



Case Study

## UNDERSTANDING EFFECT OF AYURVEDIC TREATMENT IN PRAMEHA (DIABETES MELLITUS) AND ITS UPADRAVA (COMPLICATIONS)

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### ABSTRACT


*Prameha* is a syndrome described in the ancient Ayurvedic texts that includes clinical conditions involving metabolic syndrome and is said to be a *Santarapanajanya Vyadhi*. *Prameha* literary means anomalies of urinary secretions. On the basis of clinical features of *Prameha*, it correlates with diabetes mellitus. Diabetes mellitus is a metabolic cum vascular syndrome of multiple etiologies characterised by chronic hyperglycemia. The disease *Prameha* can be understood as having three stages based on the severity of *Dhatudusti*. With the *Dushti* of all *Dhatus*, *Upadrava* of *Prameha* are manifested. **Case:** Present case study deals with a female patient 49 years old suffering from increased frequency of micturition during night and *Parshvashool* with coughing from 3 years. On taking a detailed history it was found that, it was *Upadrava* of *Prameha*. **Treatment protocol:** Patient was given *Pradhamana Nasyam* with *Pippali Churna* after proper intervention of *Snehana* and *Nadi Swedan* on chest, supraclavicular region, and *Kati Pradesh* on empty stomach in the early morning. After that a freshly prepared *Kwatha* about 50ml of *Kalmegh Churna*, *Punarnavamool*, *Giloy* and *Shunthi* was given at BD dose. And the same drugs were used for *Lepan on Kati Pradesh*. **Results:** *Parshvashool* and coughing was completely cured, BSF and PPBS came to its normal range, creatinine level decreased and there was a significant reduction in fatty liver. **Conclusion:** With proper therapy, drug intervention, diet control and exercise *Prameha* and its *Upadrava* can be managed successfully.

### INTRODUCTION

*Prameha* having anomalies of urinary secretions are of 20 types, out of 10 are born from *Shleshma (Kapha)*, 6 from *Pitta* and 4 from *Vata*.<sup>[1]</sup> Addiction to the pleasures of lounging and sleeping, the excessive use of curds, meat and soup of domestic aquatic animals and wet- land animals, milks, new grains and drinks and products of *Guda (jaggery)* and all things that increase *Kapha* are the causative factors of the anomalies of *Prameha*.<sup>[2]</sup> *Pratishyaya*, *Nidra-Kasa-Shwas* and *Hridayashool* etc are the complications of *Kaphaja Prameha* whereas *Jwara*, *Pipasa*, *Pandu roga* etc are complications of *Pittaja Prameha*

*Hridgraha*, *Sthambha*, *Kampa*, *Shool* etc are the complications of *Vataja Prameha*.<sup>[3]</sup> The International Diabetes Federation (IDF) estimated that in 2015, 415 million people worldwide were diagnosed with DM. This number is expected to go upto 642 million by 2040.<sup>4</sup>

- **Patient Details:** Age- 49 Years, Sex- Female, Occupation- Housemaker, Marital Status- Married, Religion- Hindu, Address- Patna, Bihar, DOA- 13-03-2024, DOD- 05-04-2024.
- **Pradhana Vedana (Chief Complaints):** Patient complains of having increased frequency of micturition during night and *Parshwashool* with coughing from 3 years.
- **Vedana Vrutanta (History of Present Illness):** Patient was asymptomatic 6 years before. Then patient started to suffer from increased frequency of micturition during night atleast 5-6 times. After 3-4 months she started feeling weakness, pain in limbs for which she went to private hospital and

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found to have RBS more than 300mg/dl. She was on tab metformin 500mg OD. After 3 years, she felt to have emaciation in her body with cough, breathlessness and chest pain. On diagnosis she was found to have tuberculosis for which she took treatment in private hospital and got recovered in 6 months. But coughing used to occur continuously for which she was taking treatment but it always reoccurs after sometime. On further investigation it was found that she has some consolidation in her lungs, increased creatinine level and grade 2 fatty liver. So, patient came to Govt. Ayurvedic College and Hospital, Patna, for proper management.

- **Purva Vyadhi Vrutanta (Past History):** Patient has suffered from tuberculosis before 3 years and got completely cured by medication.
- **Kula Vyadhi Vrutanta (Family History):** Her father was said to have asthmatic.

➤ **Shalyakarma Vrutanta (Surgical History):** Hysterectomy was done before 20 years and cholecystectomy before 2 years.

➤ **Prasava Vrutanta (Obstetrical History):** G<sub>3</sub> P<sub>3</sub> A<sub>0</sub> L<sub>2</sub> D<sub>1</sub>

➤ **Vyaktika Vrutanta (Personal History):**

- **Ahara-** Fish, chicken, chapati milk and vegetable together, *Raab* (liquid form of *Guda*) with *Roti*, Rice a lot.
- **Vihara- Sleep-** Day sleep regularly.
- **Urine-** Increased frequency, but passes little by little without any force and very slowly, 5-6 times at night.
- **Bowel/Stool-** She did not pass stool for 2-2 days, hard stool, loose stool when on laxatives and gaseous abdomen since 20 years with severe headache.
- **Mansik-** Stressed
- **Addiction-** Tea

#### Samanya Pareeksha (General Examination)

Appearance – Whitish complex	Pulse rate -70/min
B.P. -140/90 mm hg	R.R. – 20/ min
Weight- 55 kg	Height- 150cm
Temperature – Afebrile	R.S. – Bilateral air entry clear
C.V.S. – S1S2 heard, no abnormal murmur heard	CNS- Conscious and well oriented

#### Rogi Pariksha

<i>Prakruti: Pitta Kaphaj</i>	<i>Sara: Madhyama</i>
<i>Satva: Mashyama</i>	<i>Samhanana: Madhyama</i>
<i>Kostha: Krura</i>	<i>Agni: Manda</i>
<i>Pramana: Madhyama</i>	<i>Aharashkti: Abhyavaharan shakti- Madhyama</i>
<i>Jaranashakti: Madhyama</i>	<i>Vyayamashakti: Madhyama</i>
<i>Vaya: Madhyama</i>	

#### Ashtavidha pariksha

<i>Nadi: Vata Kapha</i>	<i>Mutra: 6-7 times (day), 5-6 times (night)</i>
<i>Mala: Sama, Kathin, Mala Vega occurs after 2-2 days.</i>	<i>Jihwa: Saama</i>
<i>Shabda: Spashta</i>	<i>Sparsha Samshittoshna</i>
<i>Druka: Prakruta</i>	<i>Akruti: Madhyam</i>

#### Chikitsa/Treatment/Therapy given

Name of medicine/Therapy	Dose	Number of days given
1. <i>Bahya abhyanga with Til tail, Karpura and Saindhav lavana</i>	-	5 days
2. <i>Nadi Swedan on chest, face, and Kati Pradesh</i>	-	5days
3. <i>Pradhaman Nasya with Pippali Churna</i>	200 mg	5days
4. <i>Kalmegh Churna, Punarnava Mool Churna, Shunthi Churna and Giloy Churna freshly prepared Kwatha</i>	50ml BD	30 days
5. <i>Kalmegh Churna, Punarnava Mool Churna, Shunthi Churna and Giloy Churna freshly prepared Kalka Lepam on Kati Pradesh and abdomen</i>	-	30 days
6. <i>Panchtikta ghrita Guggulu</i>	500mg BD	30 days
7. <i>Arogyavardhini Vati</i>	500mg BD	15 days then 7 days interval and again 15 days
8. <i>Hinguvachadi Churna (before meal)</i>	3gm BD	15 days

**Pathya Advised**

<b>Ahara</b>	<b>Vihara</b>	<b>Daivavyapashraya chikitsa</b>
Moongdal khichdi with one spoon ghee and 2 pinch of <i>Shunthi</i> sprinkled on it	No day sleep Early night sleep	Chanting of <i>Ashvino mantra</i>
Soaked black resins	<i>Yogasana- Pranayama, Anuloma Vilom, Bhramari, Surya namaskar</i>	<i>Om jaap</i>
Vegetable – <i>Methika, Rasona, Patola</i> , bottle guard, <i>Karvellaka, Kushmand</i> with very less spices	2-3 km walk every morning	
Medicated lukewarm water – made with <i>Dhaniya</i> and <i>Shunthi</i>	Should stay in <i>Nivata Sthana</i> and avoid cool environment, fan, cold water	

**Results**

Firstly, patient got relieved from severe coughing, breathlessness and *Parshwashool* (flank pain) within 5 days.

**Haematological Investigation**

<b>Investigation</b>	<b>Before Treatment</b>	<b>After Treatment</b>
Hb	9.8 gm%	12.2 gm%
RBC	3.0 million/microlitre	3.86 millions/microlitre
WBC	12.2 thousand/microlitre	7.0 thousand/microlitre
ESR	80 mm/hr	25 mm/hr
Platelet	150 thousand/microlitre	160 thousand/microlitre

**Blood Sugar**

Fasting blood sugar	139 mg/dl	87 mg/ dl
Post prandal BS	170 mg/dl	119 mg/dl
HbA1c	6.5%	5.0%

**Liver function Test**

Total bilirubin	0.32 mg/ dl	0.62 mg/dl
Direct bilirubin	0.06 mg/dl	0.26 mg/ dl
Indirect bilirubin	0.26 mg/dl	0.36 mg/dl
SGOT	20.57 U/L	
SGPT	24.7 U/L	
Alkaline phosphatase	223.9 U/L	97.3 U/L
Albumin	3.1gm/dl	4.0 gm/dl

**Kidney Function Test**

S. Creatinine	2.0 mg/dl	1.3 mg/dl
Blood urea nitrogen	39.9 mg/dl	22.2mg/ dl
Blood urea	85.1 mg/dl	47.6 mg/dl

**Ultrasound Report**

Liver	17 cm	14 cm
Kidney	Rt. Kidney-7.8 cm Left kidney -8.5 cm	Rt. Kidney-8.8cm Left kidney -9.4cm

**Last Follow-up:** on 04-07-2024 patient didn't have any sorts of symptoms as mentioned above, metformin was withdrawn completely after 15 days of treatment with normal blood sugar level.

**DISCUSSION**

*Prameha* has involvement of three *Doshas* but dominance of *Bahudrava Shleshma* is there. With this 10 *Dusyas* are also present which are *Meda, Mamsa,*

*Shukra, Kleda, Shonita, Vasa, Majja, Lasika, Rasa, Ojas.*<sup>[5]</sup> Different *Doshas* having entered the *Basti* (urinary tract) in vitiated condition give rise to the respective types of *Meha* with their own dominance. If the disease is not properly treated then *Upadrava* (complications) of that disease occur. In this patient, *Prameha* developed stage by stage and at the end she developed the complications of the disease. Like first she developed *Lakshanas* of one of the *Kaphaja Prameha*

i.e., *Shanermeha* (passes urine little by little without any force with difficulty and very slowly).<sup>[6]</sup> Then after few years she developed *Lakshanas of Vata Prakopa* like emaciation of muscles, dryness and on investigation it was found that she was suffering from tuberculosis. And at the end after 3 years, she developed complications of *Prameha* like *Shwasa* (dyspnoea) which is due to *Doshaja Marmaabhighat* like *Hridaya*, which is *Pranavahasrotomoola* as she gave the history of fall from bike. Another one is *Kasa* (cough) which occurred as a result of *Pranavaha srotodushti*.<sup>[7]</sup>

**Nadi sweda-** In this process, *Swedana* is given to the localised or affected part only. This will act as *Sthambhaghna*, (to relieve stiffness), *Gauravghna* (to relieve heaviness), *Shitaghna* (to decrease coldness), *Swedakaraka* (promotes sweating).<sup>[8]</sup> *Srotaha Sva Abhiviliyate*<sup>[9]</sup> (to dissolve dense or *Grathita Kapha* stuck to the channels), *Khani Mardavani Ayanti* (makes channel soft and do *Vatanulomana*) and *Shleshma Vishyandate* (increases secretion of *Kapha*). So, it increases vasodilatation, metabolism and makes channel clean.

**Lepan-** A method of topically applying medicated paste on the affected area of the body. This paste gets absorbed under the skin through follicles present over there and reaches to the affected cells. There they perform their native activities like healing, nourishment, cell modification, rejuvenation of cells and hence helps in giving new life to the respective cells and organ over there. Here we used *Kalmegha*, *Punarnavamool*, *Shunthi* and *Giloy* for the formation of *Lepa*.

**Kalmegha-** This plant is described as *Deepana* (increase digestive fire), *Yakrituttejaka* (hepatoprotective and liver stimulant), *Swedajanana* (diaphrotic), *Krimighna* (antimicrobial), *Rakta shodhaka* (blood purifier), purgative, *Shothahara* (anti-inflammatory), *Jwarahara* (antipyretic).<sup>[10]</sup>

**Punarnavamool-** It is *Shothahara*, (anti-inflammatory), *Mutravirechana* (diuretic), *Rakta vardhaka*, *Swedopaga*, *Rasayana*, *Prameha Hara*, *Sara*, *Deepana*, *Pandughna*, decrease hepatotoxicity and many more.<sup>[11]</sup>

**Shunthi-** There is wide explanation of beneficial effects of *Shunthi*. Juice of ginger decreased blood glucose level in streptozotocin Induced diabetic rats possibly due to involvement 5-HT receptors. It may consist of 5-HT receptor antagonists.<sup>[12]</sup> It reduces *Shwas*, *Shool*, *Kasa*, *Hridayamaya*. It is *Aampachni*, *Vibandhbhedini*, *Shothahara* etc.<sup>[13]</sup> It's *Katu* and *Ushna Guna* helps to reduce *Kapha* and *Vata* (*Kaphavatavibandhnuta*). So, it helps in improvement of overall metabolism of the

body and hence called as *Mahaushadh* and *Vishwabheshaja*.

**Guduchi-** *Guduchi* is reported to have antipyretic, hepatoprotective, immunomodulator, antidiabetic, antimicrobial, hypoglycemic and many more miraculous properties it has.<sup>[14]</sup> powder of these 4 plants was made into paste form using decoction of same ingredients and *Lepam* was applied.

Based on their properties the freshly prepared decoction of these four drugs was also used for oral intake.

**Arogyavardhini Vati-** *Jwaraghna*, *Medovinashni*, most importantly *Malashuddhikara*, *Pachni*, *Deepani*, and *Sarvarogprashmani*. It has *Shilajatu*, *Gugglu*, *Trifala*, *Neemba*, *Kutki* etc which are highly beneficial for *Prameha*, *Yakritroga*, *Shoth*, *Aampachana* etc.<sup>[15]</sup>

**Panchtikta Ghrita Guggulu -** *Tikta Rasa*, *Ushna Virya*, and *Katu Vipaka* are prevalent in *Panchatikta Guggulu Ghrita* which promotes *Deepana-Pachana*, enhance *Dhatvagni* and provide nutrition and stability to all *Dhatu*s. It is also indicated in *Prameha*, *Yakshma*, *Aruchi*, *Shwasan*, *Peenasa*, *Shoth*, abscess etc.<sup>[16]</sup>

**Hinguvachadi Churna**<sup>[17]</sup>- The majority of the ingredients in *Hinguvachadi Churna* have a strong efficacy that calms vitiated *Vata* and *Kapha*. Most of the drugs in the formulation have pungent biotransformation which aid to pacify the vitiated *Vata* and *Kapha*. The qualities of *Hinguvachadi Churna* medications, such as *Vata Anulomana* (normalizing movement of *Vata* humor), *Hritparshva Shulahara* (reduces cardiac and flanks pain), *Shothahara* (relieves swelling), and *Srotovishodhana* (clears bodily channels), aid in the normal flow of *Vata* and alleviates *Kapha*. This turns the indigestible food into assimilable form and hence normalizes the *Agni* which relieves the *Aamaj* disease condition.

## CONCLUSION

This case study shows successful management of *Prameha* and its *Upadrava* (complications) with proper intervention of *Pradhama Nasyam* therapy, *Lepan* on *Kati Pradesh* and abdomen, *Arogyavardhini Vati*, *Panchatikta ghrita Guggulu*, with regular diet control, walking, some *Yogasanas* and *Daivavya pashraya Chikitsa*. Patient got complete relief from breathlessness, *Urah-Parshvashool*, coughing, makeable decrease in blood glucose levels, hepatomegaly and significant increase in size of kidney and reduction in creatinine level. So, this concludes that proper intervention of *Pradhama Nasyam* reduced *Vikara* of *Urah Pradesh* and *Lepan* therapy with medications and proper diet, exercise, *Yogasana*, *Daivavyapashraya Chikitsa* can manage *Prameha* along with its complications, hepatomegaly and kidney diseases.

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