

Acupuncture and Moxibustion Treatment Relieves Lower Urinary Tract Dysfunction

Nobuyuki Otsuka

*Hotal Ancient Medicine Research Institute (HARI)
3-2-1 Hotarugaike-nakamachi, Toyonaka, Osaka, 560-0033 Japan
E-mail: nj00ot@kmj.biglobe.ne.jp*

Keywords: Lower urinary tract dysfunction, overactive bladder, frequent urination, urinary urgency, urinary incontinence, oriental medicine, acupuncture and moxibustion treatment

Patients complaining of urinary symptoms in Japan rapidly increase with age. According to the sample survey, the number of patient suffering from overactive bladder is estimated to be around 8.4 million in Japan. In the 40's it is about 5%, it is 13% in the 60's, 24% in the 70's and 37% in the 80's. It tends to be noticeable in the 70's years old. Women are two to five points less than men, but they have a similar tendency. The classification of symptoms is the most frequent at about 60% in nocturia, 50% in intermediate frequency urination, following the urination lowering and the feeling of urination continued. These diseases are more male than women. Urge incontinence and stress urinary incontinence are more common among women.

As a result of examining urination symptoms of patients visiting an acupuncture and moxibustion treatment facility, there are many females, and peaks are in their 60s. The patient consulted the main complaint as a motor system disease, but about 40% of the patients had dysuria owing to the

interview. As a result of crosstabulation, patients who go to the toilet several times at bedtime may also have urinary urgency and residual feeling. About half of patients have no urine leakage, but the other half have urinary incontinence.

In the case of frequent urination, some patients need to go to the bathroom during treatment. Some patients do not have an hour as a general treatment time. Therefore, for a patient who goes to the toilet more than once on interview, it is necessary to hear more about urinary urgency and residual feeling. Lower Urinary Tract Dysfunction (LUTD) such as voiding symptoms become increasingly important in the future as the aging progresses. The acupuncture and moxibustion effect on LUTD are reported.

LUTD includes urinary symptoms (there is a problem when saving), voiding symptoms (there is a problem in urination), urination symptoms (there is a problem after urination [1]. Representative diseases include overactive bladder (OAB), benign prostatic hyperplasia, low active bladder, and abdominal stress urinary

incontinence.

OAB is urine syndrome caused by excess detrusor muscle activity. International Continence Society (ICS 2001) defined OAB as "Symptom syndrome with urinary urgency as a main symptom, usually accompanied by daytime frequent urination and nocturia, and in some cases urgency urinary incontinence". Regardless of the presence or absence of urge incontinence, it is a syndrome characterized by urinary urgency accompanied by frequent urination and nocturia. OAB may have urinary urgency. Urinary incontinence is not required. OAB is related to a wide range of dysuria.

OAB is divided into neurogenic OAB caused by nerve and nonneuropathic OAB not caused by nerve. Neurogenic OAB is caused by cerebrovascular accidents and spinal cord injury. Causes of non-neurogenic OAB are classified as idiopathic OAB of unknown cause, bladder outlet obstruction (BOO), aging, female pelvic floor disorder. Idiopathic OAB is the most frequent, and application of acupuncture and moxibustion is expected. Diagnosis of OAB is based on subjective symptoms. It is necessary to properly interrogate "feeling of urgency as the main symptom" and "presence or absence of urinary symptoms such as frequent urination". Upon diagnosis, it is necessary to exclude bladder cancer, cystitis, bladder stone, prostate cancer and other diseases.

Treatment of dysuria was commonly prescribed anticholinergic as a drug to suppress bladder contraction. Oxybutynin is the first choice as an anticholinergic

agent with relaxing action of smooth muscle of bladder. In addition to oxybutynin, Propiverine having antimuscarinic action and calcium antagonistic action, Tolterodine of muscarinic receptor antagonist, Trospium and Propanthelin having antimuscarinic action are prescribed as anticholinergic agents. These therapeutic agents suffered from side effects such as dry mouth.

In addition to anticholinergic drugs, There are Flavoxate with relaxing action of smooth muscle, Imipramine of systemic antidepressant, Capsaicin and Resiniferatoxin producing state not responsive to irritation, Botulinum toxin which suppresses contraction of the bladder. Recently developed beta 3 receptor stimulant Betanisu and M3 receptor blocker Vesicare can positively suppress bladder contraction and make relaxed bladder. Traditional Chinese medicine is also used for treatment. Hatimi-ziogan, gosya-zinkigan, Hochu-ekki-to, and shokenchu-to are used.

Quantification is necessary to verify the effect of acupuncture and moxibustion treatment. A commonly known evaluation method is International Prostate Symptom Score (IPSS). The merit is that severity can be judged. The subjects we conducted this time were 7 or more of the mean moderate symptoms and 3 or more times of nighttime urination. OverActive Bladder Symptom Score (OABSS) is used as a simple questionnaire to evaluate the effect of acupuncture and moxibustion treatment on overactive bladder.

Acupuncture effect of BL33 in OAB has been reported [2-6]. Acupuncture was

performed on the left and right BL33 in 9 males and 2 females who had overactive bladder (51 years old to 82 years old, average age 71 years). The main complaint was urge incontinence 9, urinary urgency 2 people. Evaluation of subjective symptoms before and after acupuncture, and urodynamic dynamics examination were carried out to judge the effect of acupuncture. Disposable acupuncture with a diameter of 0.3 mm was inserted between 50 and 60 mm and stimulation by hand was performed for 10 minutes. The number of acupuncture treatments was 4 to 12 (average 7).

In subjective symptoms, urinary incontinence was markedly improved in 5 of 9 patients with urinary incontinence disappeared. The number of urinary incontinence and amount decreased in 2 patients and improvement was confirmed. In addition, the urinary symptoms of two who chiefly complained of urinary urgency became normalized. The improvement rate of subjective symptoms was 82%. The uninhibited contractions observed in all 11 patients in the urinary flow dynamics examination before treatment disappeared in 6 subjects after treatment. In comparison before and after treatment, a significant increase in maximum bladder capacity and bladder compliance was observed, and improvements were also observed in the urodynamic test. Acupuncture treatment using BL33 has been shown to be useful for urge incontinence and urinary urgency associated with OAB.

Acupuncture treatment to BL33 returns to original after stopping treatment. In order to continue the effect,

it is necessary to perform acupuncture treatment at least once every three weeks.

There is a report on the effect of moxibustion treatment by self care that enables continuous treatment even at home. The effectiveness of moxibustion treatment on nocturia was studied [7]. Thirty-four patients with nocturia and resistance to drug therapy (31 men, 3 women, average age 73 years) were included. Two groups were randomly assigned: 20 people in the moxibustion group and 16 people in the Sham moxibustion group that did not raise the temperature. For treatment, the patient himself tried 3 times moxibustion every day to the CV3 of the lower abdomen at home. Evaluation was made on changes in the cumulative number of average nocturnal urination frequency during 1 week before treatment and 1 week during treatment. The results showed that the average nocturnal urination frequency per day was 21.6 times before treatment and 16.8 times during treatment in the moxibustion group, a significant decrease before and after treatment ($p < 0.05$). In the Sham group, no significant difference was found between 19.9 before treatment and 18.4 during treatment. Effective examples were 10 in 20 (50%) in the moxibustion group, 4 in 14 (29%) in the Sham group. The moxibustion to CV3 has reduced the number of urination during the average nightly sleep of one week, and moxibustion treatment to CV3 is an effective treatment method for nocturia.

Results of acupuncture treatment for 20 female patients complaining of

idiopathic unstable bladder symptoms (frequent urination, urinary urgency, urge urinary incontinence) have been reported [8]. Acupuncture sites are SP6, BL23, BL28, BL32, GV4, CV4, CV6. As an evaluation, symptoms and urodynamics examination were conducted. As a result, improvement of symptoms was observed in 77% of 15 patients. There was only one patient who did not see improvement. Patients with improved symptoms confirmed an increase in bladder capacity by urodynamic examinations.

The voiding disorder targeted by Chinese medicine has a statement on urination that is difficult to urinate, but there is no direct description on OAB. This may be because OAB is not serious as a disease. On the other hand, OAB and urinary incontinence markedly lower quality of life (QOL), it is one of the diseases for which remission of symptoms is desired. Especially, in case of idiopathy, elucidation of the mechanism in Western medicine is awaited, and expectation for acupuncture and moxibustion is considered high.

In discussion, it is important to evaluate how the contents reported this time are concerned in acupuncture. BL33 have been reported as treatment holes for overactive bladder. In this case, the acupuncture technique is to take a hole in the third posterior sacral hole, connect the upper iliac spine and the sacral osteotomy to the center on that line. The insertion angle of the acupuncture towards the head 45 ° Insert 40 mm with a scantile so that the acupuncture follows the bone on the back of the sacrum. As a result, the tip of the acupuncture point is

likely to reach the position of BL32 or BL31. In addition, it is thought that BL27 traveling in the proximity part, BL28 is also stimulating. Since it is indicated that baliac points (eight sacral foramina) are effective for urinary leakage, the therapeutic effect on overactive bladder is considered. From the above, there are baliac points and BL27 for acupuncture points related to urinary leakage, and acupuncture points concerning urinary frequency have BL28. It is thought that acupuncture inserted from BL33 stimulates not only baliac points but also BL27 and BL28, thereby reducing overactive bladder symptoms such as urinary frequency, urgency urgency and urinary incontinence.

CV3 means that it is located in the middle (top and bottom, and right and left) of the body. There are uterus and testicle inside, and it is in the deep part of the body. CV3 chiefly refers to itching, reproductive disease, urinary retention, menstrual irregularity, rupture, infertility, and genital itching. The effect of mild moxibustion at CV3 has been reported, but acupuncture does not explicitly mention frequent urination or urinary leakage. Although the effect due to acupuncture stimulation to the SP6 has been reported, acupuncture academics do not explicitly mention frequent urination or urinary leakage [9-12].

On the other hand, overactive bladder is thought to be the kidney deficiency and spleen-kidney deficiency. In the case of kidney yang deficiency, the extent of kidney deficiency progressed, and cold-sho (deficiency-sho) due to a decline in warming effect appeared. Also,

in elderly people and weakness due to chronic diseases, the yang-qi of the kidney are empty, the bladder can not constrain the liquid and the amount of urine is increased by the frequency in the night. It is also thought to be a disease due to attenuation of anabolism, circulation failure, decreased excitability of the brain, etc. due to a decline in endocrine function.

The symptoms of yang deficiency of kidney are renal imperfections, in addition to kidney deficiency, cold of limbs, cold of waist and belly, frequent urination, nocturia, night polyuria, excessive urine, extra bitumen after urination, urinary incontinence or enuresis. Since it is a disease of the kidney, the accompanying symptoms are tinnitus, hearing loss, waist back dullness, slimming, premature ejaculation. Representative holes are SP6, CV3, BL23, GV4, CV6, CV4, BL28.

As described above, in the case of kidney yang deficiency, it is known that overactive bladder symptoms such as urinary frequency, urinary urgency and urinary incontinence are known to occur, and since there are SP6 and BL33 as treatment holes, The effect of BL33 is thought to be indicated not through a single acupuncture point but through remission of kidney yang deficiency.

In conclusion, in Japan where the aging of the population is progressing, patients who complain of lower urinary tract dysfunction including overactive bladder are considered to rapidly increase in the future, especially in the elderly. Western medicine treatment methods for lower urinary tract dysfunction are being

promoted with the development of effective drugs by elucidating the mechanism of smooth muscle receptors and the effectiveness has been shown. On the other hand, these drugs have side effects such as dry mouth, and there are cases where it is difficult to administer to the elderly. There are also idiopathic diseases and cases where Western medical treatment is difficult to apply. As a result, expectations for oriental medicine approaches are increasing.

In acupuncture treatment, the effect of BL33 is reported, and in warm moxibustion the effect of CV3 is reported. In the acupuncture to the SP6, a random comparison test was conducted, and the effectiveness of acupuncture was confirmed. The main symptom of acupuncture points of baliao points including BL33, and BL27 and BL28 those close to baliao points, are frequent urination, nocturia, urinary leakage. The effect is evident from ancient times has been done. SP6 and CV3 can be explained as treatment hole of kidney yang deficiency.

- [1] Nobuo Nara, Toyo Therapy Association edited Textbook Clinical Medicine Detailed Exposition 2nd edition.
- [2] Hiroshi Kitakoji et al. "The Survey of The Urinary Complaints of The Outpatients in Acupuncture Clinics", Journal of the Japan Society of Acupuncture and Moxibustion, 43, pp. 99-108, 1993.
- [3] Hiroshi Kitakoji et al. "Effect of acupuncture on the overactive bladder", The Japanese Journal of Urology 86(10), pp. 1514-1519, 1995.
- [4] Hiroshi Kitakoji et al. "Efficacy of acupuncture and moxibustion treatment regarding the field of Urology and its fact: - Focusing on pollakisuria and urinary urgency-", Journal of the Japan Society of Acupuncture and Moxibustion 65, pp.158-169, 2015.

- [5] Hisashi Honjo et al., "Acupuncture Treatment for A Overactive Type Neurogenic Bladder with Detrusor Sphincter Dyssnergia Patient: A Case Report", Journal of the Japan Society of Acupuncture and Moxibustion 43, pp.115-119, 1993.
- [6] Hisashi Honjo et al., "Analysis of bladder diary with urinary perception to assess overactive bladder symptoms in community-dwelling women", Neurourology and Urodynamics 28, pp.982-985, 2009.
- [7] Kenichi Tomita, "Effect of moxibustion treatment for nocturia: a randomized controlled trial", Journal of the Japan Society of Acupuncture and Moxibustion 59, pp.116-124, 2009.
- [8] T. Philp et.al., Acupuncture in the treatment of bladder instability., Br J Urol. 61(6), pp. 490-3, 1988.
- [9] H.C. Klingler et.al., Use of peripheral neuromodulation of the S3 region for treatment of detrusor overactivity: a urodynamic-based study., Urology. 56(5), pp.766-71, 2000.
- [10] V. Vandoninck et.al., Posterior tibial nerve stimulation in the treatment of urge incontinence., Neurourol Urodyn, 22, pp.17-23, 2003.
- [11] P.L. Chang, Urodynamic studies in acupuncture for women with frequency, urgency and dysuria., J Urol. 140(3), pp. 563-6, 1988.
- [12] S.L. Emmons et.al., Acupuncture for overactive bladder: a randomized controlled trial., Obstet Gynecol. 106(1), pp. 138-43, 2005.

(Accepted 30 September 2014)



Dr. Nobuyuki Otsuka

He graduated from Tohoku University in 1985 and completed the first half term of doctor course of Tohoku University graduate school in 1987. He was awarded doctor degree in 1997 from Tohoku University. He established Hotal Ancient medicine research Institute (HARI) in 1999. Now, he is enrolled at Meiji school of oriental medicine from 2014. He is engaged in research on oriental medicine such as traditional Chinese medicine, acupuncture and moxibustion, qigong etc.