



Role of *jalapan* in the *samprapti* and *vidhi vihit jalapan* in the management of *prameha* w.s.r. to type-II diabetes mellitus

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ABSTRACT:-

Present era of urbanization, industrialization is responsible for the stressful, sedentary lifestyle that makes a person more susceptible to Diabetes Mellitus. The misconceptions about food consumption, indiscriminate intake of liquids are the causative factors of lifestyle disorders like diabetes. Ayurveda is the science which explains scientific process and general rules for the consumption of food through the *aaharvidhivisheshayatana* and *aaharvidhividhan*. It also highlights the effect of proper food consumption and effect of proper water intake on the body. An open labeled add on comparative clinical study was conducted in BSDT's Ayurved hospital. Thirty diagnosed patients of type II Diabetes mellitus were randomly selected from the OPD of kayachikitsa and enrolled into two groups. Role of *jalapan* in the *samprapti* of *prameha* and *vidhi vihit* (as per rules described in *samhita*) *jalapan*

along with the *vyadhipratyanik chikitsa* were assessed in the management of *prameha* with special reference to type II diabetes mellitus. *Nidanparivarjana* is an essential part in the management of disease. It is observed that there is an association between *jalapan* and *prameha* and *vidhi vihit Jalapan* plays an important role in the treatment of *prameha*.

KEYWORDS: - *Prameha*, Type II Diabetes mellitus, *Vidhi vihit Jalapan*

INTRODUCTION:-

Now a day's Diabetes has become an epidemic having by and large a huge impact on people of all ages. It is the fastest spreading, non-communicable disease. 'Diabetes' the word has become so common that it is not restricted to clinics and hospitals but has reached to every individual, family, society etc. The statistical data put forth by the international Diabetes Federation gives an overview of the rise in number of Diabetes

patients up to 101.2 million till 2030. According to WHO Diabetes is predicted to become 7th leading cause of death by year 2030.¹

Present era of urbanization, industrialization is responsible for the stressful, sedentary lifestyle. The rapid dietary and habitual changes in lifestyle make a person more susceptible to Diabetes. The ignorance of current generation about healthy food habits and exercise is displayed through the weight gain, hormonal disturbances, hyperactiveness, increase medicinal dependency, occurrence of newer diseases etc. The misconceptions about food consumption, the indiscriminate intake of liquids like water, tea, coffee, cold drinks, addiction of junk food, inclination towards the taste of food instead of its usefulness for health are the causative factors of lifestyle disorders like diabetes now a days.

Many people are consuming water due to constipation, acidity, obesity, thyroid problems and diabetes or just as a habit since long term. Overuse of media is responsible for the prevalence of water intake especially in morning hours and also in the whole day. Water intake is blindly followed irrespective of the feeling of thirst, disease, constitution, regular exercise, climatic conditions etc. We conveniently neglect and choose the easiest way of indiscriminate drinking of water as a good, healthy habit for healthy lifestyle. Drinking water in early morning is advocated concurrent to proper and regular exercise on complete digestion of previously taken food, proper bowel and bladder evacuation and with feeling of freshness while awakening.

Ayurveda is the only science which highlights the effect of proper food consumption on the body. The effects of

water intake on the body as well as the effects of process and technique of water consumption were also highlighted by Ayurveda.²

Modern science emphasizes on the nutritional value of the food and energy requirements to the body in terms of deficiencies and calories. But Ayurveda describes on the basis of *rasa*, *virya*, *vipaka*, *guna* and *karma* of the *dravyas*. It also explains scientific process and general rules for the consumption of food through the “*Aaharvidhivisheshayatana*” and “*Aaharvidhividhan*” described in *rasaviman adhaya* of *viman sthana* of *Charak Samhita*.³

Ayurveda has given evidence of the existence of *prameha* since vedic period. *Prameha* is basically *apathyanimityaj* and *santarpanothha vyadhi*.⁴

The *vikar vighatkar bhava- abhava* are responsible for the *prameha*.⁵ The absence of contrast factors to the causative factors of the disease is also responsible for immediate, delayed or severe manifestation of disease. The lack of regular exercise, absence of timely and restricted diet, *atyambupan*, and sedentary life style are the influential causative factors. The *kaphakar* (*kapha* vitiating) *ahara* and *vihara* are the causative factors for *prameha*.⁶

According to Charka, *kapha dosha* which is vitiated by the *drava guna* and increased in quantity is the main culprit for the *prameha*. This *vikalpa vishesh* of *kapha dosha* is particularly seen in the *samprapti* of the *prameha*. The excess quantity of liquids and the *drava*, *sheeta*, *guru*, *snigdha guna* of liquid vitiate *kapha dosha* and further vitiates the *meda*, *mansa*, *kleda*, *shrukra*, *shonita*, *vasa*, *majja*, *lasika*, *rasa*, *oja* etc the *dushyas* of *prameha*.⁷

This study is under taken with the perspective to find out the association and the effects of, incorrect techniques and time of water intake (*jalapan*) and *prameha*. The evaluation of effect of *vyadhipratyanik chikitsa* and *vidhi vihit jalapan* (water intake as per rules described in *grantha*) in *prameha*.

AIM AND OBJECTIVES:-

Aim:-To study the role of *jalapan* in the *samprapti* of *prameha* and effects of *vidhi vihit jalapan* in the management of *prameha* with special reference to type II diabetes mellitus.

Objectives:-

- 1) To evaluate the *matra* and *sevan kala* of the *jala* (time of water intake) in diabetic patients.
- 2) To assess association between the *vidhi virahit jalapan* (not as per rules from *grantha*) and effects of *vidhi vihit jalapan* as *chikitsa* (*Nidanpariwarjan*) with *vyadhipratyanik chikitsa* in *prameha* with special reference to type II diabetes mellitus.

MATERIALS AND METHOD:-

Thirty diagnosed patients of type II Diabetes mellitus presenting with the classical symptoms of *prameha* from the OPD of Ayurved hospital were randomly selected and enrolled for the present study. On the basis of inclusion and exclusion criteria the thirty patients were classified into two groups with fifteen patients in each group. *Jalapanvidhi* (process of water intake) in diabetic patients was assessed by using specially prepared questionnaire with special emphasis on the *ushapana*, *bhojanapashyat jalapan*, *nishapan*, *atyambupan* (total water intake per day),

jalapan was assessed on the basis of *kala* and *matra*.

The patients from experimental group were subjected to *vidhi vihit jalapan* and *vyadhipratyanik chikitsa* (*shamana aushadhi*) and patients from control group were subjected to only *vyadhi pratyanyik chikitsa*. In both the groups patients were subjected to continue the same antidiabetic allopathic treatment which they were taking as before.

Modifications regarding water intake on the basis of *vidhi vihit jalapan* were explained to each patient in experimental group and were reviewed at every follow-up. At the end of duration of sixty days both the groups were assessed on the basis of assessment criteria. The follow-ups were conducted after every fifteen days. The symptoms of *prameha* like *prabhutamutrata*, *avil mutrata*, *nakta mutrata*, *pipasadhikya*, *hastapadataldaha*, *alasya*, *sarvanga gaurava*, *malavibandha* were selected for the assessment.^{8,9} The biochemical parameters like fasting and postprandial blood sugar levels before and after the treatment of two months were evaluated.

INCLUSION CRITERIA:-

- Patients of either gender age between 30 to 70 years
- Patients having classical symptoms of *prameha*
- Patients of type II diabetes mellitus
- Recently diagnosed patients of type II diabetes mellitus by the criteria blood sugar level fasting >126 mg /dl and post prandial >200 mg /dl

EXCLUSION CRITERIA:-

- Uncontrolled diabetes
- K/c/o acute complications like keto acidosis, diabetic coma, acute

infections of the any part of the body.

- Pregnant and lactating woman
- Patients on insulin and steroid treatment
- Patients with any major systemic diseases
- K/c/o benign prostatic hyperplasia

DESIGN OF THE STUDY:-

Study Centre: - The study was carried at *Kayachikitsa* OPD in BSDT's Ayurved Hospital.

The study was open labeled add on comparative clinical study.

The present interventional study was conducted with experimental group underwent the *vidhi vihit jalapan* and *vyadhipratyanik chikitsa*. *vyadhipratyanik chikitsa* includes *Arogyavardhini vati* 500 mg and *Madhusudan vati* 500 mg in *vyanodan kal* (twice a day) with warm water for 60 days, along with the antidiabetic allopathic treatment.

The control group underwent only *vyadhipratyanik chikitsa*, *Arogyavardhini* 500 mg and *Madhusudan vati* 500 mg in *vyanodan kal* (twice a day) for 60 days additionally to antidiabetic allopathic treatment.

In *vidhi vihit jalapan* patients were advised the following modifications. They were instructed to avoid the water intake especially in the early morning,

immediately after the food intake and at the bedtime. Patients were also asked to avoid excess water intake, not to drink water without the feeling of thirst and avoid drinking of liquids frequently. Not to pour water directly into the mouth. Avoid drinking large quantity at a time. Use normal boiled water for drinking. Not to re-boil the water once boiled properly. Drink the water as per requirement to quench the thirst, not to control and reduce the water intake even after the feeling of thirst.

At every follow-up the suggested modifications about *jalapan* were monitored and reviewed. The association between the *vidhi virahit jalapan* and diabetes was evaluated. The effects of *vidhi vihit jalapan* and *vyadhipratyanik chikitsa* in diabetes were assessed on the basis of assessment criteria mentioned below.

The *Madhusudan vati* and *Arogyavardhini vati* used were procured from Atharva nature health care private limited, Pune.

Assessment Criteria: - Symptoms of *Prameha*, *prabhuta mutrata*, *awil mutrata*, *nakta mutrata*, *pipasa*, *hastapadataladaha*, *alasya*, *gurugatra*, *malavibandha* and blood sugar level

(F and PP) were assessed before and after two months. The symptoms considered for evaluation were graded as follows.

Symptom	Frequency	Grade
<i>Prabhutamutrata</i>	Less than 6 times per day	0
	6-8 times per day	1
	8 to 10 times per day	2
	More than 10 times per day	3
<i>Awil mutrata</i>	Clear and transparent urine	0
	Transparent but with suspended particles	1
	Turbid with slight precipitation	2

	Homogeneous turbid mixture	3
<i>Naktamutrata</i>	Nocturnal urination absent	0
	Urination less than 2 times in night	1
	Urination 2 to 4 times in night	2
	Urination more than 4 times in night	3
<i>Pipasadhikya</i>	No urge of thirst	0
	Urge of thirst every 3-4 hours	1
	Urge of thirst more frequently	2
	Persistent urge of thirst	3
<i>Hastapadataladaha</i>	Absent	0
	Sometimes	1
	Frequently	2
	Persistent	3
<i>Gurugatrata</i> (<i>Sarvanga</i> <i>Gaurava</i>)	Absent	0
	Sometimes	1
	Frequently	2
	Persistent	3
<i>Alasya (Anutsaha)</i>	Absent	0
	Sometimes	1
	Frequently	2
	Persistent	3
<i>Malavibandha</i> (<i>Malam Kaye</i>)	Absent	0
	Sometimes	1
	Frequently	2
	Persistent	3

Assessment was performed on patient's response to the treatment on the basis of improvement in the classical symptoms of *prameha*. The improvement was categorized as below

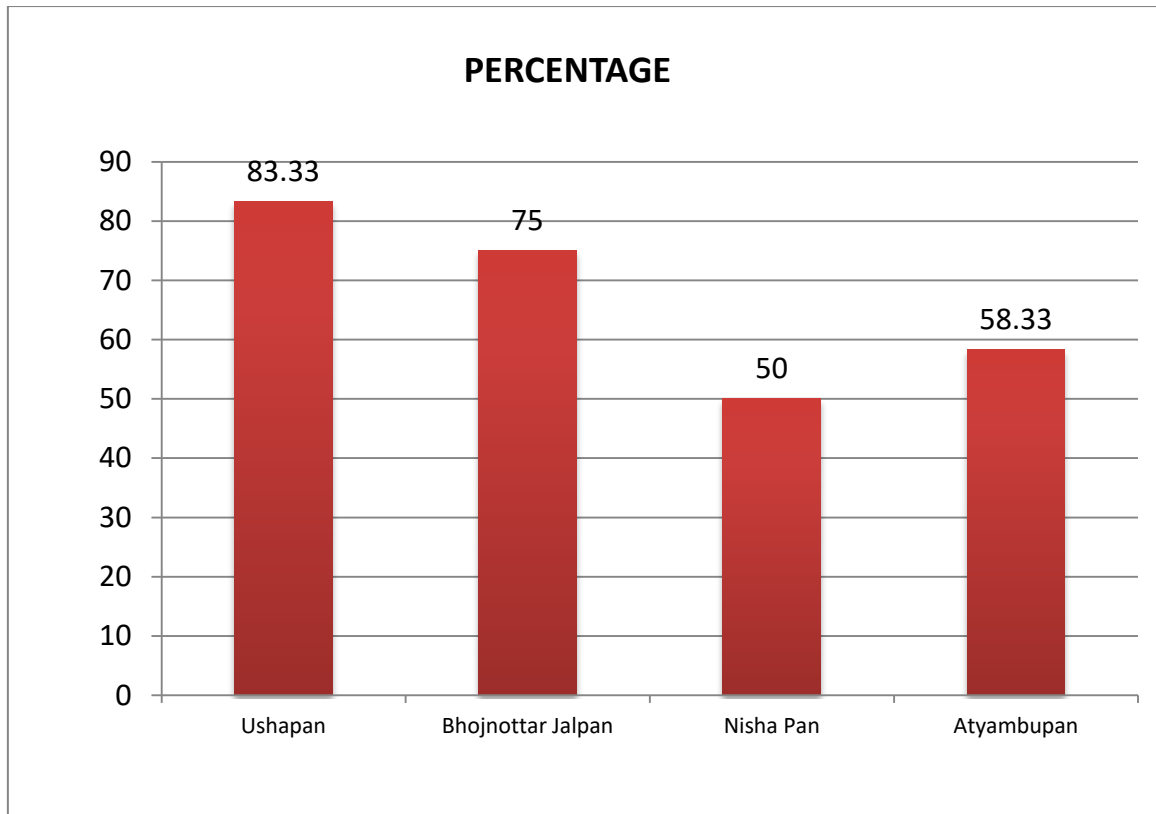
Improvement %	Grade
< 25% Improvement	Unchanged
26% -50% Improvement	Mild improvement
51%-75% Improvement	Moderate improvement
76% - 100% Improvement	Marked improvement

OBSERVATION AND RESULTS:-

In this study thirty patients were selected from the OPD of *Kayachikitsa*, having commonly occurring symptoms of *prameha*. The maximum of the patients under the study were 17 male comprising of 56.66 % and 13 female were 43.33 %. The data showed that maximum patients 53.33% were from age group 41 to 50 years, while 13.33% patients from age group 31 to 40 years, 26.66% patients from 51 to 60 years and 6.66% patients were from 61 to 70 years of age. Occupation wise data shows maximum number of

patients 46.66 % were belongs to service class (sedentary work) and suffering from mental stress. Housewives were also found 33.33% having sedentary work, day sleep, mental stress and *vishamashana*. Teachers were 6.66 %, drivers were 10 % and businessmen were 3.33%.In the present

study, data related to *jalapan* shows that *ushapan* was found 83.33%, *bhojanottar jalapan* was 75%, *nishapan* 50% and *atyambupan* 58.33% was observed. Graph displays percentage of *hetu* related with jalapana (water intake) –



Patient's response to the treatment was evaluated on the basis of improvement in the sign and symptoms of the disease. The effect of treatment on symptoms in experimental group shows that *prabhutamutrata* got 82.35% relief, *naktamutrata* 75.86%, *awilmutrata* 68.75%, *pipasa (pipasadhikya)* 71.87 %, *hastapadataldaha* 75%, *gurugatrata* 77.77%, *malalavibandh (malam Kaye)* 67.64% and *alasya (anutsysaha)* 84.61% got the relief. Marked improvement was observed in the *prabhuta mutrata*, *nakta mutrata*, *gurugatrata* and *alasya*

(*anutsysaha*). The moderate improvement was observed in symptoms like *awilmutrata*, *pipasa(pipasadhikya)*, *malalavibandh (malam kaye)* and *hastapadataldaha* in experimental group . where as in control group, the symptoms like *prabhutamutrata* got 68.42% relief, *awilmutrata* 58.82%, *naktamutrata* 57.57% , *pipasa (pipasadhikya)* 60.71%, *hastapadataldaha* 55%, *gurugatrata (sarvanga gaurava)* 58.33% and *alasya(anutsysaha)* 61.53% showed relief which indicates moderate improvement in these symptoms. Less improvement was

observed in *malavibandha* (*malam Kaye*) 44.44% in the control group. The symptoms related to *ama* and *shleshma dushti* were *prabhutamutrata*, *nakta mutrata*, *sarvanga gaurava*, *alasya* showed marked relief in experimental group than control group.

In experimental group the mean of fasting blood sugar before treatment was 148 mg/dl and after treatment 109 mg/dl while mean of postprandial blood sugar level before treatment was 210.61 mg/dl and after treatment 159.9 mg/dl. In control group the mean of fasting blood sugar before treatment was 158.26 mg/dl and after treatment 117.46 mg/dl while mean of postprandial blood sugar level before treatment was 225.26 mg/dl and after treatment 175.33 mg/dl. The comparison of blood sugar levels showed that there was improvement in both the groups but there was not much marked difference in the values of both the groups. Further evaluation with long duration of treatment is required.

DISCUSSION:-

Many patients arriving at OPD though regularly taking the allopathic treatment for the diabetes were presenting with the symptoms of *prameha*. The blood sugar level reports shows the decline pattern but still the symptoms like *prabhuta*, *awil*, *nakta mutrata*, *pipasadhikya*, *alasya*, *sarvanga gaurav*, *malavibandha* were presented by the diabetic patients. A strong association was found between the *vidhi virahit jalapan* and the diabetic patients. Thus the *vyadhipratyanik* treatment along with the *vidhi vihit jalapan* was advocated in the patients of diabetes.

Prameha is the *santarpanothha*

and *apathyanimittaj vyadhi*, the excessive indulgence of the *hetu* causes *tridosha prakopa* especially *kapha dosha* resulting in *bahudrava* and *abaddha shleshma*. It in turn causes *dushti* of *rasa*, *rakta*, *mansa*, *meda*, *majja*, *shukra*, *lasika*, *kleda*, *vasa* and *oja*, which progress into *agnidushti*, *amanirmiti*, *strotorodha* and *kledavruddhi*.

Nidanparivarjan or *Hetu-aseva* i.e etiological factors are responsible for the cause of different types of *prameha* should be avoided which is mentioned as the line of treatment and also mandatory for *samprapti bhanga*.¹⁰ The *chikitsa* especially the *vidhi vihit jalpan* was initiated according to references from *samhita*. Excessive water intake causes *mandagni amanirmiti* and *sheshma*, *kleda vruddhi*.¹¹ *Bhojanottar jalpana* and *nishapan* causes *shleshma* vitiation and *shleshma vruddhi*.¹² *Nishapan* is mentioned as *vishasama* (toxic) leading to *kleda vruddhi*, *shleshma vruddhi*. *Ushapan* in *ajirnavastha* increases the *kleda* and leads to *agnidushti*. *Amatravat jalapan* is considered as toxic in nature and the *matravat jalapan* (judicious water intake) is like "*amrutam*" that means it is beneficial and healthy. Excess water intake generates *ama*, *pipasadhikya*, *nidra*, *sarvang gaurav*, *alasya* (*anutsyaha*) and *malavibandha*.¹³ Less water intake (according to thirst) is advised in diabetes.¹⁴

Vidhi vihit jalapan was advice as having the action of *amapachana*, *shleshmakshaya*, *agnideepana*, *kledashoshana* which contributes in the *samprapti bhanga*. The *abaddha kleda* and *meda* get reduced. Thus reduces the *samprapti* of *Prameha*.

Hence *nidanaparivarjana* proves to play an essential and important role in the treatment of diabetes. Thus to achieve *samprapti bhanga* the root cause was tried to eliminate by avoiding the *jalasevana* (Water intake) particularly at specific *kala* (time period).

The *vyadhipratyanik chikitsa* used in the treatment of *prameha* was *Madhusudan vati* and *Aarogyavardhini vati*. The *Madhusudan vati* is the proprietary medicine which contains *Dhatri*, *Nisha* and *Shilajatu*. *Dhatri* being *pancharasatmaka* is *tridosha shamaka*, *vatanulomaka*, *rasyana* in nature *vrushya*, *ojovardhaka* and *pramehaghna*.¹⁵ *Nisha* and *Shilajatu* have *tikta rasa*, *katu vipak*, *ushna veerya*. *Nisha* is *Kaphapittaghna*, *Lekhaniya*, *Varnya*, *Raktadoshahara*, *Vishghna* and *Pramehahara*. *Shilajatu* is *rasayana* (rejuvenator), anti-ageing, *tridoshaghna*, *dhatudardhyakar*, *malachedkar*, *mutra rogaghna*, *medo rogaghna* and *pramehaghna*. *Aarogyavardhini* is having action as *deepan*, *pachan*, *pathyakara*, *hrudhya*, *medovinashini*, *malashuddhikar* (*kledaghna*), *kshutpravartini* and also useful in all diseases. The properties of these medicines as *tridoshamana*, *deepan*, *amapachana*, *kledanashak* and *rasayana*. It helps in *samprapti bhanga* by normalizing the *dosha* and reducing the *dhatushaithilya*. It also improves the quality of *dhatu*, reduces the *dravata* and *abaddhata* of *shleshma* and *meda*. Thus reduces the symptoms of *prameha*. The combination of *vyadhipratyanik chikitsa* with *nidanaparivarjan* gain the better results in less period of time.

CONCLUSION:-

Consideration of *matra* as well as *kala* is important while consumption of

water intake. There is an association between *jalapan* and *prameha*. *Vidhi vihit jalapan* plays an important role in the treatment of diabetes. Less quantity of water consumption is advised in diabetes which is beneficial. Hence correction in style (that is frequent practice) is necessary for the treatment of lifestyle disorders.

SCOPE FOR THE STUDY:- Results of this small scale study are encouraging. There is further scope to carry out the present study with the bigger sample size, for longer duration and by evaluating the parameters like HbA1c.

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