Role of Panchatikta Panchaprasrutik Niruha Vasti in Prediabetes

A case report

Case Report

Poonam V Ashtankar¹*, Punam Sawarkar²

1. P.G Scholar, 2. Associate Professor,
Department of Panchakarma, MGACH & RC, Salod (H), Wardha.

Abstract

Background: Prediabetes is an intermediate state of hyperglycemia with glycaemic parameters above normal but below the diabetes threshold. In Ayurveda, it is correlated with Prameha Pooavaropavastha. The risk of developing diabetes remains high with an annual conversion rate 5-10%. Many other studies have shown that the efficacy of lifestyle intervention in diabetes prevention with a relative risk reduction of 40-70% in prediabetes adults. If we treat this disease in early stage then it checks the further pathogenesis of disease. Aim and objectives: The aim of this study was to observe the efficacy of Panchatikta Panchaprasrutik Niruha Vasti enema including Palliative treatment in prediabetes. Methods: It is a single case study of 55 years old male patient who was diagnosed with prediabetes correlated as Prameha Poorvaroopa from 1 year approached to Ayurvedic hospital and was treated Panchatikta Panchaprasrutik Niruha Vasti. The treatment was continued for consecutive 15 days. Results: After 15 days changes were observed in symptoms as well as reduction was seen in blood and urine sugar level and overall quality of life of patient was improved. Conclusion: Patient got satisfactory relief in symptoms as well as objective parameters after 15 days.

Key Words: Prediabetes, Panchatikta Panchaprasrutik Niruha Vasti, Prameha Poorvaroopa.

Introduction

Ayurveda is a holistic science which gives more emphasis over prevention of disease rather than curing of disease. Many clinical entities eg. Diabetes, obesity can be prevented with appropriate Dietic habit and suitable lifestyle modification. Prediabetes is an intermediate state of hyperglycemia with glycaemic parameters above normal but below the diabetes threshold. The risk of developing diabetes remains high with an annual conversion rate 5-10% (1). In Ayurvedic compendium Prameha is defined to be characterized with excessive urination (both in frequency & quantity) and turbidity (2). Prameha is a Tridoshaj Kapha predominant disease (3). Which is included in Ashtamahagada (eight types of major diseases) by Acharya Charaka, Sushruta and Vagbhata. Prameha Pooavaropavastha (prodromal features) explained in our ancient Samhitas can be correlated with prediabetes condition. If we manage the disease at an early stage, it will check for further disease pathogenesis. Thus, diagnosis and preventive steps in Pooavaropavastha (fourth Kriyakala) (4) are very much appreciated.

Today’s eating habits, sedentary lifestyle and genetics can also play role for putting disturbances on the usual health. Several studies have demonstrated the effectiveness of lifestyle measures in diabetes care with a relative risk reduction of 40-70 per cent in adults. So, there are more chances to develop prediabetes. Type 2 diabetes may develop within 10 years if the prediabetic condition is not controlled by appropriate lifestyle changes. One study found that 5 to 7% weight loss appears to reduce the risk of diabetes (5). Many patients are reluctant to do lifestyle modification and they prefer for specific treatment so they approach for Ayurvedic physician. Considering this fact, it is need of hour to search some alternative therapy in Ayurveda to check over the pathogenesis of prediabetes to avoid its further progress into diabetes condition.

The main treatment principle in the condition of prediabetes is the elimination of Kleda (wetness). Shodhana Chiktis (purificatory treatment) is the best choice of treatment for Kledaharana since Prameha is Bahudoskhavastajanyaa Vyadhi (6). Vagbhata has mentioned about 5 types of Shodhana (Purgatative) treatment modalities which are known as Panchashodhana (five penta bio purificatory procedure). Niruha Vasti (decocion enema) is one of them (7). Among Panchakarma Vasti is such an invasive therapy having multidimensional effect. Among various Vasti preparations, Panchatikta Panchaprasrutik Niruha Vasti is specially narrated for the management of Prameha (8), which has cardinal signs and symptoms e.g. Prabhit Mutrata (excessive urination), Ghanangata (heaviness of body) Atiswedapavriti (excessive sweating), Karapada Daha (burning sensation in hands and feet) (9) In this case study, a 55-years old man with Prediabetes was prescribed Panchatikta Panchaprasrutik

* Corresponding Author:
Poonam V. Ashtankar
PG Scholar, Department of Panchakarma,
MGACH & RC,
Salod (H), Wardha, India
Email Id: drashtankarpoonam@gmail.com
Table no. 3 : Ashtavidha Parikshana

<table>
<thead>
<tr>
<th></th>
<th>Grade</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table no. 4 : Vitals Examination</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Blood Pressure (B.P)</td>
<td>140/80 mm/Hg</td>
<td></td>
</tr>
<tr>
<td>Pulse (P)</td>
<td>64/min</td>
<td></td>
</tr>
<tr>
<td>Respiratory Rate (RR)</td>
<td>18/min</td>
<td></td>
</tr>
</tbody>
</table>

Past History

Patient was also known case of hypertension since 10 years with its regular treatment.

Medication History

- Tablet Amlodipine 5 mg daily once For 10 years.

Personal history

- Food habits: mixed diet, craving for Sweet, salty and pungent food items
- Sleep: sound
- Addiction: alcohol (once in a week) and tobacco (twice a day)

Family History

- Father was known case of DM and sibling was obese.

Nidan Panchak (Etio-pathogenesis of Prameha Poorvaroopa in Ayurveda)

- Hetu (etiology or causative factors)
- Ahara: Madhur, Lavana, Katu Rasatmak Ahar (Sweet, salty, and spicy food items)
- Vihara: Asayasukham (Habitation to sitting on soft cushions for long periods), Swapnashayan (excessive sleeping), Diwaswap (day sleep)(10)
- Roopa (Manifestation): Excessive urination, heaviness of body, excessive sweating, burning sensation in hands and feet (9).
- Samprapti (patho-physiology of the disease): Due to above factors leads to aggravation of Tridosha, Saptadhatu and Mansik Dosh and forms the symptoms of Prameha Poorvaroopa (11).

Investigations done

- Blood sugar level
- Urine sugar
- Fasting and Post prandial

Diagnosis

Prediabetes (Prameha Poorvaroopa).

Treatment Advised

By analyzing the above pathogenesis of disease in this patient, medicated enema and palliative treatment was prescribed which are shown in table no. 5 and 6 respectively.
After treatment, the patient had found significantly relief symptoms such as excessive urination, heaviness of body, excessive sweating and burning sensation in hands and feet. There was significant result that 3 kg weight loss was observed after treatment. Assessment of the patient was carried out by reduction in gradation (12) of clinical symptoms and reduction in blood and urine sugar levels (Fasting and post prandial) on the day of primary assessment and on 15th day. Shown in Table 7.

**Table no. 7 : Assessment on the basis of subjective and objective criteria**

<table>
<thead>
<tr>
<th>Type of assessment</th>
<th>Before treatment</th>
<th>After treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A) Subjective criteria</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Excessive urination</td>
<td>1 (+)</td>
<td>0</td>
</tr>
<tr>
<td>Heaviness of body</td>
<td>4 (+)</td>
<td>1</td>
</tr>
<tr>
<td>Excessive sweating</td>
<td>2 (+)</td>
<td>0</td>
</tr>
<tr>
<td>Burning sensation in hands and feet</td>
<td>2 (+)</td>
<td>0</td>
</tr>
<tr>
<td>Weight gain</td>
<td>3 (+)</td>
<td>1</td>
</tr>
<tr>
<td>Distention of abdomen</td>
<td>4 (+)</td>
<td>1</td>
</tr>
<tr>
<td>Itching over inguinal region</td>
<td>3 (+)</td>
<td>0</td>
</tr>
<tr>
<td><strong>B) Objective criteria</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1) Blood sugar level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fasting</td>
<td>121 mg%</td>
<td>85 mg%</td>
</tr>
<tr>
<td>Post prandial</td>
<td>197 mg%</td>
<td>130 mg%</td>
</tr>
<tr>
<td>2) Urine sugar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Present</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table no. 8 : Gradations for Subjective Criteria**

<table>
<thead>
<tr>
<th>Sr. No</th>
<th>Subjective Criteria</th>
<th>Grade-0</th>
<th>Grade-1</th>
<th>Grade-2</th>
<th>Grade-3</th>
<th>Grade-4</th>
<th>Grade-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Excessive urination</td>
<td>3-5 times per day, no rarely at night</td>
<td>6-8 times per day, 1-2 times per night</td>
<td>9-11 times per day, 3-4 times per night</td>
<td>&gt;11 times per day, 4 times per night</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Heaviness of body</td>
<td>No Heaviness</td>
<td>Occasionally feeling of heaviness for sometimes in hand and feet.</td>
<td>feeling of heaviness for sometimes in hand and feet, not affecting daily activities</td>
<td>Daily feeling of heaviness over body, which leads to Akarmanyata</td>
<td>Most part of body for long duration</td>
<td>All body, for most part of the body.</td>
</tr>
</tbody>
</table>
3 Excessive sweating
Sweating after heavy work and fast movement or in hot cold weather
Profuse sweating after moderate work and movement
Sweating after little work and movement
Profuse sweating after little work and movement
Sweating even at rest or cold weather

4 Burning sensation in hands and feet
No Daha
Kara Pada Tala/ Supti incontinuous
Kara Pada Tala/ Supti continuous but not severe
Kara Pada Tala/ Supti continuous and severe.

5 Distention of abdomen
No Adhmana
Occasionally feeling of Adhmana
Daily After intake of food up to 1 hour with mild distention of abdomen
distention of abdomen up to 1-3 hour after intake of food
Moderate distention of abdomen up to 6 hours after intake of food
Severe distention of abdomen up to more than hrs after intake of food

6 Dryness of Skin
No line on scrubbing with nail
Faint line on scrubbing by nail
Lining and even words can be written by nail
Excessive Rukshata leading to Kandu
Rukshata leading to crack formation

Table 9: Showing American Diabetic Association diagnostic criteria for normal glucose, Prediabetes, and diabetes II (13)

<table>
<thead>
<tr>
<th>Diabetes test</th>
<th>Normal</th>
<th>Prediabetes</th>
<th>Diabetes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hemoglobin A1c %</td>
<td>&lt; 5.7</td>
<td>5.7-6.4</td>
<td>≥ 6.5</td>
</tr>
<tr>
<td>Fasting blood sugar, mg/dL</td>
<td>&lt; 100</td>
<td>100-125</td>
<td>&gt; 125</td>
</tr>
<tr>
<td>Post prandial blood sugar mg/dL</td>
<td>&lt; 140</td>
<td>140-199</td>
<td>&gt; 199</td>
</tr>
</tbody>
</table>

Discussion
Considering all factors involved in the pathogenesis of Prameha Poorvaroopa, the main treatment principle is to remove Kleda in this case and Vasti Karma was already told by Acharya Charaka as it corrects the vitiation of Vata to stabilize its normal functions and also counteracting the vitiated Kapha, Kleda, and Meda by using specific drugs. So specially prepared medicated enema was prescribed in this case followed by palliative therapy. After 15 days, patient got significant relief clinically as well as improvement were observed in blood and urine sugar level shown in Table 7. Given treatment protocol mainly comprises of Kledaharana, which helps the breakdown of pathogenesis of prediabetes in this patient.

Probable mode of action of all interventions are given below:

Shoshanna Chikitsa
Abhyanga (Local massage – From lumbar to both feet) with Tila Taila followed by Nadi Sweda (sudation) – Before administration of Niruha Vasti, local Snehana and Swedana given to the patient as a preprocedural protocol of Vasti. Local Snehana helps to pacify Vata, softness of the body, removes Mala and local Swedan relieves stiffness, toughness, coldness and improves local blood circulation due to dilation of the blood vessels(14). Generally Tila Taila (sesame oil) is considered as best among all Tailas in Ayurveda(15) because it is Tridoshgna (subside all three Doshas) in nature and it nourishes tissues, gives strength and increases Agni (15). Nadi Sweda with the decoction of Nirgundi Patra is a kind of sudation in which medicated steam is applied to the patient’s body. Nirgundi Patra has Vatahara, Shoolkara property(16). It relieves the pain and stiffness. But in this is case, both of these treatment are applied as a part of protocol & to increase blood circulation with enhancement of effect of Niruha Vasti.

Panchatikta Panchaprasutik Niruha Vasti –
Panchatikta is especially prescribed for Prameha in Charaka Samhita(10) in Kaphaja Prameha, being an Abhishyanda Pradhana disease. Prameha is the perfect indication for the use of this type of Kledahara & Shodhana Vasti. It is also a disease with a large Dushya Sangraha involved in its Samprapti (pathogenesis) (17). All the contents of this Vasti are Tikta Rasatmak, Katu Vipaki and Ushna Viryatmak so Deepan Pachan, Anulomak and Krumighna in nature(18).

- **Patol** - It is Dusha Kaphanashaka Dravya and useful in Agnimandya and Yakritvikar. It dilates opening of minute channels associated with Pakwahashya and expels dosha in the form of loose motion hence it should be used in Udar and Prameha Vikar for excretion of Kleda(19).
- **Nimba** - Digest and absorb Drava, Kapha and Kleda present in various Dhatus by its Tikta and Ruksha Gunas and controls Bahumutrata (20).
- **Bhunimba** - Bhunimba is useful in Yakrit Pleeha Vikar, Vibandha and Agnimandya(21).
• Rasna- It is Vatakaphagna in nature so act in Prameha and Udar Vikar.(22).
• Saptaparni - Useful in liver debility as liver stimulant due to Tikta Rasa. Since Tikta Rasa, it liquefies Kapha and eliminates it. Also acts as a Krimighna. It should be used in Hridayroga and vitiation of blood being Hridaya and alternative due to Tikta and Kashaya Rasa so, it is used in this case(23).
• Sarshpa Kalka - Used in the Vasti due to its Kaphavataghna, Deepan and Krimighna property. It is especially useful in reduce Pleenatvirdhadi hence it is best medicine for enlargement of spleen according to Aacharya Kashyapa. Also hridayouttejak and useful in Mutraghata, Mutrasanga and Kushtha(24).
• Saindhava (Rock salt) - It has properties such as Varyyandi, Sukshma, Tikshna, Ushna, and Vatgna encourages the evacuation of bladder and rectum. Besides this, Saindhava kills the properties of Picchila, Bahula and Kashaya of Madhu, and it is closely related to form a homogeneous mixture. The use of rock salt is useful in the correction of electrolyte imbalance also (25).
• Madhu (Honey) – which has a prebiotic index of 6.89, due to its oligosaccharides(24). With this, honey helps grow a healthy microbial flora. Fructose and glucose, the main carbohydrate in honey, have same molecular formula, but different structural formul(26). Fructose helps to reduce the amount of hyperglycemia or obesity in these patients(27).
• Go Ghrita - Due to the lipid soluble nature, Vasti Dravyas mixed with ghee are readily absorbed into the rectum. As the rectum has a rich supply of blood and lymph (28).

Shaman Chikitsa

• Chandraprabha Vati– It cures the twenty varieties of Prameha. It relieves Vata, Pitta and Kapha. Due to an increase in the frequency of urination, abdomen distention and Itching purpose, Chandraprabha Vati prescribed in this patient (29).
• Arogyavardhini Vati – It provides total health and frees the body from all kinds of diseases because it balances the three Dosha. In this condition it is beneficial for the removal of excess fat, for the degradation of various types of toxins from the body and for the reduction of accumulated cholesterol in the body. It is also beneficial as a hepatoprotective, cardioprotective and digestive properties. (30).
• Gandharva Haritaki churna - Gandharva Haritaki Churna has Vatahara and Ruksa Virechak properties. In this patient it is indicated in the management of distention of abdomen as it is Anulomak in nature. It also potentiates the over all absorption of medicine(31).

Conclusion

The overall effect of above mention therapy reveals that prediabetes can be cured effectively with collaborative approached including Panchatikta Panchaprasutik Niruha Vasti and Palliative treatment without causing any adverse effect. It can be alternative therapy in current era for prediabetes. Now it is a need of hour to conduct trial with similar intervention in large sample size because it is a single case study to establish specific guidelines for the management of prediabetes & to generate evidence based research for upcoming researchers in future.

References


