

# Is Tui Na Effective for Relieving Low Back Pain?

Taylor Jump

Research Case Report

IPSB

Spring 2010

# Abstract

*Objective:* This study is designed to determine if Tui Na massage can be effective in relieving low back pain.

*Methods:* A 54 year old full-time mother and housewife recently twisted and injured her low back and her left knee from a serious fall. She cannot put all of her weight on the injured leg. Five sessions, 60 minutes each, of Tui Na massage were performed once a week for 5 weeks to address acupoints commonly used in acupuncture for low back pain. Range of motion of flexion of the upper torso was measured, and the client kept track of how often back pain occurred, what activity aggravated it, and pain level.

*Results:* Pain frequency and intensity decreased during the course of the study. Flexion of the spinal column increased.

*Conclusion:* Tui Na was shown to be an effective treatment for LBP.

**Keywords:** Low back pain, acupoints, Tui Na.

## Introduction

This study is designed to determine if Tui Na massage will be effective in relieving low back pain. Low-back pain (LBP) is described as, "Pain in the low back area that can relate to problems with the lumbar spine, the discs between the vertebrae, the ligaments around the spine and discs, the spinal cord and nerves, muscles of the low back, internal organs of the pelvis and abdomen, or the skin covering the lumbar area" (Medicinenet, 2002). It is for this broad definition that approximately 31 million Americans experience some form of LBP at any given time (American Chiropractic Association, 2010). Deyo, Mirza, & Martin (2006) produced a study in which they found that at least 25% of the 31,044 participants in the study had LBP. Many symptoms of LBP include, but are not limited to, pain while bending over, stiffness of the back, and pain down the leg (WebMD, 2008). The client in this particular study injured her back from a fall and experienced pain while bending over or sitting for prolonged periods of time.

Rostocki's (2010) review of the literature found that there are over 50 different treatments for LBP. A few different treatments include chiropractic manipulation, spinal decompression, acupuncture, electrotherapy, transcendental meditation, and hypnotherapy. Few of the 50 treatments, like those listed, actually have scientific evidence supporting the effectiveness of the treatment. Surgery and medication are the most common forms of western intervention for low back pain treatment, but surgery is often viewed as a last resort treatment even by medical practitioners. Only 50% of surgeries are viewed as successful, and many who undergo surgery wish they had not received the surgery at all.

As for alternatives to these treatments, options vary, but popular forms are massage and yoga. Massage has been recently implemented in western medical practice and has proven effective at relieving LBP (Furlan, Imamura, Dryden, & Irvin, 2010; Cherkin, Sherman, Deyo, & Shekelle, 2003). In all of the literature reviewed massage techniques included trigger point therapy, Swedish massage, and deep tissue techniques.

Traditional Chinese Medicine (TCM) has been around for approximately 4000 years and has many different branches and applications (Mercati, 1997). One of the most common TCM treatments is acupuncture. Acupuncture has been used to treat many different disorders such as anxiety, frozen shoulder, anorexia, constipation, and of course, LBP (Braverman, 2010). Acupuncture has been shown to

have significant effects on low back pain as opposed to no treatment at all (Furlan, Van Tulder, Cherkin, & Tsukayama, 2005; Brinkhaus, Witt, Jenna, Linde, & Streng, 2006).

Tui Na is closely associated with acupuncture. Instead of using needles, the therapist uses thumbs and elbows to affect acupoints. Common techniques include rolling, press rubbing, chafing, kneading, and finger springing (Helm, 2009). There is very little research which includes Tui Na massage in the English language. This study is meant to add to the research done on Tui Na and low back pain. The particular massage performed in this study addressed acupoints commonly used in acupuncture for LBP.

The client filled out a daily journal recording date, pain level, and the activity that aggravated the back. The therapist also used a goniometer to measure range of motion (ROM) of low back flexion.

## Methods

### Client Profile

A 54 year old full-time mother and housewife recently injured her low back and her left knee from a serious fall. The client twisted her back from the fall and now almost every day when she wakes up she has to stretch her low back in order to even rise out of bed. The pain is continuous throughout the day and many of her daily activities have become monumental tasks because of the pain she endures. Retrieving a 1 lb. box of sugar from the bottom shelf causes excruciating pain. She experiences stabbing pain whenever she tries to stand up too fast or sometimes even while she's sitting. The client has pointed to her low back area, specifically the quadratus lumborum muscle, iliac crest, and sacrum on both sides as the area of the stabbing pain.

She also experiences tightness in her right knee from the fall, but explains that the pain is bearable. This tightness is felt in the hamstring of her right leg. She cannot put all of her weight on that leg so she walks with a slight limp.

Pain medication has become a daily occurrence for this client, although none are prescribed (Motrin and Aleve are the preferred choices). Since the fall she has been through physical therapy, electrical stimulation and other forms of massage (Swedish). The physical therapy definitely helped to improve her mobility immediately after the fall, but neither of the other therapies have helped her at all. The

client also experiences neck and shoulder pain and occasionally the right arm goes numb and limits day-to-day activity.

She is allergic to grasses and pollen as well as the smell of eucalyptus. The pain in her back is increased when she is exposed to the smells as she begins to sneeze excessively.

She has had abdominal surgery, a hysterectomy, and two caesarean sections. The abdominal surgery, performed in 2003, was to disconnect her small intestine that managed to attach to her bladder. The first caesarean was performed in 1984. The hysterectomy was performed during her second caesarean surgery in 1986. She does not feel any discomfort from previous surgeries and has been cleared by her medical physician to receive massage.

Her goal during this study was to no longer deal with daily low back pain. She wanted to be able to bend over, sit down, and lie down without having to worry about excruciating pain.

## Treatment Protocol

Five sessions, 60 minutes each, of Tui Na massage were performed once a week for 5 weeks. The techniques used were as follows:

### Prone:

- 1) 1 minute Palpate for Ashi points.
- 2) 15 minutes Tui Na rolling on quadratus lumborum, sacrum, gluteal muscles, hamstrings and calves.
- 3) 2 minutes place fire cups on Ashi Points
- 4) 5 minutes grasping low back, gluteal muscles, and legs, UB 40, UB 39, GB 30, K 10, K 3.
- 5) 2 minutes moderate kneading back and thighs.
- 6) 5 minutes press rub UB 23, UB 25, Du 3, Du 4, Ashi Points, UB 40, UB 39, K10, K 3
- 7) 1 minute remove fire cups
- 8) 10 minutes rolling low back, gluteal muscles, and hamstrings.
- 9) 3 minutes grasping cupped areas
- 10) 2 minutes pok on low back and legs

### Supine:

- 11) 10 minutes rolling quadriceps
- 12) 5 minutes passive movement of hip joint w/ traction.

## Measurement Tools

The practitioner used a goniometer to measure flexion of the upper torso in relation to a vertical wall (range of motion). The client filled out a continuous journal indicating how often back pain occurred, what activity aggravated it, and pain level.

### Pain Scale

- 0 No Pain
- 1-2 Mild Pain
- 3-5 Moderate Pain
- 6-8 Severe Pain
- 9-10 Excruciating pain

## Results

The treatment protocol was to meet with the client once a week for 5 weeks the same day and time every week. ROM tests were performed before and after each treatment.

Baseline week: The client reported 5 incidents of pain rating 10, mostly when sleeping and getting dressed throughout the week. She experienced moderate discomfort doing daily tasks, bending over, cooking, walking, etc. ROM: 16°.

**Session 1:** The client showed up with great excitement. She had experienced 5 instances that day in which she had to stop what she was doing because of the pain. There was a lot of stagnation in the right hip and right leg. Before ROM: 18° / After ROM: 92°. During the following week the client experienced many incidents of pain, mostly in the morning while getting out of bed and getting ready for the day. Shaving proved very difficult and was reported as the only 10 throughout the week. Putting on socks often produced a 9 on the pain scale. The client often reported a pain rating of 8-9 (6 times). No pain in left knee all week. She took 3 aspirin during the week.

**Session 2:** The client showed up with very minimal energy. She had done a lot of gardening before showing up for the massage. She experienced 3 instances during the day in which the pain caused her to stop what she was doing. She has decreased tightness in right leg and right hip, very sensitive points in left hip and her low back. Before ROM: 52° / After ROM: 76°. The following week the client spent a lot

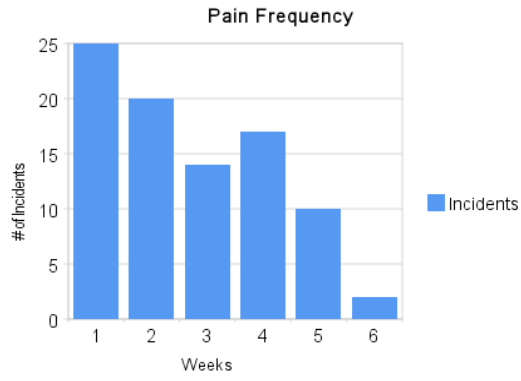
of time gardening, which she hadn't been able to do before. Throughout the week client reported regular pain ratings of 7-9 (6 times), usually when getting out of bed and putting on socks. Sleeping was the only incident of 10 on the pain scale. She took 2 aspirin throughout the week.

**Session 3:** The client showed up in a lot of pain, and had increased amounts of tightness all over. Two days before treatment she spent 6 hours shopping and walking around the mall. She explained that yesterday she was very sore. She had areas of tightness in her UB39, UB40, and K10 points. Bl 37 point was also very tender for the client. Before ROM: 65° / After ROM: 72°. The following week the client experienced a pain rating of 7 (5 times), usually while getting out of bed and getting dressed; getting dressed produced pain of 10. Took 1 aspirin all week and had 2 days of no pain incidents at all.

**Session 4:** Treatment was postponed by 3 days, but the client continued to fill out record of pain incidents. The client showed up in good spirits. In particular UB 39, UB40 and K10 on the right leg were still very stagnant, but far less sensitive. Since past areas of pain were no longer sensitive, the therapist spent what time was left of the session on areas not worked on before. The therapist worked on the liver meridian of both legs for a few minutes and found areas of extreme tenderness. Before ROM: 80° / After ROM: 82°. The client reported 1 incident of pain rating 10 and 1 incident of pain rating 8 throughout the following week. No aspirin was used and she reported 3 days of no pain. Putting on socks produced pain rating of 10. Waking up and getting out of bed became much easier and she no longer worried about twisting in the wrong direction.

**Session 5:** The client had increased energy and felt as good as she had felt before her injury. The client was able to bend over before session and not feel any pain, but felt "normal" tightness in hamstrings while bending over. The therapist found more tenderness in the liver meridian. Before ROM: 84° / After ROM: 86°. The client stopped recording journal, but no longer felt pain on a regular basis. Once throughout the week the client experienced pain putting on socks, pain rating 10, but no other incidents throughout the week.

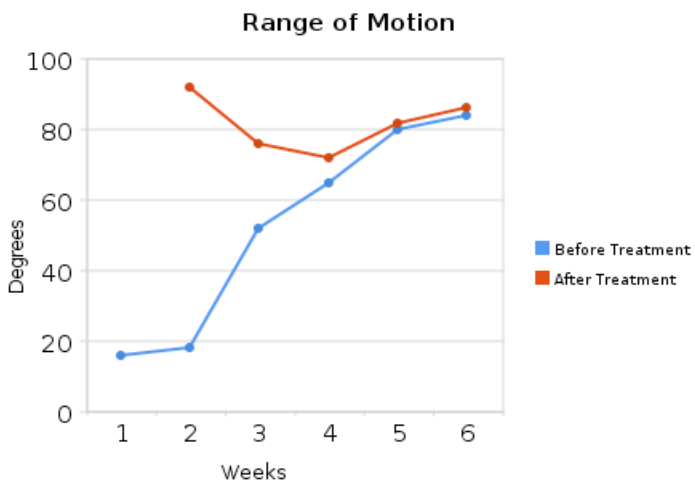
**Figure 1**



**Figure 2**



**Figure 3**



## Discussion and Conclusion

The graphs above chart the progress of the client. Figure 1 shows the number of times the client reported pain throughout the week. As can be seen the number of times she reported pain decreased as the weeks went on. Week 4, however, shows an increase in numbers, but it may be attributed to the excess walking she did that week.

Figure 2 tracks the client's most frequently reported pain rating. Week one the client reported more 10s than any other number. This chart shows a steady decrease in how much pain was felt by the client. Even though Figure 1 shows an increase in the number of times the client experienced pain, Figure 2 shows that the pain intensity decreased as the study progressed.

Figure 3 shows the amount of spinal flexion the client was able to perform before and after treatment. As can be seen the client's flexion before treatment steadily increased, but seemed to begin to level off towards the end of week six. The flexion measured after treatment seemed to remain around the same. This study cannot conclude why the flexion after session 1 is greater than the other weeks, but the ROM seemed to level off at the end of treatment.

Tui Na has proven to be an effective treatment for LBP. It has improved the client's mobility and decreased the amount of pain the client endures with day-to-day activities. The client has continued to report increased mobility even after the treatment has stopped. It is possible that this weekly treatment has provided the client with long lasting pain relief, but only a continued study would be able to draw conclusions about which this study can only speculate. Tui Na has also proved itself as a safe alternative to any sort of invasive treatment such as surgery. Only a continued study could tell if the treatment will continue to produce long term effects.

It is also possible that with the client recording and cataloguing the information throughout the study that it has increased her inner sense and knowledge of her own body. It has, in the therapist's view, provided her with a knowledge that she would not have otherwise had. The recording of daily information has in a sense provided the therapist with a much more detailed look into what was really going on every day. It provided information to the therapist that he may not have been able to obtain otherwise, very specific information which in turn allowed the therapist to focus on exactly where areas

of pain and discomfort were located. As a side note the therapist reports that providing the client with recording materials, such as a journal, to catalog progress may complement the healing process for the client. Having the client record daily activities did give better feedback for the therapist to review and use to design future session protocols.

## Bibliography

Back Pain Facts & Statistics. (2010). *American chiropractic association*. Retrieved (2010, May 13)

Braverman, S.E. (n.d.). Medical acupuncture review: safety, efficacy, and treatment practices. *Medical Acupuncture A Journal for Physicians by Physicians*, 15(3).

Brinkhaus, B., Witt, C.M., Jenna, S., Linde, K., & Streng, A. (2006). Acupuncture in patients with low back pain. *Archives of Internal Medicine*, 166(4).

Carter, B. (2004). Acupuncture statistics. *Brian Carter's Pulse of Oriental Medicine*.

Cherkin, D.C., Sherman, K.J., Deyo, R.A., & Shekelle, P.G. (2003). A Review of the evidence for the effectiveness, safety, and cost of acupuncture, massage therapy, and spinal manipulation for back pain. *American College of Physicians*, 138(11).

Deyo, R.A., Mirza, S.A., & Martin, B.I. (2006). Back pain prevalence and visit rates: estimates from national us surveys, 2002. *Lippincott Williams & Wilkins*, 31(23).

Furlan, A.D., Imamura, M., Dryden, T., Irvin, E. Massage for low-back pain. *Cochrane Database of Systematic Reviews* 2008, Issue 4.

Furlan, A.D., van Tulder, M.W., Cherkin, D., Tsukayama, H., Lao, L., Koes, B.W., Berman, B.M. Acupuncture and dry needling for low back pain. *Cochrane Database of Systematic Reviews* 2005, Issue 1.

Helm, B. (2009). *Tui na structural disorders therapy treatments*. San Diego, CA: Taoist Sanctuary. Medicinenet.com (2002). Retrieved from <http://www.medterms.com/script/main/art.asp?articlekey=20587> (2010, May 14)

Rakel, D. P., & Faass, N. (2006). *Complementary medicine in clinical practice*. Sudbury, MA: Jones and Bartlett Publishers.

Rostocki, A. (2006, May 10). *Cure back pain.org*. Retrieved from <http://www.cure-back-pain.org/cure-back-pain.html> (2010, May 1)

Webmd (2008). *Low back pain symptoms*.