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Clinical observation and study on the treatment of photosensitive dermatosis with combination of traditional Chinese and western medicine

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Abstract: To observe the clinical effect of integrated TCWM (traditional Chinese and western medicine) on photosensitive dermatosis. 58 patients with photosensitive dermatosis in our hospital were selected and randomly divided into OG (observation group) and CG (control group), with 29 patients in each group. The CG was treated with compound zinc oxide ointment once a day in the morning and evening, with an interval of about 12 hours, for 2 months. The OG was treated with TCM (traditional Chinese medicine) on the basis of the patients in the CG, and the Chinese herbal medicines were mixed according to a certain proportion. The patients were treated continuously for 2 months. The total effective rate in the OG was 93.1%, which was significantly better than that in the CG (79.3%), and the difference was statistically significant ($P < 0.05$). The recovery time and average hospitalization time of the patients in the OG were better than those in the CG, and the difference was statistically significant ($P < 0.05$). In the process of treating patients with photosensitive dermatosis, the combination of TCWM can improve the treatment effect and reduce the recurrence rate.

1. Introduction

The change of external environment increases the probability of skin infection, and dermatosis has become a common clinical disease, with the incidence increasing year by year. Photosensitive dermatoses are chronic and intractable skin diseases related to light and photosensitive substances (or photoallergens), including photosensitive dermatoses caused by drugs or chemicals, idiopathic photosensitive dermatoses, metabolic photosensitive diseases, photosensitive diseases with DNA repair defects, and skin diseases induced or aggravated by ultraviolet radiation [1-3]. All individuals may suffer from sunburn, tanning, photoaging and other phenomena as long as they receive sufficient doses of ultraviolet radiation, but some people are more sensitive to sunlight, and lower doses of ultraviolet or visible light radiation can lead to photosensitive skin diseases [4].

Exogenous allergic dermatitis is a local and systemic reaction caused by chemicals such as drugs. The photosensitive substances in idiopathic photosensitive dermatosis are unknown, and immune mechanisms are often involved; The occurrence of dermatoporphyria is due to the abnormal

biosynthesis of heme, which leads to the accumulation of porphyrin substances in the body to produce phototoxic reaction [5]; The key to the treatment of this kind of disease is to find and avoid contact with photosensitive substances. It is very important to inquire about the contact history and medication history in detail. In addition, the substances that cause photoallergic reactions can be identified by spot sticking test [6-7].

The pathogenesis of photosensitive dermatosis is complex, with various manifestations and few treatment methods. The curative effect of treating photosensitive dermatosis with integrated TCWM (traditional Chinese and western medicine) in our hospital is satisfactory, and the results are reported as follows.

2. Research progress of TCWM combined with treatment of photosensitive dermatosis

Photosensitive dermatosis refers to skin diseases caused or aggravated by ultraviolet radiation. Clinically, it is characterized by erythema, blisters or polymorphic skin lesions exposed to sunlight, self-conscious burning and itching, and generally obvious seasonality. In recent years, many doctors have explored the etiology and pathogenesis of this disease from the overall concept, and summed up many effective methods, accumulated valuable experience and achieved satisfactory results through classification treatment, TCWM combination, internal and external treatment and so on.

Literature [8] holds that photosensitive dermatosis is closely related to sun exposure. In midsummer, sun exposure, toxic heat with dampness, steaming skin, erythema papules, even blisters, self-burning, itching and stinging. Literature [9] points out that overeating fat and drinking too much leads to spleen and stomach dysfunction, and the accumulation of damp heat, combined with the invasion of external phototoxicity and the attack of internal and external phototoxicity, is easy to cause photosensitive dermatosis. Literature [10] Oral Artemisia capillaris Thunb Granule was used to treat photosensitive dermatosis, and its prescription reused Artemisia annua, Alisma orientalis and Cortex Lycii to clear heat, cool blood and remove dampness. Literature [11] Take the method of clearing away heat and toxic materials, cooling blood and promoting blood circulation, take the self-made prescription orally, and take the decoction for external use, add appropriate amount of borneol. After cooling, soak it in gauze, add appropriate amount of vinegar and honey, and apply it cold and wet to the skin lesions, with vitamin C, calcium gluconate and compound glycyrrhizin intravenous drip to reduce capillary permeability, and apply it to the skin lesions in a ratio of 1: 1: 1 to treat 22 cases of chronic actinic dermatitis. Literature [12] The application of compound spray in the treatment of solar dermatitis has achieved satisfactory results, especially for those who suffer from phototoxicity and intrinsic damp heat. While using negative ion cold spray on the affected area, purslane cold compress is used to treat solar dermatitis to reduce skin redness and swelling and reduce skin exudation, with a total clinical effective rate of 97.8%.

The active components with immune activity in Lycium barbarum L. are a kind of sugar conjugates with complex structure, and its sugar chain part may be the main active structure to exert its immune activity. Literature [13] It is found that Lycium barbarum polysaccharide can obviously improve the phagocytic function of phagocytes, improve the proliferation ability of T lymphocytes, increase serum IgG content and enhance complement activity. Flavonoids can effectively scavenge free radicals. Literature [14] studies the anti-ultraviolet effect of quercetin flavonoid glycosides, and it is considered that the addition of quercetin flavonoid glycosides may capture the lipid molecular free radicals produced by unsaturated fatty acids on mitochondrial membrane after ultraviolet irradiation, and prevent the free radical chain reaction, thus effectively inhibiting the formation of lipid peroxide in membrane. Rhodiola rosea L combined with deer serum or ginseng can resist ultraviolet rays, increase collagen content and make skin smooth and elastic [15]. The protective effect of trihydroxystyrene polyphenol on ultraviolet skin injury was tested, which proved that

trihydroxystyrene polyphenol had certain anti-ultraviolet effect.

Because there is no specific drug treatment for photosensitive dermatosis, all the current treatment methods can only improve or temporarily eliminate the symptoms, but cannot fundamentally change the photosensitive constitution, so the correct prevention of such diseases is particularly important. Some drugs, such as tetracycline, minocycline, doxycycline, chlorothiazide diuretics and sulfonylureas, can cause photosensitive reaction and phototoxic reaction, so people with a history of photosensitive should avoid using them.

3. Materials and methods

3.1 General information

We selected 58 patients with photosensitive dermatosis admitted to our hospital, including 35 male patients and 23 female patients. The average age of the patients was (34. 5%) 76 ± 7.35) years old. Patients were randomly divided into an OG (observation group) and a CG (control group), with 29 patients in each group. There was no statistically significant difference between the two groups in general data such as gender, age, condition, and disease type (P>0. 05) 05), the research is comparable.

3.2 Therapeutic method

The CG was treated with compound zinc oxide ointment once a day in the morning and evening, with an interval of about 12 hours, for 2 months.

In the OG, patients in the CG were treated with TCM(traditional Chinese medicine), including honeysuckle, dandelion, and forsythia; Coix seed, plantain seed, Akebia Stem, Atractylodes macrocephala, Poria cocos, Salvia miltiorrhiza Bge, Ophiogon japonicus, Angelica sinensis, Aucklandia lappa Decne, and other traditional Chinese medicinal materials are mixed in a certain proportion, added with 300 to 500 mml of water, boiled for 20 minutes, and taken orally half an hour before meals, twice a day, one dose per day. The patient is continuously treated for 2 months."

3.3 Observation index

Observe the occurrence of adverse reactions in the two groups; The clinical efficacy of the two groups was evaluated. The clinical symptoms disappear and the skin injury heals, which is regarded as obvious effect; The clinical symptoms are partially relieved and the pain is relieved, which is regarded as effective; Symptoms are not changed, and there is a tendency to aggravate, which is considered invalid. Observe the safety of medication [8]. According to 0= none, 1= mild, 2= moderate, 3= severe 4-level scoring system. The sum of each index value is the total score of the disease, and the decrease of less than 30% is invalid.

3.4 Statistical treatment

SPSS 22. 0 statistical software was used for statistical analysis, and $\chi 2$ test was used for efficiency comparison.

4. Result

Comparison of clinical efficacy between the two groups

Comparison of the total effective rate between the two groups (see Table 1). The total effective rate in the OG was 93.1%, which was significantly better than that in the CG (79.3%), and the

difference was statistically significant ($p < 0.05$).

Table 1: Comparison of clinical efficacy between the two groups

group	Number of cases	Recovery	Significant effect	effective	Not effective	Total effective rate/%
CG	29	6	10	7	6	79.3
OG	29	13	6	8	2	93.1*

Note: "*" stands for $p < 0.05$.

Comparison of clinical symptom relief and hospitalization time between the two groups.

The healing time and average hospitalization time of the patients in the OG were better than those in the CG, and the difference was statistically significant ($P < 0.05$), as shown in Table 2.

Table 2: Comparison of clinical symptom relief and hospitalization time

group	Number of cases	Healing time of photosensitive dermatosis	Length of stay
CG	29	8.64±1.78	10.87±3.84
OG	29	6.03±1.35*	7.25±3.69*

5. Discussion

It is considered that the cause of photosensitive skin is intolerance, the skin is not dense, and it is affected by rheumatic fever, which is depressed in the skin, causing blood heat, and toxic heat enters the blood to cause disease [9-10]. In addition to common quinolones, drugs that cause photosensitive reactions also include tetracyclines, sulfonamides, sulfonylureas, diuretics, phenothians and non-steroidal anti-inflammatory drugs. Photosensitive dermatosis is a kind of intractable and chronic dermatosis, including idiopathic, photosensitive and metabolic dermatosis caused by chemicals or drugs and dermatosis induced by ultraviolet radiation. Clinically, patients with mild illness are mainly treated with local drugs, while those with severe illness are treated with glucocorticoid and cyclosporine, but they are prone to adverse reactions, thus limiting the application of such drugs. Solar urticaria often occurs a few minutes after sun exposure, and soon disappears after avoiding light; Patients with erythropoietic protoporphyrin disease will complain that their skin is burning and easy to be scratched after sun exposure and "wind blowing". Phototoxic reaction's skin lesions include erythema, blisters, bullae, pigmentation and scars, accompanied by burning, tingling, itching and other symptoms [11]. Amiodarone and chlorpromazine can cause obvious pigmentation, and phototoxic reaction caused by plants containing Psoralea corylifolia can also cause obvious pigmentation.

Modern medicine believes that photosensitive dermatosis is an autoimmune disease. Because of the allergic reaction of the body to some allergic substances, the permeability and brittleness of capillaries increase, which leads to hemorrhage and edema of visceral organs in subcutaneous tissue and mucosa. TCM believes that patients with light-sensitive skin are born with an intolerant endowment, the body is hot and humid, the skin is not nourished, the external hand is invaded by heat and toxic heat, and it is difficult to disperse for a long time, and the toxic heat penetrates into the skin to cause this disease.

Because the diet is cold and hot, clothes are not properly adjusted according to the change of solar terms, which leads to a large number of toxic gases such as wind, humidity and heat in the body, and the existence of these pathologies seriously affects the operation function of the patient's heart, lungs and spleen [12]. The use of modern medical equipment to increase drug penetration and depolymerization into the deep skin of the focus area is conducive to giving full play to the medicinal properties. The skin lesions can be controlled in time, and pigmentation is not easy to remain.

Combined with dialectical treatment of internal TCM, the ideal curative effect can be achieved. The curative effect is better than that of simple medication; It has clinical application value.

There is no systematic theoretical and experimental study on the repair of photosensitive skin lesions with TCM, and it is still blank in this field. TCM not only proceeds from the whole, but also pays attention to syndrome differentiation and treatment; At the same time, symptomatic medication, local medication and disease differentiation medication are not excluded to relieve patients' pain, and its curative effect is unique, rapid and direct, with few side effects [13]. According to TCM theories, the basic formulas we use are: honeysuckle, dandelion, and forsythia; Chinese medicinal herbs such as Coix Seed, Plantago Seed, Akebia Stem, Atractylodes macrocephala, Poria cocos, Salvia miltiorrhiza Bge, Ophiogon japonicus, Angelica Sinensis, Aucklandia Lappa Decne, etc., have a bitter taste and enter the liver meridian, are good at clearing away heat and dampness, and can also make the blood separate from the heat and penetrate outward. They also have a fragrant and clear Qi, and are bitter and cold without damaging the spleen and stomach, without damaging yin and blood. Therefore, they are suitable for the syndrome of blood deficiency and heat. According to modern research, most of the above drugs have immunomodulatory effects, and all the drugs work together to clear away heat and promote diuresis, cool blood and detoxify. We used Chinese medicine to treat 58 cases of photosensitive dermatosis, and achieved satisfactory curative effect, and it was safe and had no side effects.

6. Conclusion

The total effective rate in the OG was 93.1%, which was significantly better than that in the CG (79.3%), and the difference was statistically significant ($P < 0.05$). The recovery time and average hospitalization time of the patients in the OG were better than those in the CG, and the difference was statistically significant ($P < 0.05$). In the process of treating patients with photosensitive dermatosis, the combination of TCWM can improve the treatment effect and reduce the recurrence rate.

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