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Original Research Article

Effect of "OM Meditation'' on pulmonary function tests in young healthy adults of B.G. Nagara

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Abstract: This study was conducted to determine the effect of OM meditation on pulmonary function tests in healthy young individuals. The present study was a case-control study consisting of 50 healthy individuals in the age group of 20-40 years. This study was conducted in the Department of Physiology, Adichunchanagiri institute of medical sciences, B.G. Nagara, Nagamangala Taluk, Mandya district, after the institutional ethical clearance and written consent from each participant pulmonary function tests was estimated before & after practicing deep OM Meditation daily for three months. The parameters thus recorded were analyzed for statistical significance using Students't' test and $p<0.05$ was considered the level of significance., (P value <0.01) (P value > 0.01) were decreased . (P value <0.01) was increased after practicing pulmonary function tests. The results of this study indicate that practicing OM meditation daily as indicated in the method, increases the pulmonary function tests significantly even in the absence of any other form of physical exercise.
Keywords: FVC - Forced Vital Capacity, FEV1 – Forced Expiratory Volume in 1st second, MVV: Maximum voluntary ventilation.

INTRODUCTION:

In recent years there has been significant uptake of meditation and other relaxation techniques as a means of maintaining good health. Meditation is a practice in which an individual trains the mind or induces a mode of consciousness to realize some benefit. Recently our Prime Minister Narendra Modi has stressed about the importance of yoga and meditation in the inaugural function of world yoga day on June 21 2015.OM covers the whole threefold experience of man, It is the combination of three letters A, U and M(1). A represents the physical plane, U represents the frontal & astral plane, the world of intelligent spirits & M represents the whole deep – sleep state [1]. The concept of Om has been well described in various Indian scriptures. In Mandukya, Upanishad it has been described that Om is the syllabus of the past, the present & the future [2]. In Mundaka, Upanishad describes that OM is the Bow, the soul is the arrow & Brahman is the target [3]. Meditation being used interchangeably with focused attention & mindful attention. A practitioner can focus intensively on one particular object called as concentrative meditation or on all the mental events that enter the field of awareness called as mindfulness meditation .Focusing the attention on a chosen object is example of concentrative meditation& OM meditation is example of mindfulness meditation [4]. Yoga and meditation have gained importance in research at the international level with the NIH of united states setting up a separate body(allocating a budget of 127 million dollars in the year 2011) [5]. Svetavastara Upanishad describes that OM is like fire which potentially present in firewood is not seen until two studies are rubbed against each other .The self is like that fire it is realized by constant awareness of the scared syllable OM (6=25).Studies on Om suggest that the mental reputation of Om results in physiological alertness, increased senstivity to sensory transmission as well as synchronicity of certain bio rhythms (7=26). An average person use only one-fourth of lungs & remaining 75% remains idle. In today's life of stress which triggers many respiratory diseases, the importance of OM meditation has come to be recognized, which has not only has the therapeutic but also rehabilitation purpose too [8]. Therefore this study was planned to find out the effect of Om Meditation on the pulmonary function test of young adults of B.G. Nagara who practiced Om Meditation for thirty minutes daily.

METHODOLOGY

Subjects were healthy volunteers in the age group of 20 – 30 years of B.G NAGAR, With BMI of 19 to 25 kg/m^2, All the subjects were non- smokers and were not on any medications. Those already performing some form of yoga or breathing exercises were excluded from the study. Those with Diabetes, cardiovascular & respiratory diseases were also excluded from the study. The study was prior reviewed and approved by the Institutional ethical committee. Each subject gave a written consent before participating in the study. A sample size of 50 subjects was calculated based on the results of a pilot study done on similar subjects.

The selected groups of subjects were made to practice the OM meditation daily for 30 minutes between 7am-8am, for a period of three months. Subjects were instructed to sit erect while performing the Om meditation. Pulmonary function test was recorded using a computerized spirometer – BPL ARPEMIS version 3.1 and was recorded between 8 - 9AM on both the occasions. Statistical analysis of the data obtained was done using Student-'t' test, and other relevant statistical tools.

RESULTS

The parameters thus recorded were analyzed for statistical significance using Students't' test and $p < 0.05$ was considered the level of significance. FVC, FEV1& MVV was significantly increased after practicing Om meditation. (P value <0.01).

Table-1:Physical characteristics of the subjects

Parameters	Mean ± SD
Age(years)	25.52±6.65
Ht(m)	1.53±0.09
Wt(Kg)	50.67±9.75
BMI(Kg/m^2)	21.57±2.82

Table 2: Comparision of Pulmonary function test in the subjects before & after practicing Om meditation

Parameters	Before meditation	After meditation	P value
FVC (L)	2.53±0.59	2.8±0.7	<0.01
FEV1(L)	1.67±0.51	2.71±0.59	<0.01
MVV (L/min)	75.32±19.2	88.71±19.76	<0.01

DISCUSSION

In our study both FVC , FEV1 and MVV, was significantly increased after practicing Om meditation, this increase is due to stimulation of the pulmonary stretch receptors due to maximum inflation of the lung during OM meditation reflexly relaxes the smooth muscles of tracheo bronchial tree. The stretch receptors are thus trained to withstand more and more stretching this helps us to hold the breath for a long period [9]. Surfactant which is secreted by the type II pneumocytes is increased after OM meditation and this surfactant increases the compliance of the lung as shown in the increased compliance during the deflation phase of the pressure volume curve of a lung. In addition increased development of respiratory musculature and endurance due to regular practice of deep breathing delays the onset of fatigue [10]. Flow rate is a function of lung volume rather than the effort exerted, which is why it is effort independent flow and is significantly increased in OM mediators [11].The stretch receptors reflexly decrease the tracheobronchial smooth muscle tone which in turn decrease the air resistance and increase the airway caliber, which ultimately causes the pulmonary function to improve [12].

LIMITATIONS OF THE STUDY: Less number of subjects in the study & this study can be implemented in large number of subjects

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