

# Curative effect of Jin'gangteng capsule combined with Kangfuxiaoyan suppository in the treatment of chronic pelvic inflammatory disease

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**Abstract:** This paper aims to analyze the curative effect of Jin'gangteng capsule combined with Kangfuxiaoyan suppository in the treatment of chronic pelvic inflammatory disease. 97 patients with chronic pelvic inflammatory disease admitted to our hospital from June 2015 to June 2016 were selected and randomly divided into observation group and control group. Patients in control group were treated with Kangfuxiaoyan suppository and patients in the observation group were treated with Jin'gangteng capsule combined with kangfuxiaoyan suppository treatment. The curative effect between the two groups was compared. The scores of symptoms and signs in the observation group after treatment were lower than those in the control group. The total effective rate of the observation group was higher than that of the control group, and there was significant difference between the two groups,  $P < 0.05$ . Jin'gangteng capsule combined with Kangfuxiaoyan suppository in the treatment of chronic pelvic inflammatory disease can improve the treatment efficiency and promote the rapid and effective relief of clinical symptoms and signs.

**Keywords:** Jin'gangteng capsule; Kangfuxiaoyan suppository; chronic pelvic inflammatory disease.

## INTRODUCTION

Chronic pelvic inflammatory disease (CPID) is a common disease and frequently occurring disease in women. It is mainly a chronic inflammatory disease involving pelvic genital organs, surrounding connective tissue and peritoneum. It is mainly caused by that acute pelvic inflammatory disease is not complete or it is not treated in a timely manner and delay the disease. Some early pelvic inflammatory disease without obvious symptoms may be due to the weak performance of the pathogen and the patient's strong resistance. It is chronic disease and there is no obvious acute phase (Gu, 2010). According to the pathological type, it is divided into six types, including chronic endometritis, chronic salpingitis and hydrosalpinx, oviductitis and oviduct cysts, chronic pelvic connective tissue inflammation (Guo and Zhang, 2010). The main clinical manifestations are the lower abdomen falling pain, low back pain, lumbosacral sore throat, generally in the body fatigue, sexual life and before and after menstruation increased, may be associated with low fever, increased menstruation and vaginal discharge and other symptoms (Zhang, 2007). Long-term effects are often associated with pelvic chronic pain, infertility and ectopic pregnancy, mainly due to the occurrence of pelvic inflammatory disease can be limited to an organ, affecting several organs or even the entire pelvic organ (Du, Zhang and Wang, 2003). In addition, because the long course disease, the symptoms of mutation, the incidence of repeated, persistent healing, it is not only impact the physical and mental health of patients, but also increased the economic burden of the patient.

At present, Western medicine treatment of the disease is mainly anti-infection. But the extensive use of antibiotics resulting in strong antibiotic resistance, therefore, antibiotic treatment of chronic pelvic inflammatory disease clinical efficacy is poor. In recent years, Chinese medicine treatment of chronic pelvic inflammatory disease has more and more reports, but because of the longer course treatment, some patients give up treatment due to tonic or long-term medication caused gastrointestinal reactions. Looking for a simple efficient treatment of chronic pelvic inflammatory disease is a hot topic for many scholars to study.

In recent years, an increasing number of patients have got chronic pelvic inflammatory disease, and more attention has been paid to clinical treatment. To help patients choose a convenient and effective treatment method, and to promote the effective relief of clinical symptoms, are the focus of clinical treatment (Qian and Li, 2011). And many scholars believe that the main cause of the disease pathogenesis is hot and humid stasis, so heat dampness, blood circulation, scavenging as the main effect of the drug are mainly used in clinical.

Kang Fu Xiaoyan bolt is one of the commonly used drugs for the treatment of chronic pelvic inflammatory disease. Its pharmaceutical ingredients include *Lithospermum*, *toe*, *Sophora*, bile powder, *aloe vera*, *Andrographis*. And it has cooling blood circulation, stasis pain, heat detoxification, Ruanjian Sanjie (*Pinellia ternate*, *Prunella vulgaris*, *Cremastra appendiculata*, *Sargassum pallidum*) and other effects. At the same time, It also has a laxative effect (Li, 2002). In addition, Kang Fu xiaoyan was used through the way of the anal administration, so that the role of drugs mainly concentrated in the rectum ampulla

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(Zhang, 2007). When the suppository slowly dissolve, it can quickly penetrate through the patient's rectal wall into the pelvic site, and produce a role on the inflammatory tissue, to achieve effective therapeutic effect.

Jin'gangteng capsule, also Chinese patent drug, is mainly made of the active components extracted from the rhizome of Jin'gangteng, then refined by modern techniques. Jin'gangteng, as a liliaceous plant, is mainly composed of organic acids, amino acids, alkaloids and other active substances, with the effect of dispelling wind, eliminating dampness, reducing swelling, resolving mass, dissipating heat and detoxifying. While the modern medicine believes that the Jin'gangteng capsule can not only enhance immune ability, but promote gonadal hormone at the same time. Moreover, the medicine is easy to take and is beneficial for the patient to accept.

This paper has analyzed the curative effect of Jin'gangteng capsule combined with Kangfuxiaoyan suppository in the treatment of chronic pelvic inflammatory disease. Now reported as follows:

## **MATERIALS AND METHODS**

### ***Basic information***

97 patients with chronic pelvic inflammatory disease admitted to our hospital from June 2015 to June 2016 were selected as subjects. They are randomly divided into the observation group and control group. There were 49 patients in the observation group, aged between 25~48 years old, with an average age of (35.8±5.7) years old. There were 48 patients in the control group, aged between 24~48 years old, with an average age of (35.1±5.3) years old. The clinical manifestations of the patients in two groups were mostly fatigue, lower abdominal pain, bulge, menstrual disorders and so on.

Inclusion criteria: 1) All selected patients were underwent clinical examination. Their condition was in accordance with the diagnostic criteria of chronic pelvic inflammatory disease, and confirmed by auxiliary examination; 2) The clinical data of the patients were relatively complete, which was easy to follow up and the data collation and analysis; 3) Patients had a certain tolerance, with no history of drug allergy; 4) There were no other serious diseases and malignant tumors in patients; 5) The patient had no history of mental illness, with a certain communication skills, and no obstacle consciousness. All patients were informed and agreed to participate in this study. Ethics Committee of the Second Affiliated Hospital of Zhengzhou University has approved this research.

### ***Exclusion criteria***

Women in pregnancy and lactation.

### ***Method***

Patients in the control group were treated with Kangfuxiaoyan suppository. Kangfuxiaoyan suppository was placed into the anus for rectal administration treatment. And it was used one time every day and one tablet each time before going to bed. The continued medication for 14 days was a course of treatment. On the basis of the control group, patients in the observation group were treated with the combination of Jin'gangteng capsule and Kangfuxiaoyan suppository. Kangfuxiaoyan suppository was placed into the anus for rectal administration treatment. And it is used one time every day and one tablet each time before going to bed. Jin'gangteng capsule was used three times a day, and it was used 4 tablets per time. The continued medication for 14 days was a course of treatment.

During this period, all patients were received given intensive care. Patient's complaints and adverse reactions after treatment should be noted and given timely treatment; life intervention should be given. The importance of developing good habits should be emphasized. To ask the patients to regular work and rest, increase the rest time. Appropriate exercise was necessary but not strenuous activities. Patients should be paid attention to personal hygiene, doing a good job in cleaning the vulva and anus, changing the underwear frequently. Sexual life and bath were forbidden during the medication period.

### ***Observation index***

The clinical symptoms and the changes of condition in both groups were observed after treatment; the symptoms, signs score and treatment effect in both groups were compared after treatment.

### ***Effect determination***

Symptom and sign score evaluation: Symptom scores included the determination of 4 symptoms, such as menstrual disorders, fever, lumbosacral and abdominal pain, vaginal discharge. The sign score included the determination of four signs of appendix thickening, local mass, uterine tenderness and adnexal tenderness. The above items were recorded 0-3 points, and the total score was 12 points. The higher the score, the more severe the symptoms and signs.

At the end of treatment, the treatment effect was determined based on the improvement of clinical symptoms and signs of patients. The evaluation criteria of curative effect were divided into cure, excellence, improvement, failure. Cure referred that the postoperative clinical symptoms of the patients were disappeared after clinical examination and uterine appendages and appendage areas had no tenderness; excellence meant that the clinical symptoms of the patients disappeared or decreased significantly and clinical examination revealed

that original thickening organization remained but to tenderness; improvement indicated that the clinical symptoms of the patients had been improved, and clinical examination showed that the residual mass was obviously improved and partial tenderness still existed; failure suggested that there was no improvement in clinical symptoms and signs. The total effective rate of treatment was equal to the excellence efficiency and improvement efficiency.

## STATISTICAL ANALYSIS

SPSS software was used for statistical analysis. The measurement data were expressed with ( $\bar{x} \pm s$ ), and *t* test was used.  $P < 0.05$  meant that the difference was statistically significant. And there was no significant difference between the two groups in the comparison of the basic data,  $P < 0.05$ .

## RESULTS

### *Comparison of symptom and sign score before and after treatment in both group*

Before treatment, there was no significant difference between the two groups in symptom and sign score ( $P > 0.05$ ); After treatment, the symptom and sign score of the two groups were lower than those before treatment and there was significant difference compared with before treatment ( $P < 0.05$ ); There was a significant difference between the symptom score and sign score in the observation group ( $P < 0.05$ ), as shown in table 1.

### *Comparison of therapeutic effect in both groups*

After active treatment, patients in the observation group was cured in 39 cases, excellent in 6 cases, improved in 3 cases, failed in 1 cases, and the total effective rate was 97.96% (48/49); Patients in the control group were cured in 31 cases, excellent in 8 cases, improved in 3 cases, failed in 6 cases, and the total effective rate was 87.50% (42/48); The total effective rate of the observation group was higher than that of the control group, there was significant difference between the two groups ( $P < 0.05$ ).

## DISCUSSION

Pelvic inflammatory disease is a common disease in women. Most of the pelvic inflammatory diseases are caused by the ascending infection of the pathogens caused by the invasion of pathogens, or the infection caused by the bacterial contamination during gynecological operation, normal delivery, and cesarean section (Tan and Shi, 2011). The incidence of pelvic inflammatory disease can be divided into acute and chronic. Acute pelvic inflammation occurs often in a confined site, or multiple sites; while the chronic pelvic inflammatory disease is mainly due to the fact that the treatment of acute pelvic inflammatory disease is not complete, or female suffer

from their physical factors, leading to the persistent illness, then the tissue hyperplasia and chronic exudation led to the formation of locally inflammatory masses under the long-term stimulation of inflammation, eventually developing into chronic pelvic inflammatory disease. Chronic pelvic inflammatory disease can cause pelvic tissue congestion, edema, hydrops and adhesion, or the formation of local tumor for severe patients. The main clinical manifestations include increased leucorrhea, irregular menstruation and pain in the waist and abdomen, etc. In general, chronic pelvic inflammatory disease is more stubborn and recurrent, seriously affecting the patient's life, treatment, physical and mental health (Yang, 2011). For the treatment of chronic pelvic inflammatory disease, it is not very satisfactory to give antibiotics through intravenous route in western medicine. Moreover, the long-term use of antibiotics can increase the patient's financial burden, and can also produce drug-resistant strains or cause bacterial imbalance, which is not conducive to patients.

Many doctors on the etiology and pathogenesis of chronic pelvic inflammatory disease from different angles were discussed. Many studies think that the disease is due to that the cell is not closed after postpartum. And the wind and cold hot, or insect poison take the internal invasion, which fight the blood of the phase and accumulate in the uterus. It repeated advance and retreat, and consumption of blood. Our hospital has accumulated a wealth of experience in the treatment of this disease from many years of clinical practice. We think the hot and humid, blood stasis is the main cause of this disease. The pathogenesis is blood stasis, dampness and evil of the main obstruction. Therefore, the treatment should be heat and dampness, blood circulation, Sanjie stasis for the principle.

Kangfuxiaoyan suppository is mainly composed of traditional prescription, Sauce grass Sargentglory Decoction, with the main ingredients of *Patrinia*, *dandelion*, *Andrographis*, *Sophora flavescens*, *danter*, *Lithospermum*. Among which *Patrinia* can remove stasis, expel pus and clear away heat and toxic substances; *Dandelion* can diminish inflammation, diuresis, cool the blood, eliminate carbuncle and dissipate stasis; *Andrographis paniculata* has the effect of cooling blood, detumescence and clearing away heat and toxic substances; *Sophora flavescens* can be used for expelling the wind to kill insects, heat-clearing and damp-drying; *Danter* can be used for detoxification, detumescence, clearing away heat and promoting diuresis; *Lithospermum* can invigorate the circulation of blood, cool the blood, detoxicate and promote eruption. From the analysis of modern medicine, Kangfuxiaoyan suppository can play anti-inflammatory, antibacterial, promoting local microcirculation and other good results. At the same time, the suppository is used in rectum, which can promote the effective component of the medicine to be absorbed by

**Table 1:** Comparison of symptom and sign score before and after treatment in both group

Grouping	Cases		Symptom score (point)	Sign score (point)
Observation group	49	Before treatment	10.6±1.8	9.4±1.7
		After treatment	1.2±0.4***	1.1±0.3***
Control group	48	Before treatment	10.3±1.6	9.3±1.5
		After treatment	3.3±0.8	2.9±0.6

\*\*\* represent that there is a significant difference between the two groups.

**Table 2:** Comparison of therapeutic effect in both group

Grouping	Cured patients (cases)	Excellent patients (cases)	Improved patients (cases)	Failed patients (cases)	The total effective rate (%)
Observation group	39	6	3	1	97.96***
Control group	31	8	3	6	87.50

\*\*\* represent that there is a significant difference between the two groups (P<0.05).

the mucous membrane of rectum quickly, and then directly act on the focus of the lesion after the circulation, and then play a fast and effective treatment effect (Wang, 2009).

Jin'gangteng capsule, also Chinese patent drug, is mainly made of the active components extracted from the rhizome of *Jin'gangteng*, then refined by modern techniques. *Jin'gangteng*, as a liliaceous plant, is mainly composed of organic acids, amino acids, alkaloids and other active substances, with the effect of dispelling wind, eliminating dampness, reducing swelling, resolving mass, dissipating heat and detoxifying. While the modern medicine believes that the Jin'gangteng capsule can not only enhance immune ability, but promote gonadal hormone at the same time. Moreover, the medicine is easy to take and is beneficial for the patient to accept.

In this study, patients in the observation group were treated with Jin'gangteng capsule combined with Kangfuxiaoyan suppository. Compared with the control group, the scores of symptoms and signs in the observation group after treatment were lower than those in the control group; the total effective rate of the observation group was higher than that of the control group, and there was a significant difference between the two groups (P<0.05). The above results fully proved the value of the combination of Jin'gangteng capsule combined with Kangfuxiaoyan Suppository in the treatment of chronic pelvic inflammatory disease, which can improve the treatment efficiency and promote the quick and effective remission of the clinical symptoms and signs of the patients.

## CONCLUSION

Jin'gangteng capsule combined with Kangfuxiaoyan on the treatment of chronic pelvic inflammatory disease has a good clinical efficacy. The total effective rate was 97.96% after treatment. So it is worthy to be used in clinical application.

## REFERENCES

- Gu WP (2010). Dialectical treatment of chronic pelvic inflammatory disease. *Asia Pacific Traditional Medicine*, **6**(5): 176-177.
- Guo W and Zhang TC (2010). Shuanghuangtao powder in the treatment of chronic pelvic inflammatory disease clinical observation. *China Modern Traditional Chinese Medicine*, **12**(5): 32-33.
- Zhang YZ (2007). Chinese medicine gynecology, Shanghai: *Science and Technology Press*, The first edition: pp.228-229.
- Du M, Zhang TF, Wang CP (2003). Etiology of 414 cases of female primary infertility. *Chinese Maternal and Child Health Care*, **18**(12): 745-747.
- Qian Q and Li WZ (2011). Clinical observation of Jin'gangteng capsule combined with antibiotics in the treatment of chronic pelvic inflammatory disease. *Strait. Pharm. J.* **23**(2): 127-128.
- LI Hand LI JF (2002). Effects of fire needle syndrome on chronic pelvic inflammation. *Chinese Journal of Acupuncture and Moxibustion (Electronic Edition)*, **22**(5): 60.
- Tan XL and Shi DM (2011). Treatment of Kun Fu Kang Capsule combined with Kangfuxiaoyan suppository in the treatment of chronic pelvic inflammation disease in 56 cases. *Shaanxi. J. Tradit. Chin. Med.* **32**(11): 1452-1452.
- Wang H (2009). Clinical observation on 160 cases of chronic pelvic inflammatory disease treated with Kangfuxiaoyan suppository. *China. Pract. Med.* **4**(34): 125-126.
- Yang ZL (2011). Curative effect of Jin'gangteng Syrup combined with antibiotics in the treatment of chronic pelvic inflammatory disease in 68 cases. *Guiding. J.Tradit. Chin. Med. Pharmacol.* **17**(7): 107-108.