

Observing the effect of traditional Chinese medicine Kouchuang Xiaotong powder on patients with recurrent aphthous ulcer

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Abstract: The effect of traditional Chinese medicine Kouchuang Xiaotong powder on patients with recurrent aphthous ulcer is observed and analyzed. 140 patients with recurrent aphthous ulcer in our hospital were selected as research objects, which were randomly divided into two groups: study group and control group. Among them, the patients in study group were treated with traditional Chinese medicine kouchuang xiaotong powder, and patients in control group were given the general routine treatment, comparing overall effective treatment of the two groups. Through comparing the time of pain disappearance, the size of ulcer after treatment, ulcer healing time and the time of feeding improvement, the results showed that study group had more obvious advantages than control group with $P < 0.05$; through comparing pain score and overall curative effect of the two groups, study group was significantly superior than control group with $P < 0.05$. The treatment of traditional Chinese medicine Kouchuang Xiaotong powder on patients with recurrent aphthous ulcer, it can obtain good effect, significantly improve the curative effect and promote recovery as soon as possible.

Keywords: Traditional Chinese medicine Kouchuang Xiaotong powder, recurrent aphthous ulcer, clinical effect.

INTRODUCTION

As a typical oral mucosal disease, recurrent aphthous ulcer accounts for most of oral mucosa diseases that one out of five persons at least have ulcer. In clinics, local treatment combined with systemic treatment can prolong its intermission period and shorten its attack period, but cannot realize a radical cure. Studies have shown that (Ma *et al.*, 2017, Wang *et al.*, 2016), the main principles of local treatment are to reduce inflammation, relieve pain and promote healing. For example, anti-inflammatory drugs include drug membrane, ointment, lozenges and powders. Among them, drug membrane is generally made of aureomycin, chlorhexidine, topical anesthetics, corticosteroids and using sodium carboxymethyl cellulose and sorbitol as substrate; ointment typically refers to 0.1% triaxelone (desonitis pine and fluoxetone acetate) ointment; lozenges refer to cydiodine tablet; powders include compound cortical powder, tin powder, pearl yellow powder, blue daisan, ice boron powder, yangyin shengmyo powder, watermelon frost, etc, which is used 3-4 times per day. In addition, painkillers such as 0.5% dacroline hydrochloride solution is also needed upon unbearable pain.

There is 20% morbidity in recurrent aphthous ulcer (as shown in fig. 1). Because of the complex pathogen, there is no unified cognition for its pathogeny, which is mostly regarded as relative relationship with autoimmune conditions (Feng 2014, Suraksha 2013). The clinical features of this disease include single or multiple recurrent ulcers occurring in oral mucosal (fig. 2).

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Moreover, the disease can occur in all parts. The timely and effective treatment for the disease has become a common concern in medical field. The research observes and analyzes clinical effect of traditional Chinese medicine Kouchuang Xiaotong powder on patients with recurrent aphthous ulcer.

Histopathology: Epithel dissolves ulcerates and abscises to form ulcers, whose surface occurs cellulose exudates, necrotic tissue, infiltration of inflammatory cell, edema of collagen fiber in lamina propria, hyaline degeneration, infiltration of inflammatory cells as well as many and dense inflammatory cells at the bottom. There are many inflammatory cells around the blood vessels with capillary dilating and congesting, vascular endothelial cells swelling and lumen narrowing.

MATERIALS AND METHODS

The 140 patients who are diagnosed as recurrent aphthous ulcer in our hospital during the period from April 2015 to December 2017 are selected as subjects. This paper has a rigorous structure, and the conclusion has been approved by relevant ethics and relevant departments. The inclusion criteria of patients meet the following aspects: western medicine meets the diagnostic criteria of stomatitis aphtha stipulated by oral medicine (Prashant, 2014); the surface of ulcer is shallow and flat, shape is irregular and size ranges from small grain to broad bean with dozens of aphthae, yellow percolate and integration of each other. There is congestion around pathogenic site with a wide range of ulcer; the location is not fixed and attacks repeatedly with significant pain; diagnosis of traditional

Chinese medicine meets the standard of aphthous syndrome in Chinese medicine stipulated by Guiding Principles of Clinical Research on New Drugs of Traditional Chinese Medicine (Ragwa and Ming 2017); patients sign the formal informed consent. The exclusion criteria for patients are: patients with oral local irritation, systemic diseases and mental disorder are systematically treated in the near time (within a month). The patients are randomly divided into study group and control group with 70 cases of each group. There are 35 cases of male patients and 35 female patients in study group, age ranging between 20 to 56 years old and the average age being (40.2 + 3.1) years old with 2 years to 10 years courses and average courses being (5.8 + 0.9) years; control group has 38 cases of male patients and 32 female patients, age ranging between 21 to 58 years old and the average age being (41.3 + 3.5) years old with 2 years to 9 years courses and average course being (6 + 0.3) years. Compared with relative data between the two groups, it shows that there is comparability with $P > 0.05$ (Ucan *et al.*, 2017, Yang *et al.*, 2017).

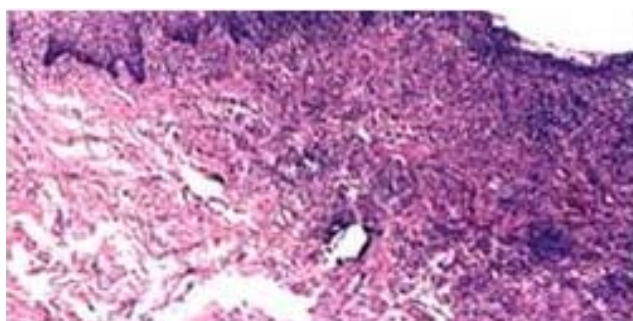


Fig. 1: Figure of recurrent aphthous ulcer



Fig. 2 Mouth Mucosa

Different treatments are given to patients in study group and control group. The treatments in control group are as follows: taking multi-vitamin B for 2 tablets a time and 3 times a day (Rui Yang Pharmaceutical Co., Ltd., SFDA approval number: H37022585). At the same time, the treatment of cetylpyridinium chloride gargle is applied

with 3 times a day. For the patients in study group, the treatment of traditional Chinese medicine Kouchuang Xiaotong powder is applied, which is pure Chinese parathions. The main components are talcum, dragon's blood and borneol etc. Take an appropriate amount of the medicine with cotton swab, gently smearing in affected area or the wound for 3 times a day. The two groups of patients are continuously treated for a week, and after the treatment, the treatment effect of is evaluated.



Fig. 3: Viral microbial infection

Observation index

First, the evaluation of pain improvement should use visual analogue score (VAS) to evaluate the pain after the treatment (Zhang *et al.*, 2015). The pain score was 0, saying the patient feel no pain; mild pain is 1 point to 3 points, which exists a slight pain and can be endured and the patients can lead a normal life without interference in diet; moderate pain is 4 points to 6 points, where the pain is relatively obvious and needs analgesic drugs with affecting the diet; severe pain is 7 points to 10 points, which expresses severe pain and patients cannot stand. It needs application of analgesic drugs as well as diet is severely interfered with autonomic dysfunction or passive posture. Secondly, through observing the total effect of treatment between two groups, the standard of recovery is: oral mucosal ulcer has healed completely without pain; excellent standards: the scope of mouth mucosal ulcer is significantly decreased and the degree of pain is significantly improved; effective standard: mouth mucosal ulcer is reduced and the pain is alleviated; ineffective standard: there is no difference compared with prior treatment and even it worsens. Finally, the time of pain disappearance, the size of ulcer, the healing time of the ulcer and the time for improvement of feeding for post-treatment are recorded (Peng *et al.*, 2016, Sarah *et al.*, 2017).

STATISTIC ANALYSIS

The used statistical analysis software is SPSS21.0. Among them, the measurement data is expressed in the

Table 1: Comparison of therapeutic indexes between the two groups of patients ($\bar{x} \pm s$)

Group	Case number	Pain disappearing time (d)	Ulcer size after treatment (mm)	Ulcer healing time (d)	Eating improvement time (d)
Study group	70	2.30±0.87	0.60±0.55	4.15±0.90	3.05±1.20
Control group	70	4.29±0.92	1.98±0.52	5.80±1.40	4.56±1.36
t		5.30	8.29	12.18	6.37
P		<0.05	<0.05	<0.05	<0.05

Table 2: Comparison of overall treatment efficiency between the two groups of patients [n, (%)]

Group	Fully cured	Significantly effective	effective	No effect	Overall curative effect rate
Study group (n=70)	42	20	8	0	70 (100.00)
Control group (n=70)	26	18	16	10	60(85.71)
X ²					8.69
P					<0.05

Table 3: Comparison of pain score between the two groups of patients ($\bar{x} \pm s$)

Group	Case number	Pain score before treatment	Pain score after treatment
Study group	70	8.53±0.02	2.03±0.56
Control group	70	8.36±0.91	5.15±0.47
t		0.32	10.58
P		>0.05	<0.05

form of mean \pm average ($\bar{x} \pm s$), and t is used for group comparison. Counting data is expressed by natural number (n) and percentage (%), and chi square is used for group comparison. When $P < 0.05$, it has statistical value.

RESULTS

Comparison of therapeutic indexes between the two groups of patients

As shown in table 1, the pain disappearing time, the ulcer size after treatment, the ulcer healing time and the eating improvement time of study group are significantly shorter than that of control group, and the intergroup difference is of statistical significant, $P < 0.05$.

Comparison of overall curative effect between the two groups of patients

As shown in table 2, the overall curative effect of study group is higher than that of control group, and the intergroup difference is of statistical significant, $P < 0.05$.

Comparison of pain score between the two groups of patients

As shown in the following table 3, the pain score of study group is significantly lower than that of control group, and the intergroup difference is of statistical significant, $P < 0.05$.

DISCUSSION

There is higher incidence in recurrent aphthous ulcer. During onset of the disease, there is a clear sense of pain

in diseased location, which has serious influence on people's normal life and work (Cai 2015). Some patients can self-heal, but for the long course of disease, the pain of the disease is severe and at the same time, it breaks out recurrently. Therefore, it will cause a lot of inconvenience and pain for the patient. At present, there is no unified view on causes of the disease. However, through related studies, it is closely related to genetic factors, mental and neurologic factors, microbial infection (fig. 3) as well as immune dysfunction (Li *et al.*, 2018, Jasim *et al.*, 2017). Current method for treating recurrent aphthous ulcer is drug treatment, including watermelon cream spray, Hua Su tablets and ice boron powder, compound chlorine fixed oral cavity ulcer membrane and so on. However, the effect of treatment is not unified, which requires longer treatment time (Pati *et al.*, 2017).

In the perspective of traditional Chinese medicine, oral mucosa is caused by exogenous pathogenic toxin, excessive fire with Yin deficiency, damp heat and blood stasis. Application of traditional Chinese medicine has sound curative effect in treating recurrent aphthous ulcers. For example, the traditional Chinese medicine Kouchuang Xiaotong powder play a curative role in clearing heat and detoxifying, eliminating swelling, relieving pain, and eliminating saprophyte. The results of this study showed Kouchuang Xiaotong powder significantly relieved that pain of the patients in study group, eliminated the local inflammation of ulcer, and activate the microcirculation of local blood to promote the healing of ulcer. Therefore, disappearance time of the clinical symptoms in ulcers

(pain, edema and congestion, etc.) were significantly reduced, and the number of recurrence was maximally minimized, and the cure rate was significantly improved.

Through comparing the pain disappearing time, the ulcer size after treatment, the ulcer healing time and the eating improvement time between two groups, it can be seen that the study group accepting Kouchuang Xiaotong powder therapy had significantly therapeutic results, $p < 0.05$. The pain score and overall curative efficiency of study group were superior to that of control group as well. This indicates that Kouchuang Xiaotong powder can realize excellent therapeutic effect in treatment of recurrent aphthous ulcer.

CONCLUSION

In conclusion, application of Kouchuang Xiaotong powder can realize excellent therapeutic effect in treatment of patients with recurrent aphthous ulcer, including shortened time for pain disappearing, reduced ulcer area, improved treatment efficiency, and promoted recovery rate. Therefore, it is worth of being promoted in clinics.

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