



Effect of Yoga Hand Mudra for controlling High Blood pressure

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Abstract

Hypertension or high blood pressure is a common clinical presentation worldwide. High blood pressure control is important to reduce many disease complications such as kidney failure, heart diseases and stroke. Apart from medications, yoga hand mudra is an effective supplement to medical healing for several clinical conditions like blood pressure, asthma, stress, obesity and heart diseases. Our study focus was on yoga hand mudra and its beneficial effect for controlling high blood pressure. Study was carried out on 34 subjects randomly, out of which 15 were diagnosed as hypertensive and 19 as normal. Yoga hand mudra was tried out on patients suffering from high blood pressure aged between 35-65 years. Blood pressure and heart rate measurements of the subjects were recorded before and after performing yoga hand mudra. After practicing the yoga hand mudra, there was a significant reduction in both systolic and diastolic blood pressure. The yoga hand mudra was found to be effective in normalizing high blood pressure in a novel way. This mudra is helpful in emergency situations where medical help is not available immediately. It can also reduce further medical deterioration of patient's clinical condition.

Keywords: Blood pressure, Hypertension, Yoga hand mudra, Stress, Hand gesture.

Introduction

Non communicable diseases or lifestyle related illness affected population is increasing in numbers as compared to communicable or infectious causes of death worldwide. Hypertension is the leading cause of death worldwide¹. Hypertension is a common disorder affecting 26% of the adult population globally². More than 1 billion people worldwide are affected with high blood pressure (BP) and cause for a daunting 13% deaths, 7 million premature deaths and 64 million disability-adjusted life years^{3,4}. It reflects that by the year 2025, approximately 1 in every 3 adults from the age group of above 20 years or 1.56 billion people globally, will suffer high blood pressure⁴. In India more than 15% of the adult population is affected by hypertension⁵. Hypertensive patients should bring modifications in their lifestyle by focusing on diet, exercise and yoga as an alternative traditional therapy⁶.

High BP escalates the chances of heart failure, chronic kidney disease and stroke. World health organization has advised repeatedly for new drug development programs including alternative or traditional medicine treatment choice for high BP patient's population⁷. Evidence has proved that yoga may be effective against back pain, blood pressure⁸, diabetes⁹, epilepsy, menopause related symptoms, decrease inflammation and many more clinical conditions.

Mudras¹⁰ or hand gestures are a part of yoga and they usually work with fingers touching certain hand locations for a certain measure of time to bring overall improvement in positive feelings and health. Yoga hand mudra can prove to be beneficial as a supplementary therapy in addition to medical aid in hypertensive patients for lowering BP. Our literature search and review revealed limited research publications on yoga hand mudra and its use for high blood pressure control.

This study was performed to evaluate the effect of yoga hand mudra for normalizing the blood pressure in hypertensive patients.

Methodology

A total of 34 subjects from Indore city were included in the study between October 2014 - November 2015, out of which 15 were diagnosed as hypertensive and 19 as normal. The written consent was taken from subjects after explaining study protocol. Before recording the parameters, the subjects were asked to relax for 20 minutes. The yoga hand mudra was performed on hypertensive patients only aged 35-65 years. The blood pressure was recorded with sphygmomanometer and heart rate measured by a doctor.

Yoga hand mudra procedure¹⁰: For lowering high BP, the middle finger of both hands were squeezed from root to tip for

minimum 5 minutes. For the present study data analysis was done by paired t-test using MS office 2010 software.

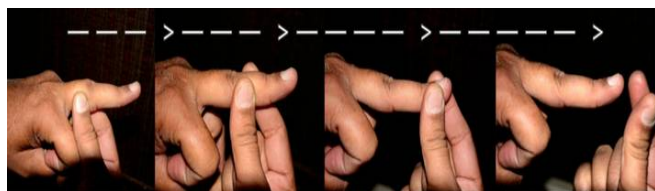


Figure-1
Yoga hand mudra technique

Results and Discussion

The data for fifteen high BP subjects who practiced yoga hand mudra for 5 minutes were analyzed. The results obtained are expressed as Mean \pm Standard deviation (Table-1). The mean systolic BP before practicing hand mudra was 155.06 ± 17.01 . After 5 minutes of yoga hand mudra practice the systolic BP was reduced to 139.53 ± 9.45 . This was a highly significant reduction of systolic BP from high to low ($p < 0.0005$) as shown in Table-1.

The mean diastolic BP before practicing hand mudra was 98.06 ± 5.83 . After 5 minutes of yoga hand mudra practice diastolic BP was reduced to 91.4 ± 5.12 . This was a highly significant reduction of diastolic BP from high to low ($p < 0.0007$) as shown in Table-1.

The mean resting heart rate before practicing was 76.86 ± 15.67 . Heart rate also reduced significantly to 72.33 ± 13.50 , after practicing hand mudra for 5 minutes ($p < 0.005$) as shown in table-1.

Hypertension is growing at an alarming rate in India and in other developing countries¹¹. High BP is a silent killer, so early detection and prevention could reduce the morbidity and mortality. Apart from anti-hypertensive drugs, certain effective supplements such as yoga, mudra, pranayama are required for normalizing hypertension. Mudra, asana and pranayama improve the physical, mental and spiritual health. Hand mudra, asana and pranayama are inexpensive, non pharmacological techniques without any side effects. Further, the patient can do it easily at any stage of life, with little training. Mudras¹⁰ or hand gesture have their origin from over thousands of years old Indian tradition of yoga.

In our study systolic BP, diastolic BP and heart rate were significantly reduced after practicing the yoga hand mudra for five minutes on middle finger of both hands. The reduction in blood pressure and heart rate after yoga therapy has been documented¹²⁻¹⁴. Our study using yoga hand mudra also indicates a significant reduction in systolic BP, diastolic BP. Another study¹⁵ has tried to explain lowering of BP using yoga. We have presumed that yoga hand mudra affects on autonomic

nervous system arbitrated through the neural system and central nervous system.

During our study we also observed that while performing yoga hand mudra the time is crucial. If it is performed for more than 15 minutes, it may bring the BP to a lower level which could be critical on the part of the subject. Apart from lowering the BP, the reverse of this mudra can be used to normalize the BP in hypotensive patients by squeezing the middle finger of both hands from tip to root in emergency situation¹⁰.

Regular practice of yoga hand mudra may reduce the dose requirement of drugs in hypertensive patients. Taking into consideration the safety and efficacy of yoga, this study was done to observe the additional effect of yoga hand mudra on high BP patients. Further medical studies needs to be done for evaluation of this mudra for the benefit of mankind.

Table-1
Effect of yoga hand mudra on hypertensive patients

Variable	Before yoga hand mudra	After 5 minutes of yoga hand mudra	P value
SBP (mmHg)	155.06 ± 17.01	139.53 ± 9.45	$< 0.0005^{**}$
DBP (mmHg)	98.06 ± 5.83	91.4 ± 5.12	$< 0.0007^{**}$
Heart Rate (bts/min.)	76.86 ± 15.67	72.33 ± 13.50	$< 0.005^*$

** Highly significant, * Significant, SBP = systolic blood pressure. DBP = diastolic blood pressure.

Conclusion

Our results indicate the efficacy of yoga hand mudra as an additional therapy in lowering down high blood pressure. The yoga mudra is beneficial in emergency situations till medical aid is available and is coined as "D Mudra".

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