



**STUDY THE EFFECT OF BHASTRIKA PRANAYAMA AND HARIDRA CHOORNA IN
TYPE 2 DIABETES MELLITUS (MADHUMEHA).**

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ABSTRACT

The effect of yogic practices with herbal drugs on the management of diabetes has not been investigated well. We carried out well designed studies in normal individuals and those with diabetes to assess the role of Bhastrika Pranayama with Haridra Choorana on glycaemic control, insulin kinetics, body composition exercise tolerance and various comorbidities like hypertension and dyslipidemia. These studies were both short term and long term. These studies have confirmed the useful role of bhastrika Pranayama and Haridra in the control of diabetes mellitus. In the present clinical study 30 diabetic patients were registered from I.P.D. & O.P.D. from all 30 patients 18 patients completed the treatment with suggested pathyapathya. The aim of the study was to see the effect of Bhastrika Pranayama with Haridra Chooran in type2 Diabetes mellitus (Madhumeha). Statistical analysis shows improvement in FBS and PPBS.

KEYWORDS:- Type2 Diabetes mellitus(Madhumeha), Bhastrika pranayama, Haridra choorna, Pathyapathya.

INTRODUCTION

In Ayurveda, Madhumeha is considered as chronic and distressing disease, where there is involvement of Tridosha (three humors- vata, pitta, kapha), major Dhatu (tissues) such as Rasa (nutritional fluid plasma), Asruka (blood), Mamsa, (muscle tissue) Meda (adipose tissue/fat), Majja (bone marrow), Shukra (semen), Ambu (watery portion of body), Vasa (oily part of flesh), Lasika (lymph) and Oja (essence of all the tissues). The features of Madhumeha mentioned in Ayurveda can be compared with NIDDM (Non insulin dependent Diabetes Mellitus), type II diabetes, a multifaceted metabolic disorder characterized by common feature of chronic hyperglycemia with disturbance of carbohydrate, fat and protein metabolism where as Madhumeha is a type of Vatika Prameha in which person passes Kashaya (astringent), Madhura (sweet) and Panduvarna (pale colour) character urine.

In this disease the management should be very particular because that management should include dietary modification, life style modification should be must and should and anti diabetic drugs should be given. In this management so many people after using the anti diabetic drugs also they were suffering from the uncontrolled diabetes that's why the simple and the most important easily available at home haridra is selected as a anti diabetic drug. There are so many research works have been carried out for identifying madhumeha activity Still simple drug like haridra (curcum a longa) shows and was

proved to be effective for having anti hyperglycaemic activity effect. And it is having the properties like tikta rasa, usna virya, katu vipaka.

Current Indian diabetic scenario is very astonishing, calculating a prevalence rate of approximately 20% in urban populations and approximately 10% in rural populations.^[1] The hazardous side effects of the hypoglycemic agents after long term use have further created problems and hence an ideal therapy is still obscure. . Yoga is an ancient discipline designed to bring balance and health to the physical, mental, emotional and spiritual dimensions of the individual. Yoga's primary emphasis is upon gaining general well-being by the way of integration often incorporating three major components: held or sequences of physical postures, breathing exercises and meditation. (Iyengar, Bellur Krishnamachar Sundaraja (1965) Light on yoga.) Yoga commencing with gentle stretching and breathing exercises, it varies up to a range of classical asanas and pranayama practices Pranayama harmonizes and links the mind and body. Breathing is controlled by both conscious and unconscious neural pathway bridging the mind and body. Improving the breathing pattern promotes health and can help in the management of many chronic ailments. Bhasrika Pranayama is also one of the Pranayama which is revitalizing Pranayama, which increases oxygen levels and reduces carbon dioxide levels in the blood. In bhasrika Pranayama, the abdominal muscles and diaphragm are used which puts

pressure on the internal organs, it helps in type 2 diabetes because pressure on pancreas regulates its function well.

Bhasrika is an important practice of Pranayama. In the Gherand Samhita it says "Draw air in and out of your nostrils over again and again like Blacksmith's bellows" (v.5:74). "Inhale deeply twenty times. Do Kumbhaka (retain breath). Then exhale in the way already explained. Wise men practise Bhasrika three times every day and never suffer from any disease" (v.5:75/76).

In the Hathyog Pradipika there are a few verses which describe the practise. These are as follows "Place both feet on the thigh and place comfortably in Padmasana. This is the destroyer of all impurities. Keeping the mouth closed, Exhale through the two nostrils. The exhalation should be such that it makes sound from the heart to the forehead. Again Exhale and inhale, Do this over and over again like Blacksmith's bellows" (v2:59-67).

REVIEW OF LITERATURE

भस्त्रिका प्राणायमः

विधिवत्कुंभकं कृत्वा रेचयेदिड्यानिलम् ।

वातपित्तश्लेष्महरं शरीराग्निविवर्धनम् ॥ ह.प्र. २/६५

Having performed (Pranayama and) retention systematically, exhale through left nostril. Thereby imbalances of wind, bile and mucus are annihilated and the digestive fire increased.

कुंडली बोधकं क्षिप्रं पवनं हितम् ।

ब्रह्मनाडीमुखे संस्थकफाद्यर्गलनाशनम् ॥ ह.प्र. २/६६

This (bhasrika) quickly arouses kundalini. It is pleasant and beneficial, and removes obstruction due to excess mucus accumulated at the entrance to Brahma nadi.

सम्यग्गात्रसमुद्भूतग्रंथित्रयविभेदकम् ।

विशेषेणैव कर्तव्यं भस्त्राख्यं कुंभकांत्विदम् ॥ ह.प्र. २/६७

This kumbhaka called Bhasrika enables the three granthis (psychic/pranic knots) to be broken. thus it is the duty of yogi to practice bhasrika.

AIMS AND OBJECTIVES

Study the effect of Bhasrika Pranayam with Haridra Choorna in Type 2 Diabetes Mellitus.

MATERIALS AND METHODOLOGY

Place of Study

For the present study, 30 diagnosed patients of *Madhumeha* (DM type 2) from the Outdoor Patient Department of Swasthivritta, Govt. Ayurved College and Hospital, Nanded, were registered on the basis of signs and symptoms of *Madhumeha* as per Ayurvedic classics and modern medicine.

Inclusion criteria

- Patients of either sex in the age group of 25-65 years
- Both obese and non-obese patients

- Patients showing classical signs and symptoms of *Madhumeha* were included in the study.

Criteria for diagnosis of DM by American Diabetic Association:^[2]

1. Patients having random blood sugar level >200 mg/dl or
2. Fasting blood sugar (FBS) >126 mg/dl up to 375 mg/dl or
3. Postprandial blood sugar (PPBS) >200 mg/dl up to 500 mg/dl.

Exclusion criteria

- Patients with juvenile diabetes
- Patients less than 25 years and more than 65 years
- Emergency cases in DM
- Patients having insulin-dependent DM (IDDM) and receiving insulin (type 1)
- Excessive blood glucose: FBS > 375 mg/dl and PPBS > 500 mg/dl
- Chronic complications (microvascular and macrovascular).

SUBJECTIVE PARAMETERS

1) Prabhut Mutrata (Frequency of Urine) Scoring

- 3-5 times per day, nil or rarely at night 0
- 6-8 times per day, 1-2 times per night 1
- 9-11 times per day, 3-4 times per night 2
- >11 times per day, >4 times per night 3

2) Avila Mutrata (Turbidity in urine)

- Crystal clear fluid 0
- Faintly cloudy, smoky or hazy with slight 1

Turbidity

- Turbidity clearly visible but newsprint easily read 2

Through test tube

- Newsprint not easily read through test tube 3
- Newsprint cannot be seen through test tube 4

OBJECTIVE PARAMETRES

The following parameters were assessed objectively

- 1) FBS level
- 2) PPBS

Plan for Bhasrika Pranayama

Time Schedule: Daily Morning at 6 to 6.15am

- 1) Prarthana: for 2 min
- 2) Breathing Awareness before Pranayama: for 3 min
- 3) Time for Padmasana with deep breathing: for 2 min
- 4) Bhasrika Pranayama: for 5 min
- 5) Prarthana: for 3 min
- 6) No pre and post medication and food is given during Asana Schedule
- 7) Liquid diet before and after Bhasrika Pranayama upto 30 min avoided.

Plan for Drug Administration

- 1) Haridra Choorn provided from our institute.
- 2) Quantity of Haridra Choorn: 2gm is given twice a day (morning and evening) after meal
- 3) Anupana: Koshn jal (warm water)
- 4) And advised proper Pathyapathya.

Selection of Patients and duration of study

It is a randomize control clinical trial. In this study 30 patients were randomly included after screening by

inclusive and exclusive criteria. All selected patients advised Bhastrika Pranayama daily 5min. For 1 month and advised Haridra choorna selected from our institute, 2 times daily after meal with warm water.

Selected subjective and objective criteria for this disease were recorded at the start of the study, the clinical data again recorded at the end of the study period of the one month.

Statistical Analysis**Table 1: Difference of Prabhut Mutrata before and after treatment.**

	Mean	S.D.	S.E.	Wilcoxon value	p value
B.T.	1.444	0.5113	0.1205	46.00	0.0150
0A.T.	0.8889	0.8324	0.1962		

P<0.005 significant.

Table 2: Difference of Avil Mutrata before and after treatment.

	Mean	S.D.	S.E.	Wilcoxon value	p value
B.T.	1.111	0.7584	0.1788	36.00	0.0083
A.T.	0.6111	0.6978	0.1645		

P<0.005 significant.

Table 3: Difference of FBS before and after treatment.

	Mean	S.D.	S.E.	t value	p value
B.T.	167.5	15.03	3.543	6.520	0.0001
A.T.	140.8	14.95	3.524		

p<0.005 significant.

Table 4: Difference of PPBS before and after treatment.

	Mean	S.D.	S.E.	t value	p value
B.T.	320.0	57.54	13.56	3.832	0.0013
A.T.	282.2	47.54	11.21		

P<0.005 significant.

OBSERVATIONS

Among the registered patients, most of the patients are non-vegetarian, almost all patients are married having disturbing daily routine. After treatment it shows positive response in almost all 18 patients who follow all treatment properly with pathyapathya. Regular Bhastrika pranayama not only affect on their Agni but also stress related causes. Also marked improvement shows in their sugar level.

Before treatment subjective and objective parameters are not in normal range but statistical analysis shows after treatment with Bhastrika Pranayama and Haridra choorna also with regular pathyakar aahar and vihar significantly helps to maintain normal range of blood sugar level.

A remarkable human clinical study^[3] revealed that turmeric extract was 100% successful at preventing prediabetic patients from becoming diabetic over the course of a 9-month intervention. The researchers concluded that a 9-month curcumin intervention in a prediabetic population significantly lowered the number of prediabetic individuals who eventually developed

T2DM. In this study it shows that the Haridra choorna is more effective with Bhastrika Pranayama and mostly those patients whose grading are primary in no. Accordingly subjective parameter.

RESULT

The result indicates regular Bhastrika Pranayama with Haridra choorna and Pathyapathya has significant effect in both subjective means Prabhut mutrata and Avil mutrata as well as objective parameter FBS and PPBS.

CONCLUSION

Western approach for Diabetes is based on wrong footings. Treating hyperglycaemia with hypoglycaemic drugs without caring to correct the metabolic impairment is something like applying dye to the grey hair which though helps to look younger does not reverse the fundamental process of senescence. Under the present circumstances Ayurvedic approach for etiopathogenesis and treatment would be of great use. Separating 19 Mehas from the chapter of pramehas ad attributing the whole description to Madhumeha identifies Ayurvedic concept of this most deadly disorder – Diabetes mellitus. It also answers all those doubts raised about the

contradictions and confusions about the disease. So the Bhastrika Pranayama with Haridra Choorna is helpful to decrease the symptoms of Type 2 Diabetes Mellitus with regular Pathyapathya.

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