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Clinical effects of psychological intervention and drug therapy against peptic ulcer

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ABSTRACT

Objective: To evaluate the clinical effects of psychological interventions and drug therapy against peptic ulcer. **Methods:** 96 patients with peptic ulcer were divided into control group with Tagamet 800 mg per evening *p.o.* and trial group with psychological intervention on the basis of drug treatment. **Results:** There were significant differences between the two groups ($P<0.05$), the trial group showed that the anxiety and depression cases declined obviously and effective rate of ulcer therapy was much higher than control group. **Conclusions:** In sum, psychological intervention combined with drug therapy provides an effective method for ulcer treatment.

1. Introduction

Recently, the scholars have realized that the psychological elements play a key role in the ulcer's occurrence, development and recovery[1-3]. The ulcer patients are usually accompanied with emotional disorders such as anxiety and depression, the exclusive drug therapy is not functioning properly and tends to be recurrent. This study aims to evaluate the efficacy of psychological intervention against ulcer from 96 recipients with peptic ulcer using mental intervention as well as drug therapy.

2. Materials and methods

2.1. Clinical data

A total of 96 cases were randomly selected from the outpatients with gastric, duodenal or combined ulcer, confirmed by gastroscopy as shown in Table 1. The ruling out criteria include: (1)pregancy, (2)malicious cancer, (3) other un-ulcer serious diseases, (4)ulcers with suspicious causes of pituitary multiple endocrine neoplasia and thyroid or pancreatic oriented disorders.

2.2. Methods

These patients were randomly divided into trial group and control group with 48 cases in each. There was no statistics difference between the both groups (Table 1). Control group was given the routine medical advice and Tagamet (TSKF) 800 mg per evening *p.o.* for 6 weeks. On the basis of drug therapy identical with the control, trial group was additionally given the psychological interventions.

2.2.1. Conversation

To analyze the patient's mental condition and find out the society and environmental stressors in terms of conversation.

2.2.2. Doctor-patient co-analysis

Doctor and patient collaborated to chase out the reasons for refractory ulcer, the patient was informed of common sense of ulcer, including the occurrence, development, periodic changes.

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2.2.3. Cognitive therapy

To establish the correct cognition, rectify the negative emotion towards ulcer and form the belief that ulcer is curable.

2.2.4. Diet modulation

Diet proposal and record were set to prevent from the additional damages to gastric mucosa by eating cold, hot and starch food. Check blood in the urine groovy, liver function, kidney function, ECG, emotional changes and adverse drug reaction before and after treatments.

Table 1.
General information of 96 patients.

Parameters		Control group [n(%)]	Trial group[n(%)]	P
Gender	Male	38(78)	37(78)	>0.05
	Female	10(20)	11(11)	
Age (year)	<40	22(46)	23(48)	>0.05
	⩾40	26(54)	25(52)	
Ulcer lesion	1 ulcer lesion	44(92)	44(92)	>0.05
	2 ulcer lesions	4(8)	4(8)	
1st lesion diameter	3-5 mm	14(27)	14(27)	>0.05
	6-10 mm	24(50)	25(52)	
	11-20 mm	10(20)	9(19)	
2nd lesion diameter	3-5 mm	3(6)	3(6)	>0.05
	6-10 mm	1(2)	1(2)	
	11-20 mm	0(0)	0(0)	
Course of disease	2-8 a	31(65)	32(67)	>0.05
	9-15 a	17(35)	16(33)	
Smoking		28(57)	29(60)	>0.05
Alcohol drinking	Mild	10(20)	11(22)	>0.05
	Sever	2(4)	2(4)	
Tea drinking	Strong	28(58)	29(61)	>0.05
	Weak	7(15)	6(13)	
Mental status	Anxiety	25(52)	24(50)	>0.05
	Depression	23(48)	24(50)	
Ache		46(96)	47(98)	>0.05

2.3. Evaluation system

2.3.1. Gastroscopy

Gastroscopy was required before and after treatments, follow the efficacy standard: recovery-no ulcer lesion left, with or without inflammation; effective-ulcer shrink more than 50%; invain-ulcer shrink less than 50%[4].

2.3.2. Psychological test

Patients scored the self-rating anxiety scale (SAS) and self-rating depression scale (SDS)[5] before and after treatments. SAS and SDS include 20 parameters (symptoms), respectively, each symptom was scored in four ranks based on the occurrence frequency before the total scores were calibrated: SAS above 50 scores indicates having anxiety, and SDS above 53 scores indicates having depression disorder.

2.4. Statistical analysis

The group data comparison was analyzed under χ^2 and t-test in SPSS 12.0 software, values with $P<0.05$ was viewed as significant different.

3. Results

3.1. Clinical effects

The healing rate and effective rate of trial group are much higher than control($P<0.05$). Cognitive therapy lead to an significant reduction in trial group with the smoking cases from 29 to 7, alcohol drinking from 13 to 1, tea drinking from 35 to 10 (Table 2).

Table 2.
Effective rate.

Group	Healing rate[n(%)]	Shrinkage rate > 50%[n(%)]	Aching relief rate[n(%)]
Trial	38(79.2)*	45(93.8)*	47(97.9)*
Control	28(58.3)	34(70.8)	39(81.5)

*$P<0.05$.

3.2. SAS and SDS

The SAS and SDS before and after treatment in trial group and in control group are significant different, repectively ($P<0.05$). There is no significant difference in SAS and SDS among groups before treatments, while with significant difference among groups after treatment as shown in Table 3.

Table 3.
SAS and SDS comparison (mean±s).

Group	Before treatments		After treatments	
	SAS	SDS	SAS	SDS
Trial	52.86±11.54	51.61±10.73	32.17±6.74[ab]	40.32±7.38[ab]
Control	52.74±11.36	51.08±0.67	39.08±7.92[a]	44.74±9.13[a]

[a]$P<0.05$ as compared with before treatment, [b]$P<0.05$ as compared with control group.

4. Discussion

Behavior cognitive therapy can allow the enhancement of patient's reality cognition, improvement of his anxiety, depression and discontent emotions on subjective level. Psychological intervention can eliminate the irrational way of thinking, as well as the mental and behavior disorders. In this study, the combination of psychological with drug therapy gains better efficacy than using drug exclusively[6-12].

It has been universally accepted that acute stress may lead to acute peptic ulcer, while there is still disagreements about the pathogenesis effect of turbulent emotion and inconformity mood on chronic ulcer[13]. At present,

psychological fluctuation is regarded as a important factor behind the gastrointestinal physiological function damages, making the ulcer repeat or aggravate in daily diagnosis. In wartime, the peptic ulcer occurrence rate as well as punch complications tended to rise, which was related to mental factors[2], psychologists found that the ulcer patients have the characteristics of independence, over-confidence and susceptibility to anxiety and depression[3]. The mental health level of patients with duodenal ulcer is a little bit lower than those healthy, presenting with mild anxiety and depression.

Nowadays researchers have come to the conclusion that the pathogenesis factors, physiology-psychology-society, are independent while functioning as a whole, for example the psychological factor influence significantly on the peptic ulcer recovery[14]. Conventional therapy overlooked the mental effects: on one hand, it can be helpful in health care by invoke the positive emotional reacts; on the other hand, it can lessen the adverse drug reacts on liver and kidney by stimulating the patient's immunity. Also, psychological intervention made strides in patient's behavior: the quit smoking rate in trial group increased obviously, compared with control group. Cigarette smoking has been proven its close relevance with peptic ulcer, long-term smokers tend to have a higher ulcer occurrence rate than non-smokers, and the ulcer healing speed lags even using effective drug therapy. Nicotine of cigarettes can damage the gastric mucosa, decrease the pyloric sphincter's tension causing bile reflux and impair the duodena's acid-neutralization capacity by inhibiting the HCO_2 section from pancrease. Drinking alcohol and tea will stimulate the gastrointestinal mucosa, the cognitive therapy could reduce the alcohol and tea drinking cases in trial group. Thus, the psychological intervention can improve the cognition; eliminate the irrational thinking mode and behavior disorders.

The anxiety and depression are alleviated obviously through psychological intervention in trial group, with a statistics differences on rating scores compared with the exclusive drug group ($P<0.05$), research shows that anxiety and depression can postpone gastric digestion and emptying process, so the overloaded gastrointestinal function is the prior factor behind the peptic ulcer. Anxiety and depression will aggravate the somatic symptoms of the ulcer, which will cause the negative emotions reversely in a vicious circle. So psychological intervention amending the circle is a considerable step for ulcer therapy.

In the present study, the trial recipients have a significant increase on ulcer healing, effective and aching relief rate. The high rate of aching relieving stems from the psychological intervention which can decrease the gastric acid corrosion to mucosa. The amelioration of anxiety and depression also contribute to the relieving aching, because the negative emotions can reduce the aching sensation threshold, even the normal physiological movements could bring the patients with abnormal signal for disease symptom. The psychological intervention allows the creation of a salutary mental state, lessening or eliminating the aching sense aggravated by subjective-oriented anxiety and depression. In sum, psychological intervention combined with drug therapy provides an effective method for ulcer treatment, which should be put more emphasis in the future medical care.

Conflict of interest statement

We declare that we have no conflict of interest.

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References

[1] Sun XL, Qin Rui, Wu YL. The research progress on the disease uncertainty of in-patients. *J Nurs Sci Surg* 2009; **24**(2): 89-90.

[2] Yand XX, Yue LQ, Xie HQ. Effect of music therapy on the life quality of patients with cancer. *Mord Nurs* 2008; **14**(2): 169-170.

[3] Taylor-Plia R, Molassiotis A. Psychometric evaluation of Chinese version of Misher's uncertainty in illness scale. *HK Nurs J* 2000; **36**(4): 14-21.

[4] McCormick KM. A concept analysis of uncertainty in illness. *J Nurs Scholarsh* 2002; **34**(2): 127-131.

[5] Wand YM. Treatment experience of HP-relatated peptic ulcer. *J Med Forum* 2009; **28**(5): 108-109.

[6] Hu FL. Consensus report about Hp infection in 3rd national conference. *Clin Med J* 2008; **6**(3): 13-18.

[7] Okokon JE, Etebong EO, Udobang JA, Obot J. Antiplasmodial and antiulcer activities of *Melanthera scadens*. *Asian Pac J Trop Biomed* 2012; **2**(1): 16-20.

[8] Patil MVK, Kandhare AD, Bhise SD. Effect of aqueous extract of *Cucumis sativus* Linn. fruit in ulcerative colitis in laboratory animals. *Asian Pac J Trop Biomed* 2012; **2**(1): S962-S969.

[9] Timshina DK, Pankaja SS, Rao HK, Kate V. Evaluation of *Helicobacter pylori* infection and other risk factors in patients with benign peptic ulcer disease. *Asian Pac J Trop Dis* 2011; **1**(1): 50-51.

[10] Gandhi MN, Challa SR, Prasanth P, Gandhi TR. Role of leukotrienes in NSAID induced gastric ulceration and inflammation in wistar rats. *Asian Pac J Trop Dis* 2012; 2(3): 215-219.

[11] Pimple BP, Kadam PV, Patil MJ. Ulcer healing properties of different extracts of Origanum majorana in streptozotocin-nicotinamide induced diabetic rats. *Asian Pac J Trop Dis* 2012; **2**(4): 312-318.

[12] Gupta J, Kumar D, Gupta A. Evaluation of gastric anti-ulcer activity of methanolic extract of *Cayratia trifolia* in experimental animals.*Asian Pac J Trop Dis* 2012; **2**(2): 99-102.

[13] Liu YS. Combination effects of furazolidone and omeprazole against peptic ulcer 60 cases. *J Med Forum* 2010; **29**(17): 61-62.

[14] Xiang Y. Evaluation of clinical effects of two kind of triple therapies against Hp-related gastritis. *Chin Pract Med* 2011; **24**(3): 73-74.