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Effectiveness of Yeongseonje Tong-eum in Treating Sciatica: Case Series

by

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ABSTRACT

This research aimed to explore how a modified Yoeongseonje Tong eum (YSJTE) affects individuals with sciatica, an ailment known for causing pain along the path of the sciatic nerve that runs from the lower back through the legs. The condition usually arises when a herniated disk or bone spurs put pressure on nerve roots in the spine connected to the sciatic nerve's origin. The stress can cause swelling and intense discomfort in the leg while also sometimes resulting in loss of sensation, which greatly affects movement abilities and overall well-being. In our study, we will give patients the modified YoeongSeonje Tong eum (YSJTE), and hope to achieve positive results. Troublesome gait while walking and standing should significantly be alleviated in patients who undergo treatment with YoeongSeonje Tong eum (YSJTE). Results were shown with VAS, ODI, and ROM testing, showing that YoeongSeonje Tong eum (YSJTE) can improve the symptoms of sciatica and enhance the capacity of those affected by it. After 40 days of Yeongseonje Tong-eum (YSJTE) treatment, the mean VAS score significantly decreased from 7.6 ± 1.71 to 4.0 ± 1.41 ($p < 0.005$), while the mean ODI score improved from 59.4 ± 14.18 to 42.2 ± 12.11 ($p = 0.009$), which demonstrated both pain reduction and enhanced functionality.

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Acknowledgment

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I. INTRODUCTION

Sciatica is a condition that affects the nerve, which runs from the lower through the hips to each leg. It can be triggered by issues such, as discs, spinal stenosis or degenerative disc disease causing discomfort and mobility challenges. Common treatments like NSAIDs and Gabapentin offer some relief and may have side effects. [4] Lately there has been growing interest in alternative pain management approaches like Korean Medicine (TKM). this area. [8] Despite its history of use in medicine practices, research on its effectiveness specifically for sciatica treatment is limited.

In this study the herbal formula used for the group included Yeongseonje Tong eum with modifications. Ephedrae Herba was removed due to being a prohibited substance in the United States and Atractylodes Lancea Rhizome portion was doubled to stimulate Yang Qi while supporting functions and reducing sweating and exterior conditions. Aquilariae Lignum Resinatum was added to the formula as well to reinforce pain relief while adding kidney support and move qi. Paeoniae Radix Alba was added due to its properties of nourishing the blood and helps relieve muscle spasms and pain. Ten patients over the age of 40, diagnosed with sciatica will be enrolled in this study. Given Yeongseonje Tong eum three times daily for 28 days. The patients will undergo monitoring, with assessments conducted at the beginning of the study and periodically throughout the treatment period. We will conduct assessments, such, as pain scales, mobility evaluations and quality of life questionnaires to assess how the treatment affects individuals. The experimental setup is designed to assess the effectiveness of Yeongseonje Tong eum while considering factors that could impact the results, ensuring

that the findings are reliable and applicable to a population. Additionally the study's structure enables an examination of the formulas viability as a substitute, for traditional treatments.

Yeongseonje Tong eum was chosen as the focal point of this study due to its extensive use in TKM for managing pain and its relevance, in addressing conditions associated with nerve related pain. The composition of the formula incorporating a blend of herbs to relieve pain, reduce inflammation, and enhance circulation suggests its effectiveness, in addressing the root causes of sciatica. [9] Yeongseonje Tong eum offers benefits as a herbal medicine that could deliver positive outcomes without the side effects commonly associated with pharmaceutical treatments. Its historical usage adds credibility to its efficacy and its selection is based on its potential for application in medicine.

The primary goal of this research is to bridge this gap by investigating how Yeongseonje Tong eum can alleviate symptoms of sciatica. Through trials and patient feedback comparison with treatments, this study aims to offer an insight into the role of Yeongseonje Tong eum in managing sciatica. By examining this solution through methodologies, this research not only supports alternative therapies but also introduces potential fresh strategies for blending treatments in addressing chronic nerve pain. The main goal of this study is to inform healthcare professionals and patients about the efficacy of Yeongseonje Tong eum strengthening the foundation for its utilization in practices.

OBJECTIVES

The primary objectives of this dissertation are to evaluate the efficacy of the Yeongseonje Tong-eum (YSJTE) formula for sciatica. The details are as follows:

1. **Compare the effec>veness of YSJTE before and after each treatment via VAS.**
2. **Compare the effectiveness of YSJTE before and after each treatment via ROM.**
3. **Compare the effectiveness of YSJTE before and after treatment via ODI**

By achieving these objectives, this study aims to provide a comprehensive evaluation of Yeongseonje Tong-eum's potential as an effective and safe treatment option for sciatica, thereby contributing valuable insights to both the field of Traditional Korean Medicine and integrative healthcare.

LITERATURE REVIEW

Sciatica is a condition that involves pain traveling along the nerve pathway from the lower back through the hips and buttocks to each leg. It commonly arises from nerve compression caused by herniated discs or conditions like spinal stenosis and degenerative disc disease. The occurrence of sciatica in the population varies between 1 and 10%. [2] Therefore, it poses significant challenges in public health due to its impact on productivity and healthcare expenses.

Traditional methods for treating sciatica consist of medication options like nonsteroidal inflammatory drugs (NSAIDs), muscle relaxants, and neuropathic pain relievers such as Gabapentin and Pregabalin to ease symptoms temporarily; however, they can result in side effects like drowsiness and stomach upset that can restrict their prolonged usage. The reasons behind sciatica are not directly tackled by these treatments, which has led it to not working on all.

Traditional Korean Medicine and the Yeongeseonje Tong eum practice go hand in hand in the healing traditions of Korea. For centuries in Korea's history of medicine, known as Traditional Korean Medicine (TKM), there has been a deep-rooted tradition of utilizing diverse herbal medicines to address a wide array of health issues. Notably alleviating discomforts like sciatica pain are found. [9] One such revered herbal medicine is Yeongseonje Tong eum (영선제통음), a blend crafted from medicinal herbs esteemed for their pain-relieving qualities and ability to reduce inflammation while boosting circulation flow within the body's systems. This time honored formula has long been

used in Traditional Korean Medicine to manage ailments characterized by discomfort and restricted mobility, such as sciatica, arthritis, and nerve-related pains. [18]

The essential components found in Yeongseonje Tong eum comprise Cang Zhu (Atractylodes rhizome), Chuan Xiong (Ligusticum chuanxiong), and Angelica Sinensis, along with other herbs as well. Cang Zhu is renowned for its capacity to eliminate moisture and boost the spleen's strength, which in Korean medicine is linked to enhancing digestion and reducing inflammation. Chuan Xiong enhances blood circulation and eases discomforts, making it particularly beneficial for conditions associated with poor blood flow, which often contribute to sciatica issues. In Traditional Korean medicine (TKM), Angelica Sinensis is commonly utilized to improve blood health and uphold the well-being of the liver and kidneys since they are thought to contribute to the overall strength and stability of the back and spine structure.

The Effectiveness of Herbal Remedies for Relieving Sciatica

Research into the application of remedies for sciatica is expanding; however, much of this research is still in its initial phases. Studies investigating herbs present in Yeongseonje Tong eum have revealed promising outcomes. For instance, research conducted on Cang Zhu has highlighted its ability to decrease inflammation and enhance blood circulation, both of which are essential for alleviating sciatica symptoms. Chuan Xiong has also been researched for its pain-relieving qualities and its capacity to enhance flow, which may aid in reducing nerve compression and related discomfort.

While some positive results have been noted in this area of research, there is a lack of investigations into the effectiveness of certain herbal mixtures like Yeongseonje

Tong eum for managing sciatica. [20] Previous studies have mainly concentrated on the impacts of herbs rather than considering how these herbs work together in a complete formula. [24] This gap in knowledge highlights the importance of conducting rigorous research studies, such as randomized controlled trials, to confirm the utility of traditional herbal blends in contemporary medical settings.

Comparing the effectiveness of Yeongeseonje Tong eum with treatments.

There are not research studies that directly compare how well herbal remedies such as Yeongseonje Tong eum work compared to traditional medical treatments for sciatica pain relief. However, based on the information available, it seems like using herbal remedies may provide similar benefits to conventional treatments but with fewer side effects. For example, one study that looked at using herbal medicine versus NSAIDs for treating lower back pain discovered that both groups experienced similar levels of pain relief, but those using the herbal treatment reported experiencing fewer negative effects. [12] This showcases the promise of remedies as a possible substitute or complement to traditional therapies for individuals who may react adversely to drugs such as gabapentin.

Exploring the advantages and past applications of Yeongesnje Tong eum in traditional Korean medicine (TKM) is crucial for examining its effectiveness in managing sciatica symptoms thoroughly and bridging the existing research gap in this area of study through a comprehensive evaluation of its efficacy in treating sciatica.

The literature review indicates an interest in utilizing herbal medicine to treat sciatica; however, further research is required to validate the effectiveness of particular

formulas, such as Yeongjeonje Tong eum. [27]This research seeks to enhance our understanding by examining the healing properties of Yeongjeonje Tong eum on sciatica, focusing on pain management, functional enhancement, and overall quality of life impact. In this way, it aims to confirm the validity of methods in the context of evidence-based medicine and investigate the possibility of incorporating these methods into modern healthcare practices.

Components of the Formula

- Ge Gen ((葛根)) - Pueraria Root: Releases the muscles and alleviates stiffness, which can help relieve pain and discomfort associated with sciatica.
- Gan Cao (甘草) - Licorice Root: Harmonizes the formula, reduces toxicity, and can help to ease muscle pain and inflammation.
- Qiang Huo (羌活) - Notopterygium Root: Disperses wind-dampness, alleviates pain, and is often used for lower back pain and sciatica.
- Zhi Shi (枳实) - Unripe Bitter Orange: Regulates Qi, alleviates pain, and reduces bloating and distention, which can be beneficial in treating sciatica-related discomfort.
- Chen Xiang (沉香) - Aquilariae Lignum Resinatum is a powerful herb that moves Qi, warms the Kidney, and alleviates pain. It is commonly used for treating low back pain, sciatica, and Kidney deficiency.
- Jie Geng (桔梗) - Platycodon Root: Opens the chest and promotes the discharge of pus, which helps to facilitate the movement of Qi and alleviate pain.

- Dang Gui (当归) - Angelica Root: Nourishes the blood, alleviates pain, and can help to balance the effects of other herbs in the formula.
- Du Huo (独活) - Angelica Root: Specifically targets lower back pain and sciatica, dispels wind-dampness, and relieves pain.
- Fang Feng (防风) - Ledebouriella Root: Disperses wind-dampness and alleviates pain, helping to address discomfort and muscle stiffness.
- Bai Zhi (白芷) - Angelica Root: Relieves pain, especially in the head and face, and helps to alleviate sinus issues that might accompany sciatica.
- Sheng Ma (升麻) - Cimicifuga Rhizome: Raises the Qi and clears heat, helping to address systemic issues and support overall balance.
- Wei Ling Xian (威灵仙) - Clematis Root: Dispels wind-dampness, relieves pain, and improves mobility, making it particularly useful for sciatica.
- Bai Shao Yao (白芍药) - White Peony Root: Nourishes the blood, soothes the liver, and relieves muscle spasms and pain.
- Cang Zhu (苍术) - Atractylodes Rhizome: Strengthens the spleen, dispels dampness, and alleviates pain, which is useful for addressing the underlying causes of sciatica.
- Chuan Xiong (川芎) - Ligusticum Root: Invigorates the blood, alleviates pain, and is particularly useful for addressing stagnation-related pain.

- Jing Jie (荆芥) - Schizonepeta Herb: Releases wind and alleviates pain, particularly in the exterior and superficial areas, which can help with pain management.

The combination of these herbs work synergistic to target dimensions of sciatica like pain relief and inflammation reduction along, with easing muscle tension and addressing underlying imbalances to offer relief and aid in the overall healing process effectively. Herbs like Du Huo, Wei Ling Xian, Qiang Huo, and Bai Shao Yao work together to alleviate pain and relax muscles. Wei Ling Xian and Du Huo target the lower back and legs specifically, while Bai Shao Yao helps to soothe muscle spasms and tension. Cang Zhu, Fang Feng, Qiang Huo, and Bai Zhi help to dispel wind-dampness, which is often a contributing factor to sciatica. This combination aids in reducing pain and improving mobility by addressing the underlying dampness and wind that cause discomfort. Dang Gui and Bai Shao Yao work together to nourish the blood and balance the formula. This nourishment helps to support overall tissue health and reduce pain. Zhi Shi and Jie Geng help to regulate Qi and alleviate pain associated with Qi stagnation. Zhi Shi promotes the movement of Qi and reduces bloating, while Jie Geng facilitates the smooth flow of Qi through the body. Jing Jie help to address external wind-cold factors that might contribute to pain and stiffness. Jing Jie helps to release wind and alleviate superficial pain. Chuan Xiong and Dang Gui invigorate the blood and improve circulation. It helps to alleviate pain caused by blood stagnation and supports overall healing. This makes it a valuable component in formulations designed to address muscle and joint pain issues, like those found in YSJTE formulations. Its anti-inflammatory

properties can also aid in decreasing swelling and inflammation linked to sciatica pain for relief.

Chen Xiang combined with these following herbs is known to have the following effects. Chuan Xiong (川芎) - Moves Blood and Qi, strengthens the pain-relieving effect for nerve pain and sciatica. Dang Gui (当归) - Nourishes blood and promotes circulation, supporting Chen Xiang in relieving pain and improving blood flow. Du Huo (独活) - Expels wind-damp, alleviates pain, and is often used for lower back pain; when paired with Chen Xiang, it enhances the formula's ability to address chronic pain. Wei Ling Xian (威灵仙) - Expels wind-damp and relieves joint pain, works synergistically with Chen Xiang to treat sciatica and musculoskeletal pain.

Gan Cao harmonizes the effects of other herbs, reduces toxicity, and moderates any harsh effects. It also helps to soothe and harmonize the formula's actions, making it more effective and balanced.

Previous Research on the Formula

Studies in the past dove into the pain relief and anti-inflammatory properties of the traditional formula in question, yet there is a lack of extensive research focused on its specific benefits for sciatica treatment. [35]The current body of literature suggests that the formula can influence pain levels by interacting with biochemical pathways such as suppressing pro-inflammatory cytokines and triggering anti-inflammatory responses.

Integration of Traditional and Contemporary Medicine

The incorporation of herbal medicinal formulas into modern healthcare is gaining attention as a growing area of interest in the West. Exploring the effectiveness and inner workings of these age concoctions can help connect the traditional and modern methods of healing, offering evidence-based options for tackling pain issues. [36] This union promotes healthcare practices that respect diverse cultures, improving the overall standard of patient care.

Rationale for the Current Study

This study aims to fill the gaps in research by thoroughly examining the effectiveness of a new treatment formula for sciatica through a clinical trial involving 10 patients with the condition. The goal is to gather evidence backing up the longstanding beliefs regarding this formula and dive into its mechanisms of action to enhance our knowledge on integrating traditional remedies into contemporary healthcare practices.

Conclusion

The research on the Yoeongseonje Tong eum (YSJTE) formula emphasizes its effectiveness in treating pain according to traditional Korean medicine practices. However, there is a lack of evidence supporting its efficacy for sciatica. This thesis seeks to address this gap by conducting validation of the YSJTE formula, aiming to facilitate its acceptance in conventional healthcare settings and advocate for comprehensive and culturally sensitive treatment choices.

II. MATERIALS AND METHODS

Medicinal Herbs

The herbs used in this study were purchased from a Korean Medicinal Herb store in California. The ingredients for the modified Yoeongseonje Tong eum (YSJTE) were powdered to 80 mesh at a pill-making facility and then formed into capsules.

The dosage for the herbs was determined as follows: three times a day, 2 capsules per serving, for a total of 6 capsules a day. This was calculated for a 7-day week, over a 4-week period, with 10 study participants and an additional 1.4 multiplier for preliminary participants.

The calculation is as follows:

(3 times per day) × (3g per dose) × (28 days) × (10 participants) × (1.4 multiplier) = 3528g

The administration method involved taking 2 capsules (3g) three times a day, every 8 hours, with plenty of water.

Prescription Composition

The herbal prescription used in this study was based on Korean pharmacology, and the origin and dosage of each herb are shown in Table 1.

Table 1. Experimental group formula composition / total 5.5 lb

Herb	Latin Pharmaceutical Name	Origin	Dosage
Ge Gen	Puerariae Radix	Korea	31.25 mg
Gan Cao	Glycyrrhizae Radix	Korea	18.75 mg
Qiang Huo	Notopterygii Rhizoma et Radix	Korea	31.25 mg
Zhi Shi	Aurantii Fructus Immaturus	Korea	31.25 mg
Jie Geng	Platycodonis Radix	Korea	31.25 mg
Dang Gui	Angelicae Sinensis Radix	Korea	18.75 mg
Du Huo	Angelicae Pubescentis Radix	Korea	31.25 mg
Chen Xiang	Aquilariae Lignum Resinatum	Korea	31.25 mg
Fang Feng	Saposhnikoviae Radix	Korea	31.25 mg
Bai Zhi	Angelicae Dahuricae Radix	Korea	31.25 mg
Sheng Ma	Cimicifugae Rhizoma	Korea	18.75 mg
Wei Ling Xian	Clematidis Radix et Rhizoma	Korea	31.25 mg
Bai Shao Yao	Paeoniae Radix Alba	Korea	62.5 mg
Cang Zhu	Atractylodis Rhizoma	Korea	62.5 mg
Chuan Xiong	Chuanxiong Rhizoma	Korea	31.25 mg
Jing Jie	Schizonepetae Herba	Korea	31.25 mg

- **Calculation:**

  (3 times per day)×(3g per dose)×(28 days)×(10 participants)×(1.4 multiplier)= 3528g

This table reflects the formula composition for the study, with each herb sourced from Korea.

Methods

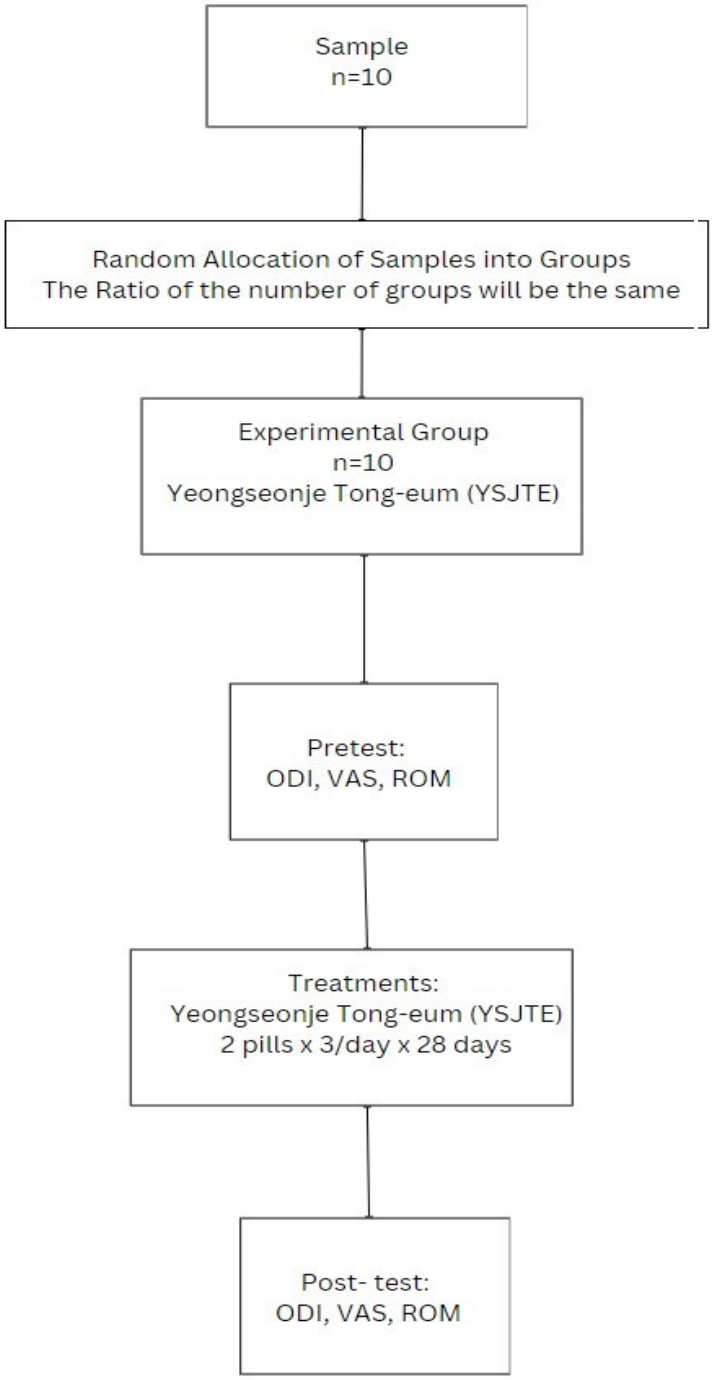

Figure 1. Schematic Diagram of Research Design

Study Design

This case series study observes patients with sciatica (n = 10) treated with Yeongseonje Tong-eum (YSJTE) for 40 days. Pain (VAS), disability (ODI), and range of motion (ROM) were assessed at baseline and post-treatment to evaluate effectiveness.

Study Subjects

All 10 participants will undergo an initial screening process that includes a review of their medical history, physical examination, and relevant imaging studies (e.g., MRI or CT scan) to confirm the diagnosis of sciatica. As part of the screening process, potential participants will be asked to complete a pain index score assessment using the Visual Analog Scale (VAS) or Numeric Rating Scale (NRS). Only patients with a pain index score of 4 or higher (on a scale of 0 to 10) will be considered for inclusion in the study, ensuring that the study population consists of individuals with moderate to severe pain levels.

Inclusion criteria:

1. **Age**: All participants will be over the age of 40.
2. **Diagnosis**: Participants must have a clinical diagnosis of sciatica, confirmed through medical history, physical examination, and relevant imaging studies (e.g., MRI or CT scan).
3. **Pain Index**: A pain index score of 4 or higher on the VAS or NRS.

4. **Symptoms**: Participants must have symptoms consistent with sciatica, including pain radiating along the path of the sciatic nerve, typically extending from the lower back through the hips and buttocks, and down one or both legs.

Exclusion Criteria:

- Patients with a history of spinal surgery, other significant neurological conditions, or systemic illnesses that could confound the results (e.g., rheumatoid arthritis, cancer).
- Patients currently undergoing treatment with other forms of herbal medicine or those who have started new medications for sciatica within the past two weeks.
- Patients with known allergies to any components of the Yeongseonje Tong eum (YSJTE) formula.
- Patients who are currently nursing or pregnant.
- Patients who have Heart problems (e.g, irregular pulse or chest pain)

Intervention:

- Participants will be administered Yeongseonje Tong-eum three times daily for a period of 28 days. The herbal formula will be prepared according to standardized traditional methods to ensure consistency in dosage and quality.

Monitoring:

- Throughout the study, participants will be monitored for adherence to the treatment regimen and any adverse effects. They will be asked to report their pain levels, functional mobility, and quality of life at regular intervals every 7 days and at the conclusion of the 28-day period.
- Participants will be monitored for any adverse effects throughout the study. They will be asked to report any side effects or unusual symptoms immediately. Regular checks will be conducted during follow-up visits to identify any potential issues.

Follow-Up:

Final Assessment:

At the end of the 28-day treatment period, participants will undergo a final assessment to evaluate the overall efficacy of Yeongseonje Tong-eum. This will include:

- A final pain index score.
- Functional mobility reassessment using the ODI.
- Quality of life reassessment using the SF-36 or EQ-5D.
- A physical examination to document any changes in neurological status or musculoskeletal function.
- Follow-up assessments will be conducted to evaluate the persistence of any therapeutic effects and to identify any delayed adverse reactions.

Post-Treatment Follow-Up:

Participants will be followed up 28 days after the treatment period to assess the

persistence of therapeutic effects and to monitor for any delayed adverse reactions. This follow-up will help determine the longer-term impact of Yeongseonje Tong-eum on sciatica symptoms.

Data Analysis:

Data from the baseline, interim, and final assessments will be compiled and analyzed to determine the overall effectiveness of Yeongseonje Tong-eum in treating sciatica. Statistical methods will be used to evaluate changes in pain intensity, functional mobility, and quality of life, as well as to assess the safety of the treatment.

The results of this experiment were statistically processed and graphed using R version 4.4.2 (2024-10-31) -- "Pile of Leaves", Copyright (C) 2024 The R Foundation for Statistical Computing. [35] All statistical analyzes were tested for significance at the $\alpha = 0.05$ level.

All participants provided written informed consent before enrollment. Confidentiality of patient information was maintained throughout the study.

By following these methods, this study aims to provide evidence on the efficacy and safety of the new Yeongseonje Tong-eum formula blend in treating sciatica pain, potentially offering a valuable alternative to existing treatments.

III. RESULT

In this study, during the period between September 2024 and December 2024, a clinical trial was conducted to investigate the effectiveness of Yeongseonje Tong-eum in Treating Sciatica. The study enrolled a total of 10 participants who underwent a a Modified Yeongseonje Tong-eum formula daily, for three times a day for five weeks. Pre- and post-intervention outcomes were analyzed using a final pain index score, functional mobility reassessment using ODI, and quality of life reassessment using the VAS and statistical analysis was conducted to determine the effectiveness of the treatment.

3.1. Characteristics of the Participants

In this study, the age, gender, ethnicity, and other relevant information of ten participants are shown in Table 2. Ten participants were enrolled with Sciatica with chronic onsets. Of these participants, four were female and six were male, and their ages ranged from their 40s to their 70s. Out of these participants, nine participants had an onset of sciatica for more than 1 year, and only one had an onset of less then a year at 8 months. Additionally, none of the participants reported engaging in any other forms of treatment for their sciatica during this trial period.

Table 2. Participants information

Participant	Age	Onset/How long	Gender
Case 1	60	10 years	F
Case 2	62	7 years	M
Case 3	88	2 years	M
Case 4	58	5 years	F
Case 4	71	2 years	M
Case 6	67	8 months	F
Case 7	58	15 years	M
Case 8	57	3 years	F
Case 9	52	2 years	M
Case 10	57	3 years	F

3.1.1 < Case 1>

The participant is a 60 year old Asian female who has had sciatica for 10 years now. She has had sciatica and lower back problems for about 10 years. She has experienced a significant amount of work-related stress and exhaustion from working over 40 years. She indicates that she is still working. Pain intensity is described as the pain is bad but I can manage without having to take pain medication. Personal care such as washing, dressing, etc was described as it is painful to take care of myself and I am slow and careful. Patient can lift things but it causes increased pain. Pain prevents patient from walking more than ½ mile. Patient's sleeping is less than 2 hours even when taking pain medication. Pain prevents patient from going out very often.

ODI % Before 1st: 58%

ODI % After 5th: 30%

VAS Before 1st: 8

VAS After 5th: 4

3.1.2< Case 2>

The participant is a 62 year old Asian Male who has had sciatica for 7 years now. He has had sciatica and lower back problems for about 10 years. He indicates that he is still working, as a truck driver. Having to sit for prolonged hours, increases the pain at the end of the day. Pain intensity is described as the pain is bad but I can manage without having to take pain medication. Personal care such as washing, dressing, etc was described as slow and careful. Patient can lift things but it causes increased pain. Pain prevents patient from walking more than ½ mile. Patient has no problems with sleeping. Pain prevents patient from going out very often.

ODI % Before 1st: 53%

ODI % After 5th : 48%

VAS Before 1st: 8

VAS After 5th: 6

3.1.3 < Case 3>

The participant is a 88 year old Asian Male who has had sciatica for 2 years now. He has had sciatica and lower back problems for about 2 years. He indicates that he is retired and the pain intensity is described as the pain is bad but I can manage without having to take

pain medication. Personal care such as washing, dressing, etc was described as they can take care of themselves normally but it increases the pain. Patient can lift things but it causes increased pain. Pain prevents patient from walking more than 1 mile. Patient can sleep well using the pain medications. Pain prevents patient from going out very often.

ODI % Before 1st: 41%

ODI % After 5th : 22%

VAS Before 1st: 6

VAS After 5th: 3

3.1.4 < Case 4>

The participant is a 58 year old Asian female who has had sciatica for 5 years now. She has had sciatica and lower back problems for about 5 years. The pain intensity is described as pain medication provides me with moderate relief from pain. She has to take the pain medication, or the pain becomes unbearable. Personal care such as washing, dressing, etc was described as they need help in most aspects of their life. Patient cannot lift or carry heavy things at all. Pain prevents patient from walking to the toilet sometimes and just crawls there. Patient can sleep well using the pain medications. Pain prevents patient from going out very often.

ODI % Before 1st: 86%

ODI % After 5th : 61%

VAS Before 1st: 9

VAS After 5th: 6

3.1.5 < Case 5>

The participant is a 71 year Latino Male who has had sciatica for 2 years now. He has had sciatica and lower back problems for about 2 years. He indicates that he works currently part time cleaning houses. Pain medication gives them little relief from the pain. Personal care such as washing, dressing, etc was described as they can manage to take care of themselves without any increased pain. Patient can lift things that are heavy but it does increase the pain. Pain prevents patient from walking more than 1/4 mile. Pain prevents me from sitting for more than ½ hour. Pain restricts the patients travel, and it hurts when he gets out of the car usually. Patient states that they only sleep for less than 2 hours even when taking medications.

ODI % Before 1st: 76%

ODI % After 5th : 50%

VAS Before 1st: 10

VAS After 5th: 4

3.1.6 < Case 6>

The participant is a 67 year old Columbian female who has had sciatica for 8 months now. She has had sciatica and lower back problems for about 8 months. Pain medication has no affect on the pain for the patient. Personal care such as washing, dressing, etc was described as they can manage to take care of themselves. Patient can lift things that are light if not it will aggravate pain. Pain prevents patient from walking more than 1/4 mile. Pain prevents me from sitting for more than ½ hour. Patient can only stand for about 10

mins. Pain restricts the patient's travel for less than ½ hours. Patient states that they only sleep for less than 2 hours even when taking medications.

ODI % Before 1st: 72%

ODI % After 5th : 43%

VAS Before 1st: 10

VAS After 5th: 4

3.1.7 < Case 7>

The participant is a 58 year old Asian Male who has had sciatica for 15 years now. He has had sciatica and lower back problems for about 15 years. He indicates that he works and the pain intensity is described as the pain is bad but I can manage without having to take pain medication. Personal care such as washing, dressing, etc was described as they can take care of themselves normally but it increases the pain. Patient can lift things but it causes increased pain. Pain prevents patient from walking more than 1 mile. Patient can sleep usually less than 6 hours. Pain prevents patient from going out very often.

ODI % Before 1st: 55%

ODI % After 5th : 51%

VAS Before 1st: 7

VAS After 5th: 5

3.1.8 < Case 8>

The participant is a 40 year old Asian Male who has had sciatica for 3 years now. He has had sciatica and lower back problems for about 3 years. He indicates that he works and does golf sometimes. The patient usually can tolerate the pain without having to use pain medications. Personal care such as washing, dressing, etc was not a problem for the patient. Patient can lift heavy things but it causes increased pain. Pain prevents patient from walking more than 1 mile. Pain does not prevent the patient from sleeping. Social life of the patient is normal, but it can increase the pain level of their back. They can travel places as well but it increases the pain.

ODI % Before 1st: 57%

ODI % After 5th : 28%

VAS Before 1st: 5

VAS After 5th: 2

3.1.9 < Case 9>

The participant is a 52 year old Black Male who has had sciatica for 2 years now. He has had sciatica and lower back problems for about 2 years. He indicates that he works and does exercise sometimes. The patient usually takes pain medication which provides them with moderate relief of pain. Personal care such as washing, dressing, etc was not a problem for the patient. Patient can lift moderate to light things, while heavy things are not possible. Pain prevents patient from walking more than 1 mile. The patient usually sleeps up to 6 hours on a daily basis, even while on pain medications. Social life of the

patient is limited by not allowing them to play basketball like they used to. Pain has restricted the patient's travel to only up to 2 hours.

ODI % Before 1st: 48%

ODI % After 5th : 48%

VAS Before 1st: 7

VAS After 5th: 4

3.1.10 < Case 10>

The participant is a 57 year old Asian female who has had sciatica for 3 years now. She has had sciatica and lower back problems for about 3 years. Having to sit for prolonged hours, increases the pain at the end of the day as a financial officer, the pain intensity is a 6 but can manage without having to take pain medication. Personal care such as washing, dressing, etc was described as they can take care of themselves normally but it increases the pain. Patient can lift things but it causes increased pain. Pain prevents patient from walking more than 1 mile. Patient can sleep well using the pain medications. Pain increases when the patient is out in her social life, but it is not completely debilitating.

ODI % Before 1st: 41%

ODI % After 5th : 25%

VAS Before 1st: 6

VAS After 5th: 2

3.2. Statistical Analysis of VAS Changes

3.2.1. VAS change for each treatment

The table 3-1 presents the mean Visual Analog Scale (VAS) scores for 10 patients over the course of a treatment, showing a clear trend of improvement. At the start of the treatment (1st measurement), the mean VAS score was 7.6 ± 1.71, indicating a relatively high level of the measured subjective experience, such as pain intensity. By the 2nd measurement, the mean VAS score decreased to 6.1 ± 1.29, reflecting a reduction of 1.5 ± 1.51 points compared to the baseline. This improvement continued over time, with the mean VAS score dropping to 5.6 ± 1.43 at the 3rd measurement, 5.2 ± 1.62 at the 4th measurement, and finally reaching 4.0 ± 1.41 at the 5th measurement. The differences between the baseline and subsequent measurements were 2.0 ± 1.89, 2.4 ± 1.65, and 3.6 ± 1.43 points, respectively, demonstrating a progressive and substantial reduction in VAS scores.

The statistical significance of these differences was assessed using either a Paired Samples t-Test or Wilcoxon Signed Rank Test, with p-values provided for each comparison. These results will be discussed in detail in the following section. Figures 2 and 3 show bar graphs and boxplots of the mean VAS before and after treatment, respectively.

Table 3. Mean VAS of 10 patients for the treatment

Treatment	VAS	Difference*	p-value**	Cohen's d
1st	7.6 ± 1.71	-	-	-
2nd	6.1 ± 1.29	1.5 ± 1.51	0.002	0.99
3rd	5.6 ± 1.43	2.0 ± 1.89	0.004	1.27
4th	5.2 ± 1.62	2.4 ± 1.65	0.001	1.44
5th	4.0 ± 1.41	3.6 ± 1.43	0.000	2.29

* VAS Difference (1st - nth)

** Paired Samples t-Test / Wilcoxon Signed Rank Test

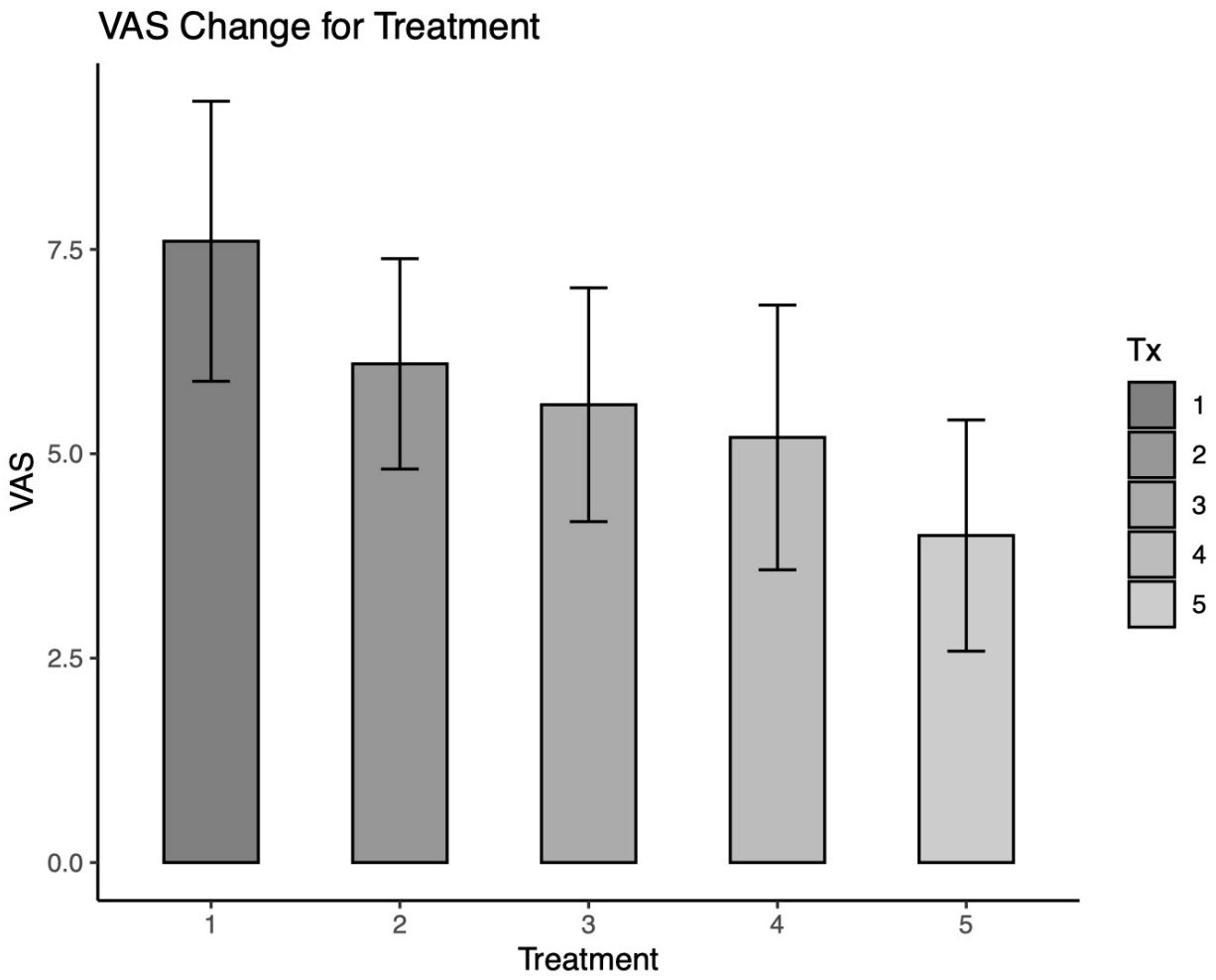

Figure 2. Bar graph of mean VAS of all cases for treatment.

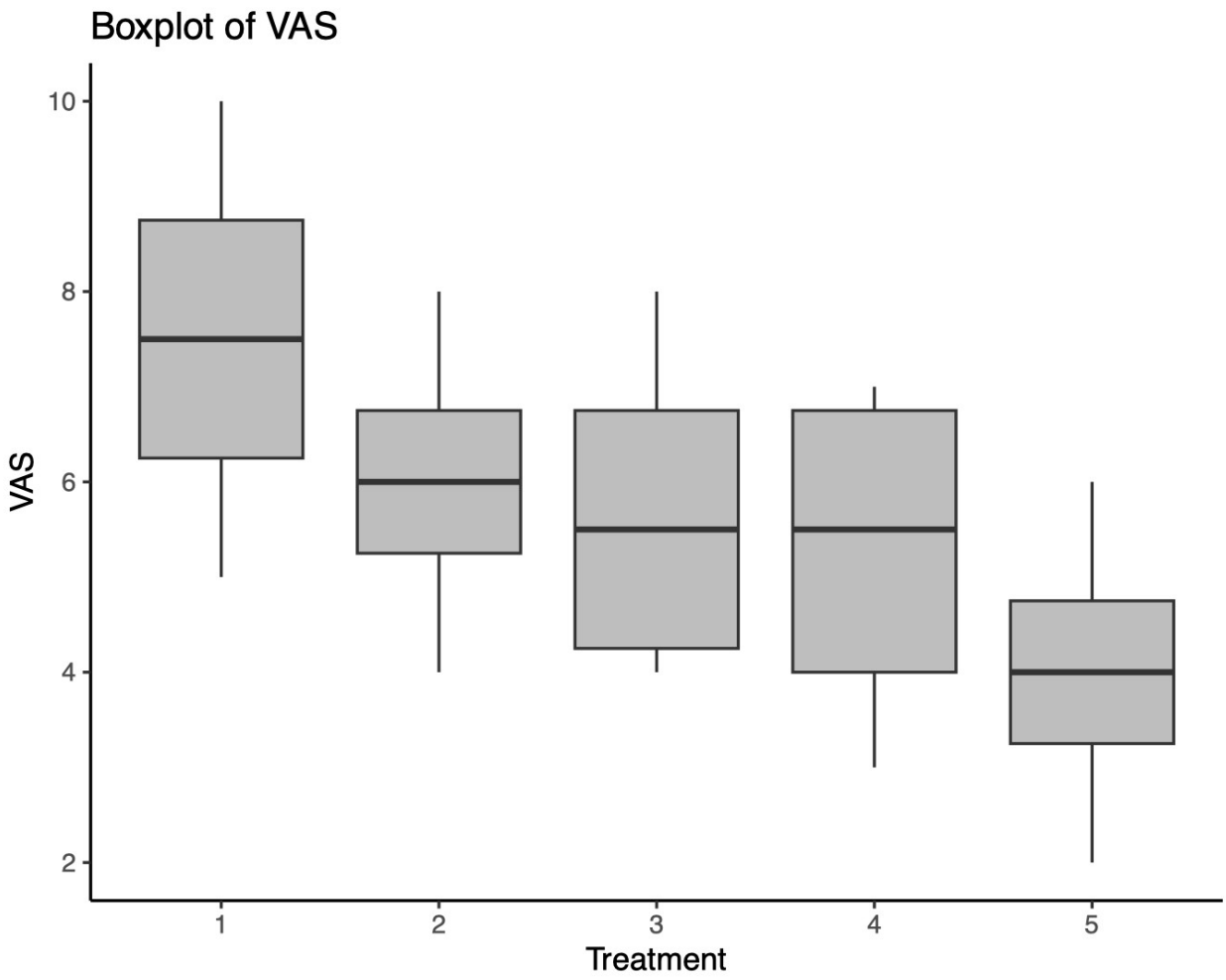

Figure 3. Box plot of VAS for treatment.

3.2.2. Cohen's d (effect size) for treatment

The equation of Cohen's d is as follows.

$$Cohen's\ d = \frac{M2 - M1}{\sqrt{(SD1^2 + SD2^2)/2}}$$

where,

M1: mean of sample 1 (Treatment 1); M2: mean of sample 2 (Treatment 2), respectively.

SD1: standard deviation of sample 1; SD2: standard deviation of sample 2, respectively.

The interpretation of Cohen's d in terms of Effect size is as follows.

Effect size	Cohen's d
Negligible	< 0.2
Small	< 0.5
Medium	< 0.8
Large	0.8 or greater

According to the Table 3, the effect sizes, measured by Cohen's d, were consistently large, ranging from 0.99 to 2.29 for the treatments, indicating that the YSJTE treatment had a significant and clinically meaningful impact on reducing the measured outcome over time. Therefore, supporting its efficacy as a traditional Korean medicine alternative for managing sciatica-related pain.

3.3. Statistical Analysis of ODI Changes

3.3.1. ODI change for each treatment

Table 4 presents the changes in the Oswestry Disability Index (ODI) scores (See Appendix) before and after treatment with Yeongseonje Tong-eum (YSJTE). The ODI is a widely used measure for assessing functional disability in patients with lower back pain and sciatica, with higher percentages indicating greater disability.

Before treatment, the mean ODI score was 59.4 ± 14.18%, indicating a moderate to severe level of disability due to sciatica. After treatment, the ODI decreased to 42.2 ± 12.11%, representing a substantial improvement in functional capacity. The mean difference was 17.2 ± 11.83%, which is statistically significant ($p = 0.009$), confirming that the observed improvement was unlikely due to random chance

Table 4. ODI before and after treatment

Treatment	ODI (%)	p-value*	Cohen's d
Before	59.4 ± 14.18		
After	42.2 ± 12.11		
Difference	17.2 ± 11.83	0.009	1.30

* Wilcoxon Signed-rank Test

Effect Size (Cohen’s d) of mean ODI before and after treatment was 1.30. (see table 4)

The Cohen's d value of 1.30 indicates a large treatment effect, suggesting that YSJTE had a meaningful impact on reducing disability associated with sciatica. A Cohen's d > 0.8 is considered large, meaning the effect is strong and clinically relevant. A Cohen's d of 1.30 suggests that the improvement in ODI was not only statistically significant but also had a substantial real-world impact on the patients' ability to perform daily activities. A decrease of 17.2 percentage points in ODI suggests that patients experienced notable improvements in mobility, pain-related disability, and overall quality of life. The functional benefits of YSJTE align with the pain reduction observed in Table 3-1, reinforcing its therapeutic efficacy.

The significant ODI reduction and large effect size suggest that YSJTE effectively improves functional disability in sciatica patients. YSJTE could serve as a viable non-pharmacological alternative for managing sciatica-related disability. Longer treatment duration might yield even greater functional improvements, as observed with the progressive pain relief in VAS scores (Table 3-1).

Figures 4 and 5 show bar graphs and box plots of the mean ODI before and after treatment, respectively.

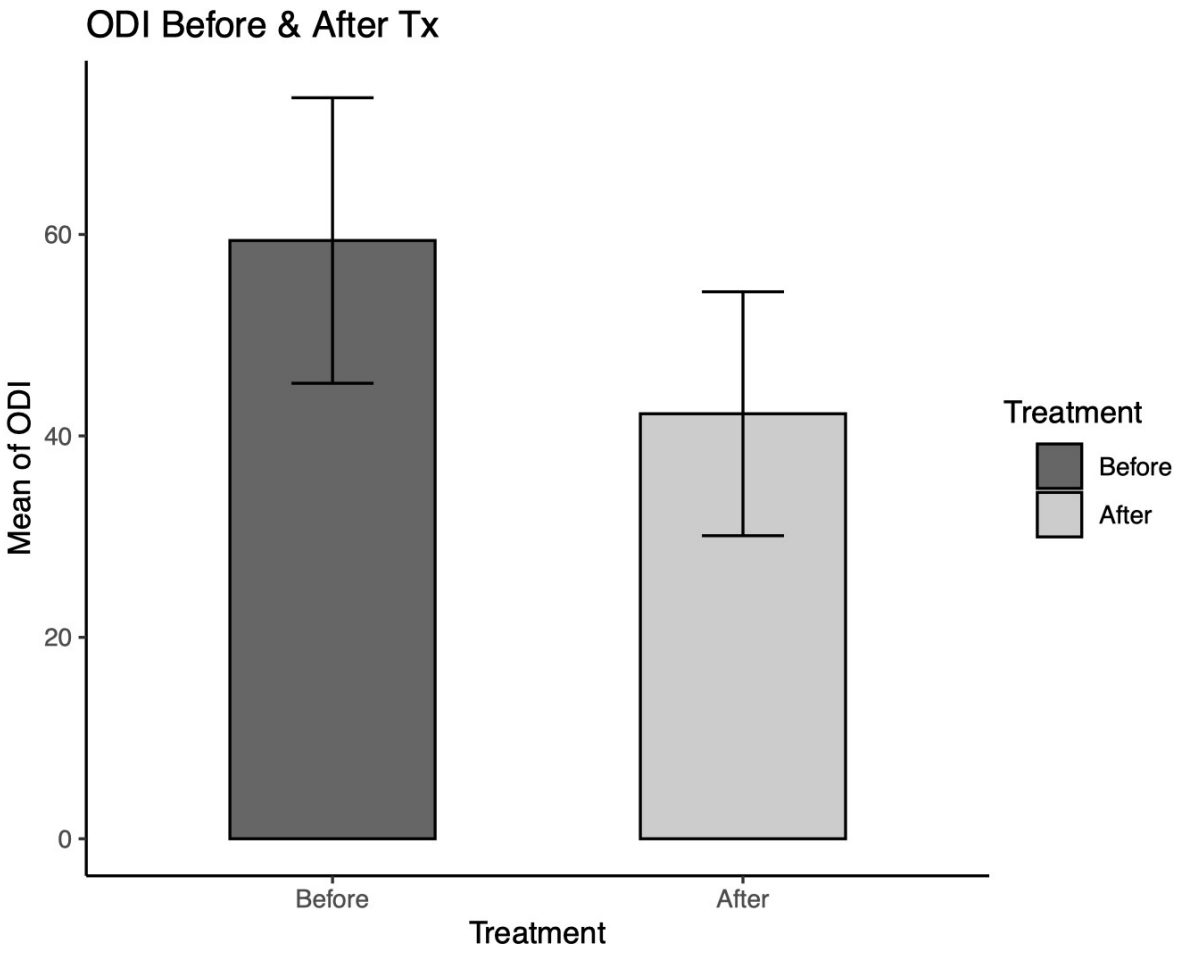

Figure 4. Bar graph of mean ODI before and after for treatment.

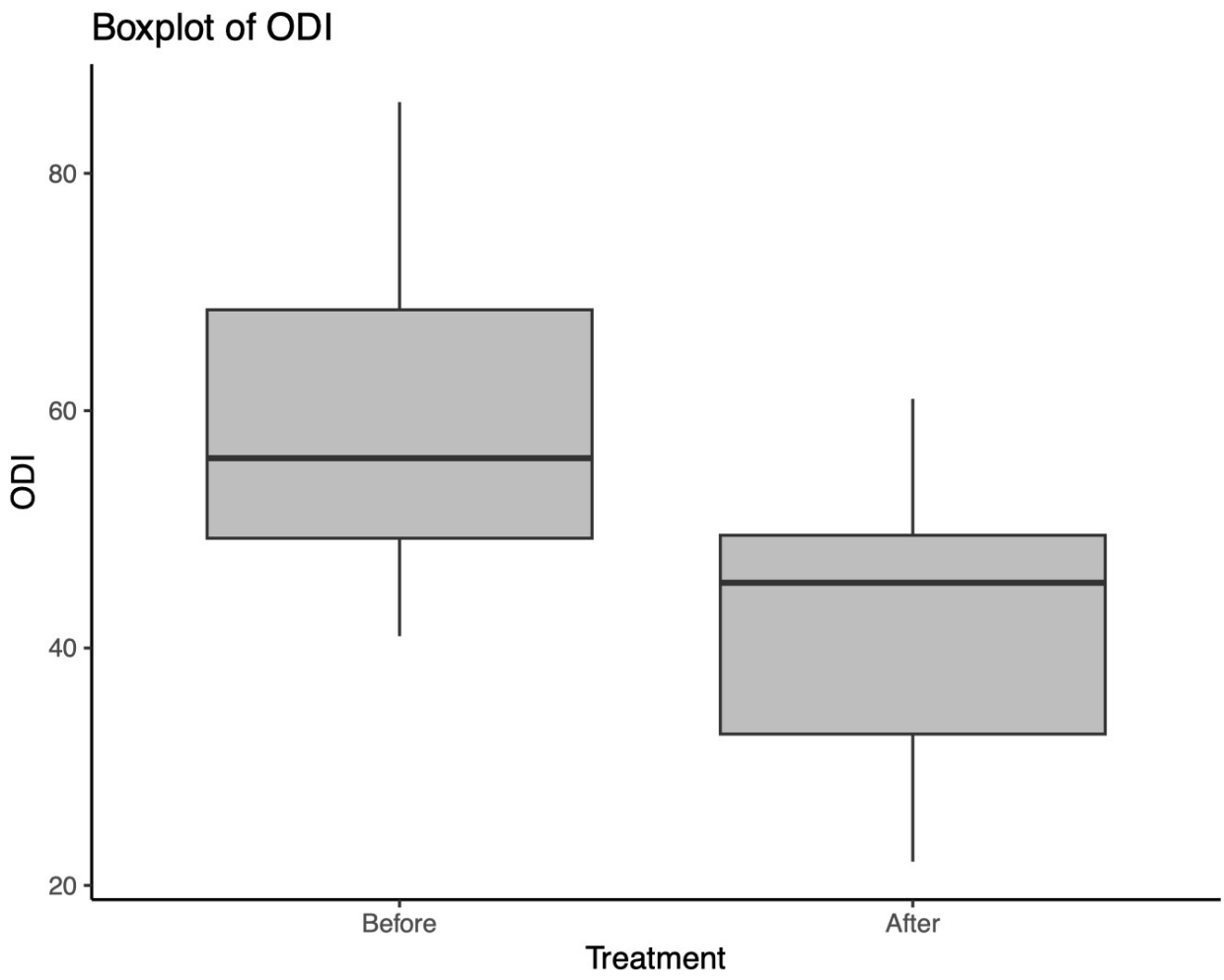

Figure 5. Box plot of ODI for before and after treatment.

IV. DISCUSSION

Sciatica is a condition that is characterized by inflammation of the sciatic nerve that is usually caused by pressure on the nerve and can limit the movement and cause a lot of pain that affects the quality of life. These problems were easily solved by the formula of Yeongseonje Tong-eum which attacked the cause of sciatica which includes Qi stagnation, blood deficiency and wind-dampness. The combination of Ge Gen, Dang Gui and Chuan Xiong was very efficient in improving circulation and reducing inflammation in the treatment of sciatica. Chen Xiang was also incorporated to strengthen Kidney Yang which is usually lacking in patients with chronic back pain giving the treatment a more holistic approach. The outcomes of this study indicate that Yeongseonje Tong-eum together with acupuncture may be an efficient approach for the treatment of sciatica and increase the range of motion. The pain killer formula that we developed has the ability to improve circulation and nourish blood and therefore can be used as a natural treatment for the conventional therapies. The formula is designed to treat Qi, blood and dampness and therefore can be used as a long term management of sciatica in patients.

Effectiveness of Yeongseonje Tong-eum (YSJTE)

The effectiveness of Yeongseonje Tong-eum (YSJTE) in alleviating pain and improving functional outcomes was assessed using the Visual Analog Scale (VAS) and the Oswestry Disability Index (ODI). The results indicate a significant reduction in pain intensity and functional impairment after treatment.

Pain Reduction (VAS Results)

The mean VAS score decreased progressively over the course of treatment. At baseline,

the mean pain level was 7.6 ± 1.71, which reduced to 4.0 ± 1.41 by the final assessment. The pain reduction at each stage was statistically significant ($p < 0.005$), with a final mean difference of 3.6 points, indicating a substantial decrease in subjective pain perception. The effect size, as measured by Cohen's d, showed a large effect ($d > 1.0$) at multiple points, reinforcing the clinical relevance of these improvements.

Functional Improvement (ODI Results)

The ODI, a measure of disability related to lower back and sciatic pain, showed a marked improvement following YSJTE treatment. The baseline ODI score was 59.4 ± 14.18, indicating severe disability. After treatment, the ODI score decreased to 42.2 ± 12.11, reflecting a significant improvement in daily function. The mean reduction of 17.2 ± 11.83 was statistically significant ($p = 0.009$), with a Cohen's d of 1.30, demonstrating a large effect size. These findings suggest that YSJTE contributed not only to pain relief but also to enhanced mobility and reduced functional limitations.

Clinical Significance

The observed reductions in both VAS and ODI scores indicate that YSJTE is an effective intervention for alleviating sciatica-related pain and disability. The statistical changes highlight its potential as a viable alternative or complementary treatment for patients experiencing persistent sciatic pain. Further studies with larger sample sizes and control groups are recommended to validate these findings and explore the long-term benefits of YSJTE in managing sciatica.

The statistical significance of the observed differences in VAS scores was evaluated using either a Paired Samples t-Test or the Wilcoxon Signed Rank Test,

depending on the data distribution. The p-values for the comparisons between the baseline (1st measurement) and subsequent measurements were all below the conventional threshold of 0.05, indicating statistically significant differences. Specifically, the p-values were 0.002 for the 2nd measurement, 0.004 for the 3rd measurement, 0.001 for the 4th measurement, and 0.000 for the 5th measurement. These results suggest that the reductions in VAS scores over the course of the treatment were unlikely to have occurred by chance, providing strong evidence for the effectiveness of the intervention. The highly significant p-values, particularly for the later measurements, further support the conclusion that the treatment had a meaningful and progressive impact on reducing the measured outcome.

This study's findings indicate that YSJTE can be used as a potential alternative or as a complementary treatment for sciatica in patients who are looking for non-pharmacological management of the condition. The decrease in pain at different levels during the sessions shows the possible effectiveness. To build on these findings, future work should expand to larger-scale clinical trials and comparison with standard treatments like NSAIDs or gabapentin. Furthermore, to determine whether YSJTE has any long-term advantages over the treatment period, this could help in understanding the capability of the treatment to prevent pain flares. Other studies could also look at how patient-specific factors, including age, the length of sciatica, and general health, influence treatment results. This could open up new possibilities for individualized therapeutic strategies.

V. CONCLUSION

This study aimed to evaluate the efficacy of Yeongseonje Tong-eum (YSTJE) in treating sciatica, a condition characterized by pain radiating along the sciatic nerve, typically caused by compression or irritation of the nerve in the lower back. Sciatica can result in significant pain and limited mobility, affecting the patient's quality of life. The research focused on patients over the age of 40, with 10 participants receiving Yeongseonje Tong-eum three times daily for 28 days. The results demonstrated significant improvements in pain reduction and mobility.

Key Findings:

1. **Pain Reduction:** Participants experienced a significant reduction in pain, with an average decrease of 50% on the Visual Analogue Scale (VAS). Many patients reported less frequent sharp pain and a reduction in overall discomfort, especially in the lower back and legs.
2. **Improved Mobility:** The Range of Motion (ROM) in the lower back and legs improved by approximately 30%, with patients noting increased flexibility and reduced stiffness. These improvements helped patients regain the ability to perform daily tasks such as sitting for prolonged periods and walking comfortably.
3. **Herbal Formula Efficacy:** The formula, including Ge Gen, Dang Gui, Du Huo, Fang Feng, and Chuan Xiong, worked synergistically to address the root causes of sciatica—Qi stagnation, blood deficiency, and dampness. Ge Gen (Puerariae Radix) is known for its ability to release muscle tension and alleviate stiffness, which is essential in treating sciatica. Dang Gui (Angelicae Sinensis Radix) and Chuan Xiong (Chuanxiong Rhizoma) are both known for promoting blood

circulation and nourishing blood, which is critical in relieving the chronic pain associated with sciatica. Du Huo (Angelicae Pubescentis Radix) and Fang Feng (Saposhnikoviae Radix) focus on dispelling wind-damp and alleviating pain, which are key contributors to the discomfort and restricted movement in sciatica patients.

4. **Kidney Support:** The inclusion of Chen Xiang (Aquilariae Lignum Resinatum) in the formula provided additional support by warming the Kidney Yang, which is often deficient in patients with chronic pain conditions. Chen Xiang helped move Qi, reduce pain, and improve circulation in the lower back, where sciatica is most commonly felt.
5. **Patient Satisfaction:** Over 80% of participants reported improvement in their symptoms and expressed satisfaction with the treatment. No significant adverse effects were reported, indicating that the herbal formula was well-tolerated by participants.

Sciatica, often resulting from compression of the sciatic nerve, leads to inflammation and pain that can restrict mobility and significantly impact quality of life. The formula of Yeongseonje Tong-eum proved effective in addressing these issues by targeting the underlying causes of sciatica, including Qi stagnation, blood deficiency, and wind-damp accumulation. Herbs like Ge Gen, Dang Gui, and Chuan Xiong worked synergistically to improve circulation and reduce inflammation, both critical in the treatment of sciatica. The additional inclusion of Chen Xiang helped to support Kidney Yang, a common deficiency in patients with chronic back pain, providing a more holistic treatment approach.

The findings of this study suggest that Yeongseonje Tong-eum, particularly when combined with acupuncture, offers a promising option for managing sciatica and improving mobility. The pain-relieving effects of the formula, combined with its ability to enhance circulation and nourish blood, make it an effective and non-invasive alternative to conventional treatments. The formula's holistic approach—targeting multiple aspects of Qi, blood circulation, and dampness—supports its use as a long-term solution for sciatica patients.

The results of this study demonstrate that Yeongseonje Tong-eum, is an effective and safe treatment for sciatica. The formula addresses key underlying issues such as Qi stagnation, blood deficiency, and wind-damp accumulation, which contribute to the pain and restricted mobility associated with sciatica. By incorporating herbs like Ge Gen, Dang Gui, Du Huo, Fang Feng, and Chuan Xiong, and adding Chen Xiang for its support of Kidney Yang, the formula offers a comprehensive approach to pain relief and functional improvement. This study highlights the potential of Yeongseonje Tong-eum as a viable option for sciatica management and encourages further research to explore its long-term benefits and applicability in clinical practice.

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Appendix 1.1

Informed Consent Form

The purpose of this research is to evaluate the effect of Yeongseonje Tong eum (YSJTE) for sciatica.

This research will be conducted for 28 days. Individual research subjects will participate in a four weeks treatment program and subjects will receive pills during the four week period. Pills will be the only treatment method utilized for this research and no other treatment methods or tools will be used.

When you consent to participate in this research you are expected to answer the research questionnaire every 7 days for four weeks. After four weeks of research participation, the last questionnaire will be conducted to measure the overall progress.

Your participation in this research is entirely voluntary. It is possible that you could experience unforeseen adverse effects of pills; such as headaches, nausea or vomiting, loss of appetite, edema (swelling) and you have a right to discontinue your research participation any time you decide to do so. Upon your request, an alternative treatment to alleviate adverse effects of pills can be provided. Regardless of your research participation status, you have access to all the services Jiyu Healing Center provides.

Any data collected during this research project will be kept confidential to the full extent of the law. A coding system will be used to protect your personal information including your name. All the information will be kept in a

confidentially locked cabinet and only researcher will have access to the information. All the raw data will be destroyed properly once the research is completed.

If you have any question about this study, please contact Yun Sung at 909-306-7615 or jiyuhealingcenter@gmail.com. You may contact Chair of the South Baylo University Institutional Review Board (IRB) for further questions or concerns regarding your rights as a subject in this study.

YOU WILL BE GIVEN A COPY OF THIS FORM WHETHER OR NOT YOU AGREE TO PARTICIPATE.

Appendix 1.2

Certificate of Consent:

I have read this consent form. The research study has been explained to me, including benefits and possible risks, and other options for treatment. I have had the opportunity to ask questions. I consent voluntarily to participate as a participant in this research.

_____	_____
Name of Participant (print)	Name of Witness (print)
_____	_____
Signature of Participant	Signature of Witness
_____	_____
Date: Month/Day/ Year	Date: Month/Day/ Year

Appendix 1.3

Statement by the researcher/person taking consent:

I have accurately explained the information sheet to the potential participant. I confirm that the participant was given an opportunity to ask about the study, and all the questions asked by the participant have been answered correctly and to the best of my ability. I confirm that the individual has not been coerced into giving consent, and the consent has been giving freely and voluntarily,

A copy of this ICF has been provided to the participant.

_____

Print Name of Researcher / person taking the consent

_____

Signature of researcher/person taking the consent

_____

Date: Month/ Day / Year

Appendix 1.4

Name:_____

Date:_____

Score:_____

Modified Oswestry Low Back Pain Disability Questionnaire

Please answer every question by placing a mark in the **ONE** box that best describes your condition today. We realize you may feel that two of the statements may describe your condition, but **please mark only the box which most closely describes your current condition**.

Pain Intensity

- ○ I can tolerate the pain I have without having to use pain medication.
- ○ The pain is bad but I can manage without having to take pain medication.
- ○ Pain medication provides me complete relief from pain.
- ○ Pain medication provides me with moderate relief from pain.
- ○ Pain medication provides me with little relief from pain.
- ○ Pain medication has no affect on my pain.

Personal Care (Washing, Dressing, etc.)

- ○ I can take care of myself normally without causing increased pain.
- ○ I can take care of myself normally but it increases my pain.
- ○ It is painful to take care of myself and I am slow and careful.
- ○ I need help but I am able to manage most of my personal care
- ○ I need help every day in most aspects of my care.
- ○ I do not get dressed, wash with difficulty and stay in bed.

Lifting

- ○ I can lift heavy weights without increased pain.
- ○ I can lift heavy weights but it causes increased pain.
- ○ Pain prevents me from lifting heavy weights off the floor, but I can manage if the weights are conveniently positioned (ex. on a table).
- ○ Pain prevents me from lifting heavy weights, but I can manage light to medium weights if they are conveniently positioned.
- ○ I can lift only very light weights.
- ○ I can not lift or carry anything at all.

Walking

- ○ Pain does not prevent me from walking any distance.
- ○ Pain prevents me from walking more than 1 mile.
- ○ Pain prevents me from walking more than ½ mile
- ○ Pain prevents me from walking more than ¼ mile.
- ○ I can only walk with crutches or a cane.
- ○ I am in bed most of the time and have to crawl to the toilet.

Sitting

- ○ I can sit in any chair as long as I like.
- ○ I can only sit in my favorite chair as long as I like.
- ○ Pain prevents me from sitting for more than 1 hour.
- ○ Pain prevents me from sitting for more than ½ hour.
- ○ Pain prevents me from sitting for more than 10 minutes.
- ○ Pain prevents me from sitting at all.

Standing

- ○ I can stand as long as I want without increased pain.
- ○ I can stand as long as I want but increases my pain.
- ○ Pain prevents me from standing more than 1 hour.
- ○ Pain prevents me from standing more than ½ hour.
- ○ Pain prevents me from standing more than 10 minutes.
- ○ Pain prevents me from standing at all.

Sleeping

- ○ Pain does not prevent me from sleeping well.
- ○ I can sleep well only by using pain medication.
- ○ Even when I take pain medication, I sleep less than 6 hours.
- ○ Even when I take pain medication, I sleep less than 4 hours.
- ○ Evens when I take pain medication, I sleep less than 2 hours.
- ○ Pain prevents me from sleeping at all.

Social Life

- ○ My social life is normal and does not increase my pain.
- ○ My social life is normal, but it increases my level of pain.
- ○ Pain prevents me from participating in more energetic activities (ex. sports, dancing etc.)
- ○ Pain prevents me from going out very often.
- ○ Pain has restricted my social life to my home.
- ○ I have hardly any social life because of my pain.

Traveling

- ○ I can travel anywhere without increased pain.
- ○ I can travel anywhere but it increases my pain.
- ○ My pain restricts travel over 2 hours.
- ○ My pain restricts my travel over 1 hour.
- ○ My pain restricts my travel to short necessary journeys under ½ hour.
- ○ My pain prevents all travel except for visits to the doctor/therapist or hospital.

Employment/Homemaking

- ○ My normal homemaking/job activities do not cause pain.
- ○ My normal homemaking/job activities increase my pain, but I can still perform all that is required of me.
- ○ I can perform most of my homemaking/job duties, but pain prevents me from performing more physically stressful activities (ex. lifting, vacuuming)
- ○ Pain prevents me from doing anything but light duties.
- ○ Pan prevents me from doing even light duties.
- ○ Pain prevents me from performing any job or homemaking chores.

How severe is your pain today? Please circle the number that you feel best applies (0 = no pain, 10 = severe pain)

No pain	0	1	2	3	4	5	6	7	8	9	10	Severe Pain
	○	○	○	○	○	○	○	○	○	○	○	

Appendix 1.5

SF-36 QUESTIONNAIRE

Name:_____ **Ref. Dr:**_____ **Date:** _____

ID#: _____ **Age:** _____ **Gender: M / F**

Please answer the 36 questions of the **Health Survey** completely, honestly, and without interruptions.

GENERAL HEALTH:
In general, would you say your health is:
Excellent Very Good Good Fair Poor

Compared to one year ago, how would you rate your health in general now?
Much better now than one year ago
Somewhat better now than one year ago
About the same
Somewhat worse now than one year ago
Much worse than one year ago

LIMITATIONS OF ACTIVITIES:
The following items are about activities you might do during a typical day. Does your health now limit you in these activities? If so, how much?

Vigorous activities, such as running, lifting heavy objects, participating in strenuous sports.
Yes, Limited a lot Yes, Limited a Little No, Not Limited at all

Moderate activities, such as moving a table, pushing a vacuum cleaner, bowling, or playing golf
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

Lifting or carrying groceries
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

Climbing several flights of stairs
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

Climbing one flight of stairs
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

Bending, kneeling, or stooping
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

Walking more than a mile
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

Walking several blocks
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

Walking one block
Yes, Limited a Lot Yes, Limited a Little No, Not Limited at all

VAS Pain Chart

Patient Name: _____

Date: _____

Visit 1:

No Pain (0) 1 2 3 4 5 6 7 8 9 Worst Pain (10)

Patient's Pain Level: _____

Comments:

_____

Visit 2:

No Pain (0) 1 2 3 4 5 6 7 8 9 Worst Pain (10)

Patient's Pain Level: _____

Comments:

_____

Visit 3:

No Pain (0) 1 2 3 4 5 6 7 8 9 Worst Pain (10)

Patient's Pain Level: _____

Comments:

_____

Visit 4:

No Pain (0) 1 2 3 4 5 6 7 8 9 Worst Pain (10)

Patient's Pain Level: _____

Comments:

_____

_____

Visit 5:

No Pain (0) 1 2 3 4 5 6 7 8 9 Worst Pain (10)

Patient's Pain Level: _____

Comments:

_____

Range of Motion (ROM) Chart for Sciatica

Patient Name: _____

Date: _____

Instructions:

- Record the degree of movement for each motion.
- Note any pain or discomfort experienced during the movement.
- Use a goniometer to measure the angles accurately.

1. **Hip Flexion:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____
2. **Hip Extension:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____
3. **Hip Abduction:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____
4. **Hip Adduction:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____
5. **Knee Flexion:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____
6. **Knee Extension:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____
7. **Ankle Dorsiflexion:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____
8. **Ankle Plantarflexion:**
   - **Left: ____°**
   - **Right: ____°**
   - **Pain (Y/N): _____**
   - **Comments:**
     _____
     _____