



RESEARCH ARTICLE

GUIDELINES FOR INTEGRATIVE TREATMENT OF PARKINSON DISEASE

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ABSTRACT

During the last decade, the use of traditional medicine has expanded globally and has gained popularity. It has not only continued to be used for primary health care of the poor in developing countries, but has also been used in countries where conventional medicine is predominant in the national health care system. The aim of our research was to develop a model to evaluate the effect of TM. Material and method: We chose one disease, where the AM is used in a high percentage worldwide. We have analyzed Parkinson disease (PD) because 56% of patients use AM. The second step was to find all methods of AM that are used for the treatment of symptoms. The third step was to find measurable instruments to evaluate effects of AM, and the last step, to see the discussion about effects from other studies published in last five years. Results: We have found that some scores and scale, which are used in conventional medicine for assessment of PD have been used in AM treatments. We are looking for a physiological explanation of effects, as well. Discussion: In consulting studies, the model of science presentation of effects were similar. In each study, we have been explaining the symptom, as well as the high impact on the quality of life. Method of application, evaluation and scale for scoring, have been analyzed, too. Conclusion: Before we support or reject the effects of AM, we must analyze it by using conventional measurable instruments.

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INTRODUCTION

During the last decade, the use of traditional medicine has expanded globally and has gained popularity (WHO, 2000). It has not only continued to be used for primary health care of the poor in developing countries, but has also been used in countries where conventional medicine is predominant in the national health care system (Kim, 2012). Parkinson's disease (PD) is a neurodegenerative brain disorder that progresses slowly in most people. Most people's symptoms take years to develop, and they live for years with the disease (Pringsheim, 2014). To sum it up, a person's brain slowly stops producing a neurotransmitter called dopamine. With less and less dopamine, a person has less and less ability to regulate their movements, body and emotions. Parkinson's disease itself is not fatal. However, complications from the disease are very serious. There are existing defined diagnostic methods and medical treatment protocols for monitoring deficiency in this disease in conventional medicine and the effects of conventional therapies (Ceravolo, 2009). The disease can decrease quality of life, and there is no medication to increase it.

There are many things we can do to help the patients with PD, like maintain their quality of life and help them live well with the disease (Global Parkinson's, 2002). The prevalence of complementary and alternative medicine (CAM) used in PD is reported to range from less than 50% to more than 75%. Alternative therapies include acupuncture, massages, Tai Chi, yoga, herbal preparations, supplements, pain management with physical therapy, music therapy, etc. In our environment, CAM is still not used for treatment in PD (Kim, 2009). The aim of our research was to develop a model to evaluate the effect of CAM in patients with Parkinson's disease.

MATERIALS AND METHODS

We are interested in finding one model to educate medical staff for integrative medicine, or to apply alternative methods supported with researches from conventional medicine. In order to do so, we made one reviewed investigation about published studies of effects on CAM methods, of which we can prove effect. In the beginning, it was an unknown field for us, and we wanted to know the opinions about implementation of CAM for PD from medical sciences and epidemiological data. Our investigation was guided from the principals of WHO for implementation of TM in health systems.¹ We have consulted 814 studies about the last medical and

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complementary methods for the treatment, classification, assessment and effects of them on increasing quality of life by patients with PD (Ramova, 2016). All data and analysis of studies were divided in the following chapters: definition of PD, epidemiology characteristics worldwide, the last diagnostic methods, management of medical treatment, questionnaires for assessment of level of PD, assessment of motor and non-motor symptoms, labor analyses, and instrument to access QOL. The data for CAM methods was divided into the following parts: effect of massage, music therapy, dance, yoga, Tai Chi, exercises, nutrition, prevention of falls, treatment of osteoporosis and pain, stimulation of brain function. In the introduction of publication, we gave an explanation of the standard physical test for assessment of balance, gait, memory, muscle force, and how to definite the stage of PD.

RESULTS

All methods were analyzed in the following steps: application, dosage, positive effects, and evaluation of significance, all of which is shown in Table 1.

Table 1. CAM methods for PD

Method	Application	Dosage	Evaluation	Effects
Yoga ⁸	Special yoga for PD	1 weekly, 12 weeks	Hard and pulse rate, blood pressure, spirometry, BBS*	Increase breathing and sleep, Relaxation, balance increase
Tai Chi ^{9,10}	Tai Chi for PD	1-2 weekly, 4-12 weeks	BBS*	balance increase
Exercises ^{11,12}	For balance	1-2 weekly, 4 weeks	BBS*	balance increase
Massage ^{13,14}	decrease muscle tone	1 weekly, 12 weeks	Cortisol level	Cortisol level
Nutrition ^{15,16}	Supplements Vit.D,E, coenzyme Q10, liver protectors, brain protectors	VitD-2000IE daily, Q10-1200-2400mg, daily	liver function cholesterol, vit.D level	liver enzymes, level of dopamine, digestion function
Osteoporosis ^{17,18}	osteoporosis drugs, Supplementation with Ca and Vit D	By protocol	DEXA	Increase bone mass
Fall prevention ¹⁹	Orthoses	Daily	BBS*	Balance, gait
Music therapy ²⁰	Relax stimulation Memory stimulation	2 hours daily	EEG, MRI	Sleeping Gait analyze
Dance therapy ²¹	Latino tango	1-2 times weekly	BBS*	Gait speed and stability
Pain treatment ²²	TENS, hot application, hydrotherapy, sonotherapy	Session of 10 days	NAS and VAS scale	Mobility, ROM of joints
Brain stimulation ^{23,24}	Trans cranial magnet and LLLT therapy	Session of 10 days	Minimantal tests, BBS*	Increase motor and cognitive function
Fine motor function ²⁵	Work therapy	During daily activity	home activity, UPRDS*	QOL,* Mobility, independent

BBS*-Berg balance scale, UPRDS*-Universal Parkinson Disease Scale, QOL,*-Quality of life.

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Basic principles of CAM application:

- Should not stop with medication;
- Stable condition with one medical therapy dose within the last 3 months;
- Assessment of fatigue before treatment;
- Assessment of stage of PD with UPRDS;
- Assessment of memory for active participation.

Every practitioner to be educated for special CAM method for PD, to use special scales and questionnaires for assessment of therapy.

Management plane for educational school:

- Promotion of the importance of CAM in treatment of PD;

- Material for theoretical and practical education;
- Institution to confirm education with certificate from academic lectures;
- Explanation of all scale and questionnaires and education for use of them in clinical practice;

DISCUSSION

A paucity of evidence supports the use of herbs or supplements for improving symptoms in PD. Recent studies lend support to the use of music and dance therapy, as well as physical therapies involving exercise, such as Tai Chi, that improve gait, mobility, and physical function (Kim, 2009). Despite the same scale and questionnaires, the measurement of clinical parameters should be used before and after CAM treatment, which is important in order to monitor the situation in conventional or alternative methods such as blood, urine, saliva, or EEG, and pulse rate or spirometry to prove the effect measurably (Colgrove, 2012; Kim, 2012; Li, 2006; Ballanger, 2006; Fitzgerald, 2006; Lefaucheur, 2009).

With this approach, the effects of SAM will be measurably available to be displayed. One of the basic principles from WHO for alternative medicine is to be applied from an educated medical staff (WHO, 2000). We are the pioneers in our community, but we look on it from the side of medicine based on science, and proven from educated medical staff. According to the latest document of WHO in the department of Traditional medicine, clearly shown is the strategy and objectives for implementation of CAM in the health care system of all countries. We made an effort guided by those recommendations to organize education for more diseases similar to PB. The publication of our book titled: Non pharmacological treatment of PD, is a promotion of all science studies about the effect of CAM methods for PD. It includes data, and is the first book for CAM and PD in our country. The first educational training was made in March 2016 with 10 participants. Education was completed at the Center for Education and Practice in Bitola, which is registered to perform training. The application of CAM methods in our country is regulated with the Law on Alternative Medicine

from the Ministry of Health (www. Ministry of Health.gov.mk. Law for Alternative medicine, 2015). The medical staff may apply the CAM method with a document from Ministry of Health, meaning if he has certification, office and technical conditions regulated by the law. As of right now, there are no regulations of How and Who can organize training in the Ministry of Education. Our model of education was made according to how these courses are made in known educational centers of CAM in Europe and the US.

Conclusion

Before we decide to support or reject the effect of AM, we must analyze it by using conventional measurable instruments. Education on CAM methods should be performed by experts from conventional medicine with scientific knowledge in order to be educated medical persons with at least faculty specializing in the health sector as an additional method to decrease pain, increase QOL or to cure illness.

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