

## Case Report

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# Ayurvedic management for hypertension with microalbuminuria: a case report

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## ABSTRACT

Hypertension is a non-communicable disease in which the pressure of blood pushing against the arterial walls becomes high. In chronic stage it leads to severe systemic diseases, which affects heart, kidney, lung etc. The main causative factors are unhealthy food and lifestyle, stress, smoking, Alcohol, obesity and hereditary. Microalbuminuria in Hypertension is an early sign of kidney damage and is considered as a predictor for the end stage of renal disease and cardiovascular disease. So, it is of great importance to manage microalbuminuria or high urine albumin creatinine ratio and progression of kidney disease in hypertensive patient. In Ayurveda references no proper description of hypertension is available. By viewing the pathogenesis and physiology, it is formed by the involvement of Tridoshas, Srotorodha, and Dhatudushti. The present case is a 60-year male patient was diagnosed uncontrolled hypertension with microalbuminuria, admitted for 1month, presented with complaints such as frothy urine, over tiredness, uncontrolled anger and increased blood pressure during evening time, not controlled by hypertensive modern medicines. His urine albumin-creatinine ratio was 106.98 mg/dl of creatinine, microalbumin in urine 138 mg/dl and uric acid was 11.5 mg/dl. He was advised the internal Ayurveda medicines, diet restriction and yogic breathing exercise. Within one month of treatment the urine albumin creatinine ratio and uric acid was reduced and became normal. His blood pressure also became controlled and recovered all symptoms. Ayurvedic treatment module appears to be safe and efficacious with early recovery and better outcomes in this case.

**Keywords:** Hypertension, Micro albuminuria, Ayurveda

## INTRODUCTION

Hypertension is a non-communicable disease and around 63% of total deaths in India are due to non-communicable diseases, of which 27% are attributed to cardiovascular disease which affects 45% people in the 40-69 age group.<sup>1</sup> High blood pressure is one of the major risk factors for CVDs. Moreover, it becomes poorly controlled due to low awareness about risk of diseases and its complications, lack of appropriate care through primary care and poor follow up.<sup>2</sup> The main causative factors of this disease are unhealthy lifestyle, stress, smoking,

obesity, hereditary. In Majority of cases, it is not accompanied with much more symptoms but in some cases patient complaints with headache, vertigo, epistaxis, sweating, excessive palpitation, tinnitus, & altered vision or fainting.<sup>3</sup> There are various antihypertensive medicines available in contemporary sciences to control hypertension and as there by prevent the risk of occurrence of coronary heart diseases. But in its advanced stage hypertension will leads to form severe systemic illness, among this kidney damage is more important. Micro albuminuria is a condition where excess amount of albumin, a protein is excreted to urine. In hypertension it

is an early sign of kidney damage and it is considered as a predictor for the end stage of renal disease and cardiovascular disease. The main symptoms of micro albuminuria are feeling of fatigue, frothy urine and swollen ankles, hands, tummy or face etc.<sup>4</sup> For hypertension and microalbuminuria, there is no exact correlation available in Ayurveda text books. In Ayurveda Vrikka is comparable with kidney of contemporary science. The function of Vrikka to regulate the removal of wastes from the blood in the form of urine and it is the Moolasthana of MedovahaSrotas.<sup>5</sup> Vrikka roga can be formed mainly due to disequilibrium of Shonita and Meda. The common symptoms of kidney diseases can be correlated with Mutraroga described in Ayurveda. The function of mutra vaha Srotas is the production and expulsion of Mutra and thereby that helps to eliminate waste products from the body. Acharya explains 'Mutrasya KledaVahanam', that means it helps to carry kleda. Albumin is a protein and which can be considered as kaphavata dushti with kledavridhi.<sup>6</sup>

## CASE REPORT

A case of hypertension with micro albuminuria was taken from IPD of Govt. Ayurveda college hospital. Detail history of the patient was taken. Complete examination was done. Relevant investigations were advised and assessment was done before, in between and after the treatment. Both ayurvedic medicines and yoga therapy

along with conservative treatment was given to the patient.

A 60-year male patient had history of hypertension since 20years. Presented complaints such as Frothy urine, over tiredness, uncontrolled anger, knee pain and swollen ankles since 3months. He had increased blood pressure during evening time since last 3 month before admission. Three months before when he had developed these symptoms, he was taken to consult his physician who diagnosed as having hypertension with micro albuminuria, after taking detailed history, doing complete examination &investigations like blood renal function test, liver function test, urine routine and albumin creatinine ratio. His doctor started to increase the dose of Antihypertensive medicines and he had it for 3 months, but he was not getting any changes in his complaints so he came to our OPD for treatment.

On the day of admission his BP was 200/100 mmHg, Serum uric acid was 11.5 mg/dl, microalbumin in urine 138mg/dl, and urine albumin-creatinine ratio was 106.98 mg/dl of creatinine. We started Ayurveda treatment after getting his consent.

Ayurveda medicines with diet restrictions and yoga therapy were given along with his conservative treatment. In family history both of his parents were hypertensive and diabetic.

**Table 1: Interventions.**

Medicines	Dose	Duration	Diet	Yoga therapy
<b>Vrikshadanyadi kashayam</b>	Panakam	1 month		
<b>Trina panchamooladi kashayam</b>	90 ml bd	1 month	Suggested to take more vegetables and fruits.	Loosening exercise, Kapalabhati,
<b>Tab. chandraprabha</b>	2-0-2	1 month	Suggested to avoid high protein rich food	Nadeesudhipranayama, Shayanapranayama
<b>Cap. sudhashilajit</b>	2-0-2	1 month		
<b>Brihatyadi milk decoction</b>	11 am	Last 2 weeks		

**Table 2: Observations and results.**

Parameters	Before treatment 0th day	7th day of treatment	After 30 days
<b>Serum uric acid</b>	11.5 mg/dl	8.9 mg/dl	6.5 mg/dl
<b>Microalbumin in urine</b>	138 mg/dl	42 mg/dl	Within normal
<b>Albumin creatinine ratio</b>	106.98	54 mg/dl	Within normal
<b>Blood pressure</b>	Varying (200/100-160/100)	140/90-130/80	130/80

## DISCUSSION

Micro albuminuria is the first stage of nephropathy and it will progress with uncontrolled diabetes and hypertension. Micro albuminuria can be considered as kapha vata dushti with Kledavridhi in Mutravaha Srotas. Kledaharana and Shodhana (Mutravirechana) is the line of treatment.<sup>5</sup> Trina panchamulas are kusa, kasa, sara, darbha and ikshu and is indicated in Basti vishodhana, mutra krichrahara.<sup>6,7</sup> Trina panchmooladi kashayam is described in sahasrayoga with ingredients such as kusa, kasa, sara, darbha, ikshu, bhadra and salaparni and is act as mutra atisara nasana. The drugs included in this yoga

having kledahara property.<sup>8</sup> Vrikshadanyadi kashaya is mutra virechaneeyaa gana explained in ashtangasamgraha shodanadi gana adhyaya and it contains vrikshadani, gokshura, darbha, ikkada, kusa, kasa, vasuka, vaseera and gundra.<sup>9</sup> Brihatyadi ksheera kashayam is indicated in sarvamootra vikaarajit, vasthyasritha rogaajit and the ingredients are brihathi, kandakari, prisniparni, salaparni, gokshura.<sup>10</sup> These drugs are vata samana dravyas. Chandraprabha gulika is vata pitta kapha samana, Mutrajanana, Dipana, Pachana, Kledahara, Rasayana and Vrishi.<sup>11</sup> Shilajit is rasayana drug, commonly used in kaphamedoja vikaras.<sup>12</sup> Yoga breathing techniques helps to improve physical as well as mental health of the

patient. Kapalabhati is one of the shadkriyas which is practiced to clear air passages before doing pranayama. Nadeesudhipranayama helps to stimulate both of sympathetic and parasympathetic system and thereby improve the mental strength of the patient.<sup>13</sup> Both nadeesudhi and Sayanapranayama helps to improve breathing capacity of patient. By the practice of these breathing techniques the concentration power of patient is increased and thereby he got relief from anger.

## CONCLUSION

Micro albuminuria is a condition where kleda get accumulated excessively along with kaphavata dushti. Above said yogas having qualities like kaphasamana, kledahara, mutra virechaneeyaa and vata anulomana property, so these are effective in the management of micro albuminuria. In addition, chandraprabha gulika and sudha shilajit are having tissue regeneration property and that helps to rejuvenate all organs in our body. As thereby controlling the micro albuminuria, hypertension became normal and thus the overall condition of the patient got improved.

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