chinese Medicine (TCM) treatment of myopia has a long history, and many forms, has a unique advantage.

2. The Etiology and Pathogenesis of Myopia

According to Chinese medicine, the causes and pathogenesis of myopia are mainly related to the dysfunction of the viscera, the habit of using the eye, the environment of using the eye and other factors. The main causes were lack of endowment, deficiency of liver and kidney, weakness of temper and weakness of heart Yang. The main causes were lack of endowment, deficiency of liver and kidney, weakness of temper and weakness of heart Yang.

According to "the Various pathogenic designate theory" [1], it is mentioned that "the liver is injured by fatigue, and the liver Qi is insufficient, and the essence Qi is weakened by wind evil, so it cannot be hyperopia". The liver is the eye in the orifices, and the liver Qi is connected to the eyes, but the essence Qi of the liver is insufficient, and the eyes cannot be hyperopia due to the loss of nourishment, plus the invasion of wind evil, and the essence Qi of the viscera is weakened, which causes the disease. As mentioned in "Examining Yaohan • Cataract", this disease is "liver meridian insufficiency and kidney meridian disease, and the brilliance is very close and the vision is blurred" and “Yang deficiency, illness due to less fire”, liver and kidney deficiency, lack of endowments, resulting in vision can not be far-sighted. In the “Lngshu” "the eye is the messenger of the heart". The heart governs the blood vessels, and the heart qi promotes and regulates the blood operation. The eyes are enriched in the blood, which makes the eyes can see. Excessive use of the eyes will damage the heart Yang, consume gas and blood, and the eyes will lose nourishment and lack eyesigh. The "Scert Book of Orchid Chamber▪Eye, Ear, Nose and Gate" states that "the essence and qi of the five organs and six viscera are all derived from the spleen and flow upwards through the eyes." If one's diet is not balanced, it can damage the spleen and stomach, leading to weak temperament, and the essence and qi of the organs cannot nourish the eyes and orifices, resulting in dryness and difficulty in long-term vision.

3. Traditional Chinese Medicine Therapy for Myopia

3.1 Internal Treatment of Traditional Chinese Medicine

Traditional Chinese medicine prescriptions are used to treat myopia, with a wide variety of options and types of medications. The medicinal materials used are often effective in brightening the eyes, invigorating the spleen and qi, nourishing the liver and kidneys, and effectively increasing local blood flow to the patient's eyes, thereby improving vision [2]. The selection of prescriptions is mostly based on

syndrome differentiation and treatment: if the liver and kidney are deficient, the treatment should be to nourish the liver and kidneys, and the prescription should be modified with Zhujing Pill; If the heart yang is insufficient, the treatment should be to nourish the heart and invigorate qi, and the prescription should be modified with Zhi Wan; If there is insufficient qi and blood, the treatment should be to nourish blood and qi, and the prescription is Danggui Buxue Tang; If the liver and gallbladder are damp and hot, the treatment should be to clear the liver and eliminate heat, and the prescription should be modified with Longdan Xiegan Wan; If the liver is deficient and the wind is hot, the treatment should focus on nourishing blood, regulating liver function, and improving vision. The prescription is Qiju Dihuang Pill, with modifications [3]. Based on her own clinical experience and inspired by the treatment of amblyopia in children, Xia Hong [4] grasped the key points of "liver and kidney deficiency, meridian obstruction" and used the principle of nourishing the liver and kidney, promoting blood circulation, and unblocking collaterals as the treatment principle, the prescription drugs are: Radix Polygonum Multiflorum 10g, Chinese wolfberry 10g, cuscuta 10g, Alisma orientalis 10g, Cistanche deserti 10g, Shu Di 10g, Chuanxiong 6g, Chen Pi 6g, Danshe 10g. The curative effect of typical cases is obvious, and it is worth further promotion and observation. Zhou Ronglin [5] et al. randomly divided 60 adolescent patients with high myopia into a control group of 30 cases and an observation group of 30 cases. The control group was treated with simple Chinese medicine placebo, while the observation group was given a prescription for strengthening the spleen, nourishing qi, and supplementing blood: 10g each of Angelica sinensis, stir fried Atractylodes macrocephala, Rehmannia glutinosa, Poria cocos, Goji berries, and Codonopsis pilosula, 6g each of chicken internal gold, red peony, and chrysanthemum, 5g each of Chenpi and Chuanxiong, 15g Huangqi, 8g Licorice, and 3 Jujubes (all pure Chinese medicine granules). Observe the refractive error, axial length, corrected visual acuity, and fundus examination of two groups of patients after three treatment courses (20 days per course). The results showed that the total clinical effective rate of the observation group was as high as 93.33%, significantly higher than the total effective rate of 63.33% in the control group. Wei Bin [6] et al selected 86 cases of adolescent myopia patients with spleen and stomach weakness syndrome based on TCM syndrome differentiation, and divided them into control group (43 cases) and treatment group (43 cases). The control group was treated with Buzhong Yiqi decoction alone, composition: Astragalus and Angelica 10g each, White rhizoma, licorice, ginseng, cohosh, orange peel 9g, Chaihu 6g. If there is stagnation in digestion and bloating in the epigastric region, 9g of malt can be added. The treatment group was treated with acupuncture and moxibustion (Yiming, Jingming, Chengqi, Qiuhou, Sibai, Shouzhongshu, Touwei, Guangming) on the basis of the formula. A course of treatment lasts for 10 days. Observation shows that the total effective rate of the treatment group (91.8%) is much higher than that of the control group (69.7%), Buzhong Yiqi Decoction combined with acupuncture and moxibustion can effectively improve myopia of spleen stomach weakness type. Professor Zhuang Zengyuan [7-8] has summarized the prescription for nourishing blood and kidney based on years of clinical experience in treating high myopia. The composition is as follows: Wolfberry, dodder, psyllium, schisandra, raspberry, cooked Rehmannia 15g each, Chuanxiong, Baizhu, Salvia miltiorrhiza and Paeony 12g each, Astragalus 20g. (1) 109 patients with high myopia were randomly divided into a control group of 54 cases and a treatment group of 55 cases. The control group was given a placebo of traditional Chinese medicine, while the treatment group was given a blood nourishing and kidney tonifying formula orally. After 2 months, the best corrected visual acuity, visual field, and contrast sensitivity were examined, and it was found that the formula had a significant effect on improving the visual function of high myopia. (2) Observing the changes in blood flow parameters of the central retinal artery in 58 patients with high myopia who took a blood nourishing and kidney tonifying formula for one month, and the comparative results showed that this prescription can effectively improve the ocular blood supply in patients with high myopia. Wang Jianquan et al [9] randomly divided 200 adolescent patients with low myopia into control group and experimental group, and received placebo (concentration of 5% Mingshi Formula) and traditional Chinese medicine Mingshi Formula (ginseng, Zhiyuanzhi, Fuling, Huangjing, yam, Danshen, Acorus tatarinowii) granules, respectively, 4-week treatment course, simultaneously conducting eye health education and optometry treatment, observing the changes in refractive parameters such as axial length and corneal curvature and visual acuity of patients after four courses of medication. The results showed that the comprehensive therapy of "Mingshi Fang + health education + optometry treatment" has the effect of slowing down the growth of axial length and has a significant effect on patients with low myopia degree of heart-yang deficiency.

3.2 Acupuncture Method

3.2.1 Filiform acupuncture

Acupuncture prevention and treatment of myopia has a long history and is effective. The earliest record can be seen in the " A-B Classic of Acupuncture and Moxibustion": "the main therapeutic acupoint is Chengguang acupoint, which can not be seen clearly with hyperopia". Gehong of the Eastern Jin Dynasty also recorded acupuncture points for treating eye diseases in his "A Handbook of Prescriptions for Emergencies". Yetianshi, a doctor in the Qing Dynasty, introduced in detail the comprehensive treatment of myopia with traditional Chinese medicine combined with acupuncture and eye massage. Acupuncture stimulates blood vessels and nerve receptors around the eye through filiform needles, improves blood circulation around the eye, increases nutrition of eye tissues, and thus restores the physiological function of the eye. The 14th five year plan textbook ophthalmology of traditional Chinese medicine [10] puts forward that the principle of acupoint selection is mainly local acupoint selection, supplemented by systemic acupoint selection. The commonly used acupoint groups are: Chengqi, Yiming; Sibai, Shoulder middle Shu; Zhaohai, Sizhukong; Jingming, Taichong, Guangming; Qiuhou, Touwei. According to the actual situation of patients, 2 to 3 groups were selected and used regularly. Cao Yaojiani [11] 's team statistically analyzed 175 domestic and foreign literature on the prevention and control of myopia in children and adolescents by acupuncture and and found that the 10 acupoints with the highest frequency of use were Zan Zhu, Jingming, Sibai, Taiyang, Fengchi, Hegu, Yuyao, Sizhukong, Chengqi and Guangming. Weng

Yueyan [12] and others summarized Professor Chen Feng's many years of clinical treatment experience, first acupuncture Taixi, Sanyinjiao, Zusanli, Shenmen and other acupoints (both sides), then acupuncture Zulinqi, Waiguan and other acupoints (both sides), and finally acupuncture Fengchi, Muchuang, Yangbai, Sizhukong, Zanzhu, Sibai and other acupoints (both sides), using the method of flat reinforcing and flat reducing to achieve the effect of regulating pivot and unblocking collaterals, tonifying qi and blood, tonifying essence and brightening eyes. This selected point is temporarily called "Chen's Mingmu Group point". Han Guanyu et al. [13] randomly divided 118 cases of juvenile heart yang deficiency myopia (low and moderate) into the control group (58 cases) and the treatment group (60 cases). The control group was treated with frame glasses, and the treatment group was treated with acupuncture (main points: zanzhu, Yuyao, Taiyang, Jingming, sizhukong, Chengqi. Matching points: Fengchi, Guangming, Zusanli, Sanyinjiao), combined with abdominal acupuncture (points: Zhongwan, Xiawan, Guanyuan, Qihai, Shangqu, Daheng, Tianshu) and specific electromagnetic wave therapeutic apparatus irradiation for 3 months. The visual acuity, diopter, adjustment amplitude, adjustment sensitivity and ocular axis examination data were observed and recorded 3 and 6 months before treatment and 3 and 6 months after treatment. It was found that acupuncture combined with abdominal acupuncture specific electromagnetic therapeutic apparatus irradiation treatment can improve the adjustment amplitude and adjustment sensitivity of young patients with low and moderate myopia with heart yang deficiency. Professor Zheng Kuishan [14] is good at using the family handed acupuncture techniques of "two dragons playing with the Pearl", "eye fever" and "magpie climbing the plum blossom" to treat eye diseases. Li Xinglan [15] et al. compared the clinical efficacy of Zheng's family acupuncture and Pingbupingxie acupuncture in the treatment of adolescent myopia. 166 cases of adolescent patients with mild myopia were randomly divided into the observation group and the control group according to 1:1. The same acupoints of Taiyang, Fengchi, Zanzhu, Guangming and Hegu were selected for the two groups. The observation group was given the acupuncture methods of "two dragons playing with pearls", "eye heat" and "magpie climbing plum" successively to Taiyang, Fengchi and Zanzhu, and the remaining two acupoints were given the acupuncture method of "Pingbu Pingxie", while the control group was given the acupuncture method of "Pingbu Pingxie". A 6-day course with a 10-day interval between each course. The visual acuity and diopter changes of the patients after 4 courses of treatment were observed and counted. The results showed that the total effective rate of the observation group was 78.3% better than 57.8% of the control group. Zheng's family acupuncture method is superior to the acupuncture method of reinforcing-reducing, and can be popularized in clinic. Lu Lianxiang [16] randomly divided 90 cases of children with pseudomyopia into the control group (45 cases) and the observation group (45 cases). The control group was treated with traditional body acupuncture, while the observation group was treated with scalp acupuncture at the upper-middle line of occiput (i.e., the Qiangjian - Naohu) and the upper-lateral line of occiput (i.e., 0.5 inches parallel to the upper-middle line of occiput). After 15 days of treatment, the visual acuity and diopter of the children were observed. It was found that scalp acupuncture and body acupuncture could improve visual acuity, and the clinical efficacy of the observation group (total effective rate 93.3%) was significantly better than that of the control group (total effective rate 80.8%).

3.2.2 Electroacupuncture

Electroacupuncture is a therapy of further stimulating acupoints with a small amount of current after a filiform needle is inserted into acupoints to get Qi. Zhang Rui [17] randomly divided 82 cases of low-grade myopia adolescent patients into the control group (42 cases) and the experimental group (40 cases). The control group was given ordinary monocular glasses, and the experimental group was given ordinary monocular glasses + electroacupuncture combined intervention treatment, with a course of 10 days. After three consecutive courses of treatment, the observation results showed that the combined treatment of electroacupuncture could improve the naked eye vision of children in a short time. Electroacupuncture is safe and effective, and is one of the commonly used therapies in clinic.

3.2.3 Xianzhen (Intradermal Needle)

The Xianzhen is also called intradermal needle, which can be fixed under the skin or within the skin for a long time. It is widely used in clinic because of its advantages of comfort, painless, simple operation and high safety. Niuye [18] recruited 32 adolescent subjects with early myopia and divided them 1:1 into the experimental group and the control group. The experimental group used the "consolidating vital base and primordial qi" intradermal needle method (taking acupoints to Zanzhu, Taiyang, Yuyao, Pishu, Shenshu, etc.), and the control group used traditional body acupuncture therapy (taking acupoints to Zanzhu, Taiyang, Yuyao, Jingming, etc.). The naked eye visual acuity, diopter, axial length, intraocular pressure and other indicators of children were observed. The test results showed that both intradermal needle and traditional body acupuncture could improve the naked eye visual acuity of children to a certain extent. Wanglihua [19]'s team treated 635 cases of juvenile myopia with intradermal needle acupuncture at auricular points, selecting eye points or mu 1 and mu 2 as the main points to apply intradermal needle, and selecting heart, Shenmen, kidney and liver as the matching points to apply seeds of Wangbuliuxing. The clinical changes of 1270 eyes were observed, and 271 eyes were found to be significantly effective, 385 eyes were improved, and 558 eyes were effective. The curative effect of intradermal acupuncture in the treatment of juvenile myopia is significant, which is conducive to clinical treatment.

3.2.4 Percussopunctator (Plum-blossom needle)

Plum blossom needle because one end of the needle handle is equipped with 7 small needles, and after tapping, the puncture site turns red and resembles a plum blossom. Plum blossom needles stimulate the skin and puncture blood vessels to regulate the qi and blood of Zang and Fu, dredge the meridians, activate blood and eliminate stasis, remove blood stasis to promote new blood, balance Yin and Yang, and prevent and treat diseases. [20] The principle of selecting acupoints for treating myopia with plum blossom needles is the acupoints

around the eyes and on the head and face. There are mainly acupoints such as Zanzhu, Yuyao, Taiyang, Sibai, Sizhukong, Baihui, Dazhui, Zhengguang, Sishencong, Jingjiaji, Fengchi, etc., which are combined with the Back-Shu acupoints and the distal acupoint Hegu, Neiguan, etc. [19]. Wang Yan [20] et al. screened and included 7 Chinese literature, and found through meta-analysis that the plum blossom needle technique has a better effect on low-grade axial myopia and pseudomyopia in adolescents. Chai Fangfang [22] studied 80 adolescent patients with pseudomyopia and randomly divided them into a control group and an experimental group, with 40 cases in each group. The control group received conventional acupuncture, while the experimental group received conventional acupuncture combined with plum blossom acupuncture. After 6 days, there was an interval of 1 day, and 30 days were considered as one course of treatment. After comparison, it was found that the visual acuity changes in the experimental group were greater than those in the control group, indicating that conventional acupuncture combined with plum blossom needling has outstanding therapeutic effects on pseudomyopia and can be widely applied in clinical work. Ju Sheng et al. [23] divided 42 cases (80 eyes) of adolescent patients with accommodative myopia into the treatment group (20 cases (38 eyes) and the control group (22 cases (42 eyes) by random number table method. The treatment group used their self-made plum blossom myopia needle (needle body--medicine pot—piston connection), which was infused with 4 distilled and purified Chinese medicinal herbs (astragalus, menthol, turmeric, chrysanthemum). The control group received simple plum blossom needle treatment, and both groups were treated with tapping at the four acupoints of Tong Ziliao, Zao Zhu, Jingming, and Sibai, with the degree of local skin flushing and no bleeding. 14 days for a course of treatment. Through observation and statistical analysis, the total effective rate of the treatment group was as high as 100%, significantly higher than the treatment group's 87%. Plum blossom needles can dredge meridians, and the four traditional Chinese medicines have the effects of improving vision, nourishing qi, relieving depression, and dispersing wind and heat. The combination of the two can relieve eye fatigue, relax the eyes, and promote blood circulation.

3.2.5 Other acupuncture therapy

Chen Jianlan et al. [24] used a combination of light needles (Semiconductor laser acupoint irradiation, patient sitting, using DHC-500I semiconductor laser therapy device, intracavity probe irradiation selected acupoints) and ears pressure beans to treat pseudomyopia. Through clinical efficacy observation, it was found that the combination of light needles and ear point patches had ideal therapeutic effects. This method is simple, painless, safe, green, time-consuming, and can improve sleep. It is highly accepted by patients and is worthy of clinical promotion. Wu Zhifan [25] carried out a clinical study of acupoint acupuncture (using spoon needle) combined with acupoint application and vision training, which was divided into experimental group and control group. Results the total effective rate of the experimental group was 81%, and the markedly effective rate was 48%. It shows that this treatment method has a positive effect on the improvement of visual function of myopia patients. Hou Xiangfei [26] and others used micro pain bee needle (the needle is a tail needle with a venomous sac of bees) to treat 35 cases of myopia by dispersing the acupoints around the eyes. The results showed that the total clinical effective rate was 97.4%. The short-term curative effect of bee needle in the treatment of myopia is significant, which is conducive to the prevention and intervention of myopia.

4. Ear Acupoints Pressing Beans

Auricular point pressure bean has unique advantages in the treatment and prevention of myopia, and the clinical efficacy is also supported by a large number of data. Ear acupoints are a combination of traditional Chinese medicine theories such as meridian theory, visceral manifestation theory, holistic concept, and holographic biology theory. [27] Stimulating the auricular point can dredge the meridians, harmonize the viscera, and achieve the effect of preventing and treating diseases. Zhu Dezheng et al. [28] selected and summarized 231 Chinese and English literatures and conducted data mining, and concluded that the main acupoints of auricular point for bean compression included eye point, kidney point, liver point, anterior Pingjian point, and posterior Pingjian point. Hou Xinyue et al. [29] included 156 children with myopia and randomly divided them into an experimental group (ear acupressure combined with ear acupressure intradermal needle) and a control group (health education + glasses) to observe the clinical efficacy of ear acupressure combined with ear acupressure intradermal needle. The results showed that the naked eye vision, axial growth, and equivalent spherical acuity of the experimental group improved significantly, and the combination of ear acupressure and intradermal needle had a positive effect in preventing and controlling myopia. Mao Xiaofeng et al. [30] studied the clinical efficacy of ear acupressure combined with outdoor activities in the treatment of myopia, and selected 96 children with myopia. Divide into experimental group and control group. The control group was treated with atropine and orthokeratology, and single frame glasses were used for intervention. The observation group received ear acupressure combined with outdoor activity therapy on this basis. The observation results showed that the total effective rate of the experimental group was 83.33%, significantly better than that of the control group at 33.33%. Ear acupressure combined with outdoor activities can improve clinical efficacy and is worth promoting. Bi Xue [31] selected 100 adolescent myopia patients and randomly divided them into a control group of 50 patients who received atropine eye drops treatment, and an experimental group of 50 patients who received atropine eye drops combined with ear acupressure treatment. The clinical effect of ear acupressure combined with atropine eye drops treatment for myopia was observed. The conclusion is that ear acupressure combined with atropine eye drops can effectively reduce axial length and equivalent spherical acuity, and improve optimal corrected visual acuity. Ear acupressure therapy is safe, non-invasive, long-lasting, and highly patient compliant, and is a major pillar of effective prevention and treatment of myopia in traditional Chinese medicine.

5. Acupoint Massage

Acupoint massage therapy is simple to operate, time-consuming, and easy to adhere to. Guardians or patients can operate it themselves, and it is a therapy that can be persisted

for a long time. Acupoint massage is based on the theory of meridians, massaging acupoints around the eyes for eye health and treatment. The eye exercises promoted by major schools are a kind of acupressure. The principle of massaging acupoints is based on selecting acupoints near the eyes, mainly including Zanzhu, Jingming, Taiyang, Sibai, Yuyao, Chengqi, and Tongziliao. Pang Yazheng [32] et al. summarized the safety and effectiveness of eye health exercises in the intervention of myopia in adolescents and found that eye health exercises have the following benefits: 1) Relaxing eye muscles and relieving fatigue; 2) Speed up blood flow and promote blood circulation; 3) Improve the function of eye regulation. Zhou Lihua [33] selected 300 college students and divided them into a control group and an experimental group. The experimental group received acupoint massage on the basis of preventing myopia education. The results showed that the clinical effect of the experimental group was significantly higher than that of the control group. Acupoint massage could effectively improve the myopia progression of college students and improve the success rate of myopia prevention and control. Nie Yingying et al. [34] screened and summarized 9 RCT literatures on the topic of acupoint massage in the treatment of children with accommodative myopia and mild myopia. The results of meta-analysis suggested that acupoint massage had obvious efficacy and was superior to drug therapy (simple Chinese medicine or ciliary muscle paralytic agents).

6. Other Treatment Methods

In addition to the above treatment methods, there are also moxibustion and catgut implantation at acupoint, etc. Song Xiaoxiao [35] observed the clinical efficacy of 30 cases of fire acupuncture therapy (also called Thunder-fire Moxibustion) in the treatment of adolescent myopia patients. Select acupoints such as Tongziliao, Sibai, Sizhukong, Yangbai, eye, liver, kidney, Hegu, etc. on the eyes, ears, and hands respectively. On the basis of traditional moxibustion strips, moxibustion strips can be infused with herbs such as dried ginger, wood fragrance, cinnamon, and Qianghuo to warm the meridians and promote blood circulation. The result is that the total clinical effective rate reached 76.7%. The temperature of moxibustion method can open up skin pores, promote the penetration of drugs, help muscles relax, dredge the meridians, promote Qi and blood circulation, and effectively prevent and cure myopia. Huang Yan [36] recruited 140 myopic adolescents and randomly divided them into two groups. The experimental group was treated with catgut implantation at acupoint and the control group with traditional acupuncture. The two groups were treated with the same acupoint group to observe the difference in clinical effect between catgut implantation at acupoint and traditional acupuncture. Result: The total effective rate of the experimental group was higher than that of the control group. Acupoint catgut embedding therapy involves embedding medical grade catgut into acupoints related to eye diseases. Its principle is the same as traditional acupuncture, but due to the time required for absorption of the catgut, its effect is more long-lasting. In addition, TCM iontophore method can directly introduce TCM extracts into the affected area, maintain high drug concentration, prolong drug action time, and effectively alleviate symptoms [2]. Gao Yan'e et al. [37] selected 80 patients with pseudomyopia and observed the clinical efficacy of traditional Chinese medicine iontophoresis in treating pseudomyopia. The results indicate that the traditional Chinese medicine iontophoresis method can effectively improve the naked eye visual acuity and diopter of patients with pseudomyopia.

7. Brief Summary

With the economic development, electronic products are widely popularized, and the time of using eyes is increasing, the incidence rate of myopia is rising, showing the characteristics of young age, rapid progress, and high degree. The incidence of myopia in China ranks first in the world [10], and the form is severe. Chinese medicine has a long history, and the record of myopia can be traced back to the Huangdi Neijing. After thousands of years of accumulated medical theory and clinical practice, traditional Chinese medicine has obvious advantages in treating myopia. Whether it is internal medicine or acupuncture and moxibustion, ear acupoint pressing beans, acupoint massage and other external treatment, these therapies are simple to operate, green environmental protection, high safety. To a certain extent, Chinese medicine therapy can improve patients' naked eye vision, improve adjustment sensitivity, effectively improve diopter, reduce equivalent spherical lens, and delay the growth of axial length of the eye, especially for children and adolescents with myopia and pseudomyopia. However, there are limitations in the clinical efficacy of traditional Chinese medicine in treating myopia, such as limited experimental samples and observation time. In addition, the mechanism of action of traditional Chinese medicine therapy has not been fully elucidated, which limits its widespread application in the field of myopia prevention and control. In the future, we can consider expanding the sample size and extending the trial time. At the same time, we can also add more comparative studies on the clinical efficacy differences between different traditional Chinese medicine therapies, as well as clinical research combining Chinese and Western medical methods, to continuously enrich and optimize the treatment methods for myopia. At the same time, more high-quality research is needed to verify the effectiveness and safety of traditional Chinese medicine therapy, in order to provide more scientific and systematic solutions for myopia prevention and control, and to provide strong data support for the unique advantages of traditional Chinese medicine therapy, promoting the development of traditional Chinese medicine.

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