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Clinical Research Progress on Plum-Blossom Needle Combined Therapy for Androgenic Alopecia

Li Luo[1,2], Yanxin Lu[1,*]

[1]*Zhuhai Campus of Zunyi Medical University, Zhuhai, China*
[2]*Zhuhai Doumen Maternal and Child Health Care Hospital, Zhuhai, China*
[*]*Corresponding author*

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Abstract: Androgenic alopecia (AGA) is a common hair loss disease characterized by progressive miniaturization of hair follicles. Its pathogenesis is associated with multiple mechanisms, including genetics, androgen metabolism, inflammation, and environmental factors. Modern medicine mainly adopts drugs, physical therapy, minimally invasive techniques, and hair transplantation. Although the efficacy is definite, it is often accompanied by side effects and high costs. Traditional medicine emphasizes holistic syndrome differentiation and treatment, and uses traditional Chinese medicine for internal and external application, acupuncture and other therapies for individualized conditioning, which has unique advantages in improving physical fitness and reducing recurrence. The current treatment presents a trend of combination, and the integrated traditional Chinese and Western medicine therapy shows good prospects. This study focuses on the treatment of spleen-stomach damp-heat type AGA with plum-blossom needle combined with Daoma needle therapy. This therapy integrates the effects of local blood circulation promotion of plum-blossom needle and the synergistic enhancement along meridians of Daoma needle, and has the characteristics of simple operation, small trauma, and high patient acceptance. This article systematically reviews the pathogenesis and traditional Chinese and Western medicine treatment progress of AGA, and focuses on the theoretical basis and clinical value of this combined therapy, in order to provide a safe and effective comprehensive treatment plan for clinical practice, and points out that high-quality clinical research is still needed in the future to further clarify its mechanism of action and long-term efficacy.

1. Introduction

Androgenic alopecia (AGA), also known as seborrheic alopecia, is increasingly prevalent in today's society due to poor lifestyle habits such as frequent late nights and greasy, irregular diets, leading to a rise in skin diseases. As an appendage of the skin, hair is also experiencing a higher incidence of hair loss. The accelerating pace of social life has increased both life and mental stress, expanding the hair loss demographic among those in their 30s and 40s. AGA accounts for a significant proportion of hair loss in this middle-aged and young adult group [1].

Modern medicine offers various explanations for the pathogenesis of AGA, with most scholars in

recent years believing that genetics may be the primary factor. The high prevalence, diverse phenotypes, and racial differences of AGA in men suggest that its inheritance pattern may be polygenic. Hormone metabolism, lifestyle, living environment, and immune factors are also associated with the development of AGA. In contrast to modern medicine, traditional medicine considers hair loss to be closely related to improper diet, irregular living habits, emotional imbalance, chronic illness-induced weakness, and congenital deficiencies, involving multiple viscera such as the lungs, liver, spleen, and kidneys[2]. The spleen and stomach damp-heat type discussed in this study is due to impaired spleen function caused by daily dietary indiscretions, leading to internal accumulation of dampness that transforms into heat over time. Damp-heat in the stomach and intestines ascends and invades the hair follicles, causing hair loss[3].

Currently, clinical treatments for AGA in modern medicine include drugs, physical therapy, minimally invasive treatments, and hair follicle transplantation surgery, which often have many adverse reactions and are expensive. Traditional medicine, on the other hand, often uses oral Chinese herbal decoctions, topical Chinese herbal solutions, and some external TCM therapies for treatment, which have good clinical efficacy and are more easily accepted by patients. Based on the related clinical experience of my supervisor in treating hair loss for many years, plum blossom needle therapy is a simple, convenient, and effective method for treating hair loss, and it is increasingly used in clinical practice and favored by patients. Dao-Ma acupuncture point combination was created by Dong Jingchang. It involves selecting two or three adjacent acupoints on the same meridian, so that adjacent acupoints only generate and never counteract each other, thereby enhancing the efficacy of acupuncture. This study aims to treat male AGA of the spleen and stomach damp-heat type with plum blossom needle combined with Dao-Ma acupuncture point combination, and to observe the effectiveness and safety of this treatment method. The aim is to provide a theoretical basis for the treatment of male AGA of the spleen and stomach damp-heat type with plum blossom needle combined with Dao-Ma acupuncture point combination, and to provide an effective treatment plan for clinical practice.

2. Pathogenesis of AGA

Understanding the pathogenesis of AGA is fundamental to selecting a treatment approach. AGA is characterized by the progressive miniaturization of hair follicles in the scalp, involving alterations in the hair growth cycle, ultimately leading to thinner, softer hair that falls out and does not regrow. The hair follicle growth process is broadly divided into the anagen (growth), catagen (regression), telogen (resting), and exogen (shedding) phases, representing a long and continuous cycle [4]. The primary change in hair follicles of AGA patients is the shortening of the anagen phase and the prolongation of the telogen phase, which results in progressively shorter new hair, the development of normal hair follicles into miniaturized follicles, and ultimately hair loss or even a cessation of growth.

2.1 Genetics and Hormone Metabolism

The high prevalence and phenotypic diversity of AGA in men, along with racial differences, suggest a polygenic mode of inheritance. The major genetic risk factors among these genes are located on the X chromosome at the AR/EDA2R loci and on chromosome 20 at the PAX1/FOXA2 loci [5]. Recent related studies suggest that the HADC9 locus on chromosome 7 may also be a susceptibility locus [6].

Imperato-McGinley found that individuals with pseudohermaphroditism, due to 5α-reductase-2 deficiency, do not develop AGA, suggesting that 5α-reductase may be associated with the SRD5A1 and SRD5A2 genes[7]. However, the association between 5α-reductase isoenzymes and AGA

remains unclear. Another related study showed that among many androgen receptor (AR) gene polymorphisms, the Stu1 polymorphism is significantly correlated with AGA, while the AR gene determines whether cells are sensitive to androgens [8]. Dihydrotestosterone (DHT) is an androgenic steroid hormone associated with AGA, is converted from testosterone in target tissues by 5α-reductase type 2. DHT binds to AR, and with the assistance of AR coactivators, the bound complex is translocated to the nucleus, leading to the transcription of target genes and ultimately the translation into new genes. It has a greater affinity for AR and interferes with hair follicle cell growth and metabolism by inhibiting the growth of dermal papilla cells, leading to the premature transition of hair from the anagen phase to the telogen phase. At this time, the proportion of hair in the telogen phase increases, and the time it takes for hair to transition from the telogen phase to the anagen phase is prolonged, resulting in a decrease in the total number of existing hairs on the scalp. There are also some enzymes involved in converting weak androgens into potent androgens [9], including 3β-hydroxysteroid dehydrogenase (3βHSD) and 17β-hydroxysteroid dehydrogenase (17βHSD). Related studies have shown that their activity is also enhanced in AGA patients. Cytochrome p450 aromatase has also been found to be associated with AGA. Aromatase reduces intra-follicular testosterone by catalyzing the conversion of testosterone to estradiol. Aromatase expression not only differs between balding and non-balding scalp but also differs between sexes; AR expression levels in frontal hair follicles are significantly lower in women than in men, and aromatase expression in female frontal hair follicles is six times higher than in male frontal hair follicles [10]. Yip et al. suggest that the aromatase gene (CYP19A1) may be one of the causes of hair loss in women [11].

2.2 Immunity and Inflammation

Although the pathology and physiology of AGA suggest a close relationship with androgen metabolism, other evidence indicates that the occurrence of AGA may be related to brain disorders and immune mechanisms. Local chronic microvascular lesions, growth factors, and the expression of inflammatory cytokines may be aggravating factors. Inflammation can promote the transition of hair from the anagen (growth) phase to the telogen (resting) phase, accelerating the process of hair entering the telogen phase, which in turn accelerates hair loss. Approximately 40% of patients with AGA have moderate perifollicular lymphocytic infiltration, with a certain probability of concentric perifollicular collagen deposition [16]. In summary, mild chronic inflammation and immune cell infiltration around the hair follicles may be microenvironmental promoting factors for the occurrence and progression of AGA.

2.3 Environmental and Lifestyle Factors

Studies have shown that lifestyle choices and environmental factors (such as ultraviolet radiation and pollutants) can exacerbate the progression of AGA through mechanisms such as inducing oxidative stress. Excessive free radicals, exposure of the scalp to ultraviolet radiation and pollutants, and certain unhealthy lifestyle choices can all act as sources of oxidative stress, negatively impacting the hair follicle growth cycle. A comprehensive study assessing factors associated with AGA found that factors increasing the risk of AGA in a group of subjects included high body mass index, high fasting blood glucose, early puberty, three or fewer deliveries, oral contraceptive use for one year or longer, and weekly ultraviolet radiation exposure exceeding 16 hours [12]. Genetic studies have demonstrated that lifestyle can promote different brain responses; even identical twins with the same genes may develop different stages of AGA due to different living habits and lifestyles [13]. A study conducted by Fortes et al. in Italy [14] concluded that being overweight and smoking are associated with increased severity of AGA. Smoking can lead to the production of free

radicals, which promotes the entry of DHT into dermal papilla cells, leading to increased activity of sebaceous glands and 5α-reductase, as well as the release of pro-inflammatory cytokines, affecting the function of hair follicle keratinocytes and ultimately inhibiting hair growth. Furthermore, the smoke produced after a cigarette is lit can lead to impaired local blood circulation, causing ischemia and damaging hair follicle nutrition. In other words, smoking can promote androgen-dependent hair thinning by promoting the hydroxylation of estradiol and the inhibition of aromatase [15].

2.4 Other Factors

Several other factors can also influence AGA, such as stress, nutritional deficiencies, insufficient sleep, and the use of certain medications [16]. In vitro studies of dermal cells from male AGA patients have shown that [17,18] oxidative stress may play an important role in the hair loss phenotype and development of AGA.

3. Treatment of AGA in Modern Medicine

3.1 Drug Therapy

Drug therapies for AGA generally include minoxidil, finasteride, and spironolactone. Within the scalp, minoxidil is converted by sulfotransferase into its active metabolite, minoxidil sulfate. As a potassium channel opener, it can promote the relaxation of vascular smooth muscle, improve local microcirculation, and thereby stimulate hair growth [19]. In an analysis of clinical trials in men, researchers found that age was the most important predictor of minoxidil treatment success, i.e., younger subjects may experience better efficacy. The main side effects of minoxidil on the scalp are itching, redness, and dandruff, and it may also cause facial hypertrichosis. Finasteride, a synthetic 4-azasteroid compound, has been used to treat AGA in men since 1997. After 1 year of oral administration of 1mg finasteride daily, nearly 50% of patients see significant improvement. However, its possible side effects, such as decreased libido and erectile dysfunction, are the main reasons why many male patients refuse this treatment option [20]. Spironolactone is an artificial steroid. In addition to its use as a diuretic, spironolactone also has anti-androgenic effects. Its side effects include gynecomastia in men, making it unsuitable for male treatment. However, the adverse reactions of spironolactone are dose-dependent, and these adverse reactions are reversible. Spironolactone can also affect the sexual differentiation of the fetus, leading to feminization of male fetuses [21]. Taking intermittent small doses can reduce the side effects of spironolactone.

3.2 Physical Therapy

Low-Level Laser Therapy (LLLT) is the main treatment method in current physical therapy. LLLT can relieve the symptoms of hair loss and stimulate hair regeneration, making it an effective alternative treatment for patients who are unwilling to use drug or surgical treatments. Several existing theories suggest that LLLT produces anti-inflammatory cytokines and antioxidants, which can accelerate keratinocyte and fibroblast mitosis, thereby stimulating hair growth [22]. Pillai found that patients with intermediate AGA (i.e., Hamilton-Norwood III and IV and Ludwig I and II) respond best, because these intermediate phenotype patients have enough hair on the scalp for biostimulation, while not exceeding the threshold at which existing hair hinders laser absorption [23]. A study showed [24] that LLLT treatment has greater improvement on the vertex area in men and the temporal area in women, showing significant advantages in all aspects of both sexes. Overall, LLLT treatment for AGA has good safety and efficacy.

3.3 Minimally Invasive Therapies

Microneedling is a commonly used technique in minimally invasive therapies, inducing controlled tissue damage by creating microchannels. Several devices can be used to perform this procedure, the most traditional being rollers and electric pens, which contain different numbers and lengths of needles. Several mechanisms of action of microneedling justify its application in trichology, such as the release of platelets and epidermal growth factors, the activation of stem cells, the production of vascular endothelial growth factor (VEGF), and the increase in gene expression related to hair growth [23]. Microneedling is most often used in combination with Platelet-Rich Plasma (PRP), or to enhance the absorption of topical drugs through the created microchannels [25]. Soluble microneedles [26] are a recent new technology with the advantages of simple production methods, low cost, and high safety. Soluble microneedles are prepared using bio-dissolvable materials that have good mechanical properties after drying. After the microneedles pierce the skin, they dissolve while absorbing tissue fluid, directly delivering the drug to the dermis area where the hair follicles are located, thereby increasing the drug concentration at the treatment site. Soluble microneedles based on nanocarriers, or the combination of drug solutions and other therapeutic factors with soluble microneedles, can achieve better therapeutic effects [27].

3.4 Surgical Treatment

The most common surgical treatment is hair transplantation. Hair transplantation is the process of transplanting hair extracted from a donor area to the balding area of the scalp. The most common donor area selected is the occipital region, because this area has significant resistance to androgens. The theoretical basis of hair transplantation is based on the principle of donor dominance—androgen-insensitive hair follicles remain androgen-insensitive even when transplanted to areas of the scalp affected by AGA [28]. There are two methods of hair transplantation: Follicular Unit Transplantation (FUT) and Follicular Unit Extraction (FUE). Follicular units are implanted by making holes in the scalp and simultaneously implanting the follicular units (FU) into them, or by making holes in the scalp first and then implanting the FUs into them. When making holes, it is important to remember the direction of the transplanted hair on the native scalp, as well as the direction of the hair in the area being transplanted. In the first few days to weeks after transplantation, some of the transplanted hair will fall out due to telogen effluvium or transplant failure. The success of hair transplantation surgery takes at least 3 months to see results, as 3 months is the approximate time it takes for the transplanted hair to enter the anagen phase [29].

4. Traditional Chinese Medicine Treatment for AGA

4.1 Oral Chinese Herbal Medicine

For thousands of years, traditional Chinese medicine (TCM) has accumulated rich experience in the fight against diseases. Over time, the treatment of AGA has gradually matured. The treatment for AGA of liver and kidney deficiency type is to tonify the liver and kidney, nourish yin and fill essence, using Siwu Tang (Four-Substance Decoction) with modifications, adding liver and kidney tonifying herbs such as ink grass, prepared Polygonum multiflorum, dogwood, yam, wolfberry, and glossy privet fruit for treatment [30]. Based on this, Xuan's Hair Growth Decoction [31], developed through research, harmonizes yin and yang in the kidney to achieve therapeutic effects. For AGA due to deficiency of qi and blood, it is necessary to strengthen the spleen and replenish qi, nourish blood and dispel wind. The spleen is the foundation of postnatal constitution; strengthening the spleen allows qi and blood to be produced, and nourishing blood allows the hair to be nourished. By

replenishing qi and regulating blood, a balance of qi, blood, yin, and yang is achieved, resulting in the effect of strengthening hair and preventing hair loss. The current prescription drugs include Shengmai Yin (Pulse-Generating Powder), which can achieve the purpose of stimulating the functions of the internal organs by regulating endocrine function [32]. Damp-heat in the spleen and stomach type of alopecia is now more common and increasingly younger. The treatment method is to strengthen the spleen, clear heat, and promote diuresis. Clinically, Chinese herbal medicine formulas for strengthening the spleen and removing dampness are often used for treatment, such as Yiyiren Qushi Tang (Coix Seed Dampness-Eliminating Decoction), which functions to strengthen the spleen and promote diuresis [33]. Director Yang Hongya uses her self-made empirical formula for seborrheic alopecia, making modifications based on the syndrome in clinical practice, and the effect is significant [34]. When Longdan Xiegan Tang (Gentian Liver-Draining Decoction) is used as the main formula with modifications combined with warm acupuncture to treat damp-heat fumigating type of alopecia [35], the method is to strengthen the spleen, remove dampness, clear heat, and protect the hair. Qushi Gufa Tang (Dampness-Eliminating and Hair-Strengthening Decoction) functions to clear heat and remove dampness, strengthen the spleen and replenish qi, starting from the whole to regulate body functions, to achieve the effect of hair growth and strengthening [36]. The key to the treatment of blood deficiency and wind-dryness type is to cool blood and eliminate wind, moisten dryness and relieve itching. The prescriptions used are mostly decoctions for moistening dryness and eliminating wind. Qi Pi Xiaofeng San combined with Chuanxiong Chatiao San [37] has the effects of clearing heat and cooling blood, dispelling wind and relieving itching, replenishing qi and strengthening hair.

4.2 Traditional Chinese Medicine for External Application

Traditional Chinese Medicine (TCM) external therapies are categorized into external liquids, ointments, and tinctures. Jiao-Lian tincture, made from fresh arborvitae leaves, Eclipta prostrata, Chinese prickly ash, Polygonum multiflorum, safflower, borax, and galangal, has a good effect on nourishing the kidney, promoting blood circulation, removing lipids, and promoting hair growth [38]. The Chinese herbal hair growth liquid produced by Bawang Company [39] has an effective rate of 62.2% in treating AGA. Compound arborvitae leaf solution [40], based on the principle of clearing heat, cooling blood, removing dampness, and relieving itching, has a fast onset and good efficacy in treating patients with AGA. Hair growth ointment [41], prepared according to the principle of warming and activating meridians, nourishing blood, promoting blood circulation, and removing blood stasis, can achieve good results when used in conjunction with local massage.

4.3 Acupuncture Therapy

Acupuncture Treatment: Acupuncture can comprehensively regulate the Qi, blood, Yin, and Yang of the internal organs, bringing the body to a harmonious state of Yin-Yang balance. In practice, acupuncture can be combined with conventional Western medicine treatments, external application of Chinese herbal medicine liquid, or internal use of Chinese herbal medicine, often achieving better results and reducing recurrence. In clinical treatment, the filiform needle acupuncture method combined with Wu Ling San (Five Ingredient Powder with Poria) is used, selecting acupoints such as Zusanli (ST36), Fenglong (ST40), Sanyinjiao (SP6), Neiting (ST44), and Yinlingquan (SP9), using the reducing method to clear heat, eliminate dampness, and strengthen the spleen, treating both the root and the branch, resulting in good therapeutic effects [42]. The first three needles for seborrheic alopecia can have significant curative effects. Jiannao (brain-strengthening) point and Fanglao (anti-aging) point are two fixed acupoints, and Shangxing (GV23) is a mobile acupoint. If the patient has severe scalp itching, Dazhui (GV14) can be added [43]. The "Inducing Qi to Return

to Origin" acupuncture method has a good therapeutic effect. The acupoints selected are Zusanli (ST36), Fenglong (ST40), Guanyuan (CV4), Qihai (CV6), Sanyinjiao (SP6), Taichong (LR3), Zhongwan (CV12), and Xiawan (CV10), which strengthen the spleen, benefit Qi, and promote Qi circulation. The treatment effect of the experimental group is significantly better than that of the control group [44].

Seven-Star Needle Therapy: Using the seven-star needle to tap the hair loss area can promote blood circulation, remove blood stasis, and dredge the meridians, and collaterals. Tapping the trunk, such as the back-shu points of the Du meridian, can regulate the functions of the internal organs. Ultraviolet irradiation of the hair loss area can strengthen tissue metabolism and stimulate hair growth. Satisfactory results can be obtained after using the seven-star needle combined with ultraviolet irradiation [45]. Ginger juice has the effect of warming and activating the meridians and nourishing the hair, which can accelerate metabolism and relieve itching. The combination with the seven-star needle tapping treatment has a significant effect [46]. Local tapping with the seven-star needle combined with oral administration of Qushi Jianfa Tang (dampness-expelling and hair-strengthening decoction) [47], after continuous treatment, the effective rate of the experimental group is significantly higher than that of the control group, and the recurrence rate is significantly lower than that of the control group. The effective rate of Qushi Huoxue Shengfa Tang (dampness-expelling, blood-activating, and hair-growth decoction) combined with the seven-star needle treatment can reach 88.89%. Internal administration of Chinese herbal medicine for conditioning combined with external application of the seven-star needle tapping, treating both internally and externally, can make the Qi and blood flow smoothly, strengthen the hair, and prevent hair loss [48].

Warm Acupuncture and Moxibustion Therapy: Warm acupuncture and moxibustion, which combines acupuncture and moxibustion, has the effects of both moxibustion and acupuncture, and can even achieve a stronger effect of promoting blood circulation, promoting Qi circulation, warming the meridians, and dredging the collaterals. Taking acupoints such as Ganshu (BL18), Shenshu (BL23), Zusanli (ST36), and Xuehai (SP10) for warm acupuncture and moxibustion, combined with scalp acupuncture, has a significant effect in the treatment of damp-heat fumigation type AGA [49].

Electroacupuncture: Electroacupuncture is a method of preventing and treating diseases by using acupuncture to stimulate acupoints and meridians combined with micro-current stimulation close to human bioelectricity after the acupuncture produces needling sensation, that is, Qi arrival. Using intermittent waves, electroacupuncture is used to treat the hair loss area and related selected acupoints, combined with oral administration of Zizao Yangrong Tang (nourishing dryness and nourishing Rong decoction), and local moxibustion is also used, and the effective rate can reach 81.82% [50].

Dao Ma (Inverted Horse) Acupuncture Method: The Dao Ma acupuncture method originates from Dong's Extraordinary Points, and its core is to continuously select 2-3 adjacent acupoints on the same meridian for compatibility. This compatibility method aims to strengthen the synergistic effect of acupoints on the same meridian and focus on specific meridians and lesions, thereby enhancing the therapeutic effect. The Dao Ma acupuncture method using Yanglingquan (GB34), Cesanli, and Cexiasanli three acupoints has achieved good results in the treatment of lumbar transverse process syndrome [51]. In the treatment of dysarthria caused by pseudobulbar palsy after stroke, the main acupoints are Jian Ce Linggu (LI20) and Dabai (SP13) on the healthy side. The two acupoints are used simultaneously to form the Dao Ma acupuncture method, combined with Sanyinjiao (SP6), Renying (ST9), Fengchi (GB20) and other acupoints, the curative effect is significant [52]. In addition, the Dao Ma acupuncture method combined with exercise therapy to treat foot varus after stroke, the same Jian Ce Linggu (LI20) and Dabai (SP13) acupoints are taken, and the treatment group is compared with conventional acupuncture combined with exercise therapy.

The curative effect is excellent, with an effective rate of 95.5% [53]. The Dao Ma acupoint combination formed by selecting the Shang, Zhong, and Xia Jiuli three acupoints on the healthy side, combined with scalp acupuncture to treat sequelae of stroke, the effective rate can reach 90% [54]. Taking the Jinmen (BL44) and Neiting (ST44) acupoints as a group of small Dao Ma, taking acupoints on a single foot, combined with wheat grain moxibustion to treat gastric paralysis syndrome after gastric cancer surgery, the curative effect is significant [55].

5. Conclusion

In summary, both modern and traditional medicine offer unique approaches to treating AGA (AGA). Modern medicine targets hormone metabolism and the hair follicle cycle, employing methods such as drugs, lasers, minimally invasive procedures, and hair transplantation. While these methods offer relatively quick results, they are often associated with side effects and higher costs. Traditional Chinese Medicine (TCM), on the other hand, emphasizes holistic diagnosis and individualized treatment through oral and topical Chinese herbal medicine, as well as various acupuncture therapies. TCM has advantages in improving overall health and reducing recurrence. Current treatment trends favor an integrated approach, with combined TCM and Western medicine significantly enhancing efficacy and reducing adverse reactions. The plum-blossom needle combined with Daoma needle therapy discussed in this study combines the local blood-activating and meridian-unblocking effects of the plum-blossom needle with the meridian-following and synergistic enhancing effects of the Daoma needle. This combination is particularly suitable for AGA with spleen-stomach damp-heat pattern, characterized by its simple operation, minimal invasiveness, and high patient acceptance. Future research should focus on high-quality clinical studies to further clarify the mechanisms and long-term efficacy of this combined therapy, and to promote the standardized development of integrated TCM and Western medicine treatment for AGA.

References

[1] Liu Yan. Clinical Research on the Treatment of Androgenetic Alopecia with Plum Needle Combined Therapy [D]. Shandong University of Traditional Chinese Medicine, 2024.

[2] Asfour L, Cranwell W, Sinclair R. Male androgenetic alopecia[J]. Endotext [Internet], 2023.

[3] Ching Yuenying. Observation on the Therapeutic Effect of Electro-acupuncture Combined with Acupoint Drainage and Fire Cupping Therapy in Treating Patients with Qi Stagnation and Blood Stasis Type Seborrheic Alopecia [D]. Guangzhou University of Chinese Medicine, 2023.

[4] Bergfeld W. Diffuse hair loss: its triggers and management[J]. Cleve Clin J Med, 2009, 76(6): 361-370.

[5] Prodi D A, Pirastu N, Maninchedda G, et al. EDA2R is associated with androgenetic alopecia[J]. Journal of Investigative Dermatology, 2008, 128(9): 2268-2270.

[6] Brockschmidt F F, Heilmann S, Ellis J A, et al. Susceptibility variants on chromosome 7p21. 1 suggest HDAC9 as a new candidate gene for male-pattern baldness[J]. British Journal of Dermatology, 2011, 165(6): 1293-1302.

[7] Imperato-McGinley J. 5α-Reductase-2 deficiency and complete androgen insensitivity: lessons from nature[J]. Pediatric gender assignment: A critical reappraisal, 2002: 121-134.

[8] Hillmer A M, Hanneken S, Ritzmann S, et al. Genetic variation in the human androgen receptor gene is the major determinant of common early-onset androgenetic alopecia[J]. The American Journal of Human Genetics, 2005, 77(1): 140-148.

[9] Sawaya M E, Honig L S, Garland L D, et al. Δ5-3β-Hydroxysteroid dehydrogenase activity in sebaceous glands of scalp in male-pattern baldness[J]. Journal of investigative dermatology, 1988, 91(2): 101-105.

[10] Sawaya M E, Price V H. Different levels of 5α-reductase type I and II, aromatase, and androgen receptor in hair follicles of women and men with androgenetic alopecia[J]. Journal of Investigative Dermatology, 1997, 109(3): 296-300.

[11] Yip L, Zaloumis S, Irwin D, et al. Gene-wide association study between the aromatase gene (CYP19A1) and female pattern hair loss[J]. British Journal of Dermatology, 2009, 161(2): 289-294.

[12] Amin J, Simamora E L P, Anwar E, et al. Green tea (Camellia sinensis, L.) ethanolic extract as hair tonic in nutraceutical: Physical stability, hair growth activity on rats, and safety test[J]. International Journal of Pharmacy and

Pharmaceutical Sciences, 2014, 6(5): 94-99.
[13] Caserini M, Radicioni M, Leuratti C, et al. A novel finasteride 0.25% topical solution for androgenetic alopecia: pharmacokinetics and effects on plasma androgen levels in healthy male volunteers[J]. Int J Clin Pharmacol Ther, 2014, 52(10): 842-849.
[14] Fortes C, Mastroeni S, Mannooranparampil T J, et al. The combination of overweight and smoking increases the severity of androgenetic alopecia[J]. International journal of dermatology, 2017, 56(8): 862-867.
[15] Kavadya Y, Mysore V. Role of smoking in androgenetic alopecia: A systematic review[J]. International Journal of Trichology, 2022, 14(2): 41-48.
[16] Natarelli N, Gahoonia N, Sivamani RK. Integrative and Mechanistic Approach to the Hair Growth Cycle and Hair Loss. J Clin Med. 2023, 12(3):893.
[17] Guo EL, Katta R. Diet and hair loss: effects of nutrient deficiency and supplement use. Dermatol Pract Concept. 2017, 7(1):1-10.
[18] Upton JH, Hannen RF, Bahta AW, et al. Oxidative stress-associated senescence in dermal papilla cells of men with androgenetic alopecia. J Invest Dermatol. 2015, 135(5):1244-1252.
[19] Kanti V, Messenger A, Dobos G, et al. Evidence-based (S3) guideline for the treatment of androgenetic alopecia in women and in men–short version[J]. Journal of the European Academy of Dermatology and Venereology, 2018, 32(1): 11-22.
[20] Kinter K J, Amraei R, Anekar A A. Biochemistry, dihydrotestosterone[M]//StatPearls [Internet]. StatPearls Publishing, 2023.
[21] Azarchi S, Bienenfeld A, Sicco K L, et al. Androgens in women: Hormone-modulating therapies for skin disease[J]. Journal of the American Academy of Dermatology, 2019, 80(6): 1509-1521.
[22] Jimenez J J, Wikramanayake T C, Bergfeld W, et al. Efficacy and safety of a low-level laser device in the treatment of male and female pattern hair loss: a multicenter, randomized, sham device-controlled, double-blind study[J]. American journal of clinical dermatology, 2014, 15(2): 115-127.
[23] Pillai J K, Mysore V. Role of low-level light therapy (LLLT) in androgenetic alopecia[J]. Journal of Cutaneous and Aesthetic Surgery, 2021, 14(4): 385-391.
[24] Rangwala S, Rashid R M. Alopecia: a review of laser and light therapies[J]. Dermatology online journal, 2012, 18(2).
[25] Dhurat R, Mathapati S. Response to Microneedling Treatment in Men with Androgenetic Alopecia Who Failed to Respond to Conventional Therapy. Indian J Dermatol. 2015, 60(3):260-263.
[26] Wang J, Zeng J, Liu Z, et al. Promising Strategies for Transdermal Delivery of Arthritis Drugs: Microneedle Systems. Pharmaceutics. 2022, 14(8):1736.
[27] Li Z J, Choi H I, Choi D K, et al. Autologous platelet-rich plasma: a potential therapeutic tool for promoting hair growth[J]. Dermatologic Surgery, 2012, 38(7 pt1): 1040-1046.
[28] Kanti V, Messenger A, Dobos G, et al. Evidence-based (S3) guideline for the treatment of androgenetic alopecia in women and in men–short version[J]. Journal of the European Academy of Dermatology and Venereology, 2018, 32(1): 11-22.
[29] Sovak M, Seligson A L, Kucerova R, et al. Fluridil, a rationally designed topical agent for androgenetic alopecia: first clinical experience[J]. Dermatologic surgery, 2002, 28(8): 678-685.
[30] Zhu Baolin, Qian Qiuhai. Extracts of Professor Qian Qiuhai's Experience in Treating Seborrheic Alopecia [J]. Yunnan Traditional Chinese Medicine and Pharmacy Journal, 2014, 35(9): 9-10.
[31] Zhong Cheng, Zhang Zisheng, Liu Chengxin, et al. Experience of Professor Xuan Guowei in Treating Seborrheic Alopecia [J]. Chinese Journal of Traditional Chinese Medicine, 2018, 33(1): 133-135.
[32] Wang Shuye, Jia Caixiao, Xu Yunxiao. Observation on the Efficacy of Shengmai Decoction in Treating Hair Loss and Insomnia of Qi Deficiency Type [J]. Clinical Rational Drug Use Journal, 2011, 4(16): 58.
[33] Yang Haifeng. Observation on the Efficacy of Xiren Dihui Decoction in Treating Androgenetic Alopecia with Dampness-Heat Accumulation Syndrome [J]. New Chinese Medicine, 2016, 48(10): 141 - 142.
[34] Zhu Mingjuan, Zhang Hongya. Experience of Director Zhang Hongya in Treating Seborrheic Alopecia of Qi Heat Type [J]. Guangming Traditional Chinese Medicine, 2022, 37(24): 4459-4462.
[35] Zheng Yongping, Wang Hantang. Clinical Efficacy of Clearing Heat and Dampness Formula Combined with Warming Therapy in Treating Seborrheic Alopecia [J]. Journal of Bengbu Medical College, 2022, 47(03): 337-339.
[36] Li Linxia, Zhao Quanlin. A Brief Analysis of the Treatment of Seborrheic Alopecia by Qudeziguduo Decoction [J]. Asia-Pacific Traditional Medicine, 2017, 13(15): 72-73.
[37] Wang Li, Zhang Tengfei, Lu Shaomin. Clinical Experience of Lu Shaomin in Treating Hair Loss [J]. Asia-Pacific Traditional Medicine, 2017, 13(2): 92-93.
[38] Lu Haipeng, Su Zhijian, Wang Guanqing, et al. Treatment of Male Androgenetic Alopecia with Jiaolian Decoction: A Case Study of 50 Patients [J]. Journal of Traditional Chinese Medicine Research, 2014, 27(08): 14-15.
[39] Liang Youya, Jiang Qian'e, Li Geng. Clinical Observation on the Treatment of Seborrheic Alopecia with

Traditional Chinese Medicine Hair Promoting Liquid [J]. Henan Journal of Traditional Chinese Medicine, 2012, 34(08): 1156-1157.
[40] Zhong Lingling, Yang Yufeng, Huang Yanhong, et al. Observation on the Efficacy of Compound Platycodon Root Solution in Treating Seborrheic Alopecia [J]. Journal of Guangzhou University of Chinese Medicine, 2019, 36(03): 349-352.
[41] Li Qingyong, Li Wenbing. Clinical Research on the Treatment of Seborrheic Alopecia with Hair Stimulating Ointment [J]. Contemporary Chinese Medicine, 2012, 19(9): 112-113.
[42] Kong Ying, Wang Zhewei, Wang Ce, et al. Observation on the Efficacy of Combined Acupuncture and Medicinal Treatment for Male Wet Heat Rising Type Seborrheic Alopecia [J]. Shanghai Acupuncture Journal, 2019, 38(04): 436-440.
[43] Chen Zhanxue. Three Acupuncture Points Treatment for Seborrheic Alopecia [J]. Chinese Folk Therapy, 2003(10): 8.
[44] Xie Wan, Jiang Xiaomei, Jiang Yanyu, et al. Observation on the Efficacy of Qi-Regulating and Origin-Reuniting Acupuncture Method in Treating Seborrheic Alopecia [J]. Shanghai Acupuncture Journal, 2022, 41(01): 61-64.
[45] Zhong Meiying. 102 Cases of Treating Hair Loss with Plum Blossom Needles and Ultraviolet Irradiation [J]. Chinese Acupuncture, 2000(04): 42.
[46] Ma Xiaojuan. 40 Cases of Treating Seborrheic Alopecia with Plum Blossom Needle Tapping and Rubbing of Ginger Juice [J]. Henan Journal of Traditional Chinese Medicine, 2013, 33(10): 1761-1762.
[47] Zhang Xuesong, Zhou Dongmei. Clinical Effect of Removing Dampness and Strengthening Hair Formula Combined with Plum Blossom Needle Tapping in Treating Spleen Deficiency Dampness Accumulation Type Seborrheic Alopecia [J]. China Medical Journal, 2019, 16(25): 126-129.
[48] Han Yue, Lin Xia, Wang Yanli. The Treatment of Seborrheic Alopecia with the Formula of Removing Fat, Activating Blood Circulation and Promoting Hair Growth [J]. Practical Integrated Traditional Chinese and Western Medicine, 2011, 11(04): 36-37.
[49] Xiang Jing, Bian Xiaodong. Observation on the Efficacy of Shi's Warm Needling Combined with Traditional Chinese Medicine in Treating Seborrheic Alopecia [J]. Shanghai Acupuncture Journal, 2018, 37(05): 544-547.
[50] Ni Jiaying, Yi Yifan, Lin Youbing, et al. Observation on the Efficacy of Combined Therapy for Seborrheic Alopecia [J]. Shanxi Journal of Traditional Chinese Medicine, 2017, 33(04): 42+44.
[51] Gao Ying, Yang Jian, Han Xiuzhen, et al. Treatment of Lumbar Tri-symphysis Syndrome with Yanglingquan Reverse Horse Needling [J]. Jilin Journal of Traditional Chinese Medicine, 2013, 33(04): 413.
[52] Gong Xiaokang, Ren Yi, Li Zhen, et al. Clinical Study on the Treatment of Dysarthria Caused by Post-stroke Pseudo-Parkinsonism with Reverse Horse Needling [J]. Journal of Chinese Medicine, 2013, 28(11): 1766-1767.
[53] Zhu Kogying. Efficacy Observation of Reverse Horse Needling Combined with Exercise Therapy in Treating Foot Inversion after Cerebral Stroke [J]. Zhejiang Journal of Traditional Chinese Medicine, 2017, 52(11): 846.
[54] Chen Xiaojuan. Treatment of 20 Cases of Post-stroke Sequelae with Head Acupuncture Combined with Dongshi Jiuli Acupuncture and Reverse Horse Needling [J]. Journal of Traditional Chinese Medicine External Treatment, 2016, 25(03): 45-46.
[55] Wang Yang, Yang Haiming, Liu Yinglu, et al. Clinical Study on the Treatment of Gastric Paralysis Syndrome after Gastric Cancer Surgery with Reverse Horse Needling Combined with Millet Acupoint Moxibustion [J]. Journal of Acupuncture Clinical Research, 2014, 30(11): 47-50.