

Review of Dhyana Yoga in Promotion of Positive Health WSR to Cardio-Protective Effect of Dhyana

Nishant Shukla*

Department of Kayachikitsa, Gujarat Ayurved University, Jamnagar, India

Abstract

Psyche and soma are the integral part of human body. It is very difficult to treat them as a separate water tight compartment. They have the effects on each other in the state of health and disease. It is advisable that some sort of tranquilizing techniques ought to be used in treating patients. There are different types of psycho-spiritual healing techniques described even in ayurveda and vedas, many of them has been proved to be having beneficial effect.

Dhyana or meditation is a very unique type of tranquilizing technique described in raj yoga (astang yoga). The process starts voluntarily but continues as involuntarily. Thus it is very unique with practically no withdrawal effects. The technique described by Shrimad Bhagvadgeeta is very simple and easily can be done without use of any external media like music, etc. One may even opt for different techniques developed by saints also like prekshya dhyana, transcendental meditation, etc. Method described in Shrimad Bhagvadgeeta seems to be superior because of ease of process.

Hypertension bears major risk cardiovascular, stroke, ocular, renal disease. Rise of Blood Pressure (BP) is directly proportional to target organ damage; it is advisable to maintain BP below 140/90 mm of Hg, so as to reduce sequela of hypertension. Meditation helps in controlling BP. It is having dual effects, one immediate i.e. it rapidly reduces blood pressure, lowers pulse and increase cardiac strength, whereas the delayed effects of meditation reduces blood pressure by regularizing complex bio-chemic and neural pathways. The continuous use of meditation offers better management of hypertension and its complications.

Introduction

Human body is composed of three components viz. Satva, Atma and sharer [1]. Both soma and psyche have their effect on each other and regulate health of the individual and also make them diseased [2]. In clinical management psyche ought to be attended, and especially in psychosomatic disease like hypertension.

Hypertension bears major risk factor for Cardiovascular Diseases (CVD), Cerebrovascular Accident (CAD), End Stage Renal Disease (ESRD), ocular changes, neurotic changes, etc., and arresting the occurrence of these complications in hypertensive patients is the goal of management of the hypertension along with maintaining blood pressure below the level of 140/90 mmHg.

It is observed that therapeutic management of hypertension has certain limitations, it controls blood pressure effectively but they are prone to produce adverse drug reaction. Hypertensive changes may not be arrested only by the use of modern therapeutic management. It requires holistic approach, with use of herbal preparation and some tranquilizing technique may ensure better life standards.

There are various tranquilizing techniques developed by saints of 20th century like prekshya dhyana, rajyoga, transcendental meditation, etc. These methods are modified techniques of Dhyana described in Shrimad Bhagvadgeeta. It seems that the method recommended by Geetaji is easy and effective method of tranquilizing. This method is based of self reliance and doesn't include any external means for meditation, which makes this method unique.

Charaka Samhita describes tranquilizing of mind as the first line of treatment for heart diseases [3]. Pacification of mind is important in all psychosomatic disease especially in heart disease. It improves general well-being of patients and dependence on therapeutic management may be lessened. Charaka Samhita describes that therapeutic agents should possess hridaya (beneficial to heart) and ojasya (increasing longevity).

Dhyana is the tranquilizing technique which is useful in maintaining blood pressure, and arresting complication of hypertension.

Review of Dhyana Yoga

Dhyana is amongst astang yoga (eight steps of raja yoga). This is the seventh step in Raj yoga, and is followed by Dharana. The knowledge of Astang Yoga is very much necessary in order to know the effect of dhyana yoga in prevention of cardiac complications in hypertensive patients. As discussed above method of dhyana described in Shrimad Bhagvadgeeta is very simple, the process is as follows.

A person ought to be in a comfortable posture preferably seating with backbone straight with aligned neck and head, stable but comfortable body posture not moving to any direction, eye sight focusing tip of nose and looking to any side and pacified and stable mind. Here pacified and stable mind is mentioned to show that the process must be done with stableness so as to achieve peace of mind. One may chant some mantra to continue the process for approximately for half an hour preferably twice a day. The process is initiated voluntary, but soon it becomes involuntary. This change helps in regularizing various functions of body.

*Corresponding author: Dr. Nishant Shukla, Department of Kayachikitsa, Dhanvantari Mandir, Shree Gulabkunverba Ayurved Mahavidyalaya, Jamnagar, Gujarat Ayurved University, Jamnagar, India, Tel: 919426984260; E-mail: nishantvd@rediffmail.com

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Physiological Effect of Dhyana Yoga

Dhyana effects almost entire body directly and indirectly. It affects functions by two control and coordinating systems of the body viz. hormonal and nervous system. Over and above physical and physiological effects have effect of psyche, i.e. improves cogitation and perceptual Ability, Rorschach Shifts, Empathy, Regression in the Service of the Ego, Creativity and Self-Actualization etc [4-7]. Thus it has holistic effect, i.e. affects all the three component of life (Satva, atma and sharir). Various studies are carried out to know the effects of Dhyana in the last century, and proved to be effective. Many ayurvedic scholars made attempt to understand the physiological changes taking place by meditation. Here it may be opined that the initiation of effects functions of body by correcting Doshas of Manas (mind). It regulates trigunas (three quality of mind) i.e. reduces rajas and tamas. Vata being regulator of mind, which is governed by rajas regulates functions of body [8]. Thus Vata regulated in this manner regulates entire physiological functions. Similarly decreasing tamas and increasing satva will regulate functions of pitta and kapha. Pitta regulates all transformation in body. As discussed above there are two body systems that perform control and coordination viz. nervous system and endocrinal system. The former may be correlated with that of Vata whereas latter with pitta. Thus dhyana regulates first mental factors, and regulated manas Doshas regulate somatic body humours [1].

Doshas thus maintained in normal status controls all physiological and psychological and thus following changes are observed after practicing Yoga [4].

1. Cardiovascular System
 - a. Heart Rate
 - b. Redistribution of Blood Flow
 - c. Regulation of Blood Pressure and reduction in Hypertension
2. Cortical System
 - a. EEG: Alpha Activity
 - b. EEG: Theta Activity
 - c. EEG: Beta Activity
 - d. EEG: Hemispheric Synchronization
 - e. EEG: Dehabituation
3. Blood Chemistry
 - a. Adrenal Hormones
 - b. Thyroid Hormones
 - c. Total Protein
4. The Metabolic and Respiratory Systems
5. Muscle Tension
6. Skin Resistance and Spontaneous GSR
7. Other Physiological Effects
 - a. Brain Metabolism
 - b. Salivary Changes
 - c. Effectiveness in the Treatment of Disease
 - d. Treatment of Cancer

- e. Changes in Body Temperature
- f. Alleviation of Pain
- g. Exceptional Body Control

Cardio Protective Activity of Dhyana

Dhyana affects both primary and secondary risk factors of cardiac illness. Hypotensive effect of Dhyana is well established, which is a primary risk factor of cardiac illness especially Cardiovascular Diseases (CVD). It has been documented in various research works that fall of blood pressure recorded varying from mild (10 units in SBP (Systolic blood pressure) and 5 units in DBP (diastolic blood pressure)) to intense relief (40 units in SBP and 17 units in DBP). These effects are observed after dhyana for 20 minutes [9,10]. It has been observed in other research works that Dhyana reduces significantly blood pressure in low and high risk groups, and in any age group and races [11-13]. Continuous practice of Dhyana helps in regulating blood pressure.

The other risk factor associated with hypertension and CVD are also controlled by Dhyana. It has been opined that Dhyana reduces Serum cholesterol, oxidized lipids, etc. [14,15]. Significant lipid lowering effect is observed in older, long-term TM practitioners (n=18; average age 67 years) compared to controls matched for age, education, and sex (n=23), while controlling for dietary fat and nutritional supplements [16]. The result implies that Dhyana reduces oxidative stress and thus arrest atherosclerotic CVD.

The recent study of single-blind clinical trial carried out at King-Drew Medical Center in Los Angeles on African Americans, compared the TM program with a health education program (diet and exercise) on hypertensive heart disease. The sample size of study was 60 patients randomly chosen for changes of Carotid Artery Intima-Media Thickness (IMT) measured by B-mode carotid ultrasound. It is marker of coronary atherosclerosis. At the end of eight-month intervention with TM decreased carotid IMT relative to the health education group [17]. Thus decreasing carotid IMT is suggestive that the status of the atherosclerotic changes in arteries is reduced, this reduces risk of CVD.

Discussion and Conclusion

Hypertension bears major risk to cardiovascular diseases. Management of hypertension primarily focused on control of blood pressure in the range of 140/90 mmHg. The second treatment objective is to arrest complication and sequel of blood pressure. Cardiovascular diseases are common in hypertensive patients as with every rise of 20 mmHg in SBP and 10 mmHg rise in DBP increases the risk for the target organ injury, and cardio-vascular risk [18,19]. Thus blood pressure control is necessary to reduce further organic damage.

Dhyana a psycho-spiritual healing process which reduces blood pressure, decreases oxidative stress and relieves dyslipidaemia, thus correcting all the risk factors of cardiac illness and thus reduces chance of CVD. Moreover Dhyana reduces IMT i.e. reduces arteriosclerotic and atherosclerotic changes in arteries further decreases occurrence of CVD.

Dhyana regulates vata, vata is regulator of all functions and propulsion of rasa (nutritive fluid-plasma) is governed by Vata only. If the gati (movement) of rasa is proper in body, all the tissues are properly nourished and metabolic process are regularised. Ware and tare phenomenon is proper and well-nourished tissues can withstand stress. Thus the pathological changes of IMT resolved in this manner reduce CVD.

Here it may be concluded that regular practice of dhyana reduces cardiac risk in hypertensive patients.

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