

## ARE AYURVEDA MEDICINE AND ACUPUNCTURE EFFICACIOUS THERAPIES IN PARKINSON'S DISEASE?

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Many studies show that use of complementary and alternative medicine (CAM) is common among PD patients across the globe. (1-4) In a study by Tan et al.(3), 61% of 159 PD participants used at least one type of CT for PD, of which the most common were traditional medicine, acupuncture, and vitamins/health supplements. Among CAM users, 40% subjectively reported some improvement of their symptoms. CT use was not associated with age of onset of PD or other sociodemographic factors. Patients with more severe motor dysfunction at onset are more likely to use CT. In a Korean study on 123 PD patients (4), ninety-four (76%) patients had used CAM. Patients using CAM sought to improve motor symptoms (57.6%), fatigue (19.6%), pain (4.3%), constipation (5.4%) or specified no single reason (13.0%). The spectrum of CAM use included oriental medicines (76.6%), traditional food (44.7%), non-prescribed drugs (31.9%), traditional therapies (7.4%), massage (7.4%) and behavioral therapy (7.4%). Factors related to current use of CAM were disease duration, degree of education, and daily levodopa equivalent dose. In a logistic regression analysis, the duration of PD was a significant factor for CAM use. Thirty-seven patients (41.6%) of the 89 CAM users who answered the question about the effects of CAM reported improvement in their PD symptoms with CAM use. Among CAM, acupuncture and massage showed a good perceived therapeutic effect on muscle pain and stiffness. Fifty-four patients (57.4%) planned to continue their use of CAM after the interview and 15 patients (16%) had recommended CAM to other PD patients. In a Swedish study (5) CAM use was reported by (M/F) 51/59 patients (30/39%). Significant differences between CAM users and non-users were found with regard to educational level, perceived health and levodopa load. More females than males used CAM, but the difference was not significant. The majority of CAM users perceived 'No improvement' or 'Some improvement'.

There may be scientific basis for these therapies. Herbal medicines used in ayurveda were sometimes shown to contain chemicals that are known to be used in PD. One example is *Mucuna pruriens*, which was shown to contain L-dopa. (6)

Many studies claim that acupuncture is effective in improving motor and nonmotor symptoms as well as quality of life of patients with PD. However, there are methodological flaws in the studies; the unknowns in concealment of allocation, number of dropouts and blinding methods. Two reviews (7,8) both concluded that uncontrolled trials and randomized clinical trials (RCTs) do not support objective evidence of improving PD symptoms by acupuncture. Large, well-designed, placebo-controlled RCTs with rigorous methods of randomization and adequately concealed allocation, as well as intention-to-treat data analysis are needed.

A Korean study (4) showed that the mean cost of CAM paid by patients (out-of-pocket costs) was 102.3 US Dollars (USD) per month, while medical costs of treatment for PD paid by patients (out-of-pocket costs) averaged 72.8 USD per month. The study also showed that about 10% experienced adverse effects from CAM including aggravation of PD symptoms and severe dyskinesia. The Swedish study (5) reported that they had spent the equivalent of 50 € on CAM during the last 6 months.

It is interesting that patients in industrialized countries with high Internet access and familiarity with Internet-based information seeking still use CAM, since only sparse EBM (evidence-based medicine) for its benefits can be found. That interest in CAM has increased during the last three decades and can possibly be explained by easy access to information on the internet, but also by the search for personal control. An illness like PD is often accompanied by a loss of control, and generally patients want to do something themselves to influence their health in a positive way.

A study (9) showed that the most common motives for expressing interest in CAM included a feeling of clinical powerlessness in the face of certain problems for which patients consult a physician, and a dissatisfaction with the scientific approach of academic medicine. Physicians' interest in CAM can be understood both as a critical reaction to academic medicine and as evidence that some alternative medical technologies are effective. Hence there is a need to deal with scientific ideals, and also to assess alternative medical technologies at regular intervals.

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