



# Effect of *Nishakatakaadi Kwath* and *Chandra Prabha Vati* in Patient of *Prameha* (Diabetes mellitus) - A Case Study

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## ABSTRACT

Diabetes mellitus (DM) has become an expanding global health problem widespread among all the socioeconomic groups, leading to various complications such as nephropathy, neuropathy, and retinopathy which are responsible for morbidity and mortality. Ayurvedic approach to pathogenesis of *Prameha* can provide solution in managing the incidence of diabetes among population by using various preparations. This is a case study of newly diagnosed *Prameha* (type 2 diabetes mellitus) patient treated completely using Ayurvedic principles. In the present case report, a 54-year-old female patient was treated with *Nishakatakaadi Kwath* and *Chandraprabha Vati*. After 2 months of strict Ayurveda protocol which basically included *Shamana* therapy, the fasting blood sugar (202mg/dl initially then reduced to 84mg/dl post treatment) and Post Prandial sugar level (From 327mg/dl initially then to 96mg/dl after treatment) decreased profoundly. The present study indicates that the *Nishakatakaadi Kwath* and *Chandraprabha Vati* are effective in the treatment of *Prameha* (Diabetes).

**Key Words:** *Diabetes mellitus, Chandraprabha Vati, Nishakatakaadi Kwath, Prameha*

## INTRODUCTION

Diabetes mellitus is a chronic, metabolic disease of multiple aetiology characterized by hyperglycaemia with disturbance of carbohydrate, fat and protein metabolism resulting from defects in insulin secretion, insulin action or both. The effects of diabetes mellitus include long-term damage, dysfunction and failure of various organs i.e., heart, blood vessels, eyes, kidneys and nerves<sup>1</sup>. Diabetes mellitus may present with

characteristic symptoms such as polyuria, polydipsia, polyphagia. The most common type of Diabetes is type 2 diabetes, seen usually in adults, which occurs when the body becomes resistant to insulin or does not produce insulin enough quantities to satisfy the need of the body. In the past three decades the occurrence of type 2 diabetes has raised enormously in countries of all income groups<sup>2</sup>. On the basis of its symptoms *Prameha* can be correlated to the features of Diabetes mellitus. It is a clinical condition in



which the patient passes large quantity of urine similar to that of *Madhu* or Honey having *Kashaya* (Astringent) and *Madhura* (Sweet) taste, *Ruksha* (Dry) texture and honey like colour making the body attain sweetness<sup>3</sup>. *Prameha* includes a number of metabolic disorders characterized by specific peculiarity in urine, due to excretion of products of metabolism, which may or may not be normal constituents of urine. In *Ayurveda* *Prameha* is an umbrella term for 20 disorders involving the entire urinary system, mainly characterized by excessive urination<sup>4</sup>. The classification of *Prameha* can be summarized according to the Dosh types in the table given below (Table Number 1)-

**Table 1** Classification of types of *Prameha*

<i>Prameha</i>	Sub-types	Stages
<b><i>Kaphaja</i></b>	10	<i>Sadhya</i> (Can be cured)
<b><i>Pittaja</i></b>	6	<i>Yapya</i> (Can kept under control)
<b><i>Vataja</i></b>	4	<i>Asadhya</i> (Difficult to treat)

The classical symptoms of Diabetes are similar to those mentioned in *Ayurveda* like thirst, polyuria, nocturia and rapid weight loss. Many Patients who might lack the presentation of classical symptoms or who are considered as asymptomatic might be having non-specific complaints such as chronic fatigue and malaise<sup>5</sup>.

**Table 2** Constituent drugs of *Nishakatakadi Kwath*

Sr. no.	Drug	Latin name	Part used	Ratio
1.	<i>Haridra</i>	<i>Curcuma longa</i> Linn	Rhizome	1
2.	<i>Kataka (Nirmali)</i>	<i>Strychnos Potatorum</i> L.f.	Seed	1
3.	<i>Paranti</i>	<i>Ixora coccinea</i> L.	Root	1
4.	<i>Lodhra</i>	<i>Symplocos racemose</i> Roxb.	Bark	1
5.	<i>Amalaki</i>	<i>Emblica officinalis</i> Gaertn.	Fruit	1
6.	<i>Gorakshaganja</i>	<i>Aerva lanata</i> (L.) Juss.Ex		1
7.	<i>Gudmar</i>	<i>Gymnema sylvestre</i> R. BR.		1
8.	<i>Ushira</i>	<i>Vetiveria zizanioides</i> Linn	Root	1
9.	Water (use for preparation of decoction)			16

Traditionally, hundreds of herbs are used in *Ayurveda* for the effective management of *Prameha*. According to ethno botanical information, there are as many as 800 different plants used in the traditional treatment of diabetes mellitus<sup>6</sup>. Treatment of Diabetes mellitus without any adverse effects remains a significant challenge even to modern medicine. *Ayurveda* can play an essential role for both management and prevention of Diabetes and its adverse effects. Here the presented case explains the effective treatment approach of *Ayurvedic* Drugs on newly diagnosed patient of Diabetes Mellitus.

## MATERIALS AND METHODS

*Nishakatakadi Kwath* (10ml) and *Chandraprabha Vati* (2tab) were administered in Diabetes mellitus positive cases.

### A) *Nishakatakadi Kwath*

*Nishakatakadi Kwath* contains 8 herb mineral ingredients<sup>7</sup>. There is mention of the said *Kwatha* in *Prameha Roga- Adhikara* in the text *Sahastrayogam*. Details of the constituent drugs of *Nishakatakadi Kwath* are enlisted in the table given below (Table 2).



## B) Chandraprabha Vati

*Chandraprabha Vati* is again a traditional and time tested medicine to combat the disorders related to Urinary Tract and especially Diabetes

mellitus. This compound made up of 37 ingredients is useful in all kinds of *Prameha Roga*. Ingredients of *Chandraprabha Vati* (37 herb mineral ingredients)<sup>8</sup> are enlisted as follows in the table given below (Table 3).

**Table 3** Ingredients of *Chandraprabha Vati*

Sr. no.	Drug	Latin name	Part used	Ratio
1.	<i>Chandraprabha (Karpura)</i>	<i>Cinnamomum camphora</i> T Nees	Deposits in the oil cells (camphor)	1
2.	<i>Vacha</i>	<i>Acorus calamus</i> Pennel	Rhizome	1
3.	<i>Mustaka</i>	<i>Cyperus rotundus</i> Linn	Tuber	1
4.	<i>Bhunimbha</i>	<i>Andrographis paniculata</i> Pennel	Whole plant	1
5.	<i>Amurta</i>	<i>Tinospora cordifolia</i> Miers	Whole plant	1
6.	<i>Daru</i>	<i>Cedrus deodara</i> Roxb. ex. Lamb	Heartwood	1
7.	<i>Haridra</i>	<i>Curcuma longa</i> Linn	Dried rhizome	1
8.	<i>Ativisha</i>	<i>Aconitum heterophyllum</i> Wall.ex Royle	Root	1
9.	<i>Darvi</i>	<i>Berberis aristata</i> DC.	Whole plant	1
10.	<i>Pippalimula</i>	<i>Piper longum</i> Linn	Root	1
11.	<i>Citraka</i>	<i>Plumbago zeylanica</i> Linn	Purified Root	1
12.	<i>Danyaka</i>	<i>Coriandrum sativum</i> Linn	Fruit	1
13.	<i>Vibhitaki</i>	<i>Terminalia belarica</i> (Gaertn.)	Fruit	1
14.	<i>Haritaki</i>	<i>Terminalia chebula</i> Retz	Fruit	1
15.	<i>Amalaki</i>	<i>Emblica officinale</i> Gaertn	Fruit	1
16.	<i>Cavya</i>	<i>Piper cheba</i> Vahl.	Root	1
17.	<i>Vidanga</i>	<i>Emblica ribes</i> Burm F	Fruit	1
18.	<i>Gajapippali</i>	<i>Scindapsus officinalis</i> Schoot.	Fruit	1
19.	<i>Shunti</i>	<i>Zingiber officinale</i>	Rhizome	1
20.	<i>Maricha</i>	<i>Piper nigrum</i> Linn.	Fruit	1
21.	<i>Pippali</i>	<i>Piper longum</i> L.	Dried spike	1
22.	<i>Swarnamakshika</i>	Copper pyritis	<i>Bhasma</i>	1
23.	<i>Yavakshara</i>	Potassium carbonate		1
24.	<i>Swargiksha</i>	Sodium bicarbonate		1
25.	<i>Saindavalavana</i>	Rock salt		1
26.	<i>Savvarcalavana</i>	Black salt		1
27.	<i>Vid lavana</i>	Ammonium chloride		1
28.	<i>Trivurt</i>	<i>Ipomea turpethum</i> Linn.	Root	4
29.	<i>Danti</i>	<i>Baliosperum montanum</i> L.	Root	4
30.	<i>Twak</i>	<i>Cinnamomum zeylanicum</i> J.S.	Bark	4
31.	<i>Ela.</i>	<i>Elettaria cardomomum</i>	Seed	4
32.	<i>Vankshalochana</i>	<i>Bambusaa rundinaceae</i>		4
33.	<i>Tejapatra</i>	<i>Cinnamomum tamala</i> Nees	Leave	4
34.	<i>Lauha Bhashma</i>	<i>Ferrum</i>	<i>Bhasma</i>	8
35.	<i>Sita</i>	<i>Sugar</i>		16
36.	<i>Shilajatu</i>	Aspelt mineral pitch	Purified <i>Shilajatu</i>	32
37.	<i>Guggulu</i>	<i>Balsamodendron mukul</i>	Resinous gum- (purified)	32

## CASE REPORT

A 54-year-old female patient, visited outpatient department of All India Institute of Ayurveda with the gradually increasing complaints of *Pipasa-*

*Aadhikya* (~excessive thirst), *Prabhoota- mutrata* (~excessive urination), *Madhurya-Aasya* (~sweetness of mouth) from past two months. The patient had no history of diabetes, hypertension



and no positive family history. As the patient recently developed the symptoms of *Prameha* and got diagnosed for DM only after blood investigations, the patient was not under any conventional therapy. There was no history of alcohol, tobacco or drug addiction.

**Clinical findings:** On general examination, the patient was of light brown complexion with medium built. On the examination of bulbar conjunctiva, icterus was absent. Blood pressure was 120/80 mm of Hg and pulse was 70/min. Tongue was coated. On systemic examination, no circulatory, respiratory and nervous abnormality were noticed.

**Ashtavidha pareeksha (~eight-fold examination):** *Nadi* (~pulse) was *Kaphaja*, *Mala* (~bowel) was irregular, *Mutra* (~urine) was excessive (7-8 time/day & 3-4 time/night), *Jihva* (~tongue) was *Sama* (~coated), *Shabda* (~voice) was *Sadharana* (~normal), *Akriti* (~body built) was *Madhyama* (~moderate), *Sparsha* (Body temperature and Texture) was *Sheeta Snigdha* and *Drik* (~vision) was normal. The Observations are summarized in the table given below (Table 4)

**Table 4** Observations of Ashtavidha Pareeksha (Eight Fold Examination)

<i>Nadi</i> (~pulse)	<i>Kaphapradhana</i> , <i>Manda</i>
<i>Mala</i> (~bowel Habit)	Irregular
<i>Mutra</i> (~urine)	Excessive (7-8 time/day and 3-4 time/night)
<i>Jihva</i> (~tongue)	<i>Sama</i> (~coated)
<i>Shabda</i> (~voice)	<i>Sadharana</i> (~normal)

**Table 6** Treatment Protocol: Consolidated Treatment protocol advised to the patient is summarized in the table given below

Drug	Quantity	Anupana	Time of Administration	Duration
Nishakatakadi Kwatha	10ml- B.D.	Ushana Jala	Before meal (empty stomach)	2 months
Chandraprabha Vati	2 Tablet- B.D.	Ushana Jala	After meal	2 months

<i>Akriti</i> (~body built)	<i>Madhyama</i> (~moderate)
<i>Drik</i> (~vision)	Normal
<i>Sparsha</i>	<i>Sheeta</i> , <i>Snigdha</i>

**Dashavidha pareeksha (~ten-fold examination):**

*Prakriti* (~body temperament) was *Kapha-Vataja*, *Vikriti* was *Kapha pradhana*, *Sara* (~excellence of tissues) was *Madhyama*, *Samhanana* (~compactness of organs) was *Madhyama*, *Satmya* (~suitability) was *Avara* (~poor), *Satwa* (~psyche) was *Pravara* (~superior), *Pramana* (~measurement of body organs) was *Madhyama*, *Aahara Shakthi* (~food digesting power) was *Madhyama*, patient was vegetarian (*Madhura*, *Amla rasa pradhana*), *Vyayama shakti* (~power of performing exercise) was *Avara* and *Vaya* (~age) was *Madhyama*. Aforesaid results of observations of tenfold examination is depicted in the table given below (Table 5)

**Table 5** Observations of Dashavidha Pariksha (Tenfold Examination)

<i>Prakriti</i> (~body temperament)	<i>Kapha- Vataja</i>
<i>Vikriti</i>	<i>Kaphaja pradhana</i>
<i>Sara</i> (~excellence of tissues)	<i>Madhyama</i>
<i>Samhanana</i> (~compactness of organs)	<i>Madhyama</i>
<i>Satmya</i> (~suitability)	<i>Avara</i>
<i>Satwa</i> (~psyche)	<i>Pravara</i> (~superior)
<i>Pramana</i> (~measurement of body organs)	<i>Madhyama</i>
<i>Aahara Shakthi</i> (~food digesting power)	<i>Madhyama</i>
<i>Vyayama shakti</i> (~power of performing exercise)	<i>Avara</i>
<i>Vaya</i> (~age)	<i>Madhyama</i>



## RESULTS

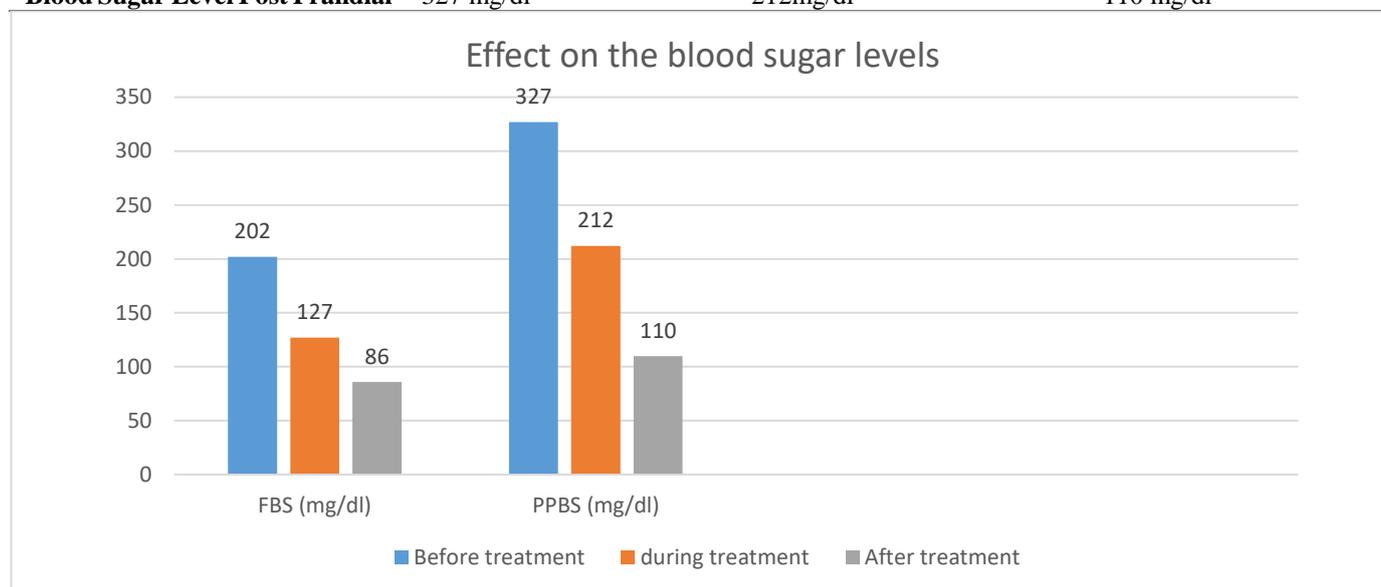
After the completion of two-month *Shamana* therapy significant Improvement was observed on objective and subjective signs and symptoms as Follows.

a) Subjective Criteria = Complete relief from *Pipasa- Aadhikya, Prabhoota- Mutrata, Madhurya-Aasya.*

b) Objective Criteria = After the therapy, i.e. two months later, fasting blood sugar of the patient was examined and found to be 86mg/dl while post prandial blood sugar was 110mg/dl, which was found in the normal range. Effect of the treatment can be observed in enlisted Table 7 and Graphically depicted in the Graph given below.

**Table 7** Effect on the blood sugar levels

Test	Before treatment	During treatment	After treatment
<b>Blood Sugar level Fasting</b>	202 mg/dl	127mg/dl	86 mg/dl
<b>Blood Sugar Level Post Prandial</b>	327 mg/dl	212mg/dl	110 mg/dl



**Graph no. 1** Effect on the blood sugar levels

## DISCUSSION

*Nishakatakaadi Kwath* is a decoction and *Chandraprabha vati* is an Ayurvedic formulation available in classical *Vati* form. Both are prepared from some different herbs that have antidiabetic and anti-hyperglycaemic properties. In *Nishakatakaadi Kwath* maximum drugs possess *Kashaya, Tikata rasa, Laghu, Ruksha guna.* *Prameha* is caused by *Kapha Vata Pitta Medo Dushti*, as *Nishakatakaadi Kwath* had *Vata-Kaphahara* properties due to *Sheeta, Ushna*

*Veerya* and *Madhura, Katu Vipaka.* This *Rasa* and *Vipaka* of the drugs help in alleviating the *Prameha*. In *Chandraprabha vati* as well most of ingredients exhibited glucose lowering activities. *Chandraprabha vati* formulation is mostly effective in *Kapha* and *Vata-Dosha.* Majority of drugs have *Katu, Tikta, Kashaya Rasa* and the prime *Virya* is *Ushna*, dominant *Vipaka* is *Katu-Vipaka* which helps in reducing the symptoms of *Prameha.* *Prameha* being *Santarpanottha vyadhi* and *Rugna Bala* was also



*Pravara*, the above-mentioned drugs helped in relieving the symptoms. As most of the drugs were of *Kashaya*, *Tikta Rasa* and *Katu Vipaka* both of the drugs are useful in *Kaphaja Prameha*. Similarly, these are useful in the *Poorvaroopa* state of the disease. The intervention showed dynamic improvement in the blood sugar levels. Substantial symptomatic relief was also observed. As the patient was treated in the prodromal state itself reversal of disease pathogenesis was observed. Thus, the patient was benefited as the need for the conventional therapy was substantially reduced. As the patient was newly diagnosed HbA1c levels were not assessed priory. Further study can be done on larger sample using HbA1c level as one of the objective criteria. This trial proved effective this case to provide relief from the symptoms and further arresting the progression of prognosis of disease in the patient.

## CONCLUSION

Diabetes mellitus is reaching potentially epidemic proportions in India. The potential complications of Diabetes are enormous and pose significant healthcare burdens on families and society. *Nishakatakaadi Kwath and Chandraprabha Vati* have showed the significant improvement in the symptoms of *Prameha* and blood sugar levels. The treatment used here was purely Ayurvedic without any interference of contemporary drugs in order to bring out proper conclusion on the usage and efficiency of Ayurveda treatment. Also, no Adverse or unwanted reactions were observed. So, Ayurvedic medicines can be considered as a

mainstream treatment in case of newly diagnosed Diabetes mellitus.

**Conflict of Interest:** No conflict of interest



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