

S1 Basic characteristics of the 22 included randomized controlled trials

Number	Author	Total sample (study/control)	Gender (male/female)		Average age (year)		Average duration		Intervention(combined with other treatments)	Outcome (effective rate)	
			study	control	study	control	study	control		study	control
NO.1	Buhong Yuan	80 (40/40)	19/21	22/18	40.0±2.1	40.2±2.0	/		Flash cupping and cup moving	97.5	85
NO.2	Yanyan Li	72 (36/36)	20/16	19/17	36.4±4.0	35.0±3.7	33.5±3.9	32.7±3.5	Rehabilitation exercise	94.44	77.78
NO.3	Qin Zeng	60 (30/30)	16/14	17/13	38±5	38±3	8.8±1.7	9.4±1.7	Row-like puncture at sternocleidomastoid	93.3	73.3
NO.4	Shulei Liu	96 (48/48)	27/21	25/23	38.84±13.69	38.72±13.64	6.62±1.11	6.54±4.08	Qianzheng San	95.83	83.33
NO.5	Bei Cao	82 (41/41)	24/17	22/19	32.35±10.77	35.23±10.12	12.04±6.07	12.23±6.10	Qianzheng San	95.12	68.85
NO.6	Guangliang Li	60 (30/30)	15/15	16/14	41	43.2	7.6±4.2	7.7±4.4	Flash cupping	93.33	80.00
NO.7	Wenjie Ni	175 (87/88)	43/44	46/42	49.15±12.22	49.98±12.18	1.79±0.63	1.74±0.63	Microwave	98.9	89.8
NO.8	Mingming Che	60 (30/30)	10/20	12/18	43.21±4.07	42.62±4.52	2.28±0.89	2.01±1.02	Ultrashort Ultrashort wave	93.33	73.33
NO.9	Xuefeng Du	80 (40/40)	27/13	25/15	42.6±7.2	40.7±9.5	19.2±4.1	17.6±5.4	Auricular point sticking	97.5	85
NO.10	Chenfei Ni	60 (30/30)	10/20	13/17	45.03±11.96	46.97±13.57	15.36±8.09	13.17±8.39	Herbal moxibustion	90.00	86.67
NO.11	Zhiling Lin	66 (33/33)	10/23	16/17	49.24±13.01	49.30±17.02	12.12±32.01	10.67±22.43	Kinesio Taping	66.67	42.42
NO.12	Yalin Li	60 (30/30)	15/15	16/14	41.83±2.06	42.24±2.18	4.12±1.38	4.56±1.27	Muscle exercise therapy	96.7	83.3
NO.13	Fei Tan	80 (40/40)	15/25	21/19	52.25±3.44	48.64±3.57	/		Rehabilitation training	97.5	72.5
NO.14	Ying Wu	40 (20/20)	12/8	11/9	42.23±25	42.19±2.31	22.62±192	22.56±1.87	Hyperbaric oxygen	95.00	70.00
NO.15	Lina Liang	86 (43/43)	23/20	24/19	47.76±9.41	47.15±9.58	7.26±3.05	7.42±2.71	Transcranial magnetic stimulation	90.70	74.20
NO.16	Lei Wang	100 (50/50)	35/15	30/20	35.15±3.32	35.13±5.43	/		Rehabilitation training	98.00	86.00
NO.17	Huiming Zhang	100 (50/50)	25/25	26/24	43.72±4.46	43.68±4.21	3.57±1.09	3.56±1.14	Facial muscle exercise	96.00	80.00
NO.18	Hongyan Cao	60 (30/30)	17/13	16/14	43.23±11.56	44.11±12.43	13.43±2.79	13.20±2.62	Facial muscle exercise	96.67	80.00
NO.19	Aitian Wang	50 (25/25)	11/14	12/13	34.7±10.2	34.4±10.1	5.3±3.1	5.2±3.2	Herbal fumigation	64.00	88.00
NO.20	Jian Mao	100 (50/50)	28/22	30/20	40.2±2.1	40.1±2.0	<40d		Buzhong Yiqi decoction	96.00	82.00
NO.21	Xiaojing Liu	60 (30/30)	14/16	16/14	45.00±7.56	44.00±6.74	2.25±1.13	2.30±1.24	Cup moving	93.10*	83.33*
										100.00*	96.67*
NO.22	Jianqiang Chen	60 (30/30)	15/15	15/15	37.8±4.8	38.3±4.9	8.2±1.6	7.9±1.5	Subtle adjustment manipulation of the cervical spine	93.3	70.0

* effective rate of four weeks: 93.10% and 83.33%; effective rate of eight weeks: 100.00% and 96.67%.