



Effectiveness of Anma massage therapy in alleviating physical symptoms in outpatients with Parkinson's disease: A before-after study



Nozomi Donoyama^{a,*}, Sachie Suoh^a, Norio Ohkoshi^b

^a Course of Acupuncture and Moxibustion, Department of Health, Faculty of Health Sciences, Tsukuba University of Technology, 4-12-7 Kasuga, Tsukuba, Ibaraki 305-8521, Japan

^b Course of Neurology, Department of Health, Faculty of Health Sciences, Tsukuba University of Technology, 4-12-7 Kasuga, Tsukuba, Ibaraki 305-8521, Japan

ABSTRACT

Keywords:

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We aimed to confirm the physical effects of a single Anma massage session and continuous Anma massage therapy for outpatients with Parkinson's disease (PD). Twenty-one PD outpatients (mean age, 64.43 ± 8.39 [SD] years; Hoehn and Yahr stage I–IV) received a single 40-min Anma massage session involving upper and lower limb exercises and some subsequently received seven weekly Anma massage sessions. After a single session, visual analogue scale scores were significantly lower for muscle stiffness, movement difficulties, pain, and fatigue; gait speed and pegboard test time were significantly shortened; stride length was significantly lengthened; and shoulder flexion and abduction were significantly improved. No significant changes occurred in controls. After continuous sessions, we found general improvements in the same outcomes. In conclusion, Anma massage might effectively alleviate various physical PD symptoms; furthermore, because it is given through clothing, Anma massage is accessible for PD patients with movement difficulties.

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1. Introduction

Parkinson's disease (PD) is a slowly progressive and degenerative central nervous system disorder with various symptoms affecting the whole body. These symptoms comprise not only the four cardinal features—resting tremor, rigidity, akinesia, and postural instability—but also features such as pain, autonomic nervous disorders, fatigue, sleep disorders, and emotional problems. To alleviate these complaints, patients with PD often resort to complementary and alternative medicine (CAM), with massage being one of the most commonly used CAM worldwide [1–4]. In Korea, CAM is used to improve motor symptoms, fatigue, pain, and constipation [3], and in the UK for quality of life [2].

In Japan, Anma massage therapy, which dates from olden times, is one of the most commonly used and popular forms of CAM, and provides several benefits. Anma massage therapy can be used for the treatment and prevention of diseases and disease recurrence, as well as for rehabilitation at medical settings and massage parlors. Anma massage therapy is the CAM treatment most commonly used by patients with PD [5,6], and a survey on CAM conducted among

patients with PD and neurologists in Ibaraki Prefecture, Japan, revealed that 11.7% of patients with PD were receiving massage therapy and that 29.8% of neurologists recommend its use for alleviating rigidity, movement disorders, and pain [5]. However, Anma massage therapy was based on anecdotal evidence from patients, their families, and health professionals, so we had conducted a preliminary case-series study of Anma massage therapy for patients with PD: After a 30-min Anma massage session combined with standard conventional medication, outpatients with gait disturbance showed improved gait speed, those with painful shoulder exhibited improved range of active motion of the shoulder joint, and visual analogue scale (VAS) scores of various subjective symptoms (e.g., fatigue, shoulder stiffness, muscle pain, hypophonia) were improved, although statistical analyses could not be done [7].

For outpatients with PD, the present study aimed (a) to confirm with statistical analysis immediate physical effects of Anma massage therapy and (b) to observe the effects of continuous Anma massage therapy.

2. Materials and methods

We designed this clinical study in accordance with the World Medical Association's Helsinki Declaration, and the study was

* Corresponding author. Tel.: +81 29 858 9631.

E-mail addresses: donoyama@k.tsukuba-tech.ac.jp (N. Donoyama), suoh@k.tsukuba-tech.ac.jp (S. Suoh), ohkoshin@k.tsukuba-tech.ac.jp (N. Ohkoshi).

approved by the Medical Ethics Committee of Tsukuba University of Technology in July 2011.

2.1. Participants

Participants were 21 outpatients with PD (mean age, 64.43 ± 8.39 [SD] years; range, 46–82 years; Hoehn and Yahr stage I–IV) who consulted a neurologist between August 2011 and November 2012 at the Center for Integrative Medicine, Tsukuba University of Technology, and who submitted consent forms to participate in this study. Table 1 shows the participants' demographic data and physical condition.

2.2. Design and setting

This was a before–after study. To confirm the immediate effects of Anma massage therapy, all participants received two interventions in conjunction with standard conventional medication in a regular clinical setting: Anma massage intervention and no Anma massage intervention with relaxing chat as a control. PD medications were not changed during the study.

To observe the effects of continuous Anma massage therapy, outpatients who wanted to continue receiving Anma massage sessions, after completing the first Anma massage intervention and registering for continuous treatment, received seven additional 40-min Anma massage sessions given weekly over a 2-month intervention period (continuous Anma massage group).

2.3. Intervention protocol

2.3.1. Anma massage protocol

First, we describe a brief introduction to general Anma massage therapy and then, show how we practice the Anma massage session for patients with PD in the present study.

2.3.1.1. General Anma massage therapy. Ancient Chinese medicine, which involves *Ankyo*, *Doin*, acupuncture, moxibustion, and herbal

medicine, was introduced to Japan from China via the Korean peninsula in the 6th century. *Ankyo* was originally a massage therapy that considered acupuncture meridians and was modified to meet the preferences of Japanese people, eventually developing into modern-day Anma massage therapy. Today, Anma massage therapy generally includes whole-body massage with a focus not on the meridians, but anatomically, especially on muscles and incorporating brief joint exercises. Anma derives its name from its two main manual techniques; *an*, which is the Japanese term for applying pressure, and *ma*, the Japanese term for stroking [8].

Anma massage is applied through clothing. Briefly, standard Anma massage techniques contain mainly kneading with lesser amounts of stroking and pressing, which are rhythmic massaging motions, and brief joint exercises. Stimulation intensity is adjusted according to each patient's range of comfort. For more detailed information on basic Anma techniques, the authors recommend referring to the guide book by Kimura et al. [8].

Anma massage therapy is practiced by nationally certified massage therapists, of whom there are about 100,000 in Japan. Taking the national certification exam requires about 2000 h of professional training over a three-year period after completing high school, and there is also one national university for teaching Anma.

2.3.1.2. Anma massage protocol used in this study. The basic procedure used in this study is described in Table 2. Participants received a single 40-min session of full-body Anma massage, excluding the face, head, and abdomen and including upper and lower limb exercises. First, patients were briefly massaged on their less severe side while lying on their severe side. Next, their position was reversed and they were given an elaborate massage on their severe side. Both positions included upper and lower limb exercises. Following this (Table 2), a therapist focused on specific locations of the body related to the patient's complaints and symptoms. Each patient's complaints and the regions where the therapist focused treatment are detailed in Table 3.

The therapist's goal, especially for PD patients, was to give somatosensory cueing through massage stimuli of rhythmic stroking,

Table 1
Basic characteristics of participants.

Patient ID	Intervention(s) ^a	Sex	Current age	Onset age	Prevalent years	Stage ^b	Severe side	Dominant hand	Registry for continuous Anma	LD/DCI ^c (mg/day)	Other Anti-Parkinson drugs	Other
P1	A, R	F	59	51	8	III	R	R	Absent	400	Use	
P2	A, R	M	67	56	11	III	R	R	Absent	300	Use	
P3	A, R	M	73	50	23	IV	R	R	Absent	600	Use	
P4	A, R	M	59	48	11	III	L	R	Absent	300	Use	
P5	A, R	F	70	64	6	II	L	R	Absent	200	Use	
P6	A, R	M	64	60	4	III	R	R	Absent	300	Use	
P7	A	M	55	53	2	III	R	R	Absent	400	Use	
P8	A	F	62	61	1	I	R	R	Absent	–	Use	
P9	A, R	F	65	64	1	III	L	R	Absent	300	Use	
P10	A	F	55	50	5	II	R	R	Absent	300	Use	
P11	A, R	F	64	60	4	III	R	R	Absent	–	Use	
P12	A, R	M	63	45	18	II	R	R	Absent	–	Use	
P13	A, R	F	72	71	1	III	R	R	Absent	150	Not used	
P14	A	M	76	65	11	IV	L	R	Present (a total of 5 sessions)	300	Use	Discontinued ^d
P15	A	M	63	57	6	IV	L	R	Present (a total of 2 sessions)	–	Use	Discontinued ^e
P16	A, R	F	46	44	2	II	L	R	Present, complete	–	Use	
P17	A	M	76	73	3	III	L	R	Present, complete	–	Not used	
P18	A, R	M	62	61	1	III	R	R	Present, complete	–	Use	
P19	A, R	M	56	43	13	IV	L	R	Present, complete	300	Use	
P20	A, R	F	82	76	6	III	L	R	Absent	400	Use	
P21	R	M	64	59	5	II	L	R	Absent	300	Use	

^a A, Anma massage session; R, relaxing chat session.

^b Hoehn and Yahr Stage.

^c LD/DCI, levodopa/dopa-decarboxylase inhibitor.

^d Discontinued due to fracture.

^e Discontinued for family reasons.

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