

# INITIAL EVALUATION OF THERAPEUTIC EFFICACY OF “KHI GIAO CUU” ON PATIENTS WITH LOWER URINARY TRACT SYMPTOMS.

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## Abstracts

**Objectives:** To initially evaluate the therapeutic efficacy and side effects of the “Khi giao cuu” in the treatment of lower urinary tract symptoms at the Acupuncture and Health Preservation Department. **Materials and methods:** Patients at the Acupuncture and Health Preservation Department, Military Institute of Traditional Medicine with lower urinary tract symptoms from November 2022 to March 2023 were included. A descriptive prospective study, open clinical trial was used, and the comparison was conducted before and after treatment. **Results:** A total of 17 patients with lower urinary tract symptoms were included in this study. In which, patients aged less than 50 accounted for 29.4%, those aged 50-69 accounted for 52.9% and those aged 70 and older accounted for 17.7%. Regarding gender, men accounted for 58.8% and women accounted for 41.2%. After 2 courses of treatment, the total rate of good therapeutic efficacy according to subjective symptoms accounted for 94.1%, the total rate of significant improvement according to the LUTS and UDI-6 scales was 88.2% and 94.1%, respectively. During the procedure, 2 patients had mild side effects, accounting for 11.8%, and these effects disappeared without any intervention after about 30 minutes to 1 hour of rest. **Conclusions:** “Khi giao cuu” has high safety and good therapeutic efficacy in the treatment of lower urinary tract symptoms, and needs to be expanded with a larger sample size to have a comprehensive conclusion and clinical application.

**Keywords:** “Khi giao cuu”, lower urinary tract symptoms

## I. INTRODUCTION

Lower urinary tract symptoms (LUTS) is a group of urinary symptoms caused by obstruction, infection or irritation of the urethra, bladder, bladder neck or prostate. Urinary incontinence can also be caused by neurological conditions or trauma. Lower urinary tract symptoms can be divided into two

types based on their involvement in the filling and voiding of urine [1]. Depending on the cause of LUTS, the treatment methods are different, and currently there is no medicine that can treat all types of LUTS. “Khi giao cuu” is a moxibustion therapy on the abdomen based on the theory of meridian acupoints, through stimulating acupoints to

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promote the flow of Qi to the affected area to promote treatment effectiveness [2]. We conducted this study to evaluate the efficacy and safety of “Khi giao cuu” in the treatment of LUTS at the Military Institute of Traditional Medicine.

## **II. METHODS**

### **2.1. Research subjects**

Patients are diagnosed with LUTS according to the standards of Modern medicine and Traditional medicine.

- Selection criteria according to modern medicine: Patients with clinical symptoms such as: sudden uncontrollable urge to urinate, frequent urination at night, weak or slow urination, lower abdominal pain, involuntary urination such as leakage when sneezing, coughing, laughing or having sex, ... These symptoms last more than 1 day.

- Selection criteria according to Traditional medicine: Heat syndrome: little urine, dripping, red-yellow urine, urinary retention, full lower abdomen, difficult defecation, dry bitter mouth, not wanting to drink water, thick yellow sticky tongue coating, red tongue, rapid pulse. Cold syndrome: fatigue, short breathing, fear of cold, spermatorrhea, amenorrhea, cold limbs, back pain, weak knees, loose stools, dribbling urine, short stream, incomplete urination, urinary retention, spontaneous urination, clear urine,

pale tongue, weak pulse, impotence.

- Exclusion criteria: Causes due to physical diseases such as urinary tract infection, cauda equina syndrome, prostate enlargement, urinary stones, genitourinary malformations... Patients are not conscious, have mental disorders, epilepsy, severe heart failure.

Research location: Department of Acupuncture and Health Care (A10), Military Institute of Traditional Medicine. The research is performed from November 2022 to March 2023.

### **2.2. Method**

Prospective descriptive study, open clinical trial, comparison before and after treatment.

### **2.3. Treatment method**

Prepare tools: Main tools include ceramic bowl, towel, anti-burn tray, moxa. Other supporting tools such as sterile cotton, 70° alcohol, sterile forceps, bean trays.

Treatment method: The patient lies on his back, exposes the Umbilicus area, disinfects regularly, and applies pine oil around the navel area. Use a ceramic bowl with a diameter of 5.5 cm, a volume of 50 mL, upside down on the abdomen so that the navel is in the center, press the bowl lightly to create a negative pressure inside the bowl, helping the bowl to be fixed on the skin. Use a towel with a circular hole of 5.5 cm in diameter to cover

the abdomen so that the ceramic bowl fits through the hole of the towel. Place the anti-burn tray on top of the bowl. On the bottom of the bowl, we place a mugwort ball with a diameter of 2.5 cm and a height of 3 cm. Burn the mugwort. When the mugwort is completely burned, we replace the mugwort ball, burning a total of 3 balls. After burning all 3 pills, wait for the bowl temperature to cool down to a warm temperature, then clean up and use a sterile towel to wipe the water on the patient's abdomen.

Treatment regimen: Each course lasts 1 week. Treat once a day, continuously for 5 days, then rest for 2 days, then assess the condition.

## 2.4. Evaluation criteria

- Epidemiological characteristics: age, gender.

- Clinical characteristics and treatment results: Assess symptoms and effectiveness before treatment and after 1-2 courses of treatment through subjective symptoms, LUTS scale and UDI-6 scale.

## LUTS Scale

How often do you experience the following urinary symptoms?	Not at all	Less than 1 in 5 times	Less than half the time	About half the time	More than half the time	Almost allways
1. Feeling of incomplete urination	0	1	2	3	4	5
2. Wanting to urinate again within 2 hours of urination	0	1	2	3	4	5
3. Interrupted urine stream during urination	0	1	2	3	4	5
4. Unable to hold urine	0	1	2	3	4	5
5. Painful urination	0	1	2	3	4	5
6. Need to strain to urinate	0	1	2	3	4	5
7. Frequent urination at night (number of times)	No	1 time	2 times	3 times	4 times	≥5 times
	0	1	2	3	4	5

Mild <7 score; Moderate 8-19 score; Severe 20-35 score

## UDI-6 Scale (Urinary Distress Inventory 6)

Do you experience? If so how much are you bothered by	Not at all	A little bit	Moderate	Greatly
1. Frequent urination?	0	1	2	3
2. Urine leakage related to the feeling of urgency?	0	1	2	3
3. Urine leakage related to physical activity, coughing or sneezing?	0	1	2	3
4. Small amount of urine leakage (that is drops)?	0	1	2	3
5. Difficulty emptying your bladder?	0	1	2	3
6. Pain or discomfort in the lower abdominal or genital area ?	0	1	2	3

Mild  $\leq 6$  score; Moderate 7-12 score; Severe 13-18 score.

- Side effects of the treatment: itching, local congestion, burn, abdominal pain,...

### 2.5. Data analysis and processing

Research data is processed and analyzed on computer, using SPSS 20.0 software.

### 2.6. Research ethics

All patients selected for the study were explained about the requirements and benefits of participating in the study and voluntarily participated in the study.

## III . RESULTS

### 3.1 Epidemiological characteristics

**Table 1.** Patient distribution by age

Age	n	%
<50	5	29.4
50-69	9	52.9
$\geq 70$	3	17.7
Sum	17	100

**Comments:** Regarding age structure, the age group <50 accounts for 29.4%, the age group

50-69 accounts for 52.9% and the age group  $\geq 70$  accounts for 17.7%.

**Table 2.** Patient distribution by sex

Sex	n	%
Male	10	58.8
Female	7	41.2
Sum	17	100

**Comment:** In this research, female proportion accounts for 41.2%. male proportion accounts for 58.8%,

### 3.2 Treatment result

**Table 3.** Distribution of medical condition based on LUTS scale of patients before and after treatment

LUTS	Time		
	Before treatment	After 1 course	After2 courses
Severe	7 (41.2%)	2 (11.8%)	0 (0%)
Moderate	8 (47.0%)	4 (23.5%)	2 (11.8%)
Mild	2 (11.8%)	6 (35.3%)	3 (17.6%)
No symptom	-	5 (29.4%)	12 (70.6%)
Sum	17 (100%)	17 (100%)	17 (100%)

**Comment:** After 1 course of treatment, there are 11 patients (64.7%) having good results, in which the normal patient number is 6, accounts for 35.3%, the number of patients having significant

improvement is 5, and accounts for 29.4%. After 2 courses of treatment, there are 12 patients having LUTS score is 0, accounts for 70.6%

**Table 4.** Distribution of medical condition based on UDI-6 scale of patient before and after treatment

UDI-6	Time		
	Before treatment	After 1 course	After 2 course
Severe	6 (35.3%)	2 (11.8%)	0 (0%)
Moderate	8 (47.1%)	5 (29.4%)	1 (5.9%)
Mild	3 (17.6%)	6 (35.3%)	1 (5.9%)
No symptom	-	4 (23.5%)	15 (88.2%)
Sum	17 (100%)	17 (100%)	17 (100%)

**Comment:** After 2 courses of treatment, the total patient proportion having good result based on UDI-6 accounts for 94.1%, in

which the normal proportion accounts for 88.2%, the mild proportion accounts for 5.9%

### 3.3. Side effects

Of the 17 patients participating in the treatment, 1 patient (5.9%) experienced itching and 1 patient (5.9%) experienced local congestion during the first time of treatment. The symptoms all resolved after the patient rested for 30 minutes - 1 hour.

#### IV. DISCUSSION

“Khi giao cuu” originated from the chapter “Luc vi chi dai luan” in “To van”: “Heavenly energy governs the area above the heavenly region, earthly energy governs the area below the heavenly region, and human energy governs the confluent place of energy in the middle” [3]. “Hoang de noi kinh” wrote that the heavenly region is located around the navel, which is the area where the yin and yang energy intersect, and is the knot where the qi goes up or down, in or out[4]. By burning mugwort on the bottom of the bowl to create an energy flow in the bowl, “Khi giao cuu” therapy is beneficial to the circulation of the energy and nourishing energy on the body’s surface.

“Khi giao cuu” can overcome the disadvantage of traditional moxibustion, which is the difficulty in controlling the temperature, avoiding the situation where the temperature is too high and causes burns or local blood circulation disorders. Therefore, “Khi giao cuu” is safer, and patients feel more

comfortable. However, the temperature of the “Khi giao cuu” is not constant like in the moxibustion tube, but has a slight change up and down over time during the process of burning moxibustion and replacing new moxibustion. This change, although small, is highly effective in regulating energy, helping the body restore the balance of yin and yang states and promoting the therapeutic effect [5].

Our study is the first to apply “Khi giao cuu” therapy in the treatment of LUTS in Vietnam. According to subjective symptom assessment, this therapy has a high treatment effect with a rate of up to 94.1% of the total number of patients achieving good results and being cured after 2 treatment courses. LUTS and UDI-6 are psychological scales used to diagnose LUTS and at the same time assess the impact of this disease on the patient's quality of life [6], [7]. The results of this study showed that after treatment with “Khi giao cuu”, the majority of patients were cured or had significant improvement in related symptoms, and the quality of life of patients after treatment was significantly improved (LUTS: 88.2%, UDI-6: 94.1%).

The common side effects included itching and local congestion. In the treatment of

LUTS with “Khi giao cuu”, the incidence of side effects was small, and these cases all improved after 0.5 - 1 hour of rest. This shows that “Khi giao cuu” therapy is relatively safe in the treatment of LUTS.

## V. CONCLUSION

“Khi giao cuu” is highly safe and effective in the treatment of LUTS. It is necessary to conduct in-depth research on this method with a larger number of patients in patients with LUTS to deeply evaluate the effectiveness of “Khi giao cuu”.

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