

Evaluation of the Clinical Efficacy of Chuzhi Shengfa Tablets and Finasteride in the Treatment of Androgenetic Alopecia

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Abstract: *Objective:* To explore the clinical efficacy and safety of Chuzhi Shengfa tablets combined with finasteride in the treatment of male androgenetic alopecia (AGA). *Methods:* Sixty male patients with androgenetic alopecia admitted to our Department of Dermatology between January 2022 and January 2024 were randomly divided into two groups, with 30 patients in each group. The control group was treated with finasteride, while the observation group received a combination of Chuzhi Shengfa tablets and finasteride. The clinical efficacy and adverse reactions in both groups were compared. *Results:* The overall effectiveness rate in the observation group was 93.33% (28/30), significantly higher than the control group's 73.33% (22/30), with a statistically significant difference ($P < 0.05$). There was no statistically significant difference in the incidence of adverse reactions between the two groups ($P > 0.05$). *Conclusion:* The combination of Chuzhi Shengfa tablets and finasteride shows good clinical efficacy in treating male androgenetic alopecia. Additionally, Chuzhi Shengfa tablets are convenient to administer and effectively improve efficacy, significantly improving patients' conditions, and demonstrating good clinical application value.

Keywords: Chuzhi Shengfa tablets; Finasteride; Androgenetic alopecia

Online publication: September 26, 2024

1. Introduction

Androgenetic alopecia (AGA), also known as seborrheic alopecia or early baldness, is the most common type of hair loss encountered in clinical practice. The etiology and pathogenesis of AGA are complex, involving multiple factors. Current medical research generally agrees that genetic factors, abnormal androgen levels, and inflammatory responses are the primary causes of AGA's development^[1-3]. Specifically, the imbalance of androgen levels in the body, particularly the interaction between dihydrotestosterone (DHT) and 5 α -reductase, plays a decisive role in the hair loss process. DHT is converted from testosterone by 5 α -reductase and is

considered the key factor leading to follicular atrophy and hair loss^[4]. The clinical manifestations of AGA vary. Mild cases usually exhibit oily scalp, increased dandruff, and other symptoms, while severe cases may show varying degrees of thinning, softening of the hair, or even complete baldness, severely affecting the patient's appearance and psychological well-being, thereby reducing their quality of life^[5]. In China, the prevalence of AGA is about 21.3% in men and approximately 6.0% in women^[6].

Currently, the main treatments for AGA include medication and hair transplantation. Among drug therapies, finasteride, a synthetic 4-azasteroid compound, works primarily by competitively inhibiting the activity of type II 5 α -reductase, effectively preventing the conversion of testosterone to dihydrotestosterone and thereby controlling the progression of AGA^[7]. However, some patients are not satisfied with the treatment results of finasteride, and long-term use may be accompanied by certain side effects. Therefore, finding safer and more effective treatment options has become an urgent need in the field of AGA treatment. In recent years, traditional Chinese medicine (TCM) has gradually gained attention for the treatment of AGA. TCM, with its multi-target and low-toxicity advantages, shows potential in treating AGA. Chuzhi Shengfa tablets, a traditional Chinese medicine compound formulation, contain ingredients such as *Angelica sinensis*, *Paeonia suffruticosa*, *Ligusticum chuanxiong*, Cortex Dictamni, Periostracum Cicada, *Rehmannia glutinosa*, *Sophora flavescens*, *Kochia scoparia*, *Saposhnikovia divaricata*, *Polygonum multiflorum* (processed), *Schizonepeta tenuifolia*, *Bombyx batryticatus* (roasted), and Scolopendra, offering effects such as nourishing yin and blood, dispelling wind and dampness, relieving itching, and removing excess scalp oil^[8]. Modern pharmacological studies have shown that the multiple components of Chuzhi Shengfa tablets can work synergistically to promote follicle cell proliferation, inhibit follicle cell apoptosis, improve scalp microcirculation, and regulate scalp oil secretion, thereby promoting hair growth and alleviating AGA symptoms^[8].

Finasteride mainly regulates androgen levels, while traditional Chinese medicine can improve the scalp microenvironment through multiple pathways, promoting hair growth. The combination of these two treatments may produce a synergistic effect. However, clinical research on the combination of Chuzhi Shengfa tablets and finasteride in AGA treatment remains limited, and its efficacy and safety require further confirmation. This study aims to explore the clinical efficacy and safety of Chuzhi Shengfa tablets combined with finasteride in treating male androgenetic alopecia by comparing the treatment outcomes and incidence of adverse reactions between the observation group (finasteride combined with Chuzhi Shengfa tablets) and the control group (finasteride alone), providing a safer and more effective treatment plan for male AGA patients.

2. Materials and methods

2.1. General information

Sixty male patients with AGA, aged 20–45 years (mean age: 32.6 \pm 5.4 years), who were treated in our Department of Dermatology from January 2022 to January 2024, were selected. The inclusion criteria were: (1) meeting the diagnostic criteria for androgenetic alopecia; (2) age \geq 18 years; (3) voluntary participation in this study and signing the informed consent form. The exclusion criteria were: (1) severe liver or kidney dysfunction; (2) other types of alopecia; recent use of hormonal drugs; (3) allergic to the study drugs. There were no statistically significant differences between the two groups in terms of gender, age, or course of disease ($P > 0.05$), making them comparable.

2.2. Methods

The control group received oral finasteride tablets, with a dosage of 5 mg per dose, once daily.

The observation group received the same dosage of finasteride, in addition to Chuzhi Shengfa tablets, which were taken orally, 6 tablets per dose, three times daily.

Both groups were treated continuously for 3 months, with close monitoring of treatment efficacy and any potential adverse reactions.

2.3. Observation indicators

2.3.1. Efficacy evaluation

The criteria for evaluating efficacy were based on the recovery of scalp symptoms and signs, as follows:

(1) Cured: After treatment, hair loss completely stopped, scalp oiliness and itching disappeared, and no dandruff was present. At least 80% of the affected scalp area showed new hair growth.

(2) Improved: New hair growth in the affected scalp area covered between 30% and 79%. Scalp oiliness and greasy dandruff were significantly reduced compared to before treatment, and itching was greatly relieved.

(3) Ineffective: New hair growth in the affected scalp area was less than 30%, and there was no reduction or even worsening of scalp oiliness, greasy dandruff, or itching compared to before treatment.

2.3.2. Adverse reactions

Researchers closely monitored both groups throughout the treatment process for potential complications such as elevated alanine aminotransferase (ALT), local skin inflammation, and acne. All observed complications were carefully recorded, and the incidence of each complication was calculated for both groups for subsequent analysis and comparison.

2.4. Statistical analysis

Statistical analysis was performed using SPSS 25.0 software. Measurement data were analyzed using the *t*-test, while count data were analyzed using the χ^2 test. A *P*-value of < 0.05 was considered statistically significant.

3. Results

3.1. Comparison of clinical efficacy between the two groups

The overall effective rate in the observation group was 93.33% (28/30), significantly higher than the control group's 73.33% (22/30), with a statistically significant difference ($\chi^2 = 4.320$, $P = 0.038$). See **Table 1**.

Table 1. Comparison of clinical efficacy between the two groups [*n* (%)]

Groups	Cured	Improved	Ineffective	Total effective rate
Control group (<i>n</i> = 30)	10 (33.33)	12 (40.00)	8 (26.67)	22 (73.33)
Observation group (<i>n</i> = 30)	16 (53.33)	12 (40.00)	2 (6.67)	28 (93.33)
χ^2				4.320
<i>P</i>				0.038

3.2. Comparison of adverse reactions between the two groups

There was no statistically significant difference in the incidence of adverse reactions between the two groups ($P > 0.05$). See **Table 2**.

Table 2. Comparison of adverse reactions between the two groups [n (%)]

Groups	Elevated ALT	Local dermatitis	Acne	Total AE rate
Control group ($n = 30$)	1 (3.33)	2 (6.67)	1 (3.33)	4 (13.33)
Observation group ($n = 30$)	1 (3.33)	0 (0.00)	1 (3.33)	2 (10.00)
χ^2				0.185
P				0.667

Abbreviations: AE, adverse reactions; ALT, alanine aminotransferase.

4. Discussion

AGA is a complex disease influenced by both genetic and environmental factors. Androgens, particularly DHT, play a key role in the pathogenesis of AGA. DHT binds to androgen receptors in hair follicles, leading to follicular miniaturization, which shortens the hair growth cycle and produces thinner, shorter, and colorless hair. Current treatments for AGA primarily include medication and surgery. Caserini *et al.* [9] found that finasteride promotes hair growth by inhibiting type II 5 α -reductase activity and reducing serum DHT levels. Finasteride can effectively increase hair count, hair diameter, and patient satisfaction in AGA patients. However, the therapeutic effect of finasteride varies among individuals, with some patients responding poorly to treatment. Therefore, finding new, safe, and effective treatments for AGA is crucial.

In recent years, the role of TCM and its extracts in AGA treatment has garnered increasing attention. TCM, characterized by its multi-component and multi-target approach, can regulate the internal environment of the body, improve the hair growth environment in AGA patients, and promote hair growth. Chuzhi Shengfa tablets, a Chinese herbal medicine, consist of multiple herbs, including *Angelica sinensis*, *Paeonia suffruticosa*, *Ligusticum chuanxiong*, Cortex Dictamni, Periostracum Cicada, *Rehmannia glutinosa*, *Sophora flavescens*, *Kochia scoparia*, *Saposhnikovia divaricata*, *Polygonum multiflorum* (processed), *Schizonepeta tenuifolia*, *Bombyx batryticatus* (roasted), and Scolopendra. These herbs nourish yin and blood, dispel wind and unblock collaterals, relieve itching, and reduce scalp oil secretion. Modern pharmacological studies show that Chuzhi Shengfa tablets have multiple pharmacological activities, promoting the proliferation of hair follicle cells, inhibiting hair follicle cell apoptosis, improving scalp microcirculation, and regulating scalp oil secretion, thereby promoting hair growth [10]. For example, *Angelica sinensis* promotes the proliferation of hair papilla cells, increases the expression of vascular endothelial growth factor (VEGF), promotes hair follicle angiogenesis, and improves blood circulation in hair follicles; *Polygonum multiflorum* contains active compounds such as lecithin and anthraquinones, which promote melanin production, delay hair follicle aging, and improve hair color [11]; Cortex Dictamni has anti-inflammatory, antibacterial, and antioxidant properties, which can inhibit scalp inflammation and improve the scalp microenvironment; *Sophora flavescens* has heat-clearing and dampness-drying properties, relieves itching, and inhibits sebaceous gland secretion, reducing scalp oil and alleviating itching symptoms.

This study aimed to explore the clinical efficacy and safety of Chuzhi Shengfa tablets combined with

finasteride in treating male AGA. The results showed that the overall effective rate (cured + improved) in the observation group (Chuzhi Shengfa tablets combined with finasteride) was significantly higher than that in the control group (finasteride alone) ($P < 0.05$), suggesting that the combination of Chuzhi Shengfa tablets and finasteride can significantly enhance clinical efficacy in male AGA patients. This may be related to the different mechanisms of action of the two drugs. Finasteride primarily acts by inhibiting androgen synthesis, while Chuzhi Shengfa tablets have a multi-target effect, improving the hair growth environment through multiple pathways, including promoting hair follicle cell proliferation, inhibiting hair follicle cell apoptosis, improving scalp microcirculation, and regulating scalp oil secretion. This synergistic effect results in better therapeutic outcomes. There was no statistically significant difference in the incidence of adverse reactions between the two groups ($P > 0.05$), indicating that both treatment regimens are safe and reliable.

However, this study has some limitations: (1) The sample size was relatively small, and larger clinical studies are needed to further validate the results; (2) The observation period was short, and longer follow-up is required to evaluate the long-term efficacy of the two treatment regimens.

In conclusion, the combination of Chuzhi Shengfa tablets and finasteride in the treatment of male androgenetic alopecia has shown promising results, with good efficacy. This combined treatment not only effectively inhibits the production of DHT, preventing damage to hair follicles, but also improves the scalp microenvironment, enhancing nutrient absorption by hair follicles, and resulting in better treatment outcomes. Clinical observations confirm that this regimen significantly improves hair loss, promotes hair regrowth, and has good clinical application value, offering hope to many male patients suffering from androgenetic alopecia.

Disclosure statement

The authors declare no conflict of interest.

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