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Acumulative Influences of F.G.Meditation on The Pharmaceutical Treatment of Asthma Patients Among Women between the Ages of 30-40 Years

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Abstract

Asthma is distinguished by reversible obstructions of the respiratory tracts while there is no a certain and decisive treatment for asthma but its symptoms are curable. Meditationis a purposeful and self-induced manipulation of attention which leads to the formation of an altered state of consciousness, concentration and mental silence. In F.G. Meditation, attention is focused on subtle vibrations and effects produced by breathing process in each specific part of the body, and dismiss all other vibrations and effects from attention scope at the same time. These vibrations should be organized on various linear, surface and solid directions in the form of some geometric shapes superposing to different parts of the body with the aim of manipulating, massaging, and modulating attention in order to reach a concentrative state and mental silence as well as to experience an altered state of consciousness.

Material and methods: In the present research work which is carried out as control-case study 20 women which were afflicted by asthma were recruited who participated in a three month meditation training course. Pre and post experimental assessment were done by the spirometry test and a standard asthma questionnaire. At the end of the study final results of the experimental group and pretest were analyzed in comparison to control group.

Findings: In the main experimental group after the completion of meditation course we observed significant reduction in recurrent of asthmatic attack, limitations to do routine and daily activities, sleep problems, fatigue during the day, breathing difficulties and asthmatic drug dependency(p-value<0.05). In two parameters related to lung capacity including Forced Expiratory Volume in one second(FEV1) and FEV1/FVC (Forced Vital Capacity) ratio, insignificant increment was detected.

Results: Results of the present study have revealed that F.G.Meditation has a significant impact on the clinical symptoms of asthma patients therefore more studies are suggested to assess the various impacts of this type of meditation and also more application and profound use of F.G.Meditation is proposed to treat and control different symptoms of asthma patients.

***Key words*:** Asthma, Geometric Meditation, Spirometry, Standard Asthma Questionnaire.

Background

Asthma is a chronic and serious pulmonary disease which distinguished by the reversible obstruction of the respiratory tracts[1]. This disease is caused by the chronic inflammation of the respiratory tracts which is due to the increased contractions of the smooth muscles cover the respiratory tracts[2].

Typical changes in respiratory tracts are including the increased number of eosinophils, thickening of lamina reticularis and increment of mucus nodes. The role of the immune system as cytokines, chemokines, histamine and leukotrienes has been diagnosed in asthma. While there is no any decisive and certain treatment for asthma but its symptoms and patient's complaints are curable[3].

The most effective treatment for asthma is abstention from the instigated and allergic factors as cigar, pets, aspirin and stress[3]. In such cases that abstention from the quoted factors is inevitable pharmaceutical treatment is recommended. In serious and intensive asthma which is resistant to inhalant corticosteroid medicine, bronchial thermoplasty is recommended. The efficacy of manual therapeutic methods including osteopathy, physiotherapy, breathing therapy maneuvers has proved and its various dimensions are under study[4].

Meditation is purposeful and self-induced manipulation of attention which leads to the experience of an altered state of consciousness, concentration and mental silence [5]. Attention, here, means the brain capability and tendency to deal with a single subject or a phenomenon and to ignore all other subjects and phenomena at the same time (Anderson 2004) [6]. Concentration, in F.G.Meditation means reducing the friction surface of attention to all things, phenomena or subjects and increasing the friction surface of attention to a single phenomenon or one subject. In other words, it means to leave all and join only to the one [7].

F.G.Meditation is a new and innovative form of meditation in which, attention is focused on the subtle vibrations and effects produced by breathing process in each specific part of the body, and dismiss all other vibrations and effects from attention scope at the same time [8]. These vibrations should be organized on various linear, surface and solid directions in the form of some geometric shapes superposing to different parts of the body with the aim of manipulating, massaging, and modulating attention in order to reach a concentrative state and mental silence as well as to experience an altered state of consciousness [9, 10, 11]. Although meditation has a long history in human culture and is deeply rooted in eastern heritage it has a major role in the promotion of mental health of the contemporary man due to the increasing level of worry and preoccupation of mind and also a rapid technological advancement of the society in new era [5].

Because of the crippling and disabling characteristics of asthma and lack of an effective therapeutic method for the treatment of stable and chronic asthma we decided to assess the influences of F.G.Meditation on the quality of life among women between the ages of 30-40 years afflicted with chronic stable asthma residing in Dashtestan, Iran.

P.K Vedanthan in a research work in 1998 studied the effect of Pranayama breathing exercises and relaxation technique which revealed a significant impact on the enhancement of exercise tolerance and physical activity and significant reduction in beta 2 agonist medicine consumption in asthmatic patients in comparison to control group but spirometer results showed no significant change [12].

Another study by Saxena was conducted in India in 2009. In this comparative study 50 asthma patients underwent 12 weeks training course in which 25 patients were under Pranayama and 25 under meditation techniques, twice a day for 20 minutes. Results disclosed a significant change in asthma symptoms andForced Expiratory Volume in one second(FEV1), Peak Expiratory Flow Rate(PEFR) parameters in Pranayama group in comparison to meditation group [13]. Lori Pbert in a study in 2012 treated 41 patients afflicted with asthma during a 12 months mindfulness training course in which there was a significant change in the quality of life and stress level but spirometry results showed no significant change [14].

Material and Methods:

In the present case-control study, 20 women between ages of 30-40 years who were afflicted with stable asthma under pharmaceutical treatment participated in a three monthF.G.Meditation training course. They were simultaneously using asthmatic medicine without any change in dosage or type of medication. F.G.Meditation training course were conducted by an expert meditation instructor for two sessions during a week, one and half hour for each session. Patients committed to hold two self-directed meditation sessions at home per day and each

session lasted 20 minutes. Control group including asthmatic patients were under pharmaceutical treatment but meditation course was not conducted for them.

Stable asthma was defined as a daily appearance of the asthmatic symptoms or daily usage of the medications. Patients were adjusted for their BMI, state of their asthma, age and results of spirometer test.

Patients completed the standard asthma questionnaire in the beginning and at the end of training course. They were also examined by spirometry test in the beginning and at the end. After completion of course the results of pretest and posttest of experimental group were compared and the results of experimental group were also compared to control group.

Those patients, who were afflicted by intermittent asthma, smoking cigar or shisha, had any known pulmonary disease as pulmonary hypertension, cystic fibrosis, bronchitis, any record of heart disease as heart failure, cardiac attack and unstable angina and also those who had metabolic disorders as diabetes mellitus, thyroid disorders or cancer were excluded from the study.

Results:

The number of participants in the present study was 40 all were female, 20 for experimental group and 20 for control group. Mean age and SD of the participants in experimental group were 38.7 and 1.3 while in the control group were 37 and 1.5 respectively. P-value was 0.586 which is statistically insignificant.

Table 01 : Mean age of participants

	Mean age	**SD**
Experimental	38.7	1.3
Control	37	1.5

Mean weight of the experimental group and SD were 71.2 and 4.6 and control group were 70.6 and 4.3 respectively in which P-value was 0.793 and statistically insignificant

Table 02 : Mean weight of the participants

	Mean weight	**SD**
experimental	71.2	6.4
control	70.6	4.3

Symptoms:

In experimental group after the completion of F.G.Meditation course in comparison to the first day significant changes were found regarding the following parameters:

Recurrent of short breathing significantly reduced (p-value=0.032). Difficulty in walking and working was significantly reduced (p-value=0.034). Difficulty in stairs climbing was significantly reduced (p-value=0.008). Feeling tired, fatigue and listlessness significantly reduced (p-value=0.036). Difficulty in falling asleep overnight was significantly reduced (p-value=0.048). Worry and stress level regarding the future and present life challenges was significantly reduced (p-value=0.046). The number of asthma attacks was significantly reduced (p-value=0.04), but regarding the reduction of wheezing problem and dependency to oral medications and inhalators change was insignificant (p-value=0.051).

Table 03 : Comparison of the results of spirometry in experimental and control group

	Experimental	Control	P
Mean FVC	78	75	0.378
Mean FEV1	74.1	70.8	0.220

Results of spirometry:

Mean Forced Vital Capacity(FVC) and Forced Expiratory Volume in one second (FEV1) in experimental group in comparison to control group was higher but difference was statistically insignificant. Change of the ratio of FEV1/FVC between experimental and control group was statistically insignificant (p-value=0.088).

Discussion:

Findings of our present study revealed that F.G.Meditation as a complementary therapy which was added to pharmaceutical treatment for asthma significantly enhanced the quality of life in asthmatic patients.

However meditation effects on the quality of life of the patients are not comparable to pharmaceutical intervention but there are some facts that show equal impacts of meditation rather than inhaled corticosteroids and anti-IgE antibody [15].

Furthermore other complementary and alternative medicines have no certain effects on the quality of life of asthmatic patients [16]. Various studies have pictured no significant correlation between the quality of life of asthma patients and pulmonary function [17] therefore the findings of the present study align with the findings of the previous studies.

Some studies have disclosed that those methods in yogic and meditation practices which included breathing techniques in their structure are more effective on the quality of life of the asthma patients rather than those yogic and meditation approaches without breathing techniques[18].

On the other side there is an assumption that Mindfulness Based Stress Reduction (MBSR) can alleviate the symptoms of asthmatic patients by reducing stress [17]. Stress reduction in asthma patients has a great importance because the higher level of stress in these patients is accompanied by disability and lower quality of life [19].

F.G.Meditation which is applied in this study is a new method including concentrative, introspective and mindfulness techniques. In this method attention is focused on breathing and its various effects in different parts of the body in the form of some geometrical figures overlapping each other [5].

It should be noted that some of the limitations of the present study were small size of the experimental group, difficulties in finding a match control group with the same age, sex, asthma intensity, medications and also proper number of skillful F.G.Meditation instructors.

It is suggested for the future studies to increase the size of experimental group and include other age groups bellow 30 years old and with longer period of time for meditation training.

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