International Journal of Research in Indian Medicine

"A comparative study of role of chandrodayo ras and shampakadi gana churna in the management of purvamadhumehi w.s.r. to prediabetis"

Priyanka S Gaikwad*[1] , Subhash B. Jamdhade[2]

1. P.G. Scholar,
2. Associate Professor

Dept. of kayachikitsa, D.M.M Ayurved Mahavidyalaya,

Yavatmal, Maharashtra, India

*Corresponding author:*Email: priyag31591@gmail.com, (9096982072)

Abstract:

As per WHO's global report on diabetes 422 million adult have diabetes worldwide, among them India ranks top 3 country. India gains its position as a capital of diabetes in the world. Pre diabetes is the previous stage of diabetes mellitus. Pre diabetes is a condition in which blood glucose level are higher than normal, but not enough higher to classified as diabetes mellitus. So those with pre diabetes are at higher risk of DM type 2 and also the cardio vascular diseases. Ayurveda relates purvamadhumeha with pre-diabetes. Now days, purvamadhumeha (pre diabetes) has become a favorite subject for the researchers of various medical fields by the preventive of view of upcoming stage of that is Diabetes mellitus . The disease purva madhumeha is generally concerned with urinary abnormalities and from the ayurvedic point of view it is a disease of *"Mutravaha & Medoaha Strotas"*.

Aim & Objectives: 1) To see the comparative study of chandradayo rasa and Shampakadi gana churna in the management of purvamadhumeha with special reference to prediabetes.

Methodology: the study is based on ayurvedic samhitas and modern texts and different websites related with diabetes

Result: Shampadi gana churna is found significantly more effective than chandradayo rasa in relieving the symptoms of purvamadhumeha like wise statistical analysis.

Discussion:. The sedentary life style i.e. lack of exercise, excessive day sleeping or late night sleeping and unproper eating habbits and daily consumption of junk food and stressful job works, alcohol and tobacco consumptions are the responsible factors for incidence of lifestyle disorders like prediabetes.

Keywords: Pre diabetes, purva madhumeha, lifestyle disorders, BSL.

Introduction -

In this the globalization of era, day by day life style is changing of the human beings due to the excessive consumption of junk

food & beverages, bad eating habits , less physical activities and sedentary life style leads to many metabolic disorders like hypertension, cardiovascular diseases , obesity, diabetes (prameha). Diabetes is the leading metabolic disorder in india, which lead india to be the capital of diabetes.

In ayurved texts , acharya sushruta explained the stage of purvarupa in shatakriya kala topics of diseases distribution in details. In 4th stage of diseases that is purvarupa where the sthansanshrya of the diseases is the step that one can come to across the exact diagnosis of diseases. After studying the purva roopa of prameha , we can imply measures for prevention of its prognosis to prameha.

AIMS AND OBJECTIVES:
AIM- (Primary objective)

To study the comparative effect of the role of chandradayo ras and shampakadi gana churna in the management of purvamadhumehi with special reference to prediabeties.

OBJECTIVES: (Secondary objective)

- To study the effects of chandradayoras and shampakadiganachurna on the laboratory parameters of pre diabetic that is blood sugar level, urine sugar.
- To compare the effect of chandradayo rasa with shamapakadi gana churna.

PREPARATION OF DRUG
1. The CHANDRODAYO RAS

described by Bruhat Nighantu Ratnakar (prameha)
- Abhrakbhasma
- Shudhagandhak
- Shudhaparad
- Vangabhasma
- Laghuaela
- Shilajatu

2. The SHAMPAKADI GANA CHURNA described by Raskamdhenu (prameha)
The contents are given as

NAME	L.N.	PARTS USED
Shmapak	Cassia fistula	Phal majja
Chitrak	Plumbago zeylanica	Mula
Nimba	Azaradiracta Indica	Twak
Madanfal	Randia spinosa	phal majja
badar	Zizyphyus	Twak
patha	Cocculushirsutus	Mula
Karanja	Pongamiapinnata	Twak
Anatamul	Hemidismus indicus	Mula
Rakta karvir	Nerium indicum	mula twak
Patol	Trichosanthesdiocia	Patra
Kutaj	HolarrhenaAntidysentric	Twak
sairaik	Grewia aisatica	Mula
Rakta aeranda	Ricinus comminus	Mula
Saptaparna	Salstoniascholaris	Parna
Guduchi	Tinospora cordifolia	Kanda
murva	Dematistribola	Mula
parushak	Grewiaaisatic	Twak

Method :-

Chandrodayoras and shampakadiganachurna was prepared by using above drugs. Visheshapathya & apathya of ahara and vihar was advised to patients along with the treatment.

PHARMACEUTICAL STUDY

Drug Manufacturing –

1. The drugs abhrakbhasma, kajjali, vanga bhasma, laghu ela, shilajatu are take in same quantity and kadlikanda swaras bhavna was given to this contents and mix them well and VATI of chnadrodayo rasa was prepared.
2. The contents of shampakdigana was mixed with each other to make uniform Shampakadiganachurna.
3. The vati and churna was made as per no. &requirement.

GROUPING & RANDOMIZATION OF PATIENT

The study of purvamadhumehi was carried out in OPD / IPD of our hospital other hospital if necessary.

- 60 patients of Purvamadhumeha was randomly selected. They was divided in two groups.
- Trial Group - 60
- Patient was diagnosed on the basis of classical signs & symptoms described in ayurvedic texts & modern medicine
- The two groups of study are

Group A –

Trial Group Drug

Chandrodayo Ras

Dose - 1-2 ratti / 125mg -250 mg BD

Anupana - warm water

Follow up - 1st, 2nd; 3rd 4th week upto 2 months

Group B -

Trial group Drug – **ShampakadiGanachura** Dose - 2 -5 gm BD

Anupana- warm Water

Follow up - 1st, 2nd; 3rd 4th week upto 2 months

Observation & criteria for gradation of Disease

1. PRABHUT MUTRATA (POLYUREA) –

Frequency / Day	Frequency / night	Grade
1 – 4	1 – 2	0
5 – 7	3 – 4	1
8 – 10	5 – 6	2
10 – 12	7 – 8	3

2. AVIL MUTRATA :-

AVIL MUTRATA	Grade
Absent	0
Present	1

3. PANIPADAYO DAHA :–

Panipadayodaha	Grade
No burning	0
Occasional	1
Intermittent	2

4. TRUT (POLYDIPSIA):-

Frequency / day	Frequency / night	Volume	Grade
1 – 4	----	More than 2	0
5 – 7	2 – 3	2 – 2.5	1
8 – 10	4 – 5	2.5 – 3	2
10 – 12	6 – 8	3 – 4.5	3
More than 12	More than 8	More than 4.5	4

5. SWADUASYATA (Sweet Taste in Mouth) :-

Absent – 0. Present – 1.

6.SHLATHANGATVA :-

Shlathangatwam (Weakness / fatigue)	Grade
Can do routine work	0
Can do moderate exercise with hesitancy	1
Can do mild exercise	2
Cannot do exercise	3

7 . KSHUDHAADHIKYA :-

Meals / Day	Extra	Qty	Grade
3	0	5 – 6	0
3	1	7 – 8	1
3	2	9 – 10	2
3	3	11 – 12	3

8. LABORATORY INVESTIGATION :-

Blood sugar level	Range
FASTING	
POST PRANDIAL	

9 .URINE SUGAR LEVELE :-

ABSENT	0
PRESENT	1

Objective:-

BSL. F – 100 to 140 mg/dl .
BSL. PP – 140 to 250 mg/dl .

Statistical Analysis:In Group A and In Group B
Subjective Parameters (By Wilcoxon Singed Ranks Test)

A) Prabhuta mutrata

Group	Day	N	Mean	Median	W	P
Group A	D0	30	2.333	2.5	435	<0.0001
	D90	30	0.700	1		
Group B	D0	30	2.533	3	406	<0.0001
	D90	30	1.256	1.5		

B) Avil mutrata

Group	Day	N	Mean	Median	W	P
Group A	D0	30	0.666	1	171	<0.0001
	D90	30	0.066	0		
Group B	D0	30	0.700	1	39	0.0039
	D90	30	0.400	0		

C) Pani padayo daha

Group	Day	N	Mean	Median	W	P
Group A	D0	30	1.433	2	276	<0.0001
	D90	30	0.600	1		
Group B	D0	30	1.133	1	91	0.0002
	D90	30	0.633	1		

D) Trishnadhikya

Group	Day	N	Mean	Median	W	P
Group A	D0	30	2.367	2	435	<0.0001
	D90	30	0.966	1		
Group B	D0	30	2.233	2	276	<0.0001
	D90	30	1.267	1		

E) Swadu asyata

Group	Day	N	Mean	Median	W	P
Group A	D0	30	0.600	1	120	<0.0001
	D90	30	0.100	0		
Group B	D0	30	0.566	1	21	0.0313
	D90	30	0.366	0		

F) Shlathangatva

Group	Day	N	Mean	Median	W	P
Group A	D0	30	2.200	2	435	<0.0001
	D90	30	0.733	1		
Group B	D0	30	2.367	2	276	<0.0001
	D90	30	1.300	1		

G) Kshudhadhikya

Group	Day	N	Mean	Median	W	P
Group A	D0	30	1.133	1	300	<0.0001
	D90	30	0.133	0		
Group B	D0	30	1.167	1	120	<0.0001
	D90	30	0.566	0		

A) BSL (F)

Shows Paired t Test:in Group A and in Group B

Group	Day	N	Mean	SD	T	P
Group A	D0	30	124.33	11.09	5.230	<0.0001
	D90	30	110.27	13.97		
Group B	D0	30	124.03	11.63	5.222	<0.0001
	D90	30	112.93	11.75		

B) BSL (PP)

Group	Day	N	Mean	SD	T	P
Group A	D0	30	186.23	21.77	7.344	<0.0001
	D90	30	158.57	23.20		
Group B	D0	30	191.83	5.246	5.843	<0.0001
	D90	30	165.93	6.034		

C) USL (F)

Group	Day	N	Mean	SD	T	P
Group A	D0	30	0.466	0.571	3.340	0.0023
	D90	30	0.133	0.345		
Group B	D0	30	0.433	0.504	3.247	0.0029
	D90	30	0.166	0.379		

D) USL (PP)

Group	Day	N	Mean	SD	T	P
Group A	D0	30	0.433	0.568	3.808	0.0007
	D90	30	0.100	0.305		
Group B	D0	30	0.366	0.490	2.971	0.0059
	D90	30	0.133	0.345		

Statistical Analysis: Comparison Group A and Group B

Subjective Parameters (By Mann Whitney's U Test)

A) **Prabhuta mutrata**

Table 5.36 Mann Whitney's Test: Comparison Group A and Group B

Group	N	Mean	Sum of Ranks	U	P
Group A	30	1.633	1056	309	0.0353
Group B	30	1.267	774		

B) Avil mutrata

Group	N	Mean	Sum of Ranks	U	P
Group A	30	0.600	1050	315	0.0430
Group B	30	0.300	780		

C) Pani Padayo daha

Group	N	Mean	Sum of Ranks	U	P
Group A	30	0.833	1055	310	0.0368
Group B	30	0.500	775		

D)Trishnadhikya

Group	N	Mean	Sum of Ranks	U	P
Group A	30	1.400	1067.5	297.5	0.0277
Group B	30	0.966	762.5		

E)Swadu asyata

Group	N	Mean	Sum of Ranks	U	P
Group A	30	0.500	1050	315	0.0417
Group B	30	0.200	780		

F) Shlathangatva

Group	N	Mean	Sum of Ranks	U	P
Group A	30	1.467	1054	311	0.0385
Group B	30	1.067	776		

G) Kshudhadhikya

Group	N	Mean	Sum of Ranks	U	P
Group A	30	1.000	1059	306	0.0320
Group B	30	0.600	771		

Objective Parameters (By Student's t Test for Unpaired data)

A) BSL (F)

Group	N	Mean	SD	T	P
Group A	30	14.06	14.73	0.8654	0.3909
Group B	30	11.10	11.64		

B) BSL (PP)

Group	N	Mean	SD	T	P
Group A	30	27.66	20.63	0.3037	0.7622
Group B	30	25.90	24.27		

C) USL (F)

Group	N	Mean	SD	T	P
Group A	30	0.333	0.546	0.5158	0.6080
Group B	30	0.266	0.449		

D) USL (PP)

Group	N	Mean	SD	T	P
Group A	30	0.333		0.8503	0.3987
Group B	30	0.233			

Effect of therapy according to % Relief in Symptoms

Symptom No.	Symptoms (Group A)	D0	D90	Relief	%Relief
1	Prabhuta Mutrata	70	21	49	70
2	Avil mutrata	20	2	18	90
3	Panipadayo daha	43	18	25	58.14
4	Trishnadhikya	71	29	42	59.15
5	Swadu asyata	18	3	15	83.33
6	Shlathangatva	66	22	44	66.67
7	Kshudhadhikya	34	4	30	88.24

Symptom No.	Symptoms (Group B)	D0	D90	Relief	%Relief
1	Prabhuta Mutrata	76	38	38	50
2	Avil mutrata	21	12	9	42.86
3	Panipadayo daha	34	19	15	44.12
4	Trishnadhikya	67	38	29	43.28
5	Swadu asyata	17	11	6	35.29
6	Shlathangatva	71	39	32	45.07
7	Kshudhadhikya	35	17	18	51.43

Average Decrease (Objective parameters)

Sr. No.	Parameter	Average Decrease	
		Group A	Group B
1	BSL (F)	14.1	11.1
2	BSL (PP)	27.7	25.9
3	USL (F)	0.33	0.27
4	USL (PP)	0.33	0.23

DISCUSSION

The continuously changing life style i.e. lack of exercise, excessive day sleeping or late night sleeping and eating junk food instead of nutritious and fiber rich food and stressful job works are the responsible factors for incidence of lifestyle disorders like prediabetes. Pre diabetes is the previous stage of diabetes mellitus. Pre diabetes is a condition in which blood glucose level are higher than normal, but not enough higher to classified as diabetes mellitus.

Ayurveda has the foremost objective of maintaing the health of healthy person followed by its second objective of curing the diseased one. where ayurveda maintain the diseased one with the help of ayurvedic medicines and also it doesn't provoke the new complication. In ayurvedic literature, Shampakadi gana churna and chandradayo rasa possess special properties in maintaining pre diabetic conditions, is Shampakadi gana churna containing 17 medicinal hurbs and chandradyo rasa contains 6 drugs having the medicinal properties like kashay rasa, laghu, ruksha guna and ushna virya are kaphavatahara. Which are act on dhatavgni and jatharagni and also helps to shoshana of bahudrava shelshma and it helps to lowers the vitiated meda and kleda.

RESULT

The result of treatment shows that both drugs are effective in the management of purvamadhumeha . The result shows that Shampakadi gana churna relieved the symptoms much earlier than chnadradayo rasa.

Thus, the overall effect shows thatshampakadi gana churna is slightly better than chandradyo rasa

CONCLUSION

Shampakadi gana churna is found significantly effective in relieving the symptoms of purvamadhumeha in symptom wise statistical analysis but the onset of action of Shampakadi gana churna is quick earlier than chandradyo rasa. No adverse effect was seen during the study with Shampakadi gana churna is more effective in treatment Shampakadi gana churna than Chandradyo rasa.

Along with medicines restricted diet, exercise, better lifestyle modifications (satmy aahar vihar, pathya) are also important in the management of purvamadhumeha .In overall analytical study it is observed that Shampakadi gana churna is better than Chandradayo rasa in the management of purvamadhumeha.

Therefore, it is concluded that Shampakadi gana churna might be useful with other known anti-diabetic drugs as an adjuvant therapy to prevent secondary resistance to disease.

REFERENCES:

1. Charaksamhita, chikitsasthana, Pramehachikitsadhyaya 6' 46/47, edited by Dr. Kashinath Shastri, Dr. Gorakhnath Chaturvedi, edition reprint 2002, Chaukhambha prakashan, page no. 227-244
2. Charaksamhita, chikitsasthana, Deerghamjivitayaadhyaya 1st 17/82, edited by Dr. Kashinath Shastri, Dr. Gorakhnath Chaturvedi, edition reprint 2002, Chaukhambha prakashan, page no. 6-8
3. Sushruta samhita, Chikitsasthana, Prameha chikitsa 11/ 12,edited by Dr. Ambikadatta Shastri 8th edition, Chaukhambha Sanskrit sansthana 1993page no.451-453
4. World health organization – facts and figure about diabetes (accesseddate17/4/2017at5:21)
5. www.who.int/diabetes/facts/en/ Who.int/diabetes/publication/
6. www.idf.org/sitesdefault/files/att.
7. Rashtriya Madhumeha Abhiyaan, protocol of ministry of AYUSH 2017

Cite this article: