



Effect of Court-Type Thai Traditional Massage Versus *Cassia alata* Linn. Treatment on Chronic Constipation: A Randomized Controlled Trial

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ABSTRACT

Introduction: 24 percent of the Thai population thinks they have constipation, it was found that about 10 percent who had defecation less than three times a week or had difficulty defecation had different health effects. Abdominal pain or bleeding from the rectum in cases of hemorrhoids causing ulcers in the colon or around the anus. Constipation can also be a symptom of a serious illness, such as colon cancer. It can make you depressed, and socioeconomic consequences may cause the patient to be absent or unable to work fully.

Objective: This study aimed to compare Court-type Traditional Thai massage with the used *Cassia alata* drug to treat chronic constipation.

Methods: This study was a Randomized Controlled Trial, randomized 2-group trial, 30 patients were randomly allocated to use Court-type Traditional Thai massage and to use *Cassia alata* drug (15 patients/group). Patients in the massage group received 60 minutes sessions of Court-type Traditional Thai Massage 2 times a week and the *Cassia alata* drug used group received 1 sachet of drug dissolve warm water 7 days in a row (before bedtime). Functional constipation was measured before (pre-test) and after (post-test) 7 days compared between 2 groups by the constipation assessment tools, adverse reaction assessment form, and satisfaction assessment form.

Results: A study showed the massage group differed significantly from the drug group ($P < 0.05$). However, the adverse reaction assessment indicated no symptoms after massage while the drug user group had symptoms; of dizziness, nausea, and stomach discomfort after using the *Cassia alata* drug.

Conclusion: Court-type Traditional Thai Massage and Using *Cassia alata* drug was effective in treating functional constipation. However, massage therapy has no symptoms, and stomach comfort after treatment satisfies patients.

Keywords: court-type traditional Thai massage; *Cassia alata*; chronic constipation

Introduction

Constipation is a condition in which the frequency of defecation is less than usual. Or there may be a normal defecation frequency. But each defecation is difficult, with a normal person defecation from 3 times a day to 3 times a week. Therefore, people who defecate less than 3 times a week are considered constipated if

they do not defecate more than 3 times a week. days are referred to as chronic constipation [1]. It is a serious health problem that interferes with your well-being and can have serious consequences. It is a symptom that often does not receive much attention, despite the fact that constipation is common in both normal people and patients. A study on the incidence of constipation in

foreign countries Found about 16-17% of constipation and 24.2 percent in Thai people [2,3]. Causes of Constipation It comes from many reasons such as low fiber diet, stress and side effects from taking medications. inappropriate excretion habits [4]. which constipation in the science of Thai traditional medicine It is stated that it is the cause of Dan Lom disease, which is a type of disease that appears in Thai traditional medicine textbooks. This is caused by chronic constipation. and deterioration of the body [5], but which in the Scriptures (The scriptures that talk about the disease of the wind), which is caused by living in an area too hot or too cold [6]. Eating cold or hot food can be seen that according to each scripture there is a cause. Different pathogens represent different methods of treatment. Such diseases are more common. The predominant symptoms of flatulence are as follows: chronic constipation for more than 4 days, characterized by hard stools similar to goat feces, back pain, bad breath, dizziness, mood disturbances, colic, abdominal distension, as well as numbness of the hands and feet, and Skin itching in some cases [7]. When constipation occurs, it affects the patient in psychosocial aspects, discomfort, and suffering. suffering from constipation results in anxiety increased anxiety reduces the quality of life and economically, from both physical and mental impacts, resulting in the loss of the patient's expenses for self-care increases [8]. Currently, there are two methods for treating constipation, which are drug and non-drug treatment. Most of them use laxatives or douche. This is a solution to occasional constipation. and may result in negative consequences from the use of laxatives for a long time. This can cause bloating, nausea, diarrhea or drug resistance. It also makes his body dehydrated and mineral salt, including the risk of drug complications [8]. And non-drug treatment but using rehabilitation principles to stimulate the functioning of the organs associated with managing the underlying causes of constipation, such as stimulating bowel movements by adding 25-30 g of fruit and vegetables per day, stimulating the intestines by walking 30 minutes after a meal. or self-abdominal massage in those who cannot be able to walk and sit and defecate immediately after meals [9]. It has also been found that Thai massage improves the motility of the abdominal organs, cavities and intestines. Aids in defecation and reduces dependence on laxatives, which can cause complications of the systemic digestive system, is an effective alternative therapy to medication [10]. Although the effectiveness of Thai massage, especially abdominal massage, is known to be effective in relieving constipation. However, the efficacy of court-type Traditional massage in relieving constipation compared to drug treatment was limited [11,12]. The efficacies of court-type Traditional massage and *Cassia alata* Linn. treatment was assessed and compared in alleviating constipation. This research will contribute to

the development of Thai traditional medicine and the preservation of local wisdom, while the findings can be used as guidelines for the treatment of constipation and healthcare improvement.

Methodology

The present study was a single-blind randomized controlled trial using a simple random sampling method which a pre-generated random assignment scheme enclosed in an envelope by one of the authors.

Subject

This study was a clinical trial, experimental Study: Randomized Controlled Trial (RCT) was a comparative study on the effectiveness of Court-type Traditional Thai massage and *Cassia alata* drug on the treatment of chronic constipation in 2 groups use purposive sampling 15 subjects per group for this pilot study. Court-type Traditional Thai massage of 15 people and a control group (*Cassia alata* drug), 15 people, measured twice, before and after the experiment. Patients were eligible and had no contraindications for participation in the study will be randomly placed in either the experimental group or the comparison group by simple randomization by drawing method to get equal opportunities prior to the randomization, each patient was informed that they may have been treated either by Thai massage for constipation or had received *Cassia alata* in advance and were informed of the information they had to be involved in the research and were willing to sign. Consent to participate in the research following a pre-generated random assignment scheme enclosed in envelopes (Figure 1).

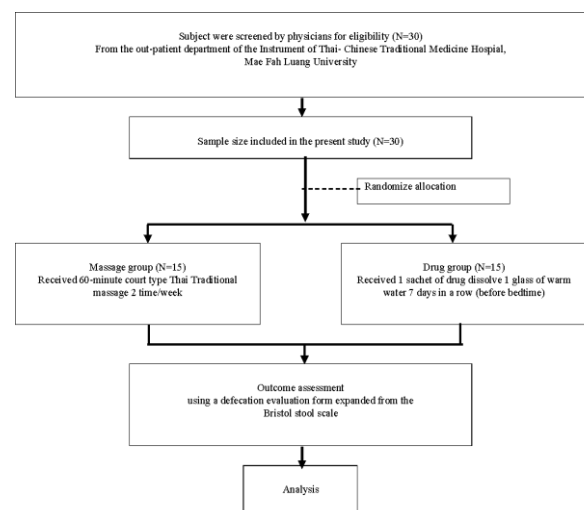


Figure 1 Consort flow diagram for patient selection

Inclusion and Exclusion criteria

Inclusion criteria were 1) Female or male aged 16-30 years, 2) has been diagnosed by a doctor for chronic constipation according to the Rome III Diagnostic

Criteria for Functional Gastrointestinal. Disorders consist of 2 of the following: there must be a 25% strain on the stool during defecation, and the stool is lumpy or hard at 25% of the defecation, feeling that the defecation is inadequate at least 25% of the defecation, feeling that defecation is not possible as if something is blocking the anus for at least 25% of defecation, there must be assisted defecation at least 25% of the defecation (eg finger support, support of the pelvic floor), defecation less than 3 times weekly with soft stools are rare without the use of laxatives and do not meet the diagnostic criteria for irritable bowel syndrome, 3) there are no contraindications to massage, such as fever over 38.5 degrees Celsius, high blood pressure more than 140/90 mm. PT, skin diseases such as inflammatory wounds, infectious diseases such as tuberculosis, AIDS, brittle bones, osteoporosis, and herniated discs. Decline, 4) there were no contraindications for abdominal massage such as confusion, impaired perception has intestinal obstruction a lump in the abdomen Bleeding in the gastrointestinal tract, hernia, received radiation to the abdomen. Had a cesarean section within 6 months. 5) Volunteers are welcome to participate in research projects. Participants were excluded 1) after abdominal surgery within the first 6 months, 2) those who are pregnant during the research, 3) people who can't be tracked or missing during research, 4) people with chronic enteritis 5) kidney disease patients.

Research Instrument

The primary outcome measurement was a defecation evaluation using an expanded Thai version of the Bristol stool scale including 3 parameters; defecations per week, characteristics of defecation, and sensation of complete evacuation. In addition, to understand the basic patient information, including medication experience, the demographic characteristics of subjects at the baseline were observed by using a questionnaire, assessment by specialist and qualified of EC committee.

Study Intervention

After granting informed consent, the subject was randomized into the massage group and drug group following a random assignment enclosed in envelopes. There were both groups concealed by physicians and researchers. The massage group comprised 15 subjects who received a 60-minute Court Type Thai Traditional Massage. Therapy was conducted by the same registered Thai traditional medicine practitioner with over 5 years of experience throughout the study. The court type that traditional massage carried out on the subjects was called "Darn-Lom". The message according to the formula prescribed in the applied Thai traditional medicine treatment for Darn-Lom patients consists of 7 steps as follows: Step 1: Leg massage 4 lines and then press on wind gate point for 45 seconds on each side. The massage both sides. Step 2: Back

massage both sides, then press signals point 1, 2, and 3 with focus pressing on 3 signal point press for 30 seconds. Step 3: Outer leg side the leg massage on lateral both sides, then press signals point 1, 2, and 3 with focus pressing on 2 signal point press for 30 seconds. Step 4: Inner leg side the leg massage on internal both sides, then press signals point 1 and 2 with focus pressing on 1 signal point press for 30 seconds. Step 5: Abdominal massage has 2 positions consisting of the Wak position and the Narb position. The Wak position starts pressing from the lateral iliac crest on another side to the midline 3 times and the Narb position Starts from the midline pressing to the iliac crest 3 times. Step 6: Abdominal massage or was called Kouy Tong, massage around the abdomen in a circular motion with 8 points, clockwise rotation massage. Step 7: Abdominal massage on each side by focusing on signal points 1, 2, 3, and 4 lateral sides with focus pressing on 5 signal points for 30 seconds (Abdominal wind gate point), then repeatedly press for the second time on the 5 signal press points while continuously monitoring the pulse beat. The drug group comprised 15 subjects who received *Cassia alata* drug and used 1 sachet of the drug to dissolve 1 glass of warm water 7 days in a row (before bedtime). Prior to the commencement of the experiment, subjects in both groups were asked questions regarding their defecations based on a defecation evaluation form. One day after the completion of the experiment, they were asked the same questions through telephone conversations. Volunteers could terminate the intervention whenever they desired without reason and this did not affect their normal treatment.

Statistical Analysis

Data were analyzed using the Statistical Package for the Social Sciences Version 20 (SPSS V.20). Descriptive statistics used included percentage, mean and standard deviation, while the inferential statistic used was the t-test for between-group comparisons before and after the experiment.

Results

Most of the people with chronic constipation in the Court-type Traditional Thai massage were female 60.00% and the *Cassia alata* drug group were male 80%, most of the Court-type Traditional Thai massage and the *Cassia alata* drug group had an average age between 21-25 years, most of the Court-type Traditional Thai massage group and *Cassia alata* drug group were single (100.0 and 100.0 percent), both with a bachelor's degree (90.0% and 53.3%) with constipation chronic for an average of 1 to 3 years (83.3% and 43.3%), most of them had meat diet behavior (100.0 and 90.0%), did some inconsistent exercise (70.0% and 80.0%), had flatulence and indigestion, occasional wind in the stomach (90.0 and 83.3 percent).

Within-Group Comparisons of the number and Characteristics of Defecations and Sensation of

Complete Evacuation Before and After the Experiment. Both the massage and drug groups showed improvements in a number of defecations. The number of subjects in the massage group who reported fewer than 3 defecations per week reduced. Defecations characteristics such as the number of defecations, characteristics of defecations, and sensation of complete evacuation, before and after the experiment are shown in Table 1. Dramatically from 7 to only 2. Similarly, the number of subjects in the drug group who defecated less than 3 times per week, dropped drastically from 9 before

to 1 after the experiment. The number of subjects in both the massage group and the drug group whose defecations fell into categories 1 and 2 or unhealthy on the Bristol stool scale reduced substantially to 2 for the former and zero for the latter; however, only subjects in the drug group experienced mushy, watery, or liquid defecations after the experiment. A similar pattern was found for the sensation of complete evacuation with the number of subjects falling drastically from 9 for both groups to only 3 for the massage group and from 9 for both groups to only 1 for the drug group (Table 1)

Table 1 Within-Group Comparisons of the Number and Characteristics of Defecations and Sensation of Complete Evacuation Before and After the Experiment

Questions relating to defecations	Pre-test		Post-test	
	Massage N=15	Drug N=15	Massage N=15	Drug N=15
Number of defecations per week				
Fewer than 3 times	7 (46.7%)	9 (60.0%)	2 (13.3%)	1 (6.7%)
Equal to or more than 3 times	8 (53.3%)	6 (40.0%)	13 (86.7%)	14 (93.3%)
Characteristics of defecations				
1. Separate hard lumps, like nuts (hard to pass)	1 (6.7%)	2 (13.3%)	-	
2. Sausage-shaped but lumpy	8 (53.3%)	10 (66.7%)	2 (13.3%)	
3. Like a sausage but with cracks on the surface	6 (40.0%)	3 (20.0%)	7 (46.7%)	5 (33.3%)
4. Like a sausage or snake, smooth and soft	-		4 (26.7%)	4 (26.7%)
5. Soft blobs with clear-cut edges (passed easily)	-		2 (13.3%)	2 (13.3%)
6. Fluffy pieces with ragged edges, a mushy stool	-		-	2 (13.3%)
7. Watery, no solid pieces; entirely liquid	-		-	2 (13.3%)
The sensation of complete evacuation				
Less than 25% of the total number of defecations	9 (60.0%)	9 (60.0%)	3 (20.0%)	1 (6.7%)
Equal to or more than 25% of the total number of defecations	6 (40.0%)	6 (40.0%)	12 (80.0%)	14 (93.3%)

Between-Group Comparisons of the number of characteristics of defecations and sensation of complete evacuation before and after the experiment. Results demonstrated no statistically significant differences between the 2 groups before and after the experiment in

almost all aspects. The only exception was the sensation of complete evacuation after the experiment, where the massage group differed significantly from the drug group ($P < 0.05$) (Table 2).

Table 2 Between-Group Comparisons of Frequency and Characteristics of Defecations and Sensation of Complete Evacuation Before and After the Experiment

Questions relating to defecations	Massage		Drug		p-value
	Mean	S.D.	Mean	S.D.	
Number of defecations per week					
Before the experiment	1.53	0.51	1.40	0.50	0.481
After the experiment	1.86	0.35	1.93	0.25	0.559
Characteristics of defecation					
Before the experiment	2.33	0.61	2.06	0.59	0.238
After the experiment	3.40	0.91	4.46	1.45	0.001*
The sensation of complete evacuation					
Before the experiment	1.40	0.50	1.40	0.50	1.000
After the experiment	1.80	0.41	1.93	0.25	0.299

* Significant level at 0.05

Discussion

This study aimed to the comparative study of the effectiveness of a group of Court-type Traditional Thai massage and *Cassia alata* drugs on the treatment of

chronic constipation. The results showed that both Court-type Traditional Thai massage and *Cassia alata* drug were effective in treating chronic constipation not statistically different, However, when considering on a

case-by-case basis, it was found that Court-type Traditional Thai massage can help increase the frequency of defecation and reduce the feeling of defecation in the end. But the nature of defecation differs in the types of stools based on the size of Bristol stools. Royal Thai massage and abdominal massage resulted in increased intestinal motility [5]. This increased the number of defecations per week by hundreds, 90 each, and has the appearance of a small lump, with no watery excretion while receiving *Cassia alata* drug. It was found that it could increase defecation frequency and reduce the feeling of incomplete defecation, but the defecation characteristics differed in stool type based on the size of the stools Bristol had excreted. The lump is liquid and watery, and both have side effects causing abdominal pain due to compression of the colon.

Conclusion

Both the Court-type Traditional Thai massage and the *Cassia alata* drug are effective in treating constipation. There is a difference in the appearance of the stool that outcomes. And *Cassia alata* drug has a side effect that causes abdominal pain. However, massage can be dangerous if the massage therapist is not properly trained. Therefore, treatment should only be done by a registered and licensed practitioner, such as a Thai traditional practitioner and Applied Thai Traditional Medicine.

Competing Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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