

**Table 1: Summary of included acupuncture clinical studies**

<b>Study</b>	<b>Design, Sample size, Study duration</b>	<b>Characteristics</b>	<b>Acupoints</b>	<b>Intervention</b>	<b>Control</b>	<b>Outcome measures: Motor symptoms</b>	<b>Non-motor symptoms</b>	<b>Others</b>
Shulman, 2002	Uncontrolled open label, N=20 (1) N=7, 5 weeks (2) N=13, 8 weeks	Age: 68 yrs Duration: 8.5 yrs H&Y: 2.2 UPDRS: 38.7 Medication: N/A	Body AP: LI4, GB34, ST36, K3, K7, SP6, SI3, TB5 Scalp AP: chorea trembling control area	PD medication + body AP + scalp AP 60min, twice a week for 5 or 8 weeks	N/A	UPDRS I to IV+, Total UPDRS+ H&Y+	Sleep and rest+++	
Cristian, 2005	Randomized Controlled Double blind, N=14, 2 weeks	Age: 72-74 yrs Duration: N/A H&Y: 2-4 UPDRS: N/A	Body AP: K3, K10, L3, ST41 ST36, GB34, Bafeng points, MH6, LI4, GV20	PD medication + body EA, 4Hz for 20min, 5 sessions, for 2 weeks (n = N/A)	PD medication + stimulation of nonacupoints, for 20min, 5 sessions for 2 weeks (n=N/A)	UPDRS III+ to ++	ADLs, PDQ-8 Summary Index score++; depression, nausea, sleep problems++; orthostasis-	
Eng, 2006	Uncontrolled open label, N=23, 24 weeks	Age: 69.3 yrs Duration: 6.4 yrs H&Y: 2.1 UPDRS: 37.8 Medication: N/A	Body AP: ST 42, SP 3, LI11, LI15, LI20, ST7, ST36	PD medication + energy massage (tui na) + AP for 7-10min, Once a week for 24 weeks + Qigong machine (n=23)	N/A	UPDRS III-	PDQ-39+++ BDI+++	
Jiang, 2006	Randomized controlled, N=30, 6 weeks	Age: 65.6 yrs Duration: 6.0 yrs UPDRS: N/A Webster: 16.4 (AP), 15.3 (C)	Scalp AP: MS4, MS6, MS8, MS9, MS14	Madopar + scalp EA, 100Hz, for 30min, 5 times/week, total 6 weeks	Medopar 125-250mg/each, 3-4 times/day	UPDRS III+++	Constipation+++ Sweating+++	

Yang, 2006	Controlled open label, N=38, 68 days	Age: N/A Duration: N/A UPDRS: N/A Medication: Prolopa	Body AP: LI4, SI3, LI5, SI6, LI11, PC3, LU5, LR3, ST41, KI3, GB34, SP9, BL40, GB30 Scalp AP: MS1, MS5, MS6	Prolopa + body AP + scalp AP 30min, 1 course = 5 AP, once every 2nd day for 10 days, 7 days interval, then next course, total 4 courses	Prolopa 62.5-500mg/each, 2-4 times/day	Total UPDRS+++	N/A	SOD↑+++ LPO↓+++
Zou, 2006	Uncontrolled open label, N=30, 6 months	Age: 47-81 Duration: 1-16 H&Y: II=6, III=9, IV=12, V=3 Medication: Madopar 0.5g-1.25g	Body AP: GV14, GV20, GV26, GB20, TE17, ST36, ST40, SP6, KI3, LR3 Scalp AP: dance and tremor zone	Madopar + body AP + scalp AP, 1 course= 5 AP, once every 2nd day for 10 days, 7 days interval, then next course for total 6 months	N/A	Webster scores +++ (n=4), ++ (n=16), +-0 (10), total effective rate: 66.7%. Madopar reduction+	Constipation+++	Madopar dosage reduced after AP
Ren 2008	Controlled, N=80, 4 weeks	Age: N/A Duration: N/A UPDRS: N/A	Body AP: TE4, LI5, PC7, SI6, LI11, LU5, PC3, HT3, TE14, LI15, SI9, LR4, KI3, ST41, SP9, GB34, BL40, GB30, BL36	Madopar 752mg±159 + AP 30min, once a day for 10 days as a session, interval 3-5 days, and another session	Madopar 749±169	Tremor++, Gait++	N/A	Madopar dosage: AP: 504±179 Control: 726±261
Chae, 2009	Randomized single blind uncontrolled, N=10, 1 time	Age: 45-66 yrs Duration: 3.0±2.0 yrs H&Y: 1.6±0.2 UPDRS: 33.0±15.5	GB34	AP for 9min	Placebo	Finger-tapping task+++	N/A	fMRI showed AP increased activation in the putamen and the motor cortex
Chen, 2012	Randomized Controlled, N=60 6 weeks	Age: N/A Duration: N/A UPDRS: N/A	GV20, EX-HN 3, EX-HN 1	AP + Madopar+ Tolterodine 1mg, 2 times/day	Madopar + Tolterodine 2mg, 2times/day	UPDRS III+++	Bladder function+++	

Cho, 2012	Randomized single blind controlled, N=22, 8 weeks	Age: 55-57 yrs Duration: 5-6 yrs H&Y: 1.6-3.0 UPDRS: 33.0±15.5	GB20, LI11, GB34, ST36, LR3	(1) PD medication + VA, 2 times weekly for 8 weeks (n = 13) (2) PD medication + AP (rotated at 2 Hz for 10s, and maintained for 20min), 2 times weekly for 8 weeks (n = 13)	PD medication only (n = 9)	Total UPDRS+++ UPDRS III+++	BDI+++	
Xia, 2012	Randomized Controlled, N=60, 12 weeks	Age: N/A Duration: N/A UPDRS: N/A	GV20, EX-HN 3, EX-HN 1, LR3, SP6	Madopar+fluoxetine + AP for 12 weeks	Madopar+fluoxetine	N/A	Depression+++	Serum BDNF+++
Lei, 2014	Randomized Controlled, N=13, 3 weeks	Age: N/A Duration: N/A UPDRS: N/A	N/A	EelctroAP 30min, once a week for 3 weeks	Sham	Balance+++; gait+++; postural transitions+++	N/A	
Yuan, 2014	Controlled, Open label, N=49, 3-6 weeks	Age: N/A Duration: N/A UPDRS: N/A	DU15, bilateral BL10, GB20, GB12	EelctroAP 30min, 3 times a week for 3 to 6 weeks + Madopar	Madopar 250mg, 3 times/day	Webster scale ++ to +++	N/A	87% of patients stopped medication for 2 weeks after AP
Liang, 2014	Controlled, Open label, N=70, 24 weeks	Age: 48-73 yrs Duration: 3-7 yrs H&Y: 1.0-3.0 UPDRS: 33.0±15.5	Bilateral GB20, GB12, BL10; GV15	(1) AP, 30 min/each time, 3 times weekly for 24 weeks (n = 35)	Madopar 250mg, 3 times/day, for 24 weeks (n=35)	PDQ-39+++	UPDRSII+++ PDSS+++ PDQ-39+++	

AP, acupuncture; N, numbers; UPDRS, Unified Parkinson's Disease Rating Scale; N/A, not available; min, minute; yrs, years; S&E ADLs, Schwab and England Activities of Daily Living; BAI, Beck Anxiety Inventory; BDI, Beck Depression Inventory; PDQ-39, Parkinson's Disease Questionnaire; PDSS, Parkinson's disease sleep scale; H&Y, Hoehn and Yahr stage; fMRI, functional magnetic resonance imaging; SOD, superoxide dismutase; LPO, lipids peroxides; BDNF, brain-derived neurotrophic factor. ↑, increase; ↓, decrease. +, indicates minor improvement; ++, indicates median improvement; +++, indicates significant improvement. -, indicate worsening effect.