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## **Foot Reflexology and Interstitial Cystitis**

### **Introduction:**

Research is extremely limited on the use of reflexology to bring relief to those experiencing interstitial cystitis (IC) symptoms. Most complementary and alternative method (CAM) studies do not include reflexology as a method of relief. While listed on the IC Association website<sup>1</sup> as a practice that may be tried by those diagnosed and experiencing IC symptoms, studies have not been conducted to show a definitive relief of symptoms through the continued practice of reflexology. In addition, the IC Network, an extensive information and support website for those suffering from IC symptoms, does not list reflexology as a possible treatment for symptom management. Further, current research studies found to address CAM for management of IC symptoms do not include reflexology as a treatment.

Symptoms of IC vary from person to person, but appear more prevalent in women, with women being diagnosed more often than men, and often having a long-lasting impact on quality of life. The cause of IC is unknown, and many factors may contribute, including a defect in the bladder lining, heredity, infection, or allergy. According to the Mayo Clinic<sup>2</sup>, there is neither a single treatment for IC nor does any single treatment relieve all symptoms. Guided imagery and acupuncture are listed as possible CAM therapies that show promise in helping with symptoms.

### **The Subject**

The subject for this case study is a retired 69-year-old female, diagnosed with IC in 2006. Subject reported the following symptoms related to her IC condition: burning, frequent urination, a continued sense of urgency to urinate, pain, and anxiety. Subject states her symptoms increase with an increase in: anxiety, gastrointestinal (GI) upset (diagnosed as irritable bowel syndrome [IBS]), long car rides, sitting for two or more hours, and, at times, sexual activity. Subject notes a decrease in symptoms from medication (Bentyl, an anti-spasmodic medication), hot baths, meditation, Reiki, and yoga or yogic stretches. If pain becomes overwhelming, subject performs bladder installation (a solution inserted into the bladder) that contains a heparin, sodium bicarbonate and lidocaine mixture. In addition, subject has noticed the following patterns that result in an IC flare:

- 1) increased anxiety that increases GI and bladder distress
- 2) accidental gluten ingestion that results in IBS-D (diarrhea)
- 3) migraines that increase anxiety.

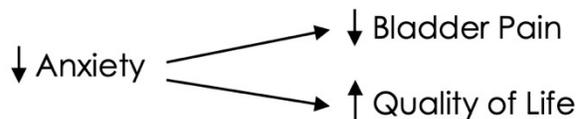
Subject further stated that IC flare length is indeterminant and that differentiating between an IC flare and a urinary tract infection (UTI) is challenging. Finally, subject shared that she felt her greatest impact (improvement) on quality of life would occur with a decrease in the following: anxiety, frequency/urgency issues, and pelvic pain.

## Study Objective

As the benefits of reflexology include stress reduction (a lifestyle practice encouraged to help those suffering from IC) and support for the whole body organism, this case study will examine if reflexology, as a continued therapy, encourages a reduction in overall stress and anxiety which, in turn, may provide relief or better management of IC symptoms.

After having subject fill out a health history and conducting a pre-interview, the primary area of concern consistently mentioned by the subject related to anxiety. Subject consistently notices an increase in other symptoms, as well as pain level, with a noticed increase in anxiety levels. This research proposes that a decrease in anxiety may lead to a decrease in symptoms, specifically bladder pain. As well, it is also proposed that a decrease in anxiety, resulting in a decrease in bladder pain, may result in a perceived increase in quality of life (or general feeling of well-being).

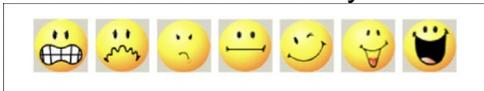
Correlations are indicated in Figure 1 below.



The following measurement tools were used throughout the study and subject was asked to keep a daily journal (sample provided upon request):

\*Bladder pain was measured using a 1-10 rating scale with 1 being the lowest level of pain and 10 being the highest level of pain.

\*Anxiety and quality of life (QOL) was measured using a Likert-type scale that resembled various smiley faces as shown in Figure 2:



The Likert-type scale was converted to a 1 – 7 rating scale for interpretive purposes. For anxiety, 7 was noted for the highest level of anxiety, 1 for the lowest. For QOL, 7 denoted the best QOL, 1 denoted the worst. Positive indication for each area would include lower numbers for anxiety and bladder pain and higher numbers for QOL.

Results are presented from two perspectives; firstly, that of the subject and secondly, that of the therapist.

## Treatment Protocol

This study was performed over a six-week period with the subject receiving weekly sessions on the same day at the same time each week. Length of each session was 60 minutes and no other therapies were added to the session. Given the client's tendency to generally be cold, subject was covered with a blanket. She was also afforded an eye cover to help with relaxation during the session.

The focus for each session included the following systems and specific reflex points: urinary (bladder and kidney reflexes), digestive (colon reflexes), lymphatic (groin reflexes), endocrine (adrenal, pineal, pituitary reflexes), and central nervous system (brain and spine). Reflexes that supported areas in which symptoms were consistently felt along with those that would support body fatigue and the brain were selected.

The following protocol was employed during each session:

Bilateral (BL) Solar Plexus hold

[Treatment was performed starting on the right foot]

Compression pull

Alternating pulls

Spreading (dorsal and plantar sides)

Rub and clear out meridians

Plantar side

Lung press

Knuckle walk

Fist glide

Thumb walk shoulder line, cervical, hallux (hold and press Pineal/Pituitary)

Milk cervical nodes

Flex/Relax toes (circles)

Knuckle walk from pelvic line (PL) to heel

Palm heel area

**Vertically thumb walk zones (Z) 1 – 5 between PL and diaphragm line (DL)**

at Z1 (specific at adrenal reflex)

at Z1/2 at waistline (WL) (specific at kidney reflex)

**Horizontally thumb walk Z1-Z5 between PL and DL**

at Z1 (specific at adrenal reflex)

at Z1/2 at WL (specific at kidney reflex)

Scissor plantar side

Fist glide

Medial Side

Palm medial side of foot

Butterfly/roll medial side of foot

Thumb walk spinal line vertically

Thumb walk bladder reflex horizontally

Wring medial foot (spine)

Dorsal Side

Ankle boogie/shoeshine

Flicking/breezing

Knuckle rub

Rotate on point along groin reflexes with range of motion (ROM)

Finger walk Z1-Z5 from shoulder line (SL) to PL  
 Finger walk lymphatic duct (between Z1/2 from SL to DL)  
 Finger walk axillary lymph nodes (between Z4/5 from SL to DL)  
 Wringing – dorsal side

Evert/Invert Stretch

Compression pull with traction stretch

Entire treatment was repeated on the left foot.

**Results**

During each session, subject was engaged and continuously reported sensations as they were felt. Sensations reported included: various points bilaterally between the DL and PL specifically along the transverse colon and kidney reflexes (all weeks); bilaterally at the adrenal reflexes (all weeks); bilaterally at the lymphatic ducts and axillary lymph node reflexes (all weeks); at the cervical reflexes (bilaterally most weeks) – client reported she carries anxiety-based tension at the neck during first session; on the medial side of the foot at the bladder reflex (bilaterally some weeks).

Sensations significantly decreased during the sessions most weeks; however, when accompanied with reports of anxiety-producing activities during the week (long car rides, spouse injury, pet illness, etc.), sensation at certain reflexes (e.g., adrenal reflexes) decreased only slightly.

Subject’s journal entries consistently reported a very relaxed feeling and reduction of anxiety after each reflexology session. Journaling also noted a continued effect for up to three days after each session.

During each session, therapist noted an increase in relaxation effects (as indicated by apparent reduced body tension in the subject as well as shallower breathing patterns). Therapist also noted a decrease in congestion at indicated reflex points of sensation noted by the subject that correlated with subject’s response to level of sensation noted (i.e., congestion decreased as indicated by the subject or reduced slightly, depending on sight of sensation).

As indicated in Table 1 below, from Week 1 (W1) to Week 6 (W6), subject saw a decline in perceived anxiety levels as well as bladder pain with a peak toward mid-week, which may be an indicator of the IBS flare subject was experiencing at the time. In addition, QOL ratings indicate a slight increase from beginning of sessions to end of the series.

*Table 1: Average results by Week*

	Anxiety (1 - 7)		Bladder Pain (1 - 10)		QOL (7 - 1)	
	AM	PM	AM	PM	AM	PM
W1	5.00	4.29	5.00	5.57	3.14	3.86
W2	2.86	3.57	4.00	6.14	4.29	3.57
W3	2.14	3.71	4.29	5.14	4.14	4.86

W4	3.86	3.86	5.71	5.86	3.86	3.86
W5	3.00	3.29	4.86	4.86	4.86	4.86
W6	2.86	3.57	3.57	5.14	5.14	4.57

Analyzing Table 2, an indicated difference is seen from the beginning of the seven-day period (i.e., Monday - Sunday) to the end of the period. For anxiety, the average for Monday indicates an increase of 1.0 in anxiety; whereas, by Sunday, a decrease of 0.67 is indicated. Similarly, analysis of bladder pain shows an average increase in pain on Mondays of more than 2 points; while Sunday indicates an average decrease of 0.50 for the day. QOL analysis indicates a minimal increase in perceived quality of life over the same seven-day period averaged over six weeks.

Table 2: Average results by Day

	Anxiety (1-7)		Bladder Pain (1-10)		QOL (7 - 1)	
	AM	PM	AM	PM	AM	PM
Monday	2.00	3.00	3.33	5.50	5.50	5.00
Tuesday	2.33	3.50	3.67	6.33	4.50	4.17
Wednesday	3.67	4.50	5.33	5.50	4.00	3.50
Thursday	5.00	3.83	7.33	5.17	3.33	4.00
Friday	3.00	3.50	4.67	4.33	4.17	5.00
Saturday	3.17	4.50	2.67	6.83	4.50	3.67
Sunday	3.83	3.17	5.00	4.50	3.67	4.50

### Recommendation

It must be noted that during the course of this study, the subject suffered a severe IBS flare which may have skewed results as measures were taken by the subject to decrease the symptoms of the IBS flare which resulted in a need for additional prescription medication which was added during Week 5 of the study. Medications prescribed significantly decreased IBS symptoms allowing the subject to focus more on the effects of reflexology regarding her IC complaints. A week following the study, subject reported the positive results experienced after the final week of treatment increased her interest in participating in a second study to further explore reflexology's benefits for IC symptom support.

With the decrease in IBS symptoms and increase in noted improvement at the conclusion of the study, my recommendation for this client would be a second similar six-week series of weekly treatments to further explore whether reflexology would support a reduction in anxiety to improve quality of life. Frequency of the treatments could then be adjusted (i.e., lengthening the time between treatments) depending on results.

### Conclusion

In this instance, based on subject reporting and indicated ratings of the three areas of concern, there may be value added to include reflexology as a modality for management of anxiety and its subsequent effects on IC symptoms.

IC/BPS affects between 3.2 and 7.9 million women and one to four million men and often begins at the age of 40.<sup>3</sup> With no single treatment available and only a CAM path of symptom management beginning to be woven for IC sufferers, reflexology may be a modality to add to the growing list of help for those who are dealing with this non-treatable dis-ease.

While a single person case study may not provide generalizable results for the entire IC population, it may be a starting point in establishing reflexology as another modality of symptom management for those who suffer from IC. The IC community supports research in CAM protocols for help with symptoms, and the lack of research regarding reflexology in this area would indicate future research of reflexology is needed to determine if this modality is viable to add to the list of helpful therapies from which those who suffer from IC and its symptoms may find relief and a return to homeostasis.

- 1 ic-network.com
- 2 mayoclinic.org
- 3 ic-network.com; ichelp.org