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Huoxue Quscar granules combined with erbium-doped fiber laser therapeutic instrument in the treatment Clinical application of atrophic scars in acne

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Abstract: Objective: To compare the clinical efficacy and safety of Huoxue-Quscar granules combined with erbium-doped fiber laser therapeutic instrument and Huoxue-Quscar granules alone in the treatment of atrophic acne scars. Methods: A total of 350 patients with atrophic acne scars treated in our hospital were randomly divided into an experimental group and a control group. The patients in the experimental group were treated with Huoxue-Quscar granules combined with erbium-doped fiber laser therapeutic instrument, and the patients in the control group were treated with Huoxue-Quscar granules. The effective rate and incidence of adverse reactions were compared between the two groups. Results: The effective rate of the trial group was 97.14%, which was significantly higher than 92.00% of the control group ($P < 0.05$). The incidence of adverse events in the experimental group (0.57%) was lower than that in the control group (4.00%) ($P < 0.05$).Conclusions: Huoxue-Quscar granules combined with erbium-doped fiber laser therapeutic instrument has good efficacy and safety in the treatment of atrophic acne scars.

Keywords: Atrophic Scars of Acne; Erbium-Doped Fiber Laser

It is well known that facial acne is a skin problem that occurs in most people during adolescence. Its pathogenesis is also complicated, and there is no unified related report at present. In general, after suffering from acne, patients often crush the skin with their hands to cause skin damage, or inflammation to damage the collagen in the dermis, and the dermal tissue collapses and leaves a cavity, or the tissue repair and destruction coexist in the sebaceous gland cavity, which is easy to form acne scars. At present, there are many methods for the treatment of acne scars, such as combination of traditional Chinese and western medicine, chemical exfoliation, and laser therapy[1]. Among them, the combined treatment of Chinese and Western medicine is achieved by the combination of oral drugs and external instruments.

350 patients with acne scars treated in our hospital from March 2024 to September 2024 were randomly divided into two groups. 175 patients in the experimental group were treated with Huoxue-Quscar granules combined with erbium-doped fiber laser therapeutic instruments, and 175 patients in the control group were treated with Huoxue-Quscar granules. After 12 weeks of treatment, the effective rate and adverse reactions of the two groups were observed.

1. General data

A total of 350 patients with acne scars in our hospital from March 2024 to September 2024 were randomly divided into two groups, including 165 males and 185 females; Age ranged from 22 to 35 years.

Inclusion criteria: (1) clinical manifestations meeting the TCM diagnostic criteria of acne damp-heat accumulation syndrome;[2] (2) in accordance with acne grade ii-iii, skin lesions occurred on the face; (3) had not received antibiotic therapy, laser therapy, or other acne treatment within 1 month before enrollment; (4) patients without contraindications to laser treatment. Exclusion criteria: (1) patients with severe fear and unwilling to receive laser treatment; (2) patients with serious organic diseases such as heart, liver, kidney, hypertension and mental illness; (3) patients with severe scar constitution and pregnant or lactating women; (4) occupational acne caused by chemical substances, drug-induced acne, rosaceasis, etc. (5) patients who voluntarily signed the informed consent form.

2. Methods

2.1 Treatment Methods:

The control group was treated with Huoxue Qucicao granule medicine composition: safflower 12g, red peony 10g, Angelica 10g, salvia

miltiorrhiza 10g, Poria 20g, Panax notoginseng 3g. Xehuo Zhoushi Xiaocuo decoction was decocted in 300ml water, and the medicine was taken warm twice in the morning and evening half an hour after meals, one dose a day, 4 weeks as one course of treatment, totally 3 courses of treatment.

Decoction method: all the daily doses of Chinese herbal decoction pieces were placed in cold water for 1 hour, and the water consumption was about 1000ml. The decoction container can be made of casserron and stainless steel, and copper, iron and aluminum products are forbidden. The water soaked in the decoction pieces can be used for decoction directly. During the decoction, the water in the pot can be observed, and the water in the pot can be properly stirred to avoid pasty the pot. After the decoction is finished, pour out the first time of decoction, continue to add 500ml water in the pot, boil the small fire and continue to decoction for 15 minutes, pour out the second time of decoction, mix the two times of decoction, and divide it into 2 parts, 1 part in the morning and 1 part in the evening, and serve warm.

The treatment method of the experimental group: on the basis of taking Huoxue Quscar granules combined with erbium-doped fiber laser therapeutic instrument produced by Shenzhen Jiesdi Technology Co., LTD. (National instrument registration20173094398), a total of 3 times of treatment, once every 4 weeks.

2.2 Observation indicators:

1) Efficacy evaluation: The efficacy index was determined according to the number of grade ii-iii acne lesions (excluding erythema) before and after treatment. Efficacy index = (number of lesions before treatment - number of lesions after treatment) ÷ number of lesions before treatment ×100%. Cure: efficacy index ≥90%; Marked efficacy: 60%≤ efficacy index ≤89%; Effective: 30%≤ efficacy index ≤59%; Ineffective: efficacy index <30% or aggravation. Total clinical effective rate = (number of cured cases + number of markedly effective cases + number of effective cases) ÷ total number of cases ×100%.

2) Occurrence of adverse reactions, and adverse reactions of patients in the two groups during treatment were recorded.

Such as nausea, vomiting, diarrhea and other digestive system reactions of oral drugs; Local burning and pain, local slight erythema, edema, blisters, infection, pigmentation, etc. of erbium-doped fiber laser therapeutic instrument.

2.3 Data collection and analysis methods: Statistical methods included t test for measurement data and Chi-square test for count data. P<0.05 was considered statistically significant.

3. Results

3.1 Comparison of general data: there were no significant differences in age, gender and course of disease between the experimental group and the control group (P>0.05).

The chi-square test was used to analyze the gender distribution of the subjects, X2=0.287, P=0.592 > 0.05. There was no statistically significant difference in the gender distribution between the experimental group and the control group, as shown in the table below.

Table 1 Gender distribution of subjects in the two groups

Groups	N	Male (%)	Female (%)	X^2	P-value
Experimental group	175	85 (48.57)	90 (51.43)	0.287	0.592
Control group	175	80 (45.71)	95 (54.29)		

Note: N stands for sample number

For the age data of the subjects, t test was used, and the age analysis of the experimental group and the control group was t=0.897, P=0.370 > 0.05, which was not statistically significant. See the table below for details.

Table 2 Comparison of age between the two groups (years)

Groups	Number of cases	Age	T	P
Experimental group	175	25.32±9.87	0.897	0.370
Control group	175	27.51±10.13		

t test was used for the course data of the subjects. The course analysis of the experimental group and the control group was t=0.572, P=0.568 > 0.05, and there was no statistically significant difference.

Table 3 Comparison of course of disease between the two groups (years)

Groups	Number of cases	Duration of illness	T	P
Experimental group	175	1.93±0.57	0.572	0.568
Control group	175	1.86±0.81		

3.2 Comparison of clinical efficacy

1) The effective rate of the experimental group was 97.14% (170/175), and that of the control group was 92.00% (161/175). The effective rate of the experimental group was significantly higher than that of the control group, and the difference was statistically significant (P=0.034<0.05).

Table 4 Comparison of effective rates between the two groups

Groups	Number of cases	Cured	Conspicuous EFFECT	Effective	Invalid	Total effective rate (%)	X^2	P-value
Experimental group	175	53	45	72	5	170 (97.14)	4.508	0.034
Control group	175	46	65	50	14	161 (92.00)		

2) The incidence of adverse reactions in the experimental group was significantly lower than that in the control group, and the difference was statistically significant. See the table below for details.

Table 5 Comparison of adverse reactions between the two groups

Groups	Number of cases	Number of adverse reactions	Incidence of adverse reactions (%)	X^2	P-value
Experimental group	175	1	0.57	4.605	0.032
Control group	175	7	4.00		

During the treatment, one subject in the experimental group had local burning without intervention due to mild symptoms, and the symptoms disappeared after 1 day. There was no adverse effect on the subjects, and no subjects were uncomfortable with the oral medication.

In the control group, 3 subjects had erythema, and the symptoms disappeared after 2 days of timely symptomatic treatment. Four subjects had burning sensation, but no intervention measures were taken because the symptoms were mild, and the symptoms disappeared after 1 day. Erythema occurred in 3 subjects and disappeared after 2 days of timely symptomatic treatment. None of the above adverse reactions had adverse effects on the subjects.

4. Discussion and Conclusions

Acne is a common chronic inflammatory skin disease in clinic. The pathogenesis of acne is complex, which is mainly caused by parakeratosis of the pilosebaceous duct, hypersecretion of sebaceous glands, and colonization of Propionibacterium acnes. The typical skin lesions are papules and pustules on the face, chest and back, and in severe cases may be accompanied by cysts and nodules. Acne lesions are

recurrent and unhealed for a long time, and there are often sequelae such as pigmentation and acne scars.

The results of this study showed that the effective rate of the experimental group was 97.14%, and the effective rate of the control group was 92.00%, indicating that the clinical treatment effect of the experimental group was better. At the same time, the incidence of adverse events in the experimental group was significantly lower than that in the control group. In conclusion, Huoxue-Quscar granules combined with erbium-doped fiber laser therapeutic instrument is more effective and safe in the treatment of acne scars than the control group.

References

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