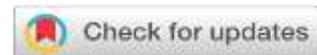


**UPASHAY CHIKITSA OF MADHUMEHAJANYA VRIKKA ROGA W.S.R TO DIABETIC NEPHROPATHY- A BRIEF CONCEPTUAL STUDY****Priyanka Chakraborty**

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**Article Received:** 24/03/2023 - **Peer Reviewed:** 29/03/2023 - **Accepted for Publication:** 09/04/2023.**ABSTRACT**

Diabetic nephropathy is now one of the common microvascular complications of Type I and Type II Diabetes mellitus. Due to poor uncontrolled or late diagnosis of diabetes mellitus, renal blood vessels get damaged resulting in nephrosclerosis. This results in increased mortality and morbidity. In Ayurvedic literature, it can be defined as the *Ubhay-Arthakari Nidanarthakara Roga of Madhumeha*. *Madhumeha* is a *Vyadhi Hetu*. The prolonged *kleda dushti* in the *madhumeha* and exposure to *nidana* led to a change in the function and structure of *Vrikka*. This leads to the dearangement of *Vrikka* resulting in *Madhumehajanya Vrikka Roga*. Various modern treatment protocols have been introduced but the degeneration is still progressing to renal failure. The *Upashaya Chikitsa* helps in making the proper treatment protocol for the disease and providing the exact method of how to treat the disease with the knowledge of the pathogenesis of the disease.

**Keywords:** Diabetic nephropathy, Diabetes mellitus, *Madhumeha*, *Madhumehajanya Vrikka Roga*, *Upashaya Chikitsa***INTRODUCTION**

Nephropathy is defined as a disease of the kidneys caused by damage to the blood vessels or the nephrons. Uncontrollable diabetes or long-term diabetes

mellitus may develop nephropathy resulting in Diabetic nephropathy. Diabetic nephropathy is an important cause of morbidity and mortality and is now

among the most common causes of the End stage of renal disease with increased incidence of dialysis and renal transplantation. Pathologically microalbuminuria is an important indicator of developing diabetic nephropathy in incontrollable diabetic patients. As the proteinuria increases, the damaging of nephrons also progresses parallely resulting in decreased glomerular filtration rate (GFR) with progression in renal failure stages. Alongwith it, if the patient is hypertensive, then automatically the progression of nephropathy accelerates.

**Table 1: Types of Upashaya**

SL. NO.	UPASHAYA	MEDICINAL PROPERTIES
1.	<i>Hetu Viparita</i>	opposite to <i>Hetu</i> or <i>Nidan</i>
2.	<i>Vyadhi Viparita</i>	opposite to <i>Vyadhi</i>
3.	<i>Hetu-Vyadhi Viparita</i>	opposite to <i>Hetu</i> and <i>Vyadhi</i>
4.	<i>Hetu Viparitarthakari</i>	An effect similar to <i>Nidan</i>
5.	<i>Vyadhi Viparitarthakari</i>	An effect similar to <i>Vyadhi</i>
6.	<i>Hetu-Vyadhi Viparitarthakari</i>	An effect similar to both <i>Hetu</i> and <i>Vyadhi</i>

**Diabetic Nephropathy**

Diabetic nephropathy is now the leading cause of chronic renal failure globally. Diabetes is responsible for 40-50% of all ESRD due to delay treatment or uncontrollable diabetes. Both type 1 and type 2 diabetes mellitus can lead to nephropathy due to microvascular complications. But there is a high prevalence of complications found in Type II diabetes mellitus (~90%) in comparison to Type I diabetes mellitus (~10%). The increase in the number of diabetic nephropathy patients raises the question of total patients suffering from diabetes mellitus, hypertension, and other metabolic disorders. The average incidence of diabetic nephropathy is high (3% per year) during the first 10-20 years after diabetes onset. It is estimated that more than 20% and up to 40% of diabetic patients will develop chronic kidney disease, depending upon the population with a significant number that develops ESRD requiring Renal replacement therapy. In a recent systematic analysis study for the Global Burden of Disease 2017 within 1990-2017, globally in 2017, there were 697.5 million cases of chronic kidney disease with 1.2 million people dying from

**Upashya chikitsa:** In simple words, *Upashaya* means relieving factors. It is one of the *Nidan Panchak*. It is one of the five essential criteria necessary for diagnosis and is also called “*Vyadhi Jaanopaya*”. According to *Madhav nidan*, *Upashaya* means the medicine, diet, and daily regimen which gives comfort or relief to the patient and when it is used permanently, it acts as *Chikitsa* and hence can also be said as *Upashaya Chikitsa*. According to Sudanta Sen, *Upashaya* is of two types i.e., *Viparita* and *Viparitarthakari*. Based on *Hetu*, *Vyadhi*, and both, *Viparita* and *Viparitarthakari* have been sub-divided into six numbers.

Chronic kidney disease. Impaired fasting plasma glucose, high blood pressure, high body mass index, and a diet high in sodium and lead were risk factors for CKD quantified in GBD accounting for 57.6%, 43.2%, 26.6%, 9.5%, and 3.6% respectively.<sup>1</sup> The number of people receiving renal replacement therapy exceeds 2.5 million and is projected to double to 5.4 million by 2030.<sup>2</sup> GBD ranks CKD as the 12<sup>th</sup> leading cause of death out of 133 conditions. There are several risk factors for the development of Diabetic nephropathy. These include hyperglycemia, dyslipidemia, smoking, family history of diabetic nephropathy, and gene polymorphism affecting the activity of the Renin-angiotensin-aldosterone axis. Uncontrolled hyperglycemia in diabetic patients stimulates the cells producing humoral mediators, cytokines, and growth factors that are responsible for the structural and functional alterations such as increased permeability of the glomerular basement membrane. These alterations lead to glomerular sclerosis and tubulointerstitial damage. Thickening of the glomerular basement membrane (GBM) is the sensitive indicator for the presence of diabetes within 1-2 years after the onset of diabetes. But it cannot be cor-

related significantly with the presence or absence of nephropathy. At the onset of diabetes, renal hypertrophy, and glomerular hyperfiltration are present. Longstanding diabetes or uncontrolled hyperglycemia may result from more sclerosis of the glomerular basement membrane. The degree of glomerular hyperfiltration correlates with the subsequent risk of clinically significant nephropathy.

#### **Pathogenesis of Madhumehajanya Vrikka Roga**

In the *Samprapti* of *Madhumeha*, *Agnidushti* will be there causing *Ama* formation. The *Agnimandya* over the *Dhatus* will result from diminished production of proper nutrients for the next *Dhatus*. The *Ama* and *Mandagni* then vitiate the *Pachaka Pitta* and *Samana Vayu* situated at “*Antaragni Sameepasthana*”. The *Kledak* and *Avalambak Kapha* also gets vitiated due to *Agni Dushti*. This will cause the increased production of *Dravata* in *Kapha* which will turn into the excess formation of *Bahudrava Kapha* in the condition of *Prameha*. This will result in the production of *Kleda* in the body. *Kleda* alongwith other *Dushita Dosh* (*Kapha*, *Pitta* and *Vata*) will result from vitiation of *Majja*, *Mamsa*, *Meda*, *Rasa* and *Rakta*, *Vasa*, *Lasika*, and *Oja*. Due to the obstruction of *Medavaha Srotas*, the *Mula Sthan* of *Meda* i.e *Vrikka* also gets vitiated. On the other hand, the *Mutravaha Srotas* get vitiated by the *Abaddha Meda* thereby causing more *Kledanvita* in the *Basti* leading to the vitiation of *Apan Vayu*. Some of the *Abaddha Meda* and *Kleda* gradually get accumulated within the *Srotas* leading to their occlusion. This is the underlying pathology in glomerular basement thickening and mesangial expansion in nephropathy. Charaka has also been named *Madhumeha* as *Ojameha* because in *madhumeha* the patient feels increased urgency of micturition and the taste of urine becomes *Madhur* with the elimination of *Apara Oja* alongwith the urine. In the formation of *Madhumeha*, *Vata* by its *Ruksha Guna* changes the *Oja* which is *Madhura* in nature into *Kashay* and brings it to the *Mutrasaya*.

#### **UPASHAY CHIKITSA SIDDHANT FOR MADHUMEHA JANYA VRIKKA ROGA OR DIABETIC NEPHROPATHY**

Both *Aushadh* and *Ahara* parallelly help in the management of Diabetic nephropathy. The *Chikitsa Siddhant* of any disease depends upon the six parameters. Based on these parameters, the treatment protocol for diabetic nephropathy can be adopted.

#### **1. Hetu Viparit:**

*Nidan Parivarjanam* is the first and prime management for nephropathy caused due to uncontrolled or longstanding diabetes mellitus (*Madhumeha*). The *nidan* like excessive use of *Kashay*, *Katu*, *Ruksha*, *Laghu* and *Shita dravya*, *Ratrijagaran*, stress, excessive use of salt and salt substitutes, etc. should be avoided. Alongwith it, smoking and alcohol intake also should be stopped.

*Agnidushti* has been said to be the prime cause of *Madhumeha* resulting *Agnimandya* and for that *Deepan* and *Pachan Dravya* should be given to the patient primarily.

#### **2. Vyadhi Viparit:**

The *Pakwashaya* has been said to be the main site for the formation of *Mutra* and it is also the *sthana* of *Apan Vayu*. Therefore, the cleansing of *Pakwashay* has to be the prime management for proper *Mutra Nirman* and *Mutra Visarga*. To prevent the *Avil mutrata* or turbid urine (passage of albumin through urine). *Dhatuposhan Dravya* or the *Rasayan* can be adopted. These drugs have antioxidant property with free radical scavenging action. *Rasayan* acts as *Dhatuposhak* and helps in the *Srotosodhan* of *Mutravaha Srota*. Due to albuminuria, low haemoglobin is also seen in a patient with diabetic nephropathy. To manage the *Pandu* (anaemia), *Raktaprasadak* drugs can be added. In this case, *Louha* preparations can be given.

#### **3. Hetu-Vyadhi viparit:**

Use of *Tikta Rasa Pradhan Aushadhi* in *Madhumeha* helps in *Hetu Vyadhi Viparit Chikitsa*.

#### **4. Hetu Viparitarthakari:**

Excessive *Panchakarma* has been said to be one of the *Hetu* of *Prameha*. But *Virechan* and *Basti* procedures can be adopted to treat the *Upadrava* of *Madhumeha* as it has been said that *Mutra Utpatti* takes place in *Antra*. *Virechan* not only flushes out the lodged waste materials in the *Vrikka* or the

*Mutravaha Srotas* but also acts in the *Lakshan-like Sotha* (oedema) present in the patient in later stages. *Basti Karma* is known to be best for *Vata Saman*. *Pakwashaya* is the *pradhan sthan* of *Vayu*. *Basti* therapy clears out the vitiated dosha or toxins from the body through *Pakwashaya*. It acts in the rejuvenation of the tissues with curative and preventive actions. As per Ayurvedic classics, *Basti* works as a plant watered at its root & then the root circulates it in all branches. It has also been described as *Ardha Chikitsa's* management of diseases.

**5. Vyadhi viparitarthakari :**

*Mutrakaran* and *mutral* drugs can be given to the patients in the late stages when there is less formation of urine due to continuous *Dhatukshay*.

**6. Hetu vyadhiviparitarthakari:**

*Lepan* and *Swedan Karma* as *Purvakarma* of *Basti* therapy can be given to the patient as *Hetu-Vyadhi Viparitartha Chikitsa* keeping in concern indications and contraindications of *Swedan Karma*.

**DISCUSSION**

DN is now the leading cause of CKD and ESRD despite new scientific breakthroughs in modern medi-

cine. The modern management of DN includes glycaemic control, the use of RAS (Renin Angiotensin System) inhibitors like ARBs(Angiotensin II receptor blockers) and ACEs(Angiotensin converting enzymes) for the control of albuminuria and secondary hypertension. According to *Ayurveda*, DN is the *Nidanarthakara Roga* of *Madhumeha* or in other words microvascular *Upadrava* of *Madhumeha*. The *Tridosha*, *Sapta Dhatu*, *Mutra*, *Lasika*, *Kleda* and *Ojas* are involved in the disease manifestation. *Vata* is the *pradhan* doshic involvement and causes both *Dhatukshay* and *Avarana*. When a patient passes albumin through urine it can be compared to *Oja*. Like, albumin or protein is a vital part of the nourishment of cells. Proteins are made up of amino acids that are needed to make enzymes, hormones, and other body chemicals. Protein is the building block of life. *Oja* is said to be the essence of all the dhatus responsible for the *Bala*, immunity in the body. Immunology has its roots in *Ayurveda* science also referred to as *Oja*. Therefore, the passage of albumin through urine or microalbuminuria which is the primary indicator of Diabetic nephropathy can be correlated with *Ojameha*.

**Table 2: Management protocol for Madhumehajanya Vrikka Roga**

SL. NO.	CHIKITSA	PROTOCOL
1.	<i>Nidan Parivarjan</i>	<i>Avyayam</i> (lack of exercise), <i>Swapnashayana</i> (oversleeping), <i>Pishta-Snigdha Annasevana</i> (consumption of starchy and fatty food), <i>Kshirikshu Vikar Sevan</i> (consumption of milk and sugarcane products), excessive consumption of curd or soup of certain marshy or aquatic animals, excessive consumption of jaggery products, new cereals, <i>Sheeta</i> (cool) and <i>Snigdha</i> (soft) drinks and other <i>Kaphakara</i> edibles
2.	<i>Sodhan Karma</i>	1. <b>Upanaha:</b> <i>Dashamula Taila+Dashamula Churna</i> 2. <b>Pariseka:</b> <i>Dashamula Kwath, Punarnava Churna Kwath,</i> 3. <b>Vata Anuloman:</b> <i>Eranda Taila, Haritaki Churna</i> 4. <b>Niruha Basti/ Ksheera Basti:</b> <i>Punarnavadi Niruha Basti, Mustadi Yapan Basti, Punarnava Ksheera Basti</i>
3.	<i>Saman Karma</i>	1. <b>Agni Deepan:</b> <i>Pippali Churna, Sunthi Churna</i> 2. <b>Mutrakaran/mutral:</b> <i>Punarnava, Gokshura, Trina Panchamula,</i> 3. <b>Raktaprasadak/ shonita sthapaniya:</b> <i>Loha preparations like Varunadya Loha, Dhatri Loha</i> 4. <b>Rasayana, srotasodhak :</b> <i>Chandraprabha Vati, Shilajita</i>
4.	<i>Pathya Ahar</i>	1. <i>Dhanya varga – Yava</i> (Barley), <i>Kodrava</i> (Kodo Millet), <i>Shyamaka</i> (Barnyard Millet), <i>Kangu</i> (Foxtail Millet), <i>Purana Shali</i> 2. <i>Shimbi varga – Mudga</i> (Green Gram), <i>Kulattha</i> (Horse Gram), 3. <i>Shaka varga – Katillaka</i> (Bitter gourd), <i>Shigru patra</i> (Drumstick), <i>Dronapushpi patra</i>

(Spider wort), *Guduchi patra* (Heart-leaved moonseed), *Kakamachi Patra* (Common nightshade)

## CONCLUSION

As the population suffering from diabetes mellitus and kidney disease is increasing, this review clearly focusses on the management protocol of *Madhumehajanya Vrikka Roga* or Diabetic nephropathy based on the *Upashaya Chikitsa*. This may help in stopping the progression of the disease and rejuvenating the viable nephrons and the *Oja*.

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**Source of Support: Nil**

**Conflict of Interest: None Declared**

How to cite this URL: Priyanka Chakraborty: Upashay Chikitsa of Madhumeha Janya Vrikka Roga W.S.R To Diabetic Nephropathy- A Brief Conceptual Study. International Ayurvedic Medical Journal {online} 2023 {cited April 2023} Available from: [http://www.iamj.in/posts/images/upload/951\\_955.pdf](http://www.iamj.in/posts/images/upload/951_955.pdf)