



# LITRARY REVIEW OF ETIOPATHOGENESIS OF DIABETIC NEPHROPATHY IN AYURVEDIC ASPECTS.

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## ABSTRACT

Diabetes as diabetes mellitus is one of health problem which is the biggest challenge now a day. According to Ayurved, symptomatology of Madhumeha is equivalent to the features of Diabetes mellitus. In diabetes, high levels of blood glucose can damage the kidneys' filters. This leaves people with type II diabetes at risk of developing renal impairment. When the kidneys are damaged, the protein albumin leaks out of the kidneys into the urine. This is one of the first signs of early stage renal disease Diabetic nephropathy, a complication of diabetes, is a chronic and progressive disease of the kidneys which occurs in about one third of all people with diabetes. This can be expressed as one of the Prameha Upadrava in ayurvedic etiology. Getting to treatment of Prameha it is known to be yasya chikitsa but to know the exact cause of nephropathy as Upadrava we must know the samanya and vishesh hetu and samprapti as etiopathology of the disease.

## KEY WORDS:

Prameha, Diabetes, Diabetic Nephropathy, Prameha Upadrava

## INTRODUCTION:

Ayurved is the art and science of life, it is one of our richest heritage gifted to us by ancestors. Through countless transmission from generation to generation it may have lost some of its original luster, but it is not a dead end. It is still playing a key role for better human health in many incurable, chronic and degenerative diseases by its effectiveness.

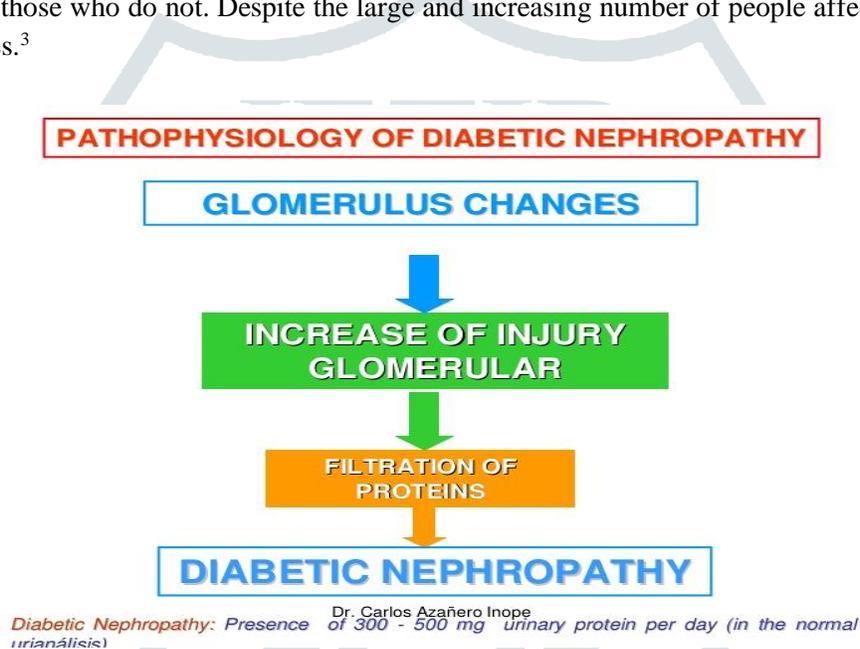
Changing life style, lack of exercise, fast foods, improper unbalanced diet, and sedentary life style are showing upward trend in India. This has lead to the emergence of Diabetes Mellitus in the world. Holistic approach of Ayurved in regard to preventive, promotive and purificative measures. Due to consideration of appropriate Diet management proved to be fruitful to provide better health to diabetics. In the present study a protocol was made to manage complication of the Diabetes Mellitus patient by a rule out of the etiology of the diabetic complication.

Diabetes mellitus, the commonest endocrine disorder afflicts entire biological system. It is similar to Madhumeha, one of the type of Prameha described by Charaka, Sushruta, Vagabhatta and Madhava. Madhumeha can be compared with diabetes mellitus. Diabetes mellitus is a giant disease considered as one of the arch enemy of the mankind. Diabetes and its complications pose a major threat to future public health resources throughout the world.

Diabetic nephropathy one of the major complications is serious complication type 2 diabetes. It's also called diabetic kidney disease. Diabetic nephropathy affects the kidneys' ability to do their usual work of removing waste products and extra fluid from your body. Over many years, the condition slowly damages your kidneys' delicate filtering system. Early treatment may prevent or slow the disease's progress and reduce the chance of complications. Kidney disease may progress to kidney failure, also called end-stage kidney disease. Kidney failure is a life-threatening condition. At this stage, treatment options are dialysis or a kidney transplant.

### DIABETIC NEPHROPATHY:

Diabetic nephropathy (DN) is a clinical syndrome characterized by persistent albuminuria and a progressive decline in renal function, and the term infers the presence of a typical pattern of glomerular disease.<sup>1</sup> DN is reported to occur in 20% to 50% of those living with diabetes and is the single commonest cause of end-stage kidney disease (ESKD) in many populations, accounting for 28% of those commencing renal replacement therapy (RRT) in the Asia, with corresponding figures of 44% in India.<sup>2</sup> DN is typically associated with arterial hypertension and increased cardiovascular morbidity and mortality; outcomes for people with type 1 (T1DM) or type 2 (T2DM) diabetes who develop DN are significantly worse than those who do not. Despite the large and increasing number of people affected by these sometimes devastating consequences.<sup>3</sup>



### PRAMEHA UPADRAVA:

अविपाको अरुचि चर्दिर्निद्र कासः सपिनासः ।

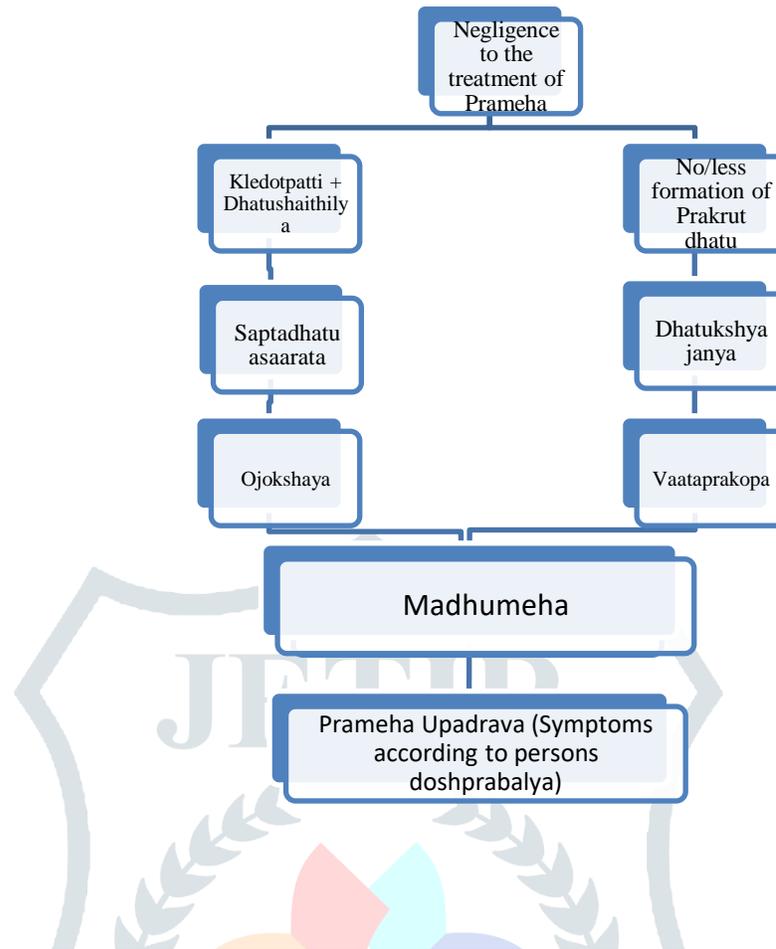
उपद्रवा प्रजायन्ते मेहानां कफजन्मनाम् ॥

बस्तिमेहनयोस्तोदो मुष्कवदरणं ज्वरः ।

दाहस्तृष्णा अम्लिका मूर्छा वेद्रेद पित्तजन्मनां ॥

वात्जानामुदावर्ता कम्पहुद्द्रहालोलतः ।

शूलमुन्निद्रता शोषः कासः श्वाशच्य जायते ॥<sup>4</sup>



Upadrava is one which occurs in the course of some other disease, although it may result from the main disease. The morbid process occurring during a disease may be a minor or major ailment<sup>5</sup>. Upadrava means which manifest after the genesis of the main disease. This episode has been superimposed, altering symptoms and modifying its course as a result disease may become difficult for management.<sup>5</sup> Chakrapani said that the signs and symptoms of a disease which appear at different stages, especially at the later stage of the disease should be considered as the signs and symptoms of the original disease and not as the complications Different stages of a disease are invariably manifested during the process of pathogenesis and

all these stages constitute a disease, but Upadravas may or may not be manifested which represent a distinct stage of development in a disease.<sup>6</sup> But if a disease manifest by powerful Doshas, Dushyas etc then it is possible that the ailments which constitute upadrava may also get manifested right from the inception of the disease. Sushruta mentions word Aupasargika as a synonym to Upadrava. It also means that Upadrava manifests upon another disease and also due to same factors which are responsible for the manifestation of the main disease<sup>7</sup>.

Prameha upadrava described in Madhav Nidan pramehadhyay tends to be a complications occurred in diabetes or prameha. We can relate DN with those upadravas. Nephropathy can be truly relatable with strotovaha dushti specifically said to be in mutrava and medovah srotas.<sup>8</sup>

## ETIOLOGY

Diabetic nephropathy being a complication of diabetes or prameha may have same etiology as like its primary disease. It's a fact that these complication only occur if diabetic etiological factors or Hetu sevan keeps on increasing even if the person having Diabetes at its pick.

आस्यसुखं स्वप्नसुखं दधिनि ग्राम्यवदकानुपरसाः पयान्ति ।  
नवान्नपान गुदवैकृत च प्रमेह हेतु कफ़कृच्च सर्वम्॥<sup>9</sup>

According to Charak Acharya, Enjoying sedentary habits and the pleasure of sleep excessively, too much use of yoghurt and its preparation, meat juice of domestic, aquatic and swampy animals, milk and its preparation, newly harvested cereals, new/ fresh wines, preparations of jaggery (cane sugar preparations) and all other Kapha-aggravating factors are the causes of the diabetes. Also when the conditions of hetu sevana go further it may convert into prameha upadrava.

### **PATHOGENESIS: (AYURVEDIC PERSPECTIVE)**

Diabetes patients who are over indulged in Guru, Snigdha, Madhura, Lavana and Picchila, etc. diet are prone to Agnimandya since they are Prithvi-Apya Guna Bhuyishtha. Hence they will cause Agnidushti. This Agnidushti will be the cause for Ama formation. Ama is nothing but undigested food due to Jatharagnimandya and it can be understood as the toxic metabolites which are not needed for the body.<sup>10</sup> Due to Jatharagnimandya, Dhathwagnimandya occurs and by this, proper nutrients are not formed for Dhathus. This Ama and Mandagni vitiate the Pachaka Pitta which has the function of digestion and Annavivechana and also vitiate the Samana Vayu situated at Antaragni Sameepasthana which has the function of promotion of Pachakagni.<sup>11</sup> The Ama and Agni Dushti also vitiate Avalambaka and Kledaka Kapha. This will cause the increased production of Dravamsha in Kapha (which will translate into excess formation of Bahudrava Kapha in the condition of Prameha. This Bahudrava Kapha, Ama, Pitta, etc will cause the over production of Kleda in the body. These Kleda and Dushita Doshas produce further Shithilata and Dushti of Meda, Mamsa, Rasa, Raktadi Dhathus.<sup>12</sup> The Kapha and Kaphabhava Dushyas especially Meda causes the Avarana of Vata. The Gati Nirodha of Vata at Vrikka by Meda and Kapha can happen by means of three interlinked phenomena:

1. Vatakara Nidana directly causing Vata Prakopa.
2. The Gatinirodha by excess Meda and other Dushyas.
3. Kapha causing Dhamani Praticaya<sup>13</sup>

I.e. Dhamani Upalepa which represents glomerular atherosclerosis and reduced oxygenation and degenerative changes. The already existing ROS in DM further damages the functioning of kidneys. Here the renal damage is minimal but the Prakupita Vata does displacement (Ashayapakarsha) of essential factors and excretes it along with metabolic waste. The Prakupita Vata manifests its signs earliest at its abode i.e. Pakwashaya. Since it is the Moola of Mootravaha Srotas,<sup>14</sup> the Srotas is also dragged into the Samprapti. Samana Vayu and Pachaka Pitta by their proper functioning separate Mala Bhavas from Saramsha. Mootra is the Dravarupa Mala formed in the Mootradharakala situated in Vrikka. Sthanasamsraya, Kleda, Bahudrava Kapha, Samana Vayu, Pachaka Pitta, and the other Dhatus derangements cause Ayanadourbalya of Mootradharakala due to the Shithila and Dushita Dushyas.<sup>15</sup>

This Ayanadourbalya contributes to the excessive loss of Dhathu Saramsha along with Kleda Bhavas because of the loss of ability to hold them together before separating from Mala Bhavas. This also causes Atipravritti of Srotas.<sup>16</sup> Atipravritti of Srotas cause Vata Prakopa and structural damage of the organs. Some of Meda and Kledamsha gradually get accumulated within the Ayanamukhas leading to their occlusion. This is the underlying pathology in glomerular basement thickening and mesangial expansion in microalbuminuria.

Albuminuria is nothing but the excess loss of Dhathu Saramsha due to Ayanadourbalya. The progress of this structural damage gradually leads to a condition in which function of the Srotas is totally impaired (Sanga).<sup>17</sup> This is actually happening in glomerulosclerotic stage of diabetic nephropathy. As function of Mootradharakala becomes fully impaired, there is failure in the removal of Kledamsa and Udaka Bhavas, which leads to their accumulation in the body.<sup>18</sup> These Malas may take Sthanasamsraya thereby producing different symptoms like Shopha, uraemia etc. This is what is happening in end stage nephropathy and the disease becomes Asadhya.

### **CONCLUSION:**

The term Prameha refers to Prabhoota and samala mootrata in which diabetes and renal complications are one of the presentations. Kaphaja, Pittaja and Vataja prameha lakshanas are related to different clinical stages and complications of DM. Most of the mootra gata lakshanas of vimshati Pramehas are also observed in Diabetes related renal complications which can be related to diabetic nephropathy in modern science. It is not upto the dosh dushti but also presented with the strotodushti. It may help to look the etiological factor told by our acharyas to diagnose the level of complication and treat the disease accordingly.

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