

Research Article

To Evaluate the Efficacy of Patoladi Kwatha in Pre-Diabetic Condition w.s.r to Pittaj Prameha

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ABSTRACT:

In today's era, Globally Diabetes Mellitus is one of the most prevalent and fastest growing disease. Hence the aim of my study is to convert pre-diabetic patient to normal or prevent them to transfer into Type 2DM in pre-diabetic condition¹. *Acharya Charaka* has advised many *Kashays* for *prameha*⁵. All the types of *prameha* were diagnosed as per their *mutraparikshana*⁴. Hence as per *mutraparikshana*, in 10 patients of *pittaj prameha patoladi kwatha*⁵ was given. The objective of my study was to prevent pre-diabetic condition to transfer into Type 2 DM and to stop the progression of disease.

This study was conducted in *Ayurved Seva Sangh Aarogyashala Rugnalaya*, Nashik. A total of 10 patients in pre-diabetic condition were randomly selected. As per *mutraparikshana*, the study was done on *Manjishthameha*⁴ and *Haridrameha*. Fresh *kwatha* was prepared from *Patola*, *Nimba*, *Aamalaki* and *Amruta churna*. 25 gms of *patoladi churna*⁵ was taken for the *kwatha* preparation. This *kwatha* was administered twice a day in empty stomach in divided doses for three consecutive months. With this study *pramehahetu*³ also studied as per *samhita. Hetus* which are present in patient that *nidanparivarjana* was also given. The blood glucose level was examined on 0th, 30th, 60th, 90th day. Statistical analysis was done according to the student's t-test.

KEY WORDS: Type2 DM, *Patoladi Kwatha*, Pre-diabetic condition, *Mutraparikshana*.

INTRODUCTION:

Globally, the number of people with diabetes mellitus has quadrupled in the three decades, and diabetes mellitus is the ninth major cause of death. About 1 in 11 adults worldwide now have Diabetes Mellitus, 90% of whom have type 2 DM. Asia is a major area of the rapidly emerging DM global epidemic, with China and India, the top two epicentres. Although genetic predisposition partly determines individual susceptibility to Type 2DM, an unhealthy diet, diet not taken on proper time or on time as per *Ayurveda* mentioned, a sedentary lifestyle and Stress, are important drivers of current global epidemic in life. Many cases of Type 2DM could be prevented with lifestyle changes if diet taken on proper time including maintaining healthy body weight, consuming a healthy diet, staying physically active, not doing smoking and

drinking alcohol. The number of people with DM is increasing due to population growth, ageing, urbanization and increasing prevalence of Obesity and physical inactivity. Quantifying the prevalence of DM and the number of people affected DM, now and in the future is important to allow rational planning and allocation of resources. Hence if we diagnose the patients in pre-diabetic condition then we prevent them to transfer into Type2DM.

IDF revealed that India has more diabetes than US. 20% of diabetes patient live in India. IDDM is relatively rare in our country & less than 2% of diabetes in India having IDDM. Prevalence of type 2 DM which was about 4.5% in early seventies has sharply rises to more than 8.5% in late nineties in urban areas in our countries. Hence it is necessary to

prevent type 2DM in early stage i.e. in pre-diabetic condition is very important hence I chosen this subject for study.

MATERIALS AND METHODS:

No symptoms are present hence diagnosis is done by *mutraparikshana*⁴ and result is drawn from BGL reports.

Definition of Pre-diabetic :

Pre-diabetes is the precursor stage before diabetes mellitus in which not all of the symptoms required to diagnose diabetes are present, but blood sugar is abnormally high. It usually involves no symptoms and

only high blood sugar as the sole sign.

Pittaj Prameha :

In this condition *Manjishtha saman*⁴ (colour like *manjishtha* means reddish) colour and *aam gangha* is present.

MATERIALS:

In this study Fresh *kwatha* was prepared from *Patola*, *Nimba*, *Aamalaki* and *Amruta* churna. 25 gms of *patoladi churna*⁵ was taken for the *kwatha* preparation. This *kwatha* was administered twice a day in empty stomach in divided doses for three consecutive months.

Table No. 1- Constituent for *kwatha*

Sr. No.	Use	Latin Name	Guna	Karma
1	Patol	<i>Trichosanthes dioica</i>	Laghu, ruksha, tikta, Katu, ushna	Tridoshshamak, Yakrutwikarhar
2	Nimba	<i>Azadiracta indica</i>	Laghu, tikta, kashay, Katu, Sheet	Kaphapittashamak, Mutragat wikarhar
3	Aamalki	<i>Emblica officinalis</i>	Guru, ruksha, sheet, madhur	Tridoshhar, pramehaghna, yakrutottejak
4	Amruta	<i>Tinispura cordifolia</i>	Guru, snigdha, tikta, Kashay, madhur, ushna	Tridoshshamak, pramehaghna, rasayan

Methods:

10 patients suffering from Type 2DM in Pre-diabetic condition, (*pittaj prameha*) were randomly selected from OPD and IPD of *Kayachikitsa* department.

No. of patients : 10

Duration of study : 90 days

Follow ups : D0, D 30, D 60, D 90

Procedure:

Fresh *kwatha* was prepared from *Patola*, *Nimba*, *Aamalaki* and *Amruta* churna. 25 gms of *patoladi churna* was taken for the *kwatha* preparation. This *kwatha* was administered twice a day in empty stomach in divided doses for three consecutive months.

Study Design:

Selection of Patients:

10 patients suffering from Type 2DM in Pre-diabetic

condition (*pittaj prameha*) were randomly selected from OPD and IPD of *Kayachikitsa* department.

{Pre-diabetic means: A Fasting Blood Glucose level from 100-126mg/dL And Post Prandial or OGTT(oral glucose tolerance test)140-199mg/dL.}

Inclusion Criteria:

1. Age group: 16 to 60 years.
2. Patients having A Fasting Blood Glucose level from 100-126mg/dL And Post Pan dial or OGTT (oral glucose tolerance test)140-199mg/dL
3. Patients from all socio-economic status.
4. Patients of both sexes.
5. Patient of *Manjishthameha* and *Haridramenha*

Exclusion Criteria:

1. Patients below 16years and above 60 years of age.
2. Patients take medicines orally for Type 2 DM.
3. Patients with any chronic disease were excluded.

OBSERVATIONS AND RESULTS:**Criteria for Assessment :****1. Nidan Parivarjana (stop hetus which are responsible for Pittaj Prameha)****Table No.2 : Observation of Hetu in Patients**

Sr. No.	Granthokta Hetu ³	Nowadays we find hetu
1	<i>Aasyasukha</i>	Sitting works i.e. Officers in AC room, Shethaji's etc.
2	<i>Swapnasukha</i>	Nidra in daytime
3	<i>Dadhini</i>	Recipes made from Dahi like malai methi, Dahi Wada, cheese etc.
4	<i>Gramya, Aanup, Udakmansrasa</i>	Atimansahara sevan
5	<i>Payansi</i>	Recipes made from milk like all sweets, panir, fruit salad etc.
6	<i>Navannapan</i>	Now we eat chapatti, rice is new.
7	<i>Nava pani</i>	Water is purified and available from drink
8	<i>Gugavaikrutam</i>	Guda nirmitt i.e. all sweet dishes
9	<i>Avyayam</i>	No exercise
10	<i>Chinta</i>	Stress

In my study some patients I found with *Aasyasukha*, *Dadhini*, *Gramya*, *Aanup*, *Udakmansrasa*, *Avyayam* *hetu*, some patients with *Swapnasukha*, *Payansi*, *Navannapan*, *Gugavaikrutam* etc and some patients with all above *hetus*. These are *hetus* of *prameha* but these all *hetus* are responsible for life style disorders also. Hence we found patients of pre-diabetic condition because Type 2 DM is life style disorder if we aware people about their faulty life style then and only we treat all life style disorders like Type 2DM, Obesity etc.

For awareness about life style disorders, we have to give knowledge about *Dincharya* and *pathapathya*

about *aahar* and *vihara*. At ancient time no life style disorders because life style is so simple with rules of *Dinacharya*. Hence if we want permanent solution on life style disorder then it is very essential to adopt *Dinacharya* and *pathapathya* of *Aahar*, *Vihara*.

2. For Diagnosis pittaj prameha mutra parikshana is done:

Patients urine collected in sterile beaker and kept it as it is for 30 min. Then change in the physical properties like colour of this sample are being noted.

**Mutra-parikshana**

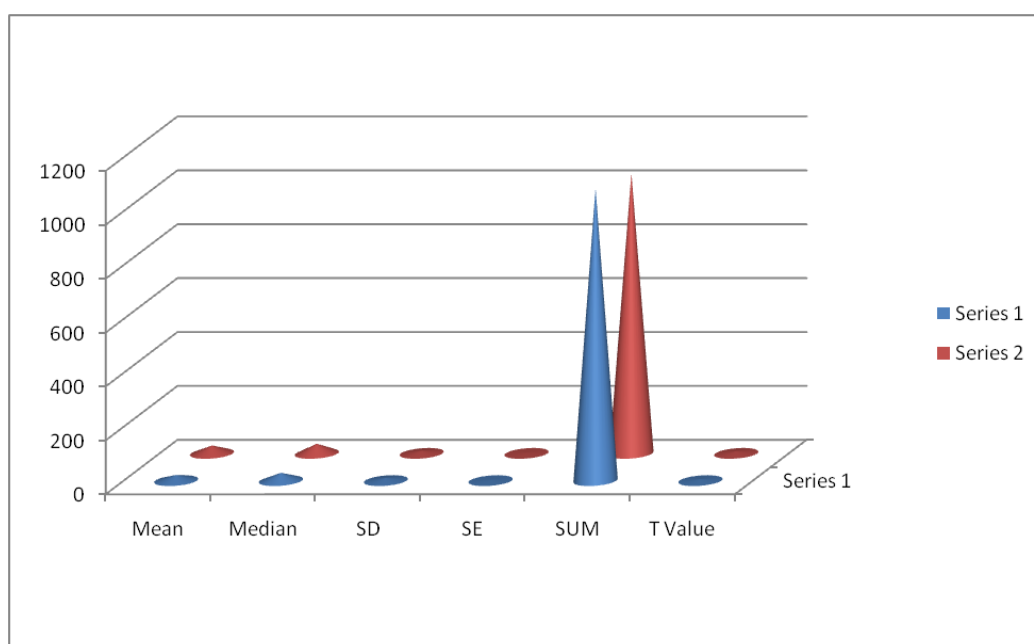
3. Objective Parameter :

Assessment of changes in Fasting and post prandial Blood Glucose level.

Table No.3 : Effect of treatment Before and After on Blood Glucose level By Using Paired t test.

	Fasting BGL	Post Prandial BGL
Mean	21	29.4
Median	29	36
Std. Deviation	10.98	10.75
Std. Error	3.47	3.40
Sum	1086	1040.4
P value Summary	6.05	8.64

Above table shows scores of Blood Glucose level before and after treatment which shows T value at t_9 is 2.26 and observed values are greater than table values hence both results are significant.



Graph No. 1: Before and After treatment blood glucose level

DISCUSSION:

The aim of this study was to stop progress of disease Type 2 DM in pre diabetic condition is fulfilled. *Patoladi kwatha* contains *Patole, Nimba, Aamalaki, Amruta*. These drugs are *Ladgu, ruksha, snigdha gunatmak. Katu, tikta, madhur, kashayrasatmak. Ushna, sheet viryatmak*. Hence these drugs are *tridoshashamak, yakrutottejak, mutragatdoshhara*. First *pachana* of vitiated *doshas* takes place hence *kledotpatti* decreases hence *mutragatkleda* also decreases hence pathology is broken and pre diabetic condition is reverting hence BGL is normalizing.

In life style disorder *pathapathya* of *Aahar, Vihara* and adaptation of *Dincharya* are very important. If globally everybody adopts these things then and only then nobody has life style disorders.

Statistically, evaluation is done as per data collected, then result and conclusion are drawn out. For Pre-diabetic condition in Type 2 DM, BGL Before and After is done. Statistical observations are evaluated by using paired t test. For BGL Fasting 9 degree of freedom 5% significant limit of 't' is 2.26. The observed value of t is 6.05 times the standard error, hence there it proves that *Patoladi kwatha* is effective. ($t = 6.05, P < 0.05$ is significant.) for post pan dial the observed value of 't' is 8.64 times the standard error, hence it proves that *Patoladi kwatha* is (8.64, $P < 0.05$ is also significant.)

Patoladi kwatha is effective in pre diabetic condition of Type 2DM.

CONCLUSION:

It was concluded that *patoladi kwatha* was found to be very effective in the pre-diabetic conditions. Statistically, also it was very significant. As per literary research, it was found that these drugs were also antioxidant, rejunuative, rasayana and with hypolipidemic properties. This research was found to be very fruitful.

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