



Case Report

A Case Study of Urinary Incontinence Treated with Acupuncture

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Abstract

A 65-year-old post-menopausal woman presented fatigue with severe incontinence and her physician offered her no treatment options. Based on her TCM diagnosis, she began weekly acupuncture sessions with general body acupuncture points. Later incontinence became her chief complaint. At that time, Master Tung's points, chosen for their specific properties, replaced the primary channel points. Once Master Tung's points were employed, her condition improved more rapidly. After 40 treatments, the patient no longer had any dripping, and had no recurrence of her symptoms by her 47th treatment in April 2017. In March 2021, she returned to the clinic for other complaints, and reported that her incontinence symptoms have not returned. Although our case study only represents the experience of one patient, the complete remission of her symptoms warrants additional research into the use of Master Tung's points for the treatment of urinary incontinence.

Keywords: Acupuncture; Case Study; Urinary Incontinence

Introduction

Incontinence is the lack of voluntary control over urination or defecation. It affects many people across all age groups, and can present as a primary or secondary condition, the latter of which is sometimes caused by neurological conditions, surgery, pregnancy, a weakening of the muscles that control these bodily functions, or as a side effect of medication. Incontinence can cause significant emotional distress due to worries and fears over leakage and changing lifestyle habits in order to be able to access bathroom facilities at a moment's notice.

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Currently, the most widely used treatment and management of symptoms include medication and surgery, but as of now there is no known cure for incontinence.

Urinary incontinence is broken up into five main subtypes: stress incontinence, urge incontinence (also known as overactive bladder, or OAB), mixed type incontinence, overflow incontinence, and functional incontinence. Since the symptoms and causes overlap, there can be some difficulty in pinpointing the exact type.

Stress incontinence is characterized by incontinence during activities that exert pressure on the bladder, such as sneezing, coughing, lifting, and/or laughing, and can be caused by pregnancy, obesity, prostate surgery, and certain medications. Urge incontinence is marked by a sudden and intense urge to urinate, which may occur frequently during the day or night. Urge incontinence is also known as 'overactive bladder', and can be caused by diseases that damage the nervous system such as Parkinson's, multiple sclerosis, diabetes, and stroke, or due to muscle damage, infection, bladder stones, and certain medications. Overflow incontinence describes frequent or constant dribbling or leakage due to the incomplete voiding of the bladder and can be caused by weakened bladder muscles, tumors or prostate enlargement, constipation, and certain medications. Functional incontinence is characterized by physical or mental impairments, such as arthritis, mental disabilities, paralysis, and dementia that make it difficult to get to the restroom in time. Finally, mixed type incontinence is a mixture of two or more types of incontinence: women are especially prone to presenting with both stress and urge type incontinence.

According to the North Carolina Medical Journal, estimated costs for the treatment of urinary incontinence ranged from \$19.5B in 2000 to over \$76B in 2016, [1] while an additional \$12.6B was spent in 2000 for the treatment of urge incontinence (OAB) [2]. According to a study published in Adult Urology in 2004, stress incontinence affects about 17 million people in the United States, while urge incontinence affects roughly 34 million people [2]. In a nationally representative sample of American adults around the same time, almost 50% of women and 12% of men reported symptoms of incontinence [3]. Although estimates of prevalence vary widely among sources [4], evidence suggests that the prevalence is increasing over time [3]. Depending on the cause and severity of the incontinence, medication, invasive surgery and lifestyle changes may be recommended to manage symptoms. However, due to the possible side effects and the uncertain prognosis, there has been recent interest in using Acupuncture as a supplemental treatment for urinary incontinence, or as a less-invasive symptom management option to try before taking more drastic measures.

Case History

A 65 year old post-menopausal female patient presented with symptoms of urinary incontinence that had lasted for 10 months before her first visit to the Mineola teaching clinic of the New York College of Traditional Chinese Medicine in September of 2015. During the

height of her incontinence, she would use two incontinence pads at once, each holding 275ml of liquid, and changed them six times daily. She experienced nocturnal leakage up to three times a night, causing fatigue and lack of concentration due to lack of sleep.

Upon further investigation, the patient also presented with a history of fatigue, anxiety, depression, and hypertension. She was also overweight, having gained 25lbs in one year. The patient's blood work showed high levels of TSH due to hypothyroidism, and high levels of liver enzymes of unknown cause. The patient has a history of cholecystectomy, and was diagnosed with benign fatty masses in her right breast.

Diagnosis made by western medicine

The diagnosis by her primary care physician was incontinence due to age, thus no treatment options were pursued. They found no evidence of kidney stones or bladder tumors, and tests for urinary tract infection came back negative. They also measured blood HBA1C to test for diabetes: Her level was 5.4, within normal range.

History of medication taken

The patient takes 25mg Hydrochlorothiazide daily for hypertension, as well as 50mcg Levothyroxine daily to treat her hypothyroidism.

Assessment by Traditional Chinese Medicine (TCM)

The patient's tongue presented as pink with a dark coating, and she had a slippery pulse on both sides. According to channel theory, this patient has mixed symptoms of Spleen deficiency and Kidney deficiency causing Liver stagnation and heat, with phlegm-damp accumulation.

Treatment principle

Clear heat, nourishes the Kidney, and strengthens the Spleen to remove damp and phlegm.

Acupuncture point selection

The selection of the acupuncture points used was based on the principles of: Point specificity, Empirical points, and Channel and Meridian Effect.

Master tung's points used as main acupoint: Xia San Huang (Lower Three Emperors): three point group containing Tian Huang (77.17, Heavenly Emperor), Di Huang (77.19, Earthly Emperor), and Ren Huang (77.21, Human Emperor) which can be applied to treat conditions of the kidney; Di Huang (77.19, Earthly Emperor) is also a specific point for strangury.

Shang San Huang (Upper Three Emperors): three point group containing Ming Huang (88.12, Bright Yellow), Tian Huang (88.13, Heavenly Yellow), and Qi Huang (88.14, This Yellow) which are applied to treat chronic diseases including conditions of the kidneys.

Ma Kuai Shui (1010.14, Horse Fast Water) treats frequent urination; Liu Kuai (1010.16, Six Fast) treats urethritis, used to regulate urinary tract. Shui Jin (1010.20, Water Metal) alleviates fatigue caused by hypofunction of the kidney.

Channel points: Zhongji (CV3), a Front-Mu point of the Urinary Bladder, is a main point as well which benefits the Urinary Bladder, benefits urination, regulates the Lower Jiao, resolves Damp-Heat.

Depending on the patient's additional complaints, the following acupoints were also used intermittently: Lieque (LU7) regulates water passages to aid in smooth urination; Hegu (LI4) with Taichong (LR3) reduces excess conditions such as stagnation; Tianshu (ST25) regulates the spleen and stomach to resolve dampness; Zusanli (ST36) tonifies yang to alleviate fatigue, clears heat, strengthens the spleen to resolve dampness; Fenglong (ST40) transforms phlegm and dampness; Sanyinjiao (SP6) tonifies the spleen to resolve dampness, harmonizes the liver to alleviate depression and hypertension, tonifies the kidneys, regulates urination; Yinlingquan (SP9) --- regulates the spleen and resolves dampness, opens and moves the water passages; Zhaohai (KI6) regulates the lower jiao (which includes the urinary bladder and kidneys).

Needling technique

Even needling technique was used.

Treatment schedule

The patient received 47 treatments in total. She routinely came once a week, with a few exceptions due to her work schedule. The longest she went without treatment was 2 weeks. The patient reported that when she missed a week of treatment, her leaking got worse, and she had to change her sanitary pads more frequently.

Other recommendations

Low carb, low fat diet with exercise.

Results

From September 2015 to April 2017 the patient received 47 treatments. When she began treatment for her incontinence, her tongue was pink with a dark coating, her pulse was slippery, and she changed her incontinence pads 6 times per day on average; at this time she often used two pads concurrently to prevent leaking. The patient provided the researchers with a medium-weight pad to test, saying she sometimes used two heavier-weight pads together. The medium-weight pad was tested and a single one holds up to 275 mL of liquid fully saturated.

When she first came in, her chief complaint was fatigue, and her secondary complaint was incontinence. When urinary incontinence became her chief complaint, the treatment protocol changed, and meridian points were largely replaced by Master Tung's points. Once this happened, she made more rapid progress. By October of 2016, she was down to one pad a day, and by February 2017, after 40 treatments, the patient no longer had any dripping. Her tongue was slightly pale and puffy with a dry coat, and her pulse was slippery and tight. She was still wearing one panty liner per day as an emotional assurance; one of the patient's own panty liners holds only 10 mL of liquid fully saturated.

As of March 2021, during treatment for emotional stress and other issues, the patient reported that she continued to have no dripping. She stopped wearing panty liners later in 2017.

Discussion

In recent years, acupuncture has gained significant spotlight in the treatment of incontinence due to the reported effect of nerve and muscle stimulation. In order to truly measure its efficacy, research

with larger sample populations has been conducted, and the results indicate it is tentatively a promising treatment method.

Research investigating the efficacy of acupuncture on the physiological aspects of incontinence indicates that patients treated with acupuncture show an improvement in pelvic floor muscle strength, which relieves the symptoms of urine leakage. Most studies indicate that acupuncture, like the other available treatment options, is unlikely to fully cure incontinence. However, the use of acupuncture in conjunction with other therapies can likely give greater relief than any one type of treatment alone.

The National Institute of Health (NIH), as well as top research universities such as The John Hopkins School of Medicine are now investigating acupuncture as an alternative or complementary treatment option for the treatment of incontinence. They have already recognized that it has statistically positive influences on a variety of issues, diseases, and symptoms due to its stimulating effects on the central nervous system.

A number of studies have been done to determine the efficacy of acupuncture for the treatment of incontinence. While many of the outcomes have not met statistical significance, the findings are largely positive, especially when compared to drugs with unpalatable side effects. In 1994, Kelleher [5] found that both acupuncture and oxybutynin significantly improved symptoms of irritable bladder, decreasing both the urgency and frequency of micturition. Acupuncture, however, was much better tolerated than the drug: 3 of the 19 people in the drug group refused to continue the study due to the side effects, and another 4 were persuaded to complete the study, but refused to continue taking the drug afterwards. In the acupuncture group, only 3 patients experienced some lightheadedness after treatments, and 2 had some needle discomfort, although only after some treatments. In comparison, “side effects were common for the oxybutynin group, all patients experiencing some degree of dryness of the mouth, and over half the patients complained of headaches, dizziness and gastrointestinal upset and transient visual impairment.”²⁵ As a result, acupuncture has a high level of patient acceptability and, most importantly, treatment compliance. Interestingly, through urodynamic assessment, they also showed that acupuncture increased bladder capacity and improved detrusor compliance. And, unlike oxybutynin, acupuncture also decreased nocturia. So, while the difference in outcomes between the drug group and acupuncture group did not reach statistical significance, it is clear that acupuncture is a viable, if not preferable, alternative.

A number of other studies compare true acupuncture with sham acupuncture. Engberg et al., [6] sought preliminary evidence of the impact of acupuncture in reducing urinary incontinence and improving quality of life and whether sham acupuncture could be an effective placebo. Comparing the number of daytime urinary accidents, they found that true acupuncture decreased incidents by 63% after one week and 67% four weeks post-treatment, while sham acupuncture reduced incidents by 19% after one week and 17% four weeks post-treatment. While their test group of 9 women is too small to reach statistical significance, the impact on those treated with true acupuncture is real and positive.

Emmons and Otto [7] also tested true acupuncture versus sham treatments, and found that both decreased episodes of incontinence: true by 59% and sham by 40%. True acupuncture (but not sham) also

had the effects of decreasing the frequency and urgency of urination, increasing cystometric bladder capacity, increasing maximum voided volume, and improving quality of life, based on the scores of the urinary distress inventory and incontinence impact questionnaire. While the study did not reach statistical significance in terms of decreasing episodes of incontinence, it is worth noting that Zusanli (ST36), one of the points chosen for the sham treatments, can be used to treat urinary disorders [8]. Paik et al cite a study of ST36 that found the point can activate the hypothalamus and bilateral prefrontal cortex, thereby possibly activating the neural brainstem-thalamus-cortex reticular system and increasing neurotransmitter concentrations [9]. They suggest that ST36 may impact micturition by way of the descending serotonergic system, facilitating glutamate-induced activation of the pudendal nerve, required for keeping the external urethral sphincter closed [8].

In their review of randomized control trials, Paik et al find that none of the studies yet performed have reached statistical significance and are thus unable to clearly determine the effect of acupuncture for the treatment of incontinence based solely on the number of incontinent episodes. They note, however, the many additional effects acupuncture has on treating other symptoms of overactive bladder, as well as the overwhelming lack of adverse effects, which were mild or not present [8].

Urinary incontinence is usually considered a symptom, rather than a disease or disorder on its own. When acupuncture is included as a supplemental treatment, it can address the underlying causes of the incontinence, thus alleviating the symptoms. It can also lessen the side effects of any medications prescribed to address the issue. In this case study, the patient suffers from hypothyroidism, treated by Levothyroxine; there appears to be some correlation between hypothyroidism and incontinence, especially in older patients [10]. She also has hypertension, for which she takes Hydrochlorothiazide, a “water pill” and increased urination is a common side effect [11]. Thus, it is impossible to know whether her incontinence was caused by her thyroid symptoms, by the side effects of her medication, or something else entirely. Her symptoms, however, have not returned.

Conclusion

Affecting millions of people every day, urinary incontinence can be a dramatic detriment to quality of life, expensive to manage, and difficult to treat. While further research is needed, our case study, alongside these trials, demonstrates the real and lasting impact that acupuncture can have for the treatment of urinary incontinence.

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