Research Article

ISSN: 2454-5023
J. Ayu. Herb. Med.
2017; 3(1): 5-10
January- March

www.ayurvedjournal.com
Received: 09-01-2017
Accepted: 17-03-2017

Clinical evaluation of *Saptavimshatika Guggulu* and *Haridra Churna* in the management of Type-2 Diabetes Mellitus

Nirmal Alodariya[1], Darshna H Pandya[2], M. S. Baghel[3]

1 *Lecturer, Department of Roga Nidana, J S Ayurved College, Nadiad, Gujarat 387001, India*

2 *Assistant Professor, Department of Roga Nidana, Institute for Post Graduate Teaching and Research in Ayurveda (I.P.G.T. & R.A.), Gujarat Ayurved University, Jamnagar-361008, Gujarat, India*

3 *Ex. Director, Institute for Post Graduate Teaching and Research in Ayurveda (I.P.G.T. & R.A.), Gujarat Ayurved University, Jamnagar-361008, Gujarat, India*

ABSTRACT

Type 2 diabetes mellitus is a chronic, debilitating disease characterized by insulin resistance, impaired insulin secretion and hyperglycemia. As per International Diabetes Federation's (IDF) fifth diabetes atlas, India's prevalence of diabetes among 20-79 year olds is 9.2%. India is just second to China. The syndrome of diabetes mellitus is largely covered under the broad heading of *Prameha*. However, *Apathyanimittaja Prameha, Sthula Pramehi* and *Avaranjanya Madhumeha* described in *Ayurvedic* literature can be correlated with Type-2 Diabetes Mellitus. **Aim:** to study the effect of Saptavimshatik Guggulu and Haridrachurna in the management of Type 2 Diabetes Mellitus. **Material and Methods:** recently diagnosed cases of Diabetes Mellitus were treated with *Saptavimshatika Guggulu* (2 tablet, each of 500 mg) with 1 sachet of *Haridra* Powder (3 gm) after meal, twice a day with Luke warm water. Total duration of the therapy was 12 weeks. **Result:** The treatment remained highly significant in for improvement on objective parameter as well as subjective parameter **Conclusion:** The Drug found more effective in *Sthula pramehi* (BMI > 25 kg/m^2) than *Krusha pamehi* (BMI ≤ 25 kg/m^2).

Keywords: Diabetes Mllitus type - 2, *Prameha, Saptavimshatika Guggulu, Haridra Churna*.

INTRODUCTION

Rapid socio-economic development and "Coca-colonization" (a term used to describe the impact of western societies on traditional sociocultural habits and way of life in developing countries) have resulted in a change in the way of life from traditional to modern.[1] Furthermore, economic development has lead to improvement in food security and better health in some instance. The nutrition transition and impact of globalization on human diet [2] have increased rate of type 2 diabetes and other life style disorders.

It is the most prevalent metabolic condition and one of the major health as well as socioeconomic problems worldwide. By 2030, India's diabetes burden is expected to cross the 100 million mark as against 87 million earlier estimated. The country is also the largest contributor to regional mortality with 983, 000 deaths caused due to diabetes in year 2011.[3] World Health Organization (WHO) reports refer India as potential diabetic capital of the world, with number of patient of diabetes expected to increase from three to six crores by 2025. Other reports revels that Gujarat is second after Tamil Nadu on the fast track in acquiring diabetic patients. Other figure says that about 10 % of Gujarat population is at least at borderline Diabetic.[4]

The ancient *Acharyas* have invariably given detailed description of disease *Prameha*, like its causes, types, pathology along with complication, line of treatment for both i.e. preventive and curative aspects. *Acharya Sushruta* has described two types of *Prameha*, i.e. *Sahaja* and *Apathyanimittaja.*[5] While describing the line of treatment *Acharya Charaka* has classified the *Prameha* in two types especially on the basis of body constitution and causative factors i.e. *Sthula Pramehi* (seen in obese person) and *Krisha Pramehi* (seen in lean and thin person) [6] and *Santarpanjanya* & *Aptarpanjanya Prameha*.[7] In the same manner *Acharya Vagbhata has* classified it in two group i.e. *Avaranajanya Madhumeha* and *Dhatukshayajanya Madhumeha*.[8] The factors which provoke the *Vata* directly cause *Apatarpanajanya Madhumeha* while the factors which provoke *Kapha* and *Pitta* cause *Santarpanajanya Madhumeha*. In *Avaranajanya Madhumeha, Kapha* is the primary *Dosha* with involvement of all the three *Dosha* while the prime *Dushya* involvement is *Meda, Mamsa* and *Kleda*. Here the vitiated *Kapha* and *Pitta* obstruct the path of *Vata* causing its provocation.[9]

***Corresponding author:**
Dr. Darshna H Pandya
Assistant Professor, Department of Roga Nidana, *Institute for Post Graduate Teaching and Research in Ayurveda (I.P.G.T. & R.A.)*, Gujarat Ayurved University, Jamnagar-361008, Gujarat, India
Email:
darshnapandya[at]rediffmail.com, darshnapandya73[at]gmail.com

Though *Prameha* is *Kapha* dominant *Tridoshaja* disease, here *Kapha* gets vitiated by excess in quantity (*Bahutva*) and melted (*dravatva*) by quality.[10] Among different *Dushyas Abaddha Meda* (free fat)*, Mamsa* and *Kleda* are prime *Dushyas*. So, the drugs which having *Katu, Tikta, Kashaya Rasa, Ushna Virya, Laghu, Ruksha, Tikshna* properties can be helpful to disintegrate patho-physiology of the disease. Taking in to consideration *Saptavimshatik Guggulu* and *Haridra* powder were selected for the present study.

Aims & Objectives

To evaluate clinical efficacy of *Saptavimshatika Guggulu* and *Haridra Churna* in the management of Type II Diabetes.

MATERIALS & METHOD

Patients fulfilling the criteria for the diagnosis of the disease were registered for the present study irrespective of their gender, religion, occupation. The patients were selected from the OPD of *Rog Nidan* & *Vikriti Vigyana* and *Kayachikitsa* Department.

Study Design:

Study Type : Interventional

Purpose : Treatment

Masking : Open label

Control : Single armed study

Timing : Prospective

End Point : Efficacy and Safet

No. of Groups : One

Time lines:

Total Study Period	18 months
Washout / Preparatory Period	48 hours
Treatment Period	12 weeks

Criteria for diagnosis:

Patients having any of symptoms of diabetes mellitus like, polyuria, polyphagia, polydipsia, calf muscle pain, burning or numbness in palm and sole along with raised HbA1c% $\geq$ 6.5 were selected for present study.

INCLUSION CRITERIA

1. Patients of both sex and age between 30 to 65 years

2. Treatment naive patients or newly diagnosed patients of Type II Diabetes Mellitus taking oral hypoglycemic drugs for ≤ 6 weeks.

3. Patients having Glycosylated hemoglobin (HbA1c) $\geq$ 6.5%.

4. Willing and able to participate for 12 weeks

EXCLUSION CRITERIA

1. Patients already diagnosed and suffering from the complications of Diabetes Mellitus.

2. Patients suffering from brittle diabetes mellitus.

3. Patients who have a past history of IHD, MI, Stroke etc. within the last 6 months.

4. Patient with poorly controlled Hypertension (≥160 / 100 mm Hg)

5. Patients with concurrent serious Hepatic Dysfunction, Renal Dysfunction, uncontrolled Pulmonary Dysfunction or other concurrent severe disease or Melignnancy.

6. Pregnant / Lactating women.

7. Patient on steroids, oral contraceptive pills or estrogen replacement therapy.

8. Alcoholics and/or drug abusers.

9. Patients with evidence of malignancy

10. Patients suffering from major systemic illness necessitating long term drug treatment

11. H/o hypersensitivity to any of the trial drugs or their ingredients.

DRUG INTERVENTIONS (Table - 1)

Do's and Don'ts: Patient were guided regarding Do's and Don'ts of the disease and advised to follow them.

Proforma: The protocol required information was collected for each patient using printed proforma. A special proforma as designed for the same. Patients consent was taken prior to register them for the study.

Table 1: Drug Interventions

Drug	Saptavimshatika Guggulu[i]	Haridra Churna[ii]
Dose	2 tablets (500 mg each) twice daily	1 sachet (3 gm) twice daily
Dosage form	Tablet	Sachet containing 3 gm powder
Route of Administration	Oral	Oral
Time of Administration	Twice a day after food	Twice a day after food
Anupana	Lukewarm Water	Lukewarm Water
Packing form	Bottle containing 60 tablets	Plastic jar containing 90 gms of Haridra Churna (30 sachets of 3gm each)
Duration of therapy	12 weeks	12 weeks

[i] (API – Part II; Vol. II; Pg 127-129).

[ii] (API – Part – I – Vol. I; Pg 60-61).

OUTCOMES

Primary Outcome Measure

• Change in Glycosylated Hemoglobin (HbA1c %)

Secondary Outcome Measures

• Change in Symptoms -Diabetes Symptoms Questionnaire (DSQ)

• Change in Blood sugar Fasting. (10-12 hrs after dinner)

• Change in Blood sugar Post -Parandial. (100-120 minutes after lunch)

Methods for assessment

Prior to selection (Screening)

• Informed Consent

• Eligibility evaluation

• Laboratory investigations

During Selection (Baseline)

• General information-(Personal Identification and Demographic profile)

• Medical history, General Physical and Systemic examination

• Clinical Assessment by Diabetes Symptoms Questionnaire (DSQ)

• Assessment of Ayurvedic Parameters.

• SF-36-Health Survey Score.

During Treatment:

Patients were assessed subjectively as well as objectively (laboratory investigation of blood sugar) every fortnight.

At the end of the treatment:

• Clinical Assessment - Diabetes Symptoms Questionnaire (DSQ)

• Assessment of Ayurvedic Parameters.

• SF-36-Health Survey Score.

• Laboratory Investigations.

DSQ and SF-36 health Survey: comprise questions evaluating Physical as well as psychological status of patients. Proper gradation of all the questions was made.

Status of the patients: Total 60 patients were registered and out of those 53 completed the treatment period successfully.

OBSERVATION

1. Maximum i.e. 70% of the subjects were having age between 40 to 60 years, female gender (56.66%), Hindu religion (86.66%), married (96.66%), and from urban / semi urban area (85%).

2. 56.66 % subjects of the study were not having family history of diabetes mellitus in their family.

3. Maximum i.e. 83.33% subjects were having average to moderate stress, sedentary lifestyle (81.66%), excessive intake of sweet dishes (76.66), food prepared with fine flour (73.33%), having habit of day sleep (66.66%), intake of curd (65%), used to have such food which is heavy to digest (56.66%), habit to have food at irregular time (53.33%).

4. BMI wise maximum i.e. 85% subjects of the study were either overweight or obese.

EFFECT OF THERAPY

Table 2: Effect of *Haridra* powder and *Saptavimshati Guggulu* on chief Symptoms of 53 patients of Diabetes Mellitus

	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	'p'	Remarks
Polyphagia	0.96	0.81	0.15	15.68↓	0.002	0.0004	0.17	NS
Polyuria	1.26	1.01	0.24	19.34↓	0.02	0.003	0.004	HS
Polydipsia	1.15	0.86	0.28	24.59↓	0.016	0.002	0.04	S
Fatigue	1.66	1.43	0.22	13.63↓	0.053	0.008	0.008	HS
Tingling Sensation	1.03	1	0.03	3.63↓	0.04	0.005	0.66	NS
Weakness	1.32	1.20	0.11	8.57↓	0.02	0.002	0.30	NS
Numbness	0.94	0.90	0.03	4↓	0.04	0.006	0.71	NS

↓- Decrease, SD – Standard Deviation, SE – Standard Error, NS – Not Significant, S - Significant, HS – Highly Significant

Table 3: Effect of *Haridra* powder and *Saptavimshati Guggulu* on associated symptoms of 53 patients of Diabetes Mellitus

No	Associate Symptoms	Mean BT	Mean AT	Diff.	%
1	Burning palm and sole	0.81	0.77	0.004	4.93↓
2	Feeling of stickiness in body	0.41	0.37	0.04	9.75↓
3	Sweetness in mouth	0.5	0.37	0.13	26↓
4	Turbid urination	0.56	0.26	0.3	53.57↓
5	Bad odor from the body	0.58	0.33	0.25	43.10↓
6	Flabbiness of body	0.79	0.37	0.42	53.16↓
7	Excess perspiration	0.84	0.62	0.22	26.19↓

BT – before treatment, AT – after treatment, ↓- Decrease

Table 4: Effect of *Haridra* powder and *Saptavimshati Guggulu* on Blood sugar level of 53 patients of Diabetes Mellitus

Sugar level	N	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	't'	'p'	Remarks
FBS (mg. / dL)	53	172.54	166.28	6.26	3.63↓	3.74	0.51	0.61	0.54	NS
PPBS (mg. / dL	47	250.25	252.08	1.82	0.73↑	26.50	3.86	0.16	0.86	NS
HbA1c%	52	8.26	7.76	0.50	6.07↓	0.37	0.05	2.11	0.03	S

↓- Decrease, SD – Standard Deviation, SE – Standard Error, NS – Not Significant, S – Significant

Table 5: Effect of *Haridra* powder and *Saptavimshati Guggulu* on Blood sugar of patients with BMI > 25 Kg/m^2

Sugar	N	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	't'	'p'	Remarks
FBS (mg. / dL)	44	166.70	164.38	2.31	1.39↓	0.40	0.06	0.19	0.84	NS
PPBS (mg. / dL)	38	248.31	244.34	3.97	1.60↓	25.99	4.21	0.31	0.75	NS
HbA1c%	44	8.05	7.55	0.50	6.28↓	0.43	0.06	2.07	0.04	S

↓- Decrease, SD – Standard Deviation, SE – Standard Error, NS – Not Significant, S – Significant

Table 6: Effect of Haridra powder and Saptavimshati Guggulu on Blood sugar of patients with BMI ≤ 25 Kg/m^2

Sugar	N	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	't'	'p'	Remarks
FBS	9	201.11	175.55	25.55	12.70↓	19.40	6.46	1.25	0.24	NS
PPBS	9	258.44	284.77	26.33	10.18↑	24.42	8.14	1.30	0.22	NS
HbA1c%	8	9.38	8.91	0.47	5.05↓	0.21	0.07	0.59	0.57	NS

↓- Decrease, SD – Standard Deviation, SE – Standard Error, NS – Not Significant

Table 7: Effect of *Haridra* powder and *Saptavimshati Guggulu* on Renal Profile of 53 patients of Diabetes Mellitus

Parameter	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	't'	'p'	Remarks
Blood Urea (mg./dL)	25.64	25.13	0.50	1.98↓	3.39	0.46	0.41	0.68	NS
Uric Acid (mg./dL)	4.51	4.44	0.06	1.42↓	0.07	0.009	0.36	0.71	NS
S. Createnine (mg./dL)	0.87	0.86	0.009	1.07↓	0.02	0.003	0.41	0.67	NS

↓- Decrease, SD – Standard Deviation, SE – Standard Error, NS – Not Significant

Table 8: Effect of *Haridra* powder and *Saptavimshati Guggulu* on Liver profile of 53 patients of Diabetes Mellitus

Parameter	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	't'	'p'	Remark
SGPT (u/l)	24.20	22.83	1.37	5.68↓	16.04	2.20	0.23	0.81	NS
SGOT (u/l)	23.13	24.49	1.35	5.86↑	10.35	1.42	0.37	0.70	NS
Total Protein (gm/l)	7.25	7.19	0.05	0.80↓	0.46	0.006	1.18	0.24	NS
S. Albumin (gm/l)	3.96	4.001	0.03	1↑	0.07	0.01	1.08	0.28	NS
S. Globulin (gm/l)	3.29	3.19	0.09	2.92↓	0.07	0.01	1.81	0.07	NS
A/G ratio	1.22	1.26	0.04	3.82↑	0.009	0.001	1.58	0.11	NS
Direct Bilirubin (mg/dl)	0.27	0.27	0	0	-	-	-	-	-
Indirect Bilirubin (mg/dl)	0.483	0.467	0.015	3.12↓	0.02	0.003	0.58	0.56	NS
S. Alkaline Phosphate (u/l)	70.98	65.98	5	7.04↓	2.00	0.27	1.28	0.20	NS

↓- Decrease, SD – Standard Deviation, SE – Standard Error, NS – Not Significant

Table 9: Effect of *Haridra* powder and *Saptavimshati* Guggulu on Lipid profile of 53 patients of Diabetes Mellitus

Parameter	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	't'	'p'	Remark
Cholesterol (mg/dl)	192.37	191.03	1.33	0.69↓	3.39	0.46	0.32	0.74	NS
Triglycerid (mg/dl)	203.13	191.39	11.73	5.77↓	5.19	0.71	1.07	0.28	NS
LDL (mg/dl)	112.29	110.63	1.65	1.47↓	1.57	0.21	0.67	0.50	NS
HDL (mg/dl)	40.71	40	0.71	1.74↓	1.52	0.20	0.63	0.52	NS
VLDL (mg/dl)	40.33	38.27	2.05	5.08↓	0.72	0.09	0.93	0.35	NS

↓- Decrease, SD – Standard Deviation, SE – Standard Error, NS – Not Significant

Table 10: Effect of *Haridra* powder and *Saptavimshati* Guggulu on Body Mass Index of 53 patients of Diabetes Mellitus

Parameter	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	't'	'p'	Remark
Body Mass Index (Kg/m^2)	29.99	29.06	0.93	3.08↓	0.15	0.02	3.90	0.0003	HS

↓- Decrease, SD – Standard Deviation, SE – Standard Error, HS – Highly Significant

Table 11: Effect of *Haridra* powder and *Saptavimshati* Guggulu on DSQ of 53 patients of Diabetes Mellitus

Parameter	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	'p'	Remark
DSQ	21.18	17	4.18	19.76↓	0.87	0.11	0.0001	HS

↓- Decrease, SD – Standard Deviation, SE – Standard Error, HS – Highly Significant

Table 12: Effect of *Haridra* powder and *Saptavimshati* Guggulu on SF - 36 of 53 patients of Diabetes Mellitus

Parameter	Mean BT	Mean AT	Diff.	%	SD ±	SE ±	'p'	Remark
Physical functioning	88.40	86.06	2.34	2.71↑	4.06	0.55	0.036	S
Role limitations due to physical health	72.87	63.29	9.67	15.12↑	5.90	0.81	0.0006	HS
Limitations due to emotional problems	73.75	66.66	7.09	10.64↑	2.71	0.37	0.002	HS
Fatigue	59.68	51.48	8.19	15.19↑	4.24	0.58	<0.0001	HS
Emotional level	64.42	55.57	8.85	15.92↑	4.60	0.63	<0.0001	HS
Social functioning	67.28	61.69	5.59	9.07↑	4.55	0.62	0.0012	HS
General health	46.80	40.31	6.48	16.09↑	1.86	0.26	0.0001	HS

↑ - Improvement, S – Significant, HS – Highly Significant

Adverse Drug Reaction: No adverse drug effect was reported in any of the patient during clinical trial.

DISCUSION:

Chief Symptoms: majority of the symptoms like polydypsia, polyuria, polyphagia, fatigue, weakness, numbness and tingling sensation were improved percentagewise. Out of those improvement in polyuria and fatigue remained highly significant (P=0.004 and 0.008 respectively), whereas, polydipsia remained significant (P=0.04). Relief observed in rest of symptoms was insignificant.

As far as symptoms pathology is concerned; manifestation of polyuria and polydepsia and fatigue are directly related with blood sugar level and hence might have shown immediate effect with improvement in blood sugar level improvement. But the symptoms like tingling and numbness are more concerned with sensory nerve involvement and hence it needs separate treatment.

Blood Sugar: HbA1c% was improved by 6.07% and remains statistically significant while 6.26% improvement observed in FBS and 1.82 % increase observed in PPBS remained statistically insignificant. The results suggest that the drug is having slow and steady effects on the disease pathology

Improvement in HbA1c% in patients with different BMI:

- Patients with BMI > 25 Kg/m^2 (over weight / obese subjects), HbA1c% was improved by 6.28% and the improvement remains statistically significant (P=0.04).
- There is 0.47% improvement was observed in HbA1c% Patients with BMI ≤ 25 Kg/m^2, but this improvement remained insignificant (P=0.57)

On the basis of above result it may be inferred that the drug is more effective in *Sthoola Pramehi* than *Krisha Pramehi.* Hence it may be useful in insulin resistance diabetes mellitus (*Avaranajanya Madhumeha*) subjects.

Improvement in BMI: 3.08% decrease were observed in BMI and it remained highly significant (P=0.0003)

Other biochemical parameter: there were no any altered results found in renal or liver profile of the patients rather it was found improved; that show the drug is very much safe for those organs. Lipids level like S.Cholesterol, Triglyceride, LDL, VLDL etc found reduced at some percentage but all those remained insignificant (P=0.74, 0.28, 0.50, 0.35 respectively). Long time duration may be required to have effect of the medicine on lipid level.

Diabetes Symptom Questioner: In DSQ score 19.76% improvement was found which was statistically highly significant**.**

SF – 36 Health Survey: improvement found in SF-36 health survey was like, 'Role Limitations due to physical health' (15.12%), 'Limitations due to emotional problems'(10.64%), improvement in 'Energy' (15.19 %), improvement in 'Emotional well being' (15.92%), 'Social Functioning' (9.07%), improvement in 'General Health' (16.09%). All these parameters remained statistically highly significant. Physical Functioning was improved by 2.71% and remained statistically significant at P < 0.01.

This shows that the drug is also useful to improve quality of life (QoL).

PROBABLE MODE OF ACION

Though *Prameha* is *Tridoshaja Vyadhi*, *Acharyas* have mainly emphasized on vitiation of *Kapha Dosha, Medovriddhi, Kledavriddhi* and *Medodhatwagnimandhya.* On the basis of cumulative properties of *Haridra powder and Saptavimshati Guggulu,* it can be said that the drug is having *Katu, Tikta, Kashaya Rasa, Laghu, Ruksha Guna, Ushna Virya, Katu* and *Madhura Vipaka and Kapha Vata shamaka* property.

Katu Rasa counteracts *Kleda* by its *'Kleda Upahanti'* action, checks vitiated *Sleshma* by *'Sleshmanam Shamayati'* and corrects status of *Agni* by *'Agni Dipna'* properties.[11] *Tikta Rasa* contributes in disintegration of *Samprapti* by *'Kleda Upashoshana' and 'Sleshma Upashoshana'* properties.[12] *Kashaya Rasa* causes *Kleda shoshana* as it is called '*Sharira Kledasyopyokta'*.[13] It is also called *'Sleshma Prashamana'*. Here also it helps in reducing – correcting the *Dravatva* and *Bahutva* of *Sleshma.* Basically *Katu, Tikta and Kashaya* will reduce *Sharira Kleda* and bring its in normal State, so there will no need for *Mutra* to excrete excess *Kleda* (as to excrete out excess *Kleda* from body is the function of *Mutra*) [14] and hence polyuria will be controlled gradually. Again by re-opening of micro channels (*Margana Vivrunoti)* property of Katu *Rasa* excessive unctuousness and stickiness is get reduced and there by obstructed micro channels will be reopen. (It can be assumed that obstructed insulin receptors may be activated and so initial stage of insulin resistance may be checked.)

Bahu Drava Shleshma, Bahu and *Abaddha Meda* and *Kleda* are prime among the *Dosha* and *Dushyas. Laghu* and *Ruksha* property of the drug absorb excess *Kleda* and also decrease *Dravatva* of *Kapha* and *Abaddhatva* of *Meda.* Thus directly or indirectly *Ruksha Guna* plays a very important role to break pathophysiology of the disease *Madhumeha.* Again *Laghu* and *Ruksha* property of the drug absorb excess *Kleda* and also decrease *Dravatva* of *Kapha* and *Abaddhatva* of *Meda* so primary and important *Dosha* and *Dushy*a of *Prameha* pathogenesis can be corrected. *Laghu* property is opposite to *Guru* and hance reduce *Prithavi Mahabuta* from the body.

Guggulu is more than 50% amount in *Saptavimshati Guggulu.* It is one of best drug for *Mutravaha Srostas, Meda* and *Kapha Dosha*.[15] So the *Saptavimshati Guggulu* may act as *Rasayana* and prevent the development of further complication. *Haridra churna*, which is given 6 gm per day, it self is called "*Pramehahara*", so it is having "*Vyadhipratyanika*" property.[16]

By *Ushana Virya*, the drug has good *Dipana-Pachana* properties and so it can correct *Medodhatvanimandhya,* therefore it reduces further production of *Abaddha Meda.* The drug is having *Madhura* and *Katu* vipaka, both the *Vipaka* simultaneously maintain normal *Dhatu* status.

Over all, the cumulative properties of the drug checks *Vata* and *Kapha Dosha* which are the prime *Doshas* for the manifestation of disease.

CONCLUSION

Saptavimshatik Guggulu & *Haridra Churna* provides improvement to the patients of diabetes mellitus (Type - 2) especially in objective criteria like BMI, and Glycocylated haemoglobin (HbA1c%) and subjective criteria like DSQ score, most of the scale of SF-36 Health survey. The medicine is found safe on renal and liver profile. *Saptavimshatik Guggulu* & *Haridra* powder are more effective in *Sthula pramehi* (BMI > 25 kg/m^2) as compared to *Krusha pamehi* (BMI ≤ 25 kg/m^2).

Source of support – CCRAS New Delhi.

Conflict of interest – None declared.

REFERENCES

1. http://oncohemakey.com/diabetes-a-worldwide-problem/#R21-30, dated 13/8/2011.
2. Drewnwski A, Popkin B. The nutrition transition: new trends in the global diat. Nutr. Rev. 1997; 55:31-43. Taken from https://deepblue.lib.umich.edu/bitstream/handle/2027.42/72461/j.1753-4887.1997.tb01593.x.pdf?sequence=1&isAllowed=y date-27.10.2011.
3. http//timesofindia.indiatimes.com, Kounteya Sinha, TNN | Dec 14, 2011, 03.36AM IST, "India's diabetes burden to cross 100 million by 2030".
4. http://www.dnaindia.com/analysis/column-is-gujarat-the-diabetic-capital-of-india-1652211 Manjula Pooja Shroff Sunday, February 19, 2012 "Is Gujarat the diabetic capital of India?", and https://www.highbeam.com/publications/dna-sunday-p436774/february-2012/2.
5. Sushruta, Sushruta Samhita edited by K.A.Shastri, Chaukhambha Sanskrit Sansthan, Varanasi, 14th edi, Chikitsasthana 11/3, pg:5.
6. Charaka Samhita edited by Vaidya Jadavaji Trikamji Acharya Chaukhambha Prakashana, Varanasi, 2009, Chikitsasthana 6/15, pg:254.
7. Ibidem 6, Chikitsasthana 6/47, pg:448.
8. Vagbhat, Astnanga Hridaya edited by Atridev Gupta, Chaukhambha Prakashana, Varanasi, reprint 2009,Nidansthana, 10/ 4, pg no 344.
9. Ibidem 6, Sutrasthan 17/79-80, pg no 103.
10. Ibidem 6, Nidanasthana 4/6, pg no 212.
11. Ibidem 6, Sutrasthana 26/42 (4), pg:144.
12. Ibidem 6, Sutrasthana 26/42 (5), pg:144.
13. Ibidem 6, Sutrasthana 26/43, pg: 145.
14. Ibidem 8, Sutrasthana, 11/ 4 ½, pg no 183.
15. The Ayurvedic Pharmacopeia of India, published by Govt. of India, ministry of health and family welfare, department of AYUSH, Vol-1, P:57
16. Ibidem 15 Vol – 1 P:61.

HOW TO CITE THIS ARTICLE

Alodariya N, Pandya DH, Baghel MS. Clinical evaluation of *Saptavimshatika Guggulu* and *Haridra Churna* in the management of Type-2 Diabetes Mellitus. J Ayu Herb Med 2017;3(1):5-10.