JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

ROLE OF PUNARNAVADI KSHIRA BASTI AND SHAMAN CHIKITSHA IN DIABETIC KIDNEY DISEASE (MADHUMEHA JANYA VRIKKAJA UPADRAVA)- A CASE REPORT

***Dr. Jupitora Dutta** ****Dr. O.P.Gupta** *****Dr. Shyamanta Kalita**

*PG Scholar, Dept. of Kayachikitsa, Govt. Ayurvedic College, Guwahati-14
**Professor, Dept. of Kayachikitsa, Govt. Ayurvedic College, Guwahati-14
***Assistant Professor, Dept. of Kayachikitsa, Govt. Ayurvedic College, Guwahati-14

Abstract

Aim and Background: Nephropathy is leading complication of Diabetes (DM) that affects about 40% of diabetics. It needs intense management, such as dialysis and may lead to renal transplant and badly affects quality of life. With limited options available in modern medicine, following ayurvedic principles of diagnosis and treatment can be useful. **Case Description**: A 65 year old male patient Diabetic since 10 years, Hypertensive since 5 years, presented with complain of bilateral pedal oedema, deranged Glycemic control and Renal Profile since 6 months. He complained of anorexia, habitual constipation, nausea with calf muscle cramps on and off since 1 year. Patient was taking oral hypoglycemic agent and insulin. He was case of diabetic nephropathy. According to principles of ayurveda he was diagnosed as case of '*Prameha Updrava Janya Kapha pitta Pradhan Vrukka Roga'*. He was treated with *Sarvatobhadra Vati, Varunadi Kwath, Gokshuradi Guggulu, Chandraprabha vati, Trinapanchamoola kwath, Punarnava mandoor, Triphala Churna* along with *Punarnavadi* Kshira Basti for 8 days. **Outcome**: After three months of treatment patient showed significant relief in symptoms. Significant drop down was seen in renal profile and diabetes and relief of all other symptoms. **Conclusion**: Significant relief can be achieved in patients of nephropathy by applying principles of diagnosis and treatment of *prameha* and *vrukkaroga*. It's single case study and can lay down road ahead for further research.
Keywords: Diabetic Kidney Diseases, *Vrukka Roga*, Serum Creatinine.

INTRODUCTION:

Diabetic nephropathy is a global threat to health in general and for developing countries in particular because therapy is expensive and lifelong. DKD is highly prevalent across the globe. The odds of developing CKD in patients with diabetes was reported around 1.75. In India, 90%patients cannot afford the cost. Diabetic nephropathy refers to an irreversible deterioration in renal function which classically over period of years. Initially, it is manifested only as a biochemical abnormality.

Eventually, loss of excretory, metabolic and endocrine function of the kidney leads to the development of the clinical symptoms and signs of renal failure, which are referred to as uremia. When death is likely without renal replacement therapy (RRT), it is called end stage renal failure (ESRF)[1] it would be interesting to know that the incidence of chronic kidney disease in India, which densely populated country with low income, different food, cultural tradition and lifestyle habits, is 7.85 million of its 1 billion population and the prevalence rate is 0.78%[2] Over 1 million people worldwide are alive on dialysis or with a functioning graft.[3]

Diabetic nephropathy is typically defined by microalbuminuria that is urinary albumin excretion of more than 300 mg in a 24-hour collection or microalbuminuria and abnormal renal function as represented by an abnormality in serum creatinine, calculated creatinine clearance or glomerular filtration rate (GFR). Clinically, diabetic nephropathy is characterized by progressive increase in proteinuria and decline in GFR, hypertension and a high risk of cardiovascular morbidity and mortality.

As per ayurvedic classics, *upadravas* of *prameha* are nausea, vomiting, edema, indigestion, hiccups. These symptoms are seen *as upadrava* due to *kapha* and pitta. Though complications of *prameha* are well written in all classical treatises there is no clear mention of pathology that can clarify *dosha-dushya sammurchchhana* involved in them. Considering nephropathy, *Vrukka Rog*a mentioned in '*Bhaishajyaratnavali*'[7] matches very well with sign and symptoms of diabetic nephropathy.

This patient reported to the Department of *Kayachikitsa* OPD, Government Ayurvedic College and Hospital, Jalukbari, Assam as a diagnosed case of Diabetic Kidney Disease with Hypertension, Type 2 DM. He seems to be not satisfied with his Allopathic Treatment and feared Haemodialysis in near future so he approached for Ayurveda.

Along with the above mentioned treatment protocol specific diet with protein and fluid restriction was advised. The total protein intake was restricted to 34g/day and 1ltr of water/day. The studies suggest that high protein diet increases the intraglomerular pressure and in turn affects the GFR. The recommended protein intake in a case of CKD is 0.6-0.8g/kg/day.

CASE REPORT:

A 65 year old male patient Diabetic since 10 years , Hypertensive since 5 years ,presented with complain of bilateral pedal oedema, deranged Glycemic control and Renal Profile since 6 months. He complained of anorexia, habitual constipation, nausea with calf muscle cramps on and off since 1 year. The patient was on following medications at the time of initial visit to our OPD. (1) Tab Vidagliptin 50 milligram (mg), (2) Tab Dopaglyn 10 twice daily, (3) Injection Huminsuline 30/ 70 in the dose of 35 units before lunch, and 30 units before dinner subcutaneously, (4) Tab Cilacar 20mg 1 tab twice daily, (5) Tab Telsig 40mg 1 tab once daily at 10am, (6) Tab Dytor 20mg 1 tab daily, (7) Cremaffine plus Sugar Free Syrup 2 tsf twice daily, (8) Tab Renosave 1 tab twice daily after meal, (9) Tab Ferisome 1 tab daily after meal. His FBS was 211mg /dl, Uric Acid 7.4mg /dl, Sr Creatinine 3.97 mg /dl as on 10/5/23 when she presented to KC OPD GACH, Ghy 14.

DEMOGRAPHIC DATA :

- Age : 65 years
- Sex: Male
- Socio economic status : Upper Middle
- Marital status : Married
- Occupation: Retired Defense personel

ASHTAVIDHA PARIKSHA

- *Nadi –Vatakaphaja*
- *Mala-Grathit*, (Hard & unsatisfactory)
- *Mootra – Shania shnanei, Sadaha* (Frequent burning micturition with & unsatisfactory feeling of complete evacuation of bladder)
- *Jivha –Alpasaama*
- *Druk-Spashta*
- *Shabda-Karkash*
- *Akruti-Sthoola*
-

GENERAL EXAMINATIONS

- Pulse:-84/min
- Weight -70 kg (at the time of primary assessment)
- B.P.-160/100 mm/Hg (in supine position at the time of primary assessment)
- RS –Clear
- CVS-S1S2 Normal

PRESENTING COMPLAINTS WITH DURATION (BASELINE)

1. Generalised weakness with tingling of extremities since 14 months
2. Anorexia with Habitual Constipation since 1 year
3. Nausea with Calf muscles pain since 6 months
4. Swelling of both the feets with heaviness since 8 days

DIAGNOSIS

In view of modern sciences, it was clearly a case of Diabetic Nephropathy. According to Ayurveda the patient clearly showed symptoms of *Prameha Upadrava* such as vomiting (chhardi), nausea (hrillas), weakness (daurbalya).[4] But precise diagnosis established was *Prameha Upadrava Kapha* Pitta Pradhan *Vrukka Roga*.

TREATMENT GIVEN : SAMSAMANAUSHADHI

Day 1-15 days

Drug	**Dose**	**Duration**
Sarvatobhadra Vati	1 tab twice daily after food	30 days
Varunadi Kwath	20 ml twice daily	30 days
Gokshuradi Guggulu	1 tab thrice daily	30 days
Chandraprabhavati	2 tab twice daily	30 days
Punarnava mandoor	1 tab twice daily	30 days
Trinapanchamoola Kwath	20 ml twice daily	30 days
Triphala Churna	2tsf at bed time with lukewarm water	30 days

Purvakarma: for 3 days (Day 15-17)

1. *Snehan* with *Bala taila*
2. Sweden with *Dasamoola kwath*

Pradhankarma : (Day 18 -25)

Punarnavadi Kshira Basti

SCHEDULE FOR *YAPANA BASTI*

Ingredients		**Time of administration**	**Retention time**
Makshika- 1 Prasrita	Day 1	9 am	7 mins
Lavana - 1 tola	Day 2	9.10 am	10 mins
Tila taila - 1 Prasrita	Day 3	8.45 am	8 mins
Ghrita - 1 Prasrita	Day 4	8.00 am	3 mins
Satahva - 1Prasrita	Day 5	8.15 am	4 mins
Punarnva, Gokshur kwath - 1 Prasrita each	Day 6	8.45 am	4 mins
Ksheeravashesha	Day 7	8.10 am	5 mins
	Day 8	8.30 am	6 mins

PROGRESS OF TREATMENT

Sl. No.		**Day**	**15 days**	**30 days**	**60 days**	**90 days**
1	Sr. Creatinine (mg/dl)	3.97 mg/dl	3.5mg/dl	3.4 mg/dl	2.9 mg/dl	1.8 mg/dl
2	FBS (mg/dl)	211 mg/dl	202 mg/dl	140 mg/dl	198 mg/dl	86 mg/dl
3	PBBS (mg/dl)	140 mg/dl	136 mg/dl	196 mg/dl	160 mg/dl	128 mg/dl
4	MICRAL (mg/dl)	3346	2320	2116	1486	836
5	Na^+ (mEq/L)	142.9	140.2	137	138	142
6	K^+ (mEq/L)	4.77	4.5	4.27	3.8	4.8
7	Hb% (gm%)	9.5 gm%	8.3 gm%	8.6 gm%	9.2 gm%	10 gm%
8	ESR (mmAEFH)	102 mm	86 mm	98 mm	92 mm	50 mm
9	Blood Urea mg/dl	40.9	40.8	30.2	25	21

10	BP (mmHg)	160/80	120/80	140/80	150/72	120/90
11	Oedema	+++	++	++	+	-
12	Nausea	+++	+	+	+	-

PATHYA ADVISED :

Day 0-3 Lajja Siddha Jala
Day 4-10 Millet Dahlia for breakfast
Yava Chapatti 2 no with Boiled Veggies for lunch
Oats Chilla 1 no for dinner

TREATMENT OUTCOME

After 15 days of treatment, bilateral pitting pedal edema, nausea and vomiting were reduced. After one month of treatment marked reduction in serum creatinine levels was seen (3.4 mg/dl) and significant relief was seen in *Chardi* (Vomiting), *hrullas* (Nausea), *Daurbalya* (General weakness). After three months, serum creatinine levels were almost within normal limits (1.8mg /dl) and patient did not show any symptoms. Blood sugar fasting was 86 mg/dl and post prandial 128 mg/dl which showing good glycemic control.And in urine routine microscopic decrease in proteinuria is there from 3346 mg/dl to 836mg/dl as detected in MICRAL Quantitative test over a period of 3 months. Hb% improved from 9.5 gm% to 10gm%. His Erythrocyte Sedimentation Rate decreased from 102 mm to 50 mm in 90 days. Blood urea improved from 40.9mg/dl to 21 mg/dl. His constipation cleared of gradually with significant relieve of heaviness of his legs. Patient was feeling light due to reduction of pedal oedema and felt good to consume food with decrease in food aversion. There's no sign of muscle cramps and general weakness in his latest follow up.

DISCUSSION:

Diabetic Nephropathy is characterized by excessive urinary albumin excretion followed by loss of kidney function. It is a result of reduced glomerular filtration rate (GFR). It has been classified in five stages. Protinuria is hallmark of Diabetic Nephropathy. It begins as transient microalbuminurea with preserved GFR in early stage I. As GFR reduces to 50%, there is persistent proteinurea, raised serum creatinine, hypertension and edema (stage IV), which reaches to end stage renal disease (stage V) as GFR reduces. In view of this classification, the current patient was in late stage IV of diabetic nephropathy. Patient in this stage need meticulous treatment for preservation of renal tissue.[5] As per ayurvedic classics, *upadravas* of *prameha* nausea, vomiting, edema, indigestion, hiccups these symptoms are seen as *upadrava* due to *kapha* and pitta. Though complications of *prameha* are well written in all classical treatises there is no clear mention of pathology that can clarify dosha *dushya sammurchchhana* involved in them. Considering nephropathy, *Vrukka Roga* mentioned in '*Bhaishajyaratnavali'* matches very well with sign and symptoms of diabetic nephropathy. So, pathology of Diabetic nephropathy from Ayurveda's point of view can be considered according to *Vrukka Roga* mentioned in *Bhaishajyaratnavali*.[6]

If symptoms of *upadrava* of *prameha* and *vrukka roga* are considered the patient can be diagnosed as case of'*prameha upadravajanya kapha* pitta *pradhan vrukkaroga'*. Acharyas have advised to use combination of herbal medicines which have functions such as mutral, deepen, *pachan, raktaprasadak, virechak* and *rasayana*.[7

] Patient received *chandraprabha vati* which reduces *kapha, pitta, dhatushaithilya* (laxity), *kleda*, well known for its action on *mutrendriya* (*basti*)[8]

Sarvatobhadra Vati is explained in *Bhashjya Ratnawali* in *Vrukka roga*. The main ingredients are *Swarna bhasma, Rajat bhasma, Abhraka bhasma, Loha bhasma, Shilajit* (Asphaltum), Purified *Gandhaka, Mashika bhasma*, and *Varuna* (Crataeva nurvala) is used as decoction. [9] It possesses antioxidant and anti-inflammatory properties and helps to protect against the damage caused by free radicals.

Punarnava (*Boerhavia diffusa*) is an excellent medicine in this condition due to its *tridoshar, kaphapittashamak, shothhar, mutrajanan* properties.[10] *Varun (Crataeva nurvala*) also pacifies *kapha* and *vata* and especially reduces pain in *basti*. It is well known as *mutramargsankramana*.[11]

Goksuradi guggulu (combined Ayurvedic preparation) is *Rasayana* for *Mutravaha Srotas* and possesses *Lekhana* (scraping) effect because of both *Guggulu* (*Commiphora mukul*) and *Gokshur*. *Lekhana* action opens the blocked channels. Diuretic property helps in sodium excretion.[12]

Triphala churna significantly improved urine parameters. *Triphala churna* treatment also improved plasma proteins, albumin, creatinine, and BUN levels. The oxidative stress was reduced in the kidney with the treatment of *Triphala churna*. Histopathological studies revealed that *Triphala churna* reduced kidney damage. Immunohistochemistry, ELISA, and western blotting study revealed that treatment with Triphala decreased the expression of TGF-β in kidney tissues.[13]

Trunpanchmul is combination of *kush (Desmostachya bipinnata), kash (Saccharums pontaneum), shara* (*Saccharum munja), ikshu (Sacharum officinorum), kandeshu*. The combination is well known for its effect on urinary system. It is *tridoshghna, mutral* and works on *vrukkaroga*.[14] Hence the combination of medicines along with decoction of *trunapanchamula* could have shown good effect in improving renal function.

The formation of Mutra takes place in pakwashaya and gets stored in mutrashaya, as Pakwashaya is the seat of Vata Dosha and Basti treatment mainly act on Pakwashaya so use of Punarnavadi Ksheera basti help in chronic renal failure . It revives the renal parenchymal tissue , saves the dying cell and ultimately meticulously save the organ from damage. [15]
Sushruta has scientifically described the mode of action of basti where main importance has been given to “Virya” (active principles) of the drugs administered in the form of Basti[16] The Virya of Basti from Pakwashaya spreads all over in the body in the same manner as the water poured at roots of tree reaches up to the leaves. The Virya of such basti which comes out earlier as in the case of niruha with or without accompanying feces also gets absorbed due to the rapid action of vata particularly of Apana vata. At the same time virya also draws the morbid dosha to the Pakwashaya wherever they are situated in the body, from head to feet.[17]

It is obvious from the foregoing that basti has two main actions. First Virya of the basti drugs gets absorbed, which will act according to its properties and nature visa drug or nutrient. Its second major action is related with the facilitation of excretion of morbid substances responsible for the disease process into the Pakwashaya. In this way it has two edged function i.e. facilitation of the absorption of the content of basti into general circulation and facilitation of the excretion of the morbid matter into the colon.

In Charak Samhita Siddhisthana Punarnavadi Kshira Basti is mentioned for Sarvadoshasamana[18]. It is established Punarnava has the fibrinolytic activity. Inhibition of lipid peroxidation, anti oxidant property, it has hepatoprotevtive activity. Smooth muscles relaxation[19]. It also improves the filtration rate also it removes the waste out of body which damage the kidney.[20]

CONCLUSION

This case of diabetic kidney disease, based on its presentation and dosha involvement was diagnosed as Prameha janya vrikkaja upadrava and it was treated according to the *chikitsa sutra* of mutrakriccha , prameha , sotha. *Mutrala* and *tridosha shamaka* mainly *kapha* and *vata shamaka dravyas* were used in the management of the disease. With the use Punarnavadi Kshira basti and Ayurveda medicines this condition was well managed and significant improvement was observed in this case, but such cases require frequent follow ups and regular medication until the serum creatinine levels comes under normal range.

REFERENCES

1. Walker BR, Colledge NR, Ralston SH, Penman ID. Chronic Kidney Disease In: Davidsons principles and practice of medicine. 20thed. Philadelphia: Churchil Livingstone Elsevier Publication: 2006, p.485.
2. Agrwal SK, Dash SC, Irshad M. Prevalence of Chronic Renal Failure In Adults In Delhi, India. Nephrol Dial Transplant, 2005; 20: 1638-1642.
3. Lysaght MJ. Maintenance dynamics dialysis population: current trends and long term implications. J Am socnephrol, 2002; 13: s 37-40.
4. Shukla V, Tripathi R (editors). Charak samitha of Agnivesha, Nidana sthana, Chapter 4, Verse 47. Chaukhamba Sanskrit Pratishthan Delhi, Reprint 2006.
5. Green JB, Bethel AN, Armstrong PW, Duse JB, Engel SS, Garg J, et al. Effect of Sitagliptin on cardiovascular outcomes in type II Diabetes. New England Journal of Medicine, 2015; 373: 232 -242.
6. Shastri AD, Shastri R, (editors). Bhaisjyaratnavali. Chapter 93. Chaukhmba Prakashan, Varanasi; reprinted 2015: 1193.
7. Shastri AD, Shastri R, (editors). Bhaisjyaratnavali. Chapter 93. Chaukhmba Prakashan, Varanasi; reprinted 2015: 1194.
8. Trivedi RP. Siddha Yoga Sangraha Ashmari Mutrakrichra Rogadhikara. Vol- 2. Varanasi: Chaukhmba Sanskrit Series. 1981; 4.
9. Kaviraj Govind Das Sen, Bhaishajya Ratnavali, Siddhiprada Hindhi commentary by Prof. Siddhi Nandan Mishra, Chaukhambha Surbharati Prakashan Varanasi-2011, Pp - 1196, Pg - 976.
10. Vaidya BG, Nighantu Adarsa (Vol. II) Chaukhmba Bharti Academy. Reprinted 2005; 91.
11. Vaidya BG, Nighantu Adarsa (Vol. II) Chaukhmba Bharti Academy. Reprinted, 2005; 739.
12. Dvivedi Vishvanath., editor. Bhavamishra, Bhavaprakash Nighantu, Karpuradi Varga, 38 – 40. 9th ed. Varanasi: Motilal Banarasidas Prakashan; 1998. p. 107. Pandit Narahari, Raj Nighantu, Candanadi Varga, 105. 1st ed. Varanasi: Krishnadas academy; 1982.
13. Vaidya BG, Nighantu Adarsa (Vol. II) Chaukhmba Bharti Academy. Reprinted, Trunadi Varga, 2005; 714, 725, 730.
    Sachin V. Suryavanshi; Mayuresh S. Garud; Kalyani Barve; Veeranjaneyulu Addepalli; Sachin V. Utpat; Yogesh A. Kulkarni.
    Triphala Ameliorates Nephropathy via Inhibition of TGF-β1 and Oxidative Stress in Diabetic Rats, *Pharmacology* (2020) 105 (11-12): 681–691. https://doi.org/10.1159/000508238.
14. Shastri AD, Shastri R, (editors). Bhaisjyaratnavali. Gulma rogadhikar. Chaukhmba Prakashan, Varanasi; reprinted, 2015; 139-143.
15. 15.(Sushruta. ‘Sushruta Samhita Chikitsasthana 35/24-26, Varanasi, India, Chaukhamba Orientalia.2002,page no)
16. Vrudha Vagbhata, Ashanga Samgraha,with English translation of Prof.K.R Srikanha murthi, published by Chaukhamba orientalia, Kalpashana, chapter 5, sloka 40,page 591
17. Vrudha Vagbhata, Ashanga Samgraha, with English translation of Prof. K. R Srikanha murthi, Chaukhamba orientalia, Kalpashana, chapter 5, sloka 43 , page 591
18. Anathram sharma.Sushrut samhita volII.Varanasi,Chaukhambha Sanskrit sansthan 2012(nidansthan-23th chapter slok no-68). P 485
19. Agnivesa’s Caraka Samhita Text with English translation & critical exposition based on Chakrapani Datta’s Ayurveda Dipika. Volume II. Published by Choukhamba Sanskrit Series Office. Varanasi.Edition -Reprint nidana Sthan.Chapter 4.Slok no 8. 2010. 56.
20. Vidhyadhar shukla. Charaksamhita Uttarsthan. Varanasi. Chaukhambha Sanskrit sansthan 2012 (sidhisthan, 3rd chapter, slok no-68). P 989