Effect of Acupuncture for Urinary Retention After Stroke

Mengyao Wang ¹, Mei Han ², Iain Marshall ¹, Myeony Soo Lee ³, Masafumi Komori ¹, Yanzhong Wang ^{1*}
1. King's College London, United Kingdom; 2. Beijing University of Chinese Medicine, China; 3. Korean Institute of Oriental Medicine, Korea

Background

Stroke is the fourth leading cause of death in the UK and second in the world. 38–60% of stroke survivors are affected by urinary retention (UR) during the early period of recovery. This review aims to assess the efficacy of acupuncture combined with mainstream therapies for improving the treatment for UR after stroke.

Method

18 databases and 16 clinical trials registries in four different languages (English, Chinese, Korean, and Japanese) were searched to identify published RCTs worldwide. RCTs comparing any conventional treatment plus acupuncture versus the conventional treatment alone to treat post-stroke UR patients were eligible for inclusion. Two independent reviewers assessed the eligibility of studies based on predefined inclusion criteria. The likelihood of bias was assessed by using the Cochrane risk of bias tool. Two outcome measures, the cure rate and response rate, were used to assess the effect of acupuncture plus mainstream therapy over mainstream therapy alone. Meta-analysis was performed using RevMan 5.3 software. The evidence quality of all outcomes was assessed by GRADE.

Results

20 randomized clinical trials were included with 1322 participants. Catheterization and urination training with acupuncture has a favorable effect on UR than without acupuncture (cure rate: relative risk (RR) from 1.76 [1.24, 2.50] to 1.61 [1.20, 2.18] by two different assessment criteria, and response rate: RR from 1.18 [1.03, 1.35] to 1.34 [1.16, 1.56] by two different assessment criteria). Acupuncture also has a favorable effect on UR with comparison to medicine alone (cure rate: RR: 1.71 [1.19, 2.46] and response rate: RR: 1.33 [1.12, 1.58]). Catheterization with acupuncture is better than catheterization with urination training (cure rate: RR: 1.86 [1.31, 2.65] and response rate: RR: 5.20 [2.51, 10.79]).

Comparisons	Effect indicator	TCM outcome assessment criteria	Quality	PVR classification criteria	Quality
Indwelling catheterization + urination training + acupuncture vs Indwelling catheterization + urination training	RR (Cure rate)	1.76 [1.24, 2.50] (3 trials, n=190)	moderate	1.61 [1.20, 2.18] (4 trials, n=332)	low
	RR (Response rate)	1.18 [1.03, 1.35] (3 trials, n=190)	low	1.34 [1.16, 1.56] (4 trials, n=332)	moderate
Acupuncture vs Medicinal treatment	RR (Cure rate)	1.71 [1.19, 2.46] (3 trials, n=180)	moderate	- (0 trials, n=0)	-
	RR (Response rate)	1.33 [1.12, 1.58] (3 trials, n=180)	moderate	- (0 trials, n=0)	-
Indwelling catheterization + acupuncture vs Indwelling Catheterization + urination training	RR (Cure rate)	- (0 trials, n=0)	-	1.86 [1.31, 2.56] (4 trials, n=200)	low
	RR (Response rate)	- (0 trials, n=0)	-	5.20 [2.51, 10.79] (4 trials, n=200)	low

Conclusion

Acupuncture appears to increase cure rates for patients who develop UR after stroke, but the trials are small and many had important quality problems. There is a need to confirm the effect of acupuncture on treating UR with further high-quality and standardized RCTs.