

MASTER'S THESIS

Evaluation of effects of the Chinese herbal medicine jia wei liu jun zi granules on the treatment of idiopathic Parkinson's disease: a randomized, double-blind, placebo-controlled pilot study

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**Evaluation of Effects of the Chinese Herbal Medicine
Jia Wei Liu Jun Zi Granules on the Treatment of Idiopathic Parkinson's Disease:
A Randomized, Double-Blind, Placebo-Controlled Pilot Study**

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ABSTRACT

Background: Parkinson's disease (PD) is the second most common neurodegenerative disease and is anticipated to increase the economic and social burden on communities throughout the world as population ageing. The chronic levodopa treatment of PD is usually complicated by the development of side effects including motor complications. Both the symptoms of PD and adverse effects of conventional therapy can prominently affect patient's quality of life. Traditional Chinese medicine (TCM) has a long history of application in the treatment of PD. However, Solid scientific evidence is not available despite its widespread use among patients in Asia. The aim of the current study was to investigate the effect of a Chinese herbal medicine, *Jia Wei Liu Jun Zi (JWLJZ)* Granules in PD via randomized, double blind, placebo-controlled clinical trial.

Methods: Fifty-five patients with mild-to-advanced idiopathic PD (mean age/standard deviation [SD], 62.5/9.9 years; disease duration 6.1/4.9 years; 36 men [65%]) were recruited from the community. They were randomly allocated to receive either *JWLJZ* Granules 35g or placebo with each dose of their current Western medicine treatment regimen. The primary outcome measure was the 39-item Parkinson's Disease Questionnaire (PDQ-39). Secondary outcome measures included the Unified Parkinson's Disease Rating Scale (UPDRS), Short-Form-36 Health Survey (SF-36), Geriatric Depression Scale (GDS), home diaries, and a range of category rating scales.

Results: *JWLJZ* Granules resulted in a significant improvement in the UPDRS IVC when compared with placebo at 12 (-0.45 ± 0.74 vs. -0.04 ± 0.79 , $p=0.039$) and 24 weeks (-0.59 ± 0.80 vs. -0.08 ± 0.81 , $p=0.034$). In addition, patients in *JWLJZ* Granules group also have a significant improvement in PDQ-39 communication scores at 12 (-4.17 ± 19.03 vs. 6.92 ± 13.27 , $p=0.024$) and 24 weeks (-3.79 ± 18.67 vs. 5.92 ± 13.87 , $p=0.047$) when compared to placebo group. There were no significant differences between treatment and control groups for any of the SF-36 variables, GDS score or the mean daily on-off time. No serious adverse effects were found. One case of mild diarrhea was noted in *JWLJZ* Granules group.

Conclusions: The above results showed that *JWLJZ* Granules combined with conventional Western medicine treatment, was well tolerated and showed good efficacy in terms of relieving some non-motor complications including anorexia, nausea, vomiting, insomnia, hypersomnolence and symptomatic orthostasis. In addition, adjunctive use of *JWLJZ* Granules provided additional clinical benefits on communication ability in this group of patients with mild-to-advanced idiopathic PD. The results of this pilot study warrant larger multi-center controlled studies to examine long term efficacy, tolerability and mechanisms of *JWLJZ* Granules in PD function.

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