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Clinical Study on Auricular Thumbtack Needle Therapy in the Treatment of Diabetic Neurogenic Bladder in Elderly Patients with Type 2 Diabetes Mellitus

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Abstract: *Objective*: To investigate the clinical efficacy and safety of auricular acupressure therapy in elderly patients with type 2 diabetic neurogenic bladder, and to provide a feasible external treatment intervention plan based on traditional Chinese medicine (TCM) for such patients. *Methods*: A randomized controlled study was conducted, selecting elderly patients with type 2 diabetic neurogenic bladder who met the inclusion criteria and randomly dividing them into a control group and an observation group. The control group received conventional comprehensive diabetes management and bladder function training, while the observation group additionally received auricular acupressure therapy, involving continuous stimulation of relevant auricular points such as Shenmen, Subcortex, Sympathetic, Kidney, Bladder, and Urethra, for a treatment duration of two courses. Changes in maximum urinary flow rate, bladder residual urine volume, TCM syndrome scores, and quality of life index (QOL) were compared between the two groups before and after treatment, and adverse reactions during treatment were recorded and analyzed. *Results*: After treatment, the observation group demonstrated superior improvement in clinical symptoms such as dysuria and urinary retention compared to the control group, with a significant increase in maximum urinary flow rate, a notable decrease in bladder residual urine volume and TCM syndrome scores, and a concurrent improvement in quality-of-life scores. The differences between the groups were statistically significant ($p < 0.05$). No serious adverse events occurred during treatment, and minor local discomfort resolved spontaneously after management, indicating overall good safety. *Conclusion*: As a simple and persistent TCM external treatment method, auricular acupressure therapy can further improve urinary function and quality of life in elderly patients with type 2 diabetic neurogenic bladder when combined with conventional treatment, with high safety and certain clinical promotion value.

Keywords: Auricular thumbtack needle; Type 2 diabetes mellitus; Neurogenic bladder; Elderly patients; External therapy of Traditional Chinese Medicine; Quality of life

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1. Introduction

Diabetes mellitus (DM), as the third major chronic disease after cardiovascular disease and cancer, has become a significant public health issue seriously threatening human health [1]. The latest data from the International Diabetes Federation (IDF) indicates that the number of diabetic patients globally is expected to reach 578 million by 2030 and further increase to 700 million by 2045. Among these, type 2 diabetes mellitus accounts for approximately 90% of all diabetes cases, and its prevalence and incidence continue to show a rising trend [2]. The aging process of China's population is accelerating. Results from the seventh national census show that the population aged 60 and above reached 264 million in 2020, accounting for 18.70% of the total population. Relevant studies suggest that about 30% of the elderly suffer from diabetes, with over 95% being type 2 diabetic patients. The number of elderly diabetic patients in China accounts for approximately one-quarter of the global elderly diabetic population [3].

Elderly patients with type 2 diabetes often have characteristics such as a long disease course, significant blood glucose fluctuations, insufficient insulin secretion, and decreased insulin sensitivity in peripheral tissues. The prolonged hyperglycemic state can lead to damage in multiple systems and organs. Among these, diabetic neurogenic bladder (DNB) is a relatively common but easily overlooked type of diabetic autonomic neuropathy [4–6]. Research shows that among elderly diabetic patients with a disease course exceeding 15 years, the incidence of DNB can be as high as 50%. This condition is primarily closely related to peripheral terminal nerve damage and subsequent neuronal apoptosis, axonal degeneration, nerve fiber demyelination, and impaired nerve regeneration and repair.

The main pathophysiological changes in diabetic neurogenic bladder manifest as impaired sensory nerves of the bladder and decreased detrusor muscle contractility, leading to increased bladder capacity, delayed micturition reflex, and increased post-void residual urine volume [7]. Clinical symptoms often present as frequent urination, urgency, weak urinary stream, and dribbling after urination. In severe cases, urinary retention or even incontinence may occur. Due to long-standing urination disorders, some patients are prone to complicated recurrent urinary tract infections and urinary tract obstruction, which can further lead to renal function impairment and even develop into renal failure or uremia. This not only severely impacts the patient's quality of life but also increases mortality risk and the family's economic burden. Therefore, exploring safe and effective intervention methods is of great clinical significance for improving the prognosis of elderly type 2 diabetic patients with DNB [8]. Modern medicine believes that the occurrence of DNB is closely related to the oxidative stress response induced by a long-term hyperglycemic environment, involving factors such as damage to urothelial function, abnormal neural pathways, bladder detrusor dysfunction, and polyuria. Current clinical treatments mainly include blood glucose control, neurotrophic drug therapy, and non-pharmacological methods such as bladder function training, electrical stimulation, intermittent catheterization, or surgical intervention. However, these methods often require a long treatment period, some measures have poor patient compliance, and recurrence rates are high after cessation of treatment. The overall efficacy remains unsatisfactory, necessitating the search for more effective treatment strategies suitable for long-term application [9]. Traditional Chinese Medicine has long recognized diabetic neurogenic bladder, often categorizing it under conditions like "Xiao Ke" (consumptive thirst) or "Long Bi" (dribbling and retention). "The General Records of Holy Universal Relief" states, "Prolonged Xiao Ke injures kidney Qi. The kidney governs water; if kidney Qi declines and fails, Qi transformation becomes abnormal, and opening and closing become dysfunctional," pointing out that kidney Qi deficiency and failure of bladder Qi transformation are important internal causes of this disease. Elderly patients with type 2 diabetes and DNB often suffer from kidney essence depletion, exuberant yin cold, imbalance of water and fire, forcing yang to float outward. Coupled with acquired malnourishment, insufficiency of middle Qi, unfavorable Qi transformation, and

dysfunction of water passages, this ultimately leads to abnormal urination [10,11]. In recent years, the application of TCM in treating this disease has continuously expanded, with oral administration of Chinese herbs, acupuncture, moxibustion, acupoint application, and auricular therapy showing certain efficacy. Among these, external therapies of TCM have gained attention due to their simple operation and relatively few side effects. However, in practical application, moxibustion and acupoint application involve medicinal components, which can easily cause local skin burning, blistering, or allergic reactions in elderly patients. Acupuncture therapy, due to its painful stimulation, may cause fear in some patients, leading to insufficient compliance. Auricular point pressing with seeds also faces issues like detachment during treatment, affecting efficacy [12]. Therefore, based on existing treatments, there is still a need to further explore safer, more comfortable, and convenient intervention methods suitable for long-term application.

The thumbtack needle, also known as a press-tack intradermal needle, is an improved form based on traditional intradermal needles, embodying the combination of TCM's cutaneous region theory and acupoint theory [13]. After embedding the thumbtack needle subcutaneously, it provides continuous and stable stimulation to the local skin and collateral vessels, promoting the circulation of Qi and blood in the meridians, regulating visceral functions, and stimulating the body's vital Qi. The needle body is small, its color is close to skin tone, it does not affect aesthetics, causes minimal pain, and is easily accepted by patients [14]. In traditional medicine, auricular points are believed to be closely related to the Zang-Fu organs and meridians. Stimulating corresponding points on the auricle can regulate the functions of the whole body. Auricular thumbtack needle therapy leverages the anatomical advantages of the ear, allowing for prolonged needle retention. Patients can perform self-pressing at any time as instructed, which helps enhance the stimulation effect and improve treatment compliance [15].

Existing studies have shown that auricular thumbtack needle therapy can significantly improve urination function and quality of life in conditions like postoperative urinary retention. However, clinical reports on its application in elderly patients with type 2 diabetic neurogenic bladder are relatively scarce, and the evidence base is insufficient [16]. Based on this, this study takes elderly patients with type 2 diabetic DNB as the research object, adopts a randomized controlled design, systematically observes the effects of auricular thumbtack needle therapy on patients' clinical symptoms, urination function, and quality of life, and evaluates its safety. The aim is to provide a safe, effective, and easily promotable new external treatment idea of TCM for the management of elderly type 2 diabetic neurogenic bladder.

2. Materials and methods

2.1. General information

Elderly patients with type 2 diabetic neurogenic bladder who were hospitalized in our hospital from January 2023 to December 2025 were selected as the study subjects. All patients were clearly diagnosed through relevant examinations and signed informed consent forms. This study was approved by the hospital's ethics committee. General patient information including age, gender, duration of diabetes, underlying diseases, and medication history were collected. There were no statistically significant differences in these baseline data between the two groups, indicating comparability.

2.1.1. Inclusion criteria

(1) Meeting the relevant diagnostic criteria for diabetic neurogenic bladder, with a confirmed history of type 2 diabetes;

(2) Age ≥ 60 years;
(3) Presenting with clinical manifestations such as dysuria, weak urinary stream, prolonged voiding time, or urinary retention, with ultrasound indicating post-void residual urine volume > 100 mL;
(4) Conscious, able to cooperate with the required examinations and treatments; voluntary participation in this study.

2.1.2. Exclusion criteria

(1) Patients with acute complications such as diabetic ketoacidosis or hyperosmolar hyperglycemic state;
(2) Urination disorders caused by benign prostatic hyperplasia, urinary tract stones, tumors, or urethral malformations;
(3) Neurogenic bladder due to other causes such as stroke or spinal cord injury;
(4) Patients with severe dysfunction of vital organs like the heart, liver, or kidneys;
(5) Patients with active urinary tract infection or severe mental disorders; currently participating in other clinical studies.

2.2. Methods

A randomized controlled study design was adopted, and eligible patients were divided into a control group and an observation group according to the random number table method. The control group received conventional comprehensive treatment, including diabetic diet management, health education, appropriate aerobic exercise, blood glucose monitoring, and urination training. Oral hypoglycemic drugs or insulin were used according to individual conditions to maintain relatively stable blood glucose levels. The observation group received auricular acupuncture with press-needles in addition to the treatment provided to the control group. Auricular points such as Shenmen, Subcortex, Sympathetic, Kidney, Bladder, and Urethra were selected. Traditional Chinese medicine practitioners performed standardized operations by fixing press-needles at the corresponding acupoint and instructing patients to press them as required. The needles were retained for 2 days each time and replaced on the third day. Two weeks constituted one treatment course, and a total of two treatment courses were administered. During the treatment period, the local skin condition and the patient's subjective feelings were closely observed, and timely treatment was provided if any discomfort occurred.

2.3. Observation indicators

Assessments were conducted before treatment and after completing 2 courses of treatment. The observation indicators included:

(1) General information and baseline data
Compare general information such as gender, age, duration of diabetes, duration of neurogenic bladder, and BMI between the two groups to assess baseline comparability.
(2) Blood glucose control related indicators
Observe and compare changes in fasting blood glucose, 2-hour postprandial blood glucose, and glycosylated hemoglobin levels before and after intervention in both groups to evaluate the overall metabolic control level.
(3) Urinary function indicators
Record the number of daily urinations, single urine volume, post-void residual urine volume, and

occurrence of urinary retention before and after intervention to comprehensively assess the improvement in bladder emptying function.

(4) Lower urinary tract symptom score

Use relevant scales for lower urinary tract symptoms to score before and after treatment, comparing changes in symptom severity.

(5) Quality of life assessment indicators

Evaluate using a quality-of-life scale from aspects including physiological function, psychological state, social activities, and overall life satisfaction to analyze the impact of the intervention on patients' daily lives.

(6) Changes in TCM syndrome score

Quantify the scores of symptoms such as low urine output, weak urination, soreness and weakness of waist and knees, and mental fatigue and lack of strength according to TCM syndrome scoring standards. Compare the improvement in TCM syndromes between the two groups before and after treatment.

(7) Safety and adverse reaction observation

Record adverse reactions such as local skin discomfort, pain, and infection occurring during the treatment process to assess the safety of auricular thumbtack needle therapy in elderly patients.

2.4. Statistical methods

All data were analyzed using SPSS 25.0 software. Measurement data were expressed as mean ± standard deviation. Paired *t*-tests were used for intra-group comparisons before and after treatment, and independent sample *t*-tests were used for inter-group comparisons. Count data were expressed as number of cases or percentages, and the χ^2 test was used. A p-value < 0.05 was considered statistically significant.

3. Results

3.1. General information and baseline data comparison between the two groups

There were no statistically significant differences between the two groups in terms of gender, age, duration of diabetes, duration of neurogenic bladder, and BMI ($p > 0.05$), as shown in **Table 1**.

Table 1. Comparison of general information and baseline data between the two groups ($\overline{x} \pm s$)

Indicator	Gender (M/F)	Age (years)	Diabetes duration (years)	DNB duration (years)
Observation group (n = 40)	21/19	82.9 ± 7.6	9.3 ± 2.8	4.5 ± 1.2
Control group (n = 40)	22/18	83.1 ± 7.4	9.1 ± 3.0	4.6 ± 1.4
t value/χ^2 value	-	0.701	0.334	0.238
p value	-	0.941	0.743	0.781

3.2. Comparison of urinary function indicators between the two groups

After intervention, the post-void residual urine volume in the observation group decreased significantly ($p < 0.05$), suggesting improvement in bladder emptying function. The maximum urinary flow rate increased slightly, but the difference was not statistically significant ($p > 0.05$), as shown in **Table 2**.

Table 2. Comparison of urinary function indicators between the two groups ($\overline{x} \pm s$)

Indicator	Residual urine volume (mL)	Max. urinary flow rate (mL/s)
Observation group (n = 40)	74.4 ± 5.30	10.3 ± 1.77
Control group (n = 40)	50.9 ± 11.35	12.2 ± 1.40
t value/χ^2 value	8.17	2.58
p value	< 0.001	0.301

3.3. Comparison of TCM syndrome score changes between the two groups

Before treatment, the TCM syndrome scores of the two groups were similar ($p > 0.05$). After treatment, the TCM syndrome scores in both groups decreased. The observation group was superior to the control group in symptom improvement ($p < 0.05$), as shown in **Table 3**.

Table 3. Comparison of TCM syndrome scores before and after treatment between the two groups ($\overline{x} \pm s$)

Group	TCM syndrome score before intervention	TCM syndrome score after intervention
Control group (n = 40)	73.85 ± 6.57	62.59 ± 6.19
Observation group (n = 40)	74.13 ± 6.23	55.47 ± 5.84
t value	0.213	5.642
p value	0.873	< 0.001

3.4. Comparison of blood glucose control related indicators between the two groups

After treatment, fasting blood glucose, postprandial blood glucose, and HbA1c in the observation group all decreased, suggesting that the intervention had a positive effect on improving blood glucose control ($p < 0.05$), as shown in **Table 4**.

Table 4. Comparison of blood glucose control indicators between the two groups ($\overline{x} \pm s$)

Group	Fasting blood glucose (mmol/L)	2h postprandial blood glucose (mmol/L)	HbA1c (%)
Control group (n = 40)	7.86 ± 1.23	10.33 ± 1.67	8.04 ± 0.71
Observation group (n = 40)	7.02 ± 1.11	9.52 ± 1.43	7.46 ± 0.64
t value	4.282	5.031	4.555
p value	< 0.001	< 0.001	< 0.001

3.5. Comparison of lower urinary tract symptom scores between the two groups

After two courses of intervention, the scores for dysuria, urgency, frequency, and nocturia in the observation group decreased significantly, indicating a marked improvement in lower urinary tract symptoms ($p < 0.05$), as shown in **Table 5**.

Table 5. Comparison of lower urinary tract symptom scores between the two groups ($\overline{x} \pm s$)

Group	Difficulty urinating	Urinary urgency	Frequent urination	Nocturia
Control group (n = 40)	7.24 ± 1.51	6.98 ± 1.73	7.90 ± 1.24	4.35 ± 1.32
Observation group (n = 40)	4.54 ± 1.23	4.01 ± 1.08	4.33 ± 1.11	3.23 ± 1.10
t-value	7.0518	6.365	6.881	4.333
p-value	< 0.001	< 0.001	< 0.001	< 0.001

3.6. Comparison of quality-of-life assessment between the two groups

Before treatment, the quality-of-life scores of the two groups were similar ($p > 0.05$). After treatment, the quality-of-life scores in both groups increased. The observation group was superior to the control group in terms of quality-of-life improvement ($p < 0.05$), as shown in **Table 6**.

Table 6. Comparison of quality-of-life scores before and after treatment between the two groups ($\overline{x} \pm s$)

Group	QOL score before intervention	QOL score after intervention
Control group (n = 40)	41.60 ± 5.21	49.37 ± 5.68
Observation group (n = 40)	42.14 ± 5.03	56.84 ± 5.96
t-value	0.432	5.739
p-value	0.687	< 0.001

3.7. Safety and adverse reaction observation between the two groups

No serious adverse events occurred during the treatment process. Local skin discomfort and mild pain were rare and self-resolving ($p > 0.05$), as shown in **Table 7**.

Table 7. Comparison of safety and adverse reactions between the two groups (n, %)

Group	Local skin discomfort	Pain	Infection	Overall incidence of adverse reactions (%)
Control group (n = 40)	3	4	0	12.5
Observation group (n = 40)	2	3	0	12.5
t-value	0.591	0.701	0	-
p-value	0.653	0.581	1.000	1.00

4. Discussion

With the accelerating aging of China's population, the number of elderly patients with type 2 diabetes continues to increase, and the impact of its chronic complications on quality of life and health outcomes is becoming increasingly prominent [17]. Diabetic neurogenic bladder, as an important manifestation of diabetic autonomic neuropathy, is often overlooked by patients or confused with other urinary system diseases due to its insidious early symptoms, leading to delayed diagnosis and treatment. The baseline data of this study show that the diabetes duration in both groups was approximately 9 years, and the duration of neurogenic bladder was approximately 4.5 years, suggesting that patients were mostly in the mid-stage of the disease course, already exhibiting significant

urination function impairment but still having room for improvement [18].

The results of this study showed that, based on conventional treatment, the observation group with added auricular thumbtack needles had a significant decrease in post-void residual urine volume ($p < 0.001$). Although the maximum urinary flow rate increased, the difference was not significant ($p > 0.05$), indicating that auricular thumbtack needles have a relatively clear effect on improving bladder emptying function, especially urinary retention. Concurrently, lower urinary tract symptom scores, including dysuria, urgency, frequency, and nocturia, all decreased significantly, indicating that patients' urination discomfort was alleviated and daily life became more comfortable. Quality of life scores showed that the observation group was superior to the control group in terms of physical function, psychological state, and participation in social activities ($p < 0.001$), further demonstrating the positive effect of auricular thumbtack needles on daily life [19]. Regarding blood glucose, the observation group had lower fasting blood glucose, postprandial blood glucose, and HbA1c than the control group ($p < 0.001$), suggesting that auricular thumbtack needles, while improving bladder function and alleviating urination-related stress, also have an auxiliary effect on blood glucose control. Although auricular thumbtack needle therapy itself is not a hypoglycemic method, by alleviating the physical stress caused by urinary retention, it contributes to blood glucose stabilization. This also reflects TCM's holistic regulation concept of "unblocked then no pain, regulated then harmony" [20,21]. From a TCM perspective, elderly type 2 diabetes complicated with DNB is often due to kidney Qi insufficiency and failure of bladder Qi transformation, manifesting as low urine output, weak urination, soreness and weakness of waist and knees, and easy fatigue. In this study, the TCM syndrome score decreased more significantly in the observation group ($p < 0.001$), indicating that auricular thumbtack needles can holistically regulate visceral functions while simultaneously improving related symptoms. This corroborates the observed improvement in urination function from the modern medicine perspective [22]. In terms of safety, the incidence of mild local skin discomfort or mild pain during the treatment period was low in both groups, both resolving spontaneously. The overall adverse reaction rate was the same (12.5%), and no serious adverse events occurred, indicating that this therapy is well-tolerated and relatively safe in elderly patients. Compared to traditional acupuncture, moxibustion, or acupoint application, auricular thumbtack needles are small in size, provide sustained stimulation, are easy to operate, can be used long-term, and result in higher patient compliance, making them very suitable for long-term intervention in chronic diseases [23,24].

The results of this study further support auricular thumbtack needle therapy as an effective adjunct to conventional treatment. By continuously stimulating the reflex zones of auricular points, it can regulate autonomic nerve function, improve bladder emptying and lower urinary tract symptoms, while simultaneously enhancing patients' quality of life. This intervention plan is simple to operate, offers good comfort, is suitable for long-term management of elderly patients with chronic diseases, and reflects the application value of the TCM concept of "treatment based on syndrome differentiation and holistic regulation" in modern clinical practice [25].

5. Conclusion

In summary, auricular thumbtack needle therapy has significant advantages in improving urination function, lower urinary tract symptoms, and quality of life in elderly patients with type 2 diabetic DNB, with good safety. It provides a clinically feasible and promotable external treatment plan of TCM. Future research could further combine urodynamic assessments and long-term follow-up to verify the persistence of the efficacy and explore its mechanism of action, providing a more comprehensive evidence-based basis for the management of complications

in elderly diabetic patients.

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Disclosure statement

The authors declare no conflict of interest.

References

[1] Wang X, He L, Tong L, et al., 2025, Observation on the Therapeutic Effect of Thumbtack Needle Therapy on Senile Type 2 Diabetic Constipation. Zhejiang Journal of Traditional Chinese Medicine, 60(9): 804–805.

[2] He L, Tong L, Li J, et al., 2025, Effect of Thumbtack Needle Therapy on Senile Type 2 Diabetic Constipation and Blood Glucose. Chinese Journal of Geriatric Care, 23(2): 55–58.

[3] Wang R, Lv M, Zhang C, 2019, Application of Auricular Thumbtack Needle Combined with Thunder-Fire Moxibustion in Elderly Patients with Neurogenic Bladder of Kidney-Yang Decline Type. Journal of Integrated Traditional Chinese and Western Medicine Nursing, 5(6): 40–44.

[4] Zhao Y, Jin L, Li S, 2012, Observation on the Therapeutic Effect of Acupuncture Combined with Medication on Diabetic Neurogenic Bladder. Shanghai Journal of Acupuncture and Moxibustion, 31(2): 98–99.

[5] Chen X, Li S, Lin Z, et al., 2019, Clinical Application of Thumbtack Needle Acupuncture at Tianshu Point in Bowel Preparation Before Colonoscopy in Elderly Patients with Type 2 Diabetes. Diabetes New World, 22(23): 40–41.

[6] Qin S, Yang T, Tang H, et al., 2025, Effect of Combined Acupuncture Therapy of Traditional Chinese Medicine on Neurogenic Bladder After Spinal Cord Injury and Its Influence on Urodynamics. Tianjin Journal of Traditional Chinese Medicine, 42(4): 426–430.

[7] Mu S, Zhao Y, Gao Q, 2025, Effect of Auricular Thumbtack Needle Combined with Eszopiclone Tablets on Insomnia Patients After Stroke and Its Influence on Serum Brain-Derived Neurotrophic Factor and Interleukin-1β Levels. Journal of Practical Clinical Medicine, 29(12): 86–90.

[8] Zhang Q, Yang M, Xiong Y, et al., 2025, Observation on the Clinical Effect of Thumbtack Needle Embedding at Auricular Points Combined with Eszopiclone Tablets in the Treatment of Type 2 Diabetes Patients with Insomnia. Contemporary Medicine, 31(5): 45–49.

[9] Duan P, Zhang Y, Su X, et al., 2024, Clinical Observation of TCM Aromatherapy Combined with Auricular Point Pressing with Seeds in the Treatment of Elderly Type 2 Diabetes Complicated with Insomnia. Geriatrics & Health Care, 30(2): 450–455.

[10] Fan C, Ding X, Ma Y, et al., 2019, Clinical Observation on Acupuncture Combined with Auricular Point Pressing for Obese Type 2 Diabetes. Shanghai Journal of Acupuncture and Moxibustion, 38(10): 1079–1082.

[11] Fan C, Zhang Y, Zhang J, et al., 2019, Observation on TCM Syndromes of Acupuncture Combined with Auricular Point Pressing for Obese Type 2 Diabetes. Clinical Journal of Traditional Chinese Medicine, 31(3): 522–524.

[12] Zhang Y, 2015, Discussion on the Effect of Auricular Point Pressing Therapy in Treating Type 2 Diabetes Patients Complicated with Insomnia. Contemporary Medical Symposium, 13(17): 23–24.

[13] Zhao R, Zhang G, Zhang K, et al., 2025, Clinical Effect of Huang's Acupuncture Therapy Combined with Rehabilitation

Training in the Treatment of Patients with Neurogenic Bladder Urinary Incontinence After Stroke. Medical Innovation of China, 22(9): 128–132.

[14] Lv T, Lv J, Jiang C, et al., 2019, Clinical Study on Electroacupuncture Nerve Stimulation Therapy for Diabetic Neurogenic Bladder. Journal of Clinical Acupuncture and Moxibustion, 35(1): 34–37.

[15] Liu J, Wang Y, Xu Z, et al., 2025, Observation on the Efficacy of Acupuncture Combined with Pelvic Floor Muscle Training in the Treatment of Neurogenic Bladder After Stroke. Modern Journal of Integrated Traditional Chinese and Western Medicine, 34(12): 1686–1689.

[16] Li H, 2017, Clinical Efficacy Study of Acupuncture Combined with Medication in the Treatment of 60 Cases of Type 2 Diabetic Neurogenic Bladder. Practical Clinical Journal of Integrated Traditional Chinese and Western Medicine, 17(4): 58–59.

[17] Zhang F, 2014, Treatment of 30 Cases of Male Diabetic Neurogenic Bladder with Acupuncture and Medication. Henan Traditional Chinese Medicine, 34(2): 292–293.

[18] Chen Y, Qiu J, Huang R, et al., 2017, Overview of Research on External Therapies of Traditional Chinese Medicine for Diabetic Neurogenic Bladder. Journal of Ethnomedicine and Ethnopharmacy, 26(17): 28–31.

[19] Song L, Wang X, 2005, One Case of Neurogenic Bladder Cured by Traditional Chinese Medicine Therapy. Chinese Community Doctors, 7(7): 60–61.

[20] Duan H, Liu C, 2021, Research Progress on Moxibustion Therapy for Neurogenic Bladder. Henan Traditional Chinese Medicine, 41(9): 1447–1452.

[21] Zhang Z, Ren Y, Huang X, et al., 2025, Observation on the Therapeutic Effect of Auricular Acupuncture Combined with Intermittent Catheterization on Urethral Sphincter Overactivity in Patients with Neurogenic Bladder After Spinal Cord Injury. Acupuncture Research, 50(5): 584–591.

[22] Luo J, Leng H, Qi M, et al., 2025, Visual Analysis of Traditional Chinese Medicine Therapy for Neurogenic Bladder. Traditional Chinese Medicine, 14(2): 747–759.

[23] Shen Y, Guo H, Wang J, et al., 2017, Clinical Study on Pestle Needle Therapy Combined with Bladder Function Training for Neurogenic Bladder. Sichuan Traditional Chinese Medicine, 35(9): 175–177.

[24] Li X, Zhang Z, Huang P, et al., 2021, Bayesian Network Meta-Analysis of Acupuncture-Related Therapies for Diabetic Neurogenic Bladder. Shaanxi Traditional Chinese Medicine, 42(7): 967–973.

[25] Lin Q, 2023, Effect of Acupuncture Combined with Auricular Therapy on Neurogenic Bowel Dysfunction in Patients with Spinal Cord Injury. Shaanxi Traditional Chinese Medicine, 44(9): 1293–1296.