Acupuncture Care For A Patient With Tennis Elbow (Lateral Elbow Tendinopathy): A Case Report

Noenggaling Tjatur Sukma[1]*, Ikhwan Abdullah[2], Chantika Mahadini[3], Mayang Wulandari[4]

[1,2,3,4]Acupuncture Study Program, Faculty of Acupuncture, Institut Teknologi, Sains, dan Kesehatan RS dr. Soepraoen Kesdam V/Brawijaya Malang, Indonesia
*Correspondence author:
Email: noenggalingtj@gmail.com

Abstract.
Tennis elbow, also known as lateral elbow tendinopathy, is a disorder of the wrist extensor tendon that causes lateral elbow pain, reduced grip strength, and impaired arm function. This study aimed to describe the application of acupuncture care based on Traditional Chinese Medicine (TCM) principles and the clinical changes observed in a patient with tennis elbow. A descriptive clinical case study was conducted in a 38-year-old man with right-sided tennis elbow lasting approximately six weeks. The patient worked with prolonged computer use and played padel and tennis four to five times per week. Acupuncture care was delivered in six weekly sessions using 1-cun needles, lifting–thrusting stimulation, and 15 minutes of needle retention in the supine position. Points used included LI11, LI10, LI12, SJ10, Ashi point, LI4, SJ5, and ST36, with adjustments at each session. TCM assessment resulted in a diagnosis of Bi Zheng with Qi and Blood stagnation involving the Large Intestine and Sanjiao meridians. Pain intensity was assessed using the Numeric Rating Scale (NRS) at the beginning and end of each session, arm function was evaluated using a researcher-developed assessment sheet adapted from the Patient-Rated Tennis Elbow Evaluation (PRTEE) domains, and grip strength was measured using a hand grip dynamometer. After six sessions, NRS decreased from 7/10 to 3/10, the functional score decreased from 52/100 to 27/100, and right-hand grip strength increased from 22 kg to 27 kg. TCM-based acupuncture care was accompanied by clinical improvement in this patient, but the findings cannot be generalized as they involve a single patient without a comparison group.
Keywords: *tennis elbow; lateral elbow tendinopathy; acupuncture; Traditional Chinese Medicine; Bi Zheng and case report.*

I. INTRODUCTION

Tennis elbow, known in modern terminology as lateral elbow tendinopathy, is a painful condition around the lateral epicondyle associated with degenerative changes of the wrist extensor tendon, particularly the extensor carpi radialis brevis (ECRB). Repetitive mechanical loads exceeding the adaptive capacity of the tendon produce microtrauma, disorganized collagen structure, and increased tendon sensitivity, resulting in pain during gripping and resisted wrist extension [1].

The condition is not confined to tennis players. An analysis of South Korea's national claims data for 2010–2018 identified more than 213,000 patients seeking health care for lateral epicondylitis, including substantial use of traditional medicine services [2]. Reported risk factors include high hand-force activities and repetitive forearm movements, although the strength of causal inference remains limited [1,5].

Management options include therapeutic exercise, medication, injections, and needle-based therapies. Active exercise interventions show better outcomes than passive approaches, although effect sizes remain small [9]. Needle-based methods such as dry needling [3,8], acupotomy [6], percutaneous electrolysis [14], and warm acupuncture combined with extracorporeal shock wave therapy [7] have shown potential benefits. For acupuncture specifically, a systematic review and meta-analysis of 18 randomized trials reported significant short-term pain reduction [11].

Within Traditional Chinese Medicine (TCM), musculoskeletal pain such as tennis elbow is categorized as Bi Zheng, an obstruction of Qi and Blood flow in the meridians producing pain and dysfunction [13]. Pattern diagnosis integrates history, tongue, and pulse findings, while point selection combines local and distal points along the involved meridians [4,12]. Although evidence for acupuncture effectiveness continues to grow, documentation of individualized acupuncture care based on TCM pattern diagnosis remains scarce. This case report aims to describe the application of TCM-based acupuncture care in a patient with tennis elbow, together with observed changes in pain, arm function, and grip strength over six treatment sessions.

II. CASE PRESENTATION

A 38-year-old man presented with pain on the outer aspect of the right elbow of approximately six weeks' duration. His work involved prolonged computer use in a seated position, and he played padel and tennis four to five times per week. Pain worsened when gripping a racket, hitting strokes, lifting objects with the right hand, and working at the computer for extended periods. There was no history of direct trauma to the elbow. During the study period the patient took no medication and received no other therapy.

Clinical examination revealed tenderness over the right lateral epicondyle, increased pain on resisted wrist extension, and pain on forceful gripping; elbow range of motion was normal. Baseline findings were: NRS 7/10; functional evaluation sheet score 52/100 (a researcher-developed sheet adapted from PRTEE domains, not formally validated); right grip strength 22 kg and left grip strength 32 kg, measured in sitting with 90° elbow flexion and neutral forearm.

TCM assessment showed a pale-red tongue with stasis spots and a thin white coating, and a wiry (Xian) and choppy (Se) pulse. The combination of localized pain, tenderness, worsening after repetitive use, a history of repetitive loading, and the tongue and pulse findings supported a diagnosis of Bi Zheng with Qi and Blood stagnation involving the Large Intestine (LI) and Sanjiao (SJ) meridians. The treatment principle was to promote Qi and Blood flow, remove meridian obstruction, relieve local pain, and support upper-limb function [4,12,13].

III. Treatment and Outcomes

3.1 Intervention Protocol

Treatment was delivered in six weekly sessions. The patient was positioned supine; single-use sterile 1-cun needles were inserted with lifting–thrusting stimulation to patient tolerance, followed by 15 minutes of retention. Local points included LI11, LI10, LI12, SJ10, and Ashi points; distal points included LI4, SJ5, and ST36 [4]. Point selection was adjusted at each session according to the patient's response. NRS was recorded at the beginning and end of each session; the functional evaluation sheet and grip strength were repeated after the sixth session.

3.2 Outcomes

After the first session the patient reported feeling more relaxed with mild pain reduction (post-session NRS 6/10). Improvement proceeded gradually: post-session NRS values for sessions two through six were 6, 5, 4, 3, and 3, respectively. The patient reported more comfortable computer work from the third or fourth session and resumed light-intensity sports around the fifth session. Mild pain still occurred after high-intensity sports activity at the end of the treatment course. No adverse events were reported.

Table 1. NRS course over six treatment sessions

Time point	NRS
Before session 1 (baseline)	7
After session 1	6
After session 2	6
After session 3	5
After session 4	4
After session 5	3
After session 6	3

After six sessions, the functional evaluation score decreased from 52 to 27 (0–100 scale, lower is better), particularly for computer use and gripping activities. Right grip strength increased from 22 kg to 27

kg (+5 kg), although it had not reached the baseline value of the left hand (32 kg). Session-by-session before–after values for function and grip strength were not evaluated because these two outcomes were measured only at baseline and at the end of the course.

Table 2. Outcome changes before and after six sessions

Outcome	Baseline	Week 6	Change
NRS (0–10)	7	3	−4
Functional evaluation sheet (0–100)	52	27	−25
Right grip strength (kg)	22	27	+5

IV. DISCUSSION

This report documents TCM pattern-based acupuncture care for tennis elbow and shows gradual improvement in pain, function, and grip strength over six sessions. The direction of change is consistent with the systematic review by Ma et al., which reported short-term effects of acupuncture on pain and function in lateral elbow tendinopathy [11]. Those findings derive from controlled trials, whereas the present report is a single case without a comparator, so effect sizes cannot be directly compared.

Within the TCM framework, the diagnosis of Bi Zheng with Qi–Blood stagnation was established from the overall findings rather than pain location alone: persistent pain and tenderness suggest stasis; the wiry pulse supports Qi stagnation; the choppy pulse and tongue stasis spots support Blood stasis [12,13]. Use of the LI and SJ meridians follows their pathways along the lateral arm and elbow [4]. The local–distal point combination and inter-session point adjustment reflect the principle of individualized treatment in TCM [4,12].

From a biomedical perspective, plausible mechanisms include central nociceptive modulation, local effects on tissue circulation, and neuroimmune regulation. Experimental work has shown that electroacupuncture can activate the vagal–adrenal axis in a location- and intensity-specific manner in an animal model [10]; as preclinical evidence, this cannot be extrapolated directly to the mechanism in this human case. Other needle-based therapies (dry needling, acupotomy, percutaneous electrolysis) show positive results in similar conditions [3,6,8,14], but they differ in theoretical basis, target tissue, and technique, and therefore cannot be equated with TCM acupuncture.

Several interpretive notes are warranted. First, pain reduction and improved grip may reflect reduced pain inhibition of muscle contraction rather than structural tendon change. Second, improvement may have been influenced by the natural course of the condition, regression to the mean, contextual/expectation effects, and the patient's activity modification. Third, the functional evaluation sheet used here was developed by the researcher by adapting PRTEE domains and has not undergone formal validity and reliability testing, so its score is descriptive and not comparable with the official PRTEE. Fourth, left-hand grip strength was not remeasured at the end of treatment, so the between-hand comparison is supplementary information only.

The main limitations of this report are its single-case design without a control group, a six-week follow-up without assessment of the durability of improvement, the absence of separately documented pre-session NRS values for sessions two through six, and the lack of documented repetition details for grip strength testing. Future research with stronger designs, validated instruments, standardized grip protocols, and longer follow-up is needed to assess the persistence of benefits.

V. CONCLUSION

In this patient with right-sided tennis elbow, six sessions of TCM-based acupuncture care (diagnosis of Bi Zheng with Qi–Blood stagnation of the LI and SJ meridians) were accompanied by a decrease in NRS from 7 to 3, improvement in the arm function score from 52 to 27, and an increase in grip strength from 22

kg to 27 kg. Given the limitations of the case-report design, these changes represent a clinical illustration in a single patient and do not establish the general effectiveness of acupuncture. Documentation of pattern-based acupuncture care may serve as an initial reference for clinical practice and further research.

Ethical Statement

This case report was written with the patient's written informed consent for participation and publication; the patient's identity is anonymized using initials. [Adjust: include ethics committee approval statement if applicable.]

Conflict of Interest

The author declares no conflict of interest.

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