



## SUCCESSFUL AYURVEDIC MANAGEMENT OF CASE OF CKD STAGE 5 DUE TO CHRONIC PYELONEPHRITIS HAVING ADVISED NEPHRECTOMY: A CASE STUDY WITH LONG TERM FOLLOW UP

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**ABSTRACT** **Introduction:** Chronic Renal Failure is a syndrome affecting the kidneys, in which there is a gradual, progressive and irreversible decline in kidney function and urine output over a period of time. Chronic Pyelonephritis is a common cause of CKD. **Case study:** Here is a case study of 64 year old female with recurrent episodes of U.T.I., diagnosed as a case of Chr. Pyelonephritis. She was advised Nephrectomy but she was successfully managed by Ayurvedic line of treatment. She was a case of CKD stage 5 and after 6 months of Ayurvedic treatment her kidney function recovered and she landed in to CKD stage 3B. After 5 years, her CKD stage has improved to CKD stage 3A. Modern science believes that CKD stage 5 is irreversible but Ayurveda has proved that that was a myth. She need not have to go for Nephrectomy. She had a calculus in gall bladder that was also eliminated by Ayurvedic treatment. **Conclusion:** This study is testimony of strength of Ayurved in treating CKD stage 5 case for more than 5 years, leading a normal Quality of life.

**KEYWORDS :** Chronic Renal Failure, CKD stage 5, Chronic Pyelonephritis, Ayurvedic management

### INTRODUCTION

Chronic Renal Failure is a syndrome affecting the kidneys, in which there is a gradual, progressive and irreversible decline in kidney function and urine output over a period of time<sup>1</sup>. Chronic Pyelonephritis is a common cause of CKD. Chronic Pyelonephritis is commonly encountered in people with urinary obstructions which can be caused by recurrent UTIs, vesicoureteral reflux, or anatomical anomalies<sup>2</sup>. Chronic pyelonephritis is twice as common in females than males<sup>3</sup>. In severe form of Chronic Pyelonephritis like Xanthogranulomatous pyelonephritis, that leads to suppurative destruction of renal tissue, Nephrectomy is advised as a last remedy<sup>4</sup>.

**Case study:-**A 64 year old female, house-wife, resident of Pune, belonging to middle class, came to Ayurvedic OPD of Sassoon General Hospital (Teaching hospital of B. J. Medical College), Pune, with following complaints:-

C/o Burning micturition and dysuria repeated episodes- for last 8 years.

Fever with chills off & on

Strangury

Thirst

Anorexia

8 months

Weakness

Easy fatigability

Nausea and Vomiting

She was diabetic for last 10 years and on modern anti-diabetic treatment. H/o Surgery for Urethral stricture in the year 2008, 2013 and on 27.2.2014. H/o Frequent antibiotic courses of Cephalosporins, Norflox, etc.

She was a case of Chronic Renal Failure for at last 8 months undergone treatment from a famous corporate hospital in Pune and advised to start dialysis. She was also advised to remove Rt. kidney and the expenditure of the surgery was told to be Rs. 1.5-2 lacs. Further she was asked to live in an isolated room for 6 months after the surgery. She was not able to afford the cost of surgery and no arrangement of isolation was available

**Table No.1: Treatment Chart**

Type of Treatment	From	To	Details of treatment
Shaman chikitsa	12.12.2014	21.12.2014	Durva swaras (Juice of Cynadon dactylon) 2 TSF BD Nagkesar (Mesua ferrea) 500 mg OD- 5 days Sookshma triphala 2 tab BD + Gandhak rasayan 500 mg BD for 10 days. Chandansav 2 TSF BD Gokshuradi guggul 500 mg BD
	22.12.2014	11.01.2015	Maka +Punarnava +Palash quath 40 ml BD ; Chandansav 2 TSF BD for 21 days Gokshuradi guggul 500 mg BD
	12.12.2014	12.5.2015	Jeetsaya 100 gm (Spermedietyon suaveolens) +Saptarangi ( Casearia Esculenta) 100 gm Amalki (Emblica officinalis )100 gm + Haridra (Curcuma longa) 50 gm 1TSF BD for 8 days with one week gap again continued
	12.1.2015	12.5.2015	Gokshuradi guggul 500 mg BD for 10 days in every month

to her. One of her friends suggested visiting our Ayurved department, Sassoon General Hospital, Pune which was well known for treating ESRD cases and hence she reported to our Ayurved OPD.

She was admitted to Ayurved ward on 12.12.2014.

**Physical exam:-** Pulse-82/ min, B.P.-134/90 mm Hg, Resp- 22/ min Pallor ++, Dry-skin++, Oedema over feet +, Oedema on face + RS, CVS-NAD; P/A- No Ascitis; Liver, Spleen not palpable Her doshik prakruti was Kaphaj-Pittaj and her Mansik prakruti was Satva-rajass.

**Investigations:-** Hb-9.8 gm%, Blood sugar- Fasting- 87 mg%, P.P.- 190 mg %,

**Urine exam-** dated 8.12.2014: **Protein ++; Pus cells-90-100, RBCs-25-30/HPF**

**S. Creatinine-3.9 mg/dL, Blood urea- 63 mg/dL; eGFR-12.3 ml/min (MDRD) and 11.5 (EPI) ml/min. CKD stage 5, Na<sup>+</sup> 129 meq; K<sup>+</sup> 3.9 meq; S. Cholesterol- Total 174; LDL-126 PCR test for Mycobacterium Tuberculosis-Negative**

**USG abdomen** showed Rt Kidney-5.9× 2.7 cm small in size with increase in echotexture, loss of C.M.D. Lt. Kidney -10.6 ×5.1 cm normal size with altered echotexture. No calculus or hydronephrosis. Inflamed urinary bladder wall. Residual urine 60 cc.

Gall bladder showed solitary calculus of size 7.9 mm with shadowing.

**Urine culture report showed presence of E.coli.** Colony count-> 1,50,000 organisms/ml

**Hetusevan:-** She used to take Guru, Ati lavan, Laghu-ruksha, Paryushit, Snigdha, Vidahi-Abhishandhi aahar, and having habit of Diwaswap that caused her Kaphadushti. Ushapan, Nishapan-Atyambupan, Vegavrodh, stress and strain caused her Vatadushti.

Her main cause of CKD was recurrent Pyelonephritis, as she had vesico -ureteral reflux due to obstruction in urethra i.e. stricture urethra. There was infection in urinary bladder/ Cystitis. We treated this complicated case as shown in the treatment chart

<b>For Gall bladder stone</b>	16.12.2014	6.1.2015	15 ml juice of core of stem of Banana tree + 2 Cardamom seeds daily for 3 weeks.
<b>Basti chikitsa:Yog basti</b>	15.12.2014	21.12.2014	Niruh: Dashmool+ Erandmool+ Punarnava 450 ml Anuvasan; Sahachar/ Narayan tail A/D
<b>Uttar basti (In urinary bladder)</b>	22.12.2014	28.12.2014	Sahchar tail 20 ml- day 1 Maka (Eclipta prostrata)+Punarnava (Boerhavia diffusa)+Palash ( Butea monosperma) + Haridra (Curcuma longa) quath 40 ml-day 2 Sahchar tail 20 ml - day 3 Maka +Punarnava +Palash+ Haridra quath 40 ml - day 4 Sahchar tail 20 ml- day 5 Maka +Punarnava +Palash+ Haridra quath 40 ml -day 6 Sahchar tail 20 ml -day 7
<b>Uttarbasti (Second round)</b>	29.1-2015	1.2.2015	Sahchar tail 20 ml A/D Maha-Narayan tail 20 ml

### OBSERVATIONS AND DISCUSSION:

Nidanparivajan was advised in view of her Hetu-sevan. She was asked to consume Laghu, Supachya aahar. She responded to treatment very well. Her signs and symptoms were abated as shown in the table below:

**Table No. 2. Summary of signs and symptoms during treatment period**

Sign/Symptom	0day	28day	84day	140day	180day
Pallor	++	+	Nil	Nil	Nil
Burningmicturition	+++	++	Nil	Nil	Nil
Dysuria/Strangury	++	+	Nil	Nil	Nil
Oedema	+	Nil	Nil	Nil	Nil
Nausea	+	Nil	Nil	Nil	Nil
Vomiting	+	Nil	Nil	Nil	Nil
Anorexia	++	+	Nil	Nil	Nil
Weakness	+	+	Nil	Nil	Nil
Fatigue	+	Nil	Nil	Nil	Nil

She was followed up similar to the schedule mentioned for clinical trial conducted by the author i.e. on 28, 84, 140 and 180 days<sup>5</sup>. It is clear from the above table that all of her symptoms were abated by 84th day.

**Table No. 3. Urine Exam and its follow up**

	0day	28day	84day	140day	180day
Proteinuria	++	+	Trace	Nil	Nil
Puscels	90-100	25-30	Nil	Nil	Nil
RBC	25-30	Nil	Nil	Nil	Nil
Urine output	700	820	940	1020	1050

Her proteinuria was 2 plus at the time of admission, that remained as trace on 84<sup>th</sup> day and it was absent on 140<sup>th</sup> day. She was a case of recurrent U.T.I. that caused her Chr. Pyelonephritis and the main cause of that was stricture urethra, for which she was operated thrice and that was the reason for vesico-ureter reflux on Rt. side. Therefore her Nephrologist advised her for Rt. Nephrectomy. The cost of surgery was told to be Rs 1.5-2 lacs. That was beyond her financial condition. She was eager to find out an alternate treatment and she approached Ayurved Research department. We admitted her and started the treatment as mentioned in the treatment chart. She responded very well to the treatment as mentioned earlier and her kidney started functioning. Her urine output showed 50% increase. Firstly we focused to treat Cystitis and Pyelonephritis. **Durva swaras** (Juice of Cynadon dactylon) is made of Kashay, Madhur and Tikta ras, stops bleeding (She had hematuria), being of Sheet guna acts as a *Dah nashak*, *Mutral* (diuretic), *Kapha-Pitta -Rakta vikar nashak*, Anti-diabetic and *Jwar-nashak*<sup>6</sup>, used for treating the E.coli infection. It is documented that Durva exhibited special lethal effect on E.coli as she had more than 1.5 Lac colonies of E. coli/ml found on urine culture, we preferred it. Further Syahriel Abdullah et al demonstrated broad spectrum antimicrobial activity against some pathogens viz. Bacillus cereus, Bacillus subtilis, **Escherichia coli**, Klebsiella spp., Pseudomonas aeruginosa, Staphylococcus aureus, Streptococcus pyogenes, and Streptococcus pneumoniae more notable from Ethanol and Ethyl acetate extract<sup>7</sup>. Due to its wide range of anti-bacterial properties the infection was controlled. **Nagkesar** (Mesua ferrea) is having *Laghu*, *Ruksha*, *Kashay* i.e. *Aam-pachak*/Anti-toxic properties which is used to treat urinary tract disorders; recurrent fever, vomiting, nausea and excessive thirst. Sookshma triphala and Gandhak rasayan were used as a support in treating the infection. We administered Uttarbasti for treating Stricture urethra and Cystitis by combination of *Maka* (Eclipta prostrata)+*Punarnava* (Boerhavia diffusa)+ *Palash* (Butea monosperma) + *Haridra* (Curcuma longa), alternate daily

followed by Sahachar tail. *Maka* is having anti-scarring, *Mutra-janan*/diuretic, *Raktaprasadak* properties, improves function of *Amashay*, *Yakrut* and *Pakwashay*<sup>8</sup>. (In Ayurved, it is documented that *Mutranirmiti*/Urine formation takes place in Pakwashay). *Palash* is having inhibitory effect against pathogenic bacteria viz. Bacillus subtilis, Escherichia coli, Pseudomonas aeruginosa and Salmonella typhimurium. The extract was active in higher concentration against Enterobacter aerogens, Klebsiella pneumonia, Proteus vulgaris and Staphylococcus aureus. *Palash* also acts as an urinary alkalizer and relieves pain in Dysuria<sup>9</sup>. **Punarnava** acts as diuretic, anti-inflammatory, antibacterial, anti viral, cardiotoxic and hepatoprotective<sup>10</sup>, further it rejuvenates body due to its Rasayan effect. *Haridra* is Jantughna/ Antiseptic, Antidiabetic, Anti-inflammatory<sup>11</sup>, and removed *Shaitihilya* which had occurred in bladder due to Cystitis. It removed pain due to Cystitis. We treated her recurrent Stricture urethra successfully by administering Yogbasti and Uttarbasti given in 2 rounds.

Sushrutacharya mentioned the use of Basti and Uttarbasti in following shlokas<sup>12</sup>:

"Vatadusto Vrano Yastu Rukshascha Atyarthvedanah I  
Adhahkaye Visheshena Tatra Bastir Vidhiyate" II Su. Chi. 1/108  
"Mutrughate Mutradoshe Shukradoshe Ashmarivrane,  
Tathaiv Artavdoshe Cha Bastirapi Uttarhitah" II Su. Chi. 1/109

There was one gall bladder calculus of 7.9 mm size. We treated that by asking her to take 15 ml juice of core of stem of Banana tree along with 2 Cardamom seeds daily for 3 weeks. That dissolved her gall stone, confirmed by Sonography exam (USG abdomen) carried out after one month. Here it is pointed out that Modern surgery have no procedure for removing the gall stone, except Cholecystectomy. It is further observed that up to 33% patients with uncomplicated gall -stone disease notice persistent abdominal pain after Cholecystectomy<sup>13</sup>. **It is the strength of Ayurved that it can eliminate Gallstone disease without surgery** and there are no consequences like persistent pain as seen after Cholecystectomy.

**USG dated 15.1.2015:** Gall bladder is optimally distended and appears normal with normal wall thickness; no obvious mobile calculus or mass lesion seen. Rt. Kidney small in size, 5.9 x 2.99 cm in size, it shows normal shape and echo pattern with maintained CMD. No obvious renal calculus or Hydronephrosis. Lt. Kidney 10.72 x 5.1 cm normal size shape and echo pattern with well maintained Corticomedullary Differentiation. No obvious renal calculus or Hydronephrosis.

**Table No. Important notable observations**

	0day	CKD stage	28 day	CKD stage	84 day	CKD stage	140 day	CKD stage	180 day	CKD stage
Serum Creatinine	3.9	<b>5</b>	3.1	<b>4</b>	2.54	<b>4</b>	2.2	<b>4</b>	1.67	<b>3B</b>
eGFR MDRD	<b>12.3</b>		<b>16.1</b>		<b>20.2</b>		<b>23.9</b>		<b>32.8</b>	
eGFR EPI	<b>11.5</b>	<b>5</b>	<b>15.1</b>	<b>4</b>	<b>19.3</b>	<b>4</b>	<b>22.9</b>	<b>4</b>	<b>32</b>	<b>3B</b>
Blood urea	63		56		52		50		48	
Urine output	700		820		940		1020		1050	
Hb	9.8		10.5		11.1		11.5		11.9	

Her Serum Creatinine was 3.9 mg/dL on admission. It showed constant decline to 1.67 mg/dL at the end of treatment period. Her CKD stage was 5 as her eGFR was < 15 ml/min by both the methods as mentioned in the table. On completion of 6 months of Ayurvedic treatment her eGFR was 32.8 mL/min (MDRD) and 32 mL/min (EPI) as mentioned in the table and that showed that her CKD stage was improved from

stage 5 to 3B. At the end of treatment her Sonography examination revealed normal echotexture of both kidneys with C.M.D. well maintained. This is the testimony of effective Ayurvedic treatment confirmed by Sonography. **Modern science believes that CKD stage 5 is irreversible but Ayurveda has proved that that was a myth.** This case study has shown that a CKD stage 5 subject can land in to better stage and remain in Stage 3A for number of years that is unbelievable to Modern Science. **She need not have to go for Nephrectomy.** Her kidney function improved, urine output increased and proteinuria was stopped. Her gall bladder was normal and the solitary gall stone was also eliminated by Ayurvedic treatment.

**Follow up** **USG abdomen after 6 month of treatment** showed Rt Kidney-6.6× 2.9 cm, increased size as compared to earlier USG, with **normal echotexture and C.M.D. well maintained.** Lt. Kidney-10.8 ×4.7 cm normal size with CMD well maintained. U. Bladder wall-normal echotexture. Residual urine 30 cc. Gall bladder normal. **No evidence of gallstone.**

**Follow up:** She comes for follow up every 3-6 months. She is perfectly fine, having no symptoms. Her urine output is 1500-1800 mL/24 hours and her Serum Creatinine is quite stable at 1-1.2 mg/dL and Blood urea is 23-30 mg/ dL i.e. within normal limits. Her cardiac function is also normal. Her CKD stage is further improved to stage 3A as her eGFR was 58.4 mL/min (MDRD), on the boundary of CKD stage 2; and that is commensurate to her age related decline of renal function. **The kidney which was asked to be removed is still functioning with improved function.**

Today, at the age of 69, she is earning livelihood by doing tailoring work, taking care of grand children and prepares food for her family, too!

## CONCLUSION

This is the example of once a hopeless CKD-5 stage subject with Chronic Pyelonephritis, treated successfully by Ayurvedic treatment, now leading normal quality of life even after more than 5 years of the disease.

## REFERENCES

1. Karl Skorecki, Jacob Green, Barry M. Brenner: Chronic Renal Failure Chapter no.270 in Harrison's Principles of Internal Medicine, Vol-2. 15<sup>th</sup> edition. Mc Graw Hill Education (2003): 1551-1556
2. Pyelonephritis. <https://www.healthline.com/health/pyelonephritis>
3. Chronic Pyelonephritis. <https://emedicine.medscape.com/article/245464-overview#a1>
4. Kalpana Gupta, Barbara W. Trautner. Urinary Tract Infections, Pyelonephritis and Prostatitis. Chapter no. 162 in Harrison's Principles of Internal Medicine, Vol-2. 19<sup>th</sup> edition. Mc Graw Hill Education (2015): 861-868
5. Gaikwad Sarita Alias Sonale Sarita. Ayurvedic management of Chronic Renal Failure: A non randomized Ayurvedic Clinical trial. Ind J App Res. Vol. 7/ 8. Aug 2017. p 88-94
6. Editor Pt. Shri Vishwanath Dwivedi Shastri. Chapter No.3. Guduchyadi vargah: Shwet Durva in 'Bhavprakash-Nighantu'. 8<sup>th</sup> Edition. Publishers Motilal Banarasidas, Delhi-7 (1974).p 213-215.
7. Syahrieh Abdullah, Khim Phin Chong and Januarius Goblik. In Vitro Antimicrobial Activity of Cynodon dactylon (L.) Pers. (bermuda) Against Selected Pathogens. <https://www.researchgate.net/publication/259016348>
8. Late Vaidya Shankar Dattatrey Phansalkar. Chapter 6: Maka-Bhringaraj in 'Ayurvediya Rasayan Chikitsa Part-II', 1<sup>st</sup> Edition. Manakarmika Publications. (2011).p 62-64.
9. Jaysree D, Shakila R and Meeradevi Sri P: Evaluation of antibacterial activity of ethanolic extract of Butea monosperma (Lam.) Kuntz pod, Journal of Pharmaceutical, Chemical, Biological Sciences 2015, Vol.3 (1), 1-5
10. Pranati Nayak, M Thirunavoukkrasur:A review of the plant Boerhaavia diffusa: its chemistry, pharmacology and therapeutical potential The Journal of Phytopharmacology 2016; 5(2): 83-92
11. Editor Pt. Shri Vishwanath Dwivedi Shastri. Chapter No.1. Haridra: Haritkyadi vargah in Bhavprakash-Nighantu. 8<sup>th</sup> Edition. Publisher Motilal Banarasidas, Delhi-7 (1974).p 69
12. Editor Dr. Anantram Sharma. Chikitsastanam 1 verse 108-109 in 'Sushruta samhita', Vol.2. Chaukhamba Surbharati Prakashan, Varanasi (India) 2015.p 160-170. Lamberts, Mark P. Indications of Cholecystectomy in gallstone disease. Current Opinion in Gastroenterology: March 2018-Vol.34/2.p97-102. doi: 10.1097/MOG.0000000000000419