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Case Report

A Case Report on Mutrakricchra with Special Reference to the Chronic Cystitis with Bladder Atony

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Abstract

In Ayurvedic texts, various Mutra-rogas and their management has been described. Mainly eight types of Mutrakricchra has been elaborated. Krichchhrata (difficulty in voiding / pain full voiding), is the main feature but sometimes some feature of obstructions (mutravibhandhata) is also present. In Mutraghat, obstruction is a major feature. According to Acharya Sushrut, Mutrakricchra is a tridoshaj vyadhi, physiological action of urination and defecation is predominantly under the control of Apan vayu, seat of which is Pakwashaya and if this vayu gets vitiated, it causes various genitourinary and anorectal diseases (S. Ni. 1/19), (C. SU. 20/15, C. Si. 1/32-34, A. H. Su. 1/25).

On the basis of symptomatology, Cystitis can be assumed as one of the Mutraroga. Chronic cystitis may result in bladder atony in which there is a declination in the normal bladder tone, may causes increase frequency of micturition, incomplete bladder evacuation, abnormal sensation of micturition etc.

Keywords: *Mutrarogas, kricchrata, Apana Vayu, Mutraghat, Dashmoola kwath, Narayan Tail, Anuvasana Basti, Niruha Basti*

Introduction of Mutrakriccha[1]

Ayurveda is a comprehensive scientific system of medicine developed through ancient wisdom, clinical experiences and experimentations. Exploration of this knowledge throughout the world can be done only by scientific studies on different parameters. Since time immemorial, Ayurveda has been showing the ideal way of living, which promises a disease free, happy and long life. Ayurveda has a unique speciality in the field of Shalya Tantra in which Aacharya Sushruta explained the most sophisticated principles of surgery as well as conservative management of different specific diseases.

Acharya Sushruta has explained various oral Ayurvedic medications as well as Basti therapy for the management of Mutrakricchra (S. U. 59/17-22). References as supportive evidence are present in our classics which show that above medicaments have role in treatment of chronic Cystitis. In Ayurvedic classics, several drugs in different dosage forms and combinations are tailored for treating Mutrakrichhra. The selected drugs are: - Varuna stembark (*Crataeva nurvala*), Shigru stembark (*Moringa olerifera)* and Goksuru fruit (*Tribulus terrestris) & Shodhit Shilajit.* These drugs (Varuna, Shigru, Goksuru and Shilajit) were used in combination and formulated with help of ghansatva formation technique so as to make it compatible with present age (In capsule form). Basti therapy was given, using Dashmool Kwatha & Narayan Tail (for Niruha basti) and Narayan Tail (for Anuvasan Basti) with saindhava lavana and madhu in both Niruha and Anuvasana Basti.

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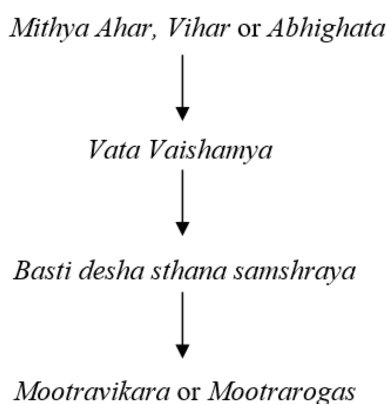
Mutrakricchra is the group of disease described in *Ayurvedic* classics in relation to urinary system but according to modern system of medicine, it is only a symptom complex in major urinary disorder. The word *Mootrakrichhra* means painful micturition.

मूत्रस्य कृच्छेण महता दुखेन प्रवृतिः। (मधुकोषः)

Painful micturition (*Mutrakrichhra*) is divided into mainly 8 types. *Krichchhrata* is the main feature but sometimes some feature of obstructions (*Mootravibhandhata*) is also present. The pathology attains at different stages like *Sanchaya, Prakopa, Prasara, Sthansamshraya, Vyakta and Bheda Awastha.* When vitiated *dosha* takes seat in *basti* produces, obstructive uropathy and other urinary disorders.



Mutrakrichchhra can be assumed as Cystitis on the basis of symptomatology.

Cystitis

Inflammation of the bladder mucosa may be occurring due to different causes such as – bacterial inflammation, tuberculosis, syphilis, schistosomiasis, postmenopausal atrophic cystitis, radiation cystitis etc.

Predisposing factors are:

- Congenital urinary tract anomalies
- Short urethra in females may cause ascending infection and cystitis
- Initial period of sexual contact - honeymoon cystitis
- Catheter, instrumentation
- Bladder stone, cystocele, bladder diverticulum
- Stricture urethra, bladder outlet obstruction
- Pregnancy, Bladder tumours, Diabetes Mellitus, CNS diseases, Spinal injury etc.

Aetiopathogenesis

Cystitis is a heterogeneous syndrome characterised by bladder pain and is associated with frequency and Nocturia. Research findings have proposed several pathophysiological mechanisms including epithelial dysfunction, activation of mast cells, Neurogenic inflammation, autoimmunity and occult infection.

One of the most common findings in chronic cystitis is denudation or thinning of the bladder epithelium, suggesting an altered regulation of urothelial homeostasis. Different phenotypes of Cystitis have been explored including Hunner and Non-Hunner type (ulcer and non-ulcer type), Hypersensitive bladder and bladder pain with and without functional somatic syndrome.

Histopathological Changes

Significant increase in antiproliferative factor, decrease in heparin-binding epidermal growth factors, and increased level of epidermal growth factor have been discovered. It is possible to postulate that the pathophysiology of Chronic Cystitis might evolve sequentially by:

- Urothelial injury (due to UTI, Surgical trauma, chronic bladder overdistention).
- Suburothelial inflammation.
- Chronic inflammatory cell infiltration in the suburothelium.
- Increased inflammatory reaction in the sensory afferents, dorsal horn ganglia and corresponding spinal cord.

Ayurvedic drugs like snehana with Narayan tail, swedana with Dashmoola Kwath,Basti therapy with luke warm Narayan tail along with madhu and shaindhav lavana (Anuvasan Basti) and Dashmool Kwath along with Narayan Tail, madhu and shaindhav lavana (Asthapan Basti) etc. shown good result on the clinical and diagnostic parameters.

Case Study

A 47-year female patient, from Jaunpur came to the Mutraroga OPD Room no. 16A. After proper diagnosis as case Cystitis with Bladder atony, she was admitted in the Sir Sundar Lal Hospital, IMS BHU with MRD NO.1458705 at 06.09.2017.

Chief Complains

Complains were increased frequency of micturition, 20 to 30 times per 24hr (15 to 20 times in day time and 8 to 10 times in night) at interval of 20 to 30 minutes from 4 to 5 months, with Urgency and sometimes pain during micturition. She also complains of intermittent flow as well as altered urinary sensations from last 4 months.

Past History

- No history of Tuberculosis, Bronchial Asthma, Epilepsy etc.

- No history of PUC (Per Urethral Catheterization).
- No history of Urethral dilatation.

Family History

No any relevant family history present.

Drug History

- H/O treatment for same problem outside BHU from last 3 month.
- H/O Hypertension - 1 year (taking medicine – tab. Amlokind AT 1 tab daily in morning).
- H/O diabetes Mellitus - 15 days (early diagnosed - on oral anti diabetic drug therapy).

Material and Methods

After routine investigations as well as viral markers, oral Ayurvedic medicaments and Basti therapy was introduced.

For kosth shuddhi (bowel evacuation using oral Ayurvedic medicaments) – 3 days

- Shadshakar churna 3gm HS with luke warm water.[2]
- Abhyanga with Narayan tail & For 21 days with Basti therapy.[3]
- Nadi Sweda with Dashmoola kwath.[4]

Oral Therapy

(Varun + Goksuru + Shigru) ghansatva + shuddh Shilajit 125 mg – 500 mg BD for 21 days.

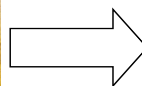
Basti Therapy: Alternate day for 30 days

Anuvasan Basti: Narayan Tail 50ml + Madhu (1/2 tsf) + Saindhav (1/4 tsf)

Asthapan Basti: Dashamoola kwatha (150 ml) + Narayan Tail (30 ml) + Madhu (1/2 tsf) + Saindhav (1/4 tsf)

Varun, Shigru & Gokshura decoction made & placed on hotplate to concentrate

Placed in oven to convert in Ghan **Ghan of varun, shigru & Gokshura**



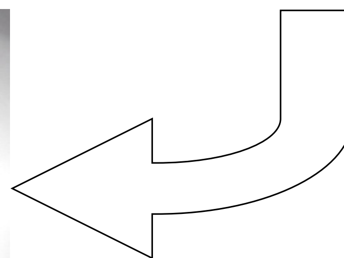


Figure 1.Steps of formulation of Varun, Shigru, Gokshura ghan and Shiljit capsules

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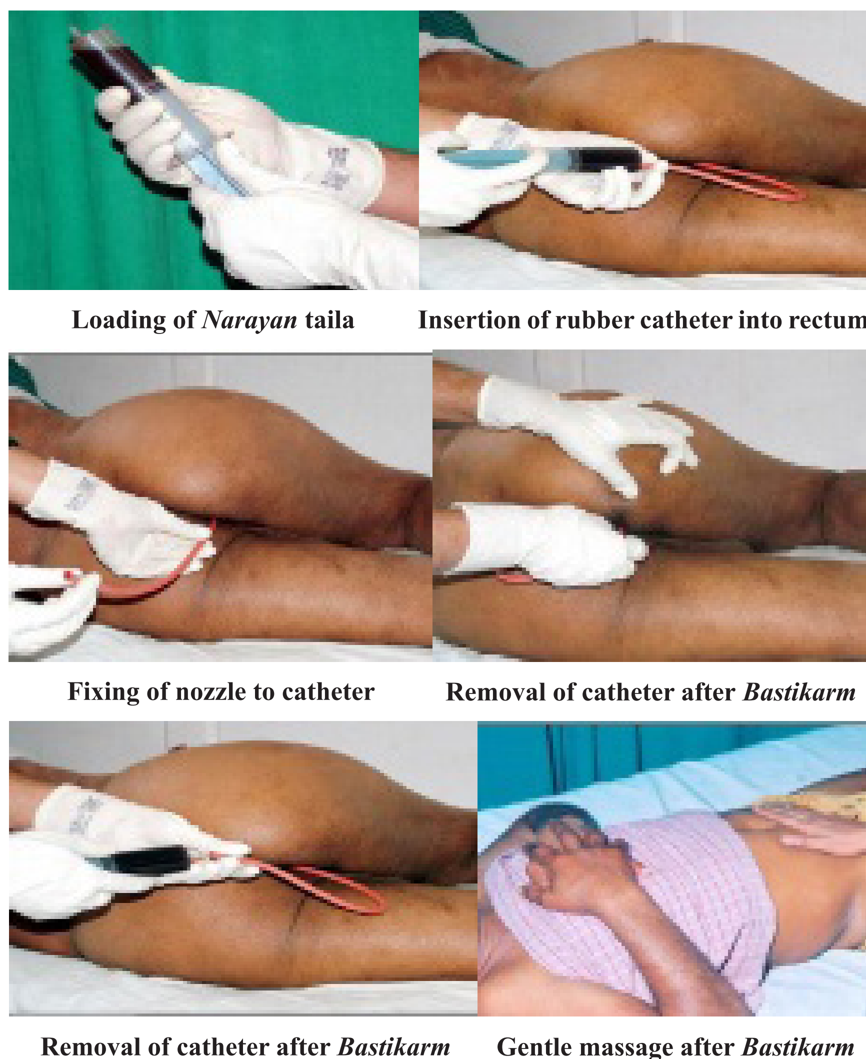

Loading of *Narayan* taila — Insertion of rubber catheter into rectum

Fixing of nozzle to catheter — Removal of catheter after *Bastikarm*

Removal of catheter after *Bastikarm* — Gentle massage after *Bastikarm*

Figure 2.Administration of method of basti

Results

Patient started showing improvement in symptoms after 7 days of management. The total duration of treatment was 90 days. Relevant investigations such as CBC with ESR, Ultrasound (whole abdomen and pelvis-specially bladder wall thickness, PVRU), Urine (routine and microscopic along with culture and sensitivity) were repeated at interval of one-month duration.

First Follow-Up

After 1 month - Improvements in the previous observed were as follows:

- Frequency of micturition reduces up to 15-20 times per day.
- Dribbling after micturition and intermittent flow of urine were minimized.
- Time interval between passage of urine increases from 30 minutes to 1.5-2 hours.

Second Follow-Up

After 2 month - Improvement in the previous complaints (nearly 50% improvements):

- Frequency of micturition reduces up to 12-14 times per day.
- Dribbling after micturition and intermittent flow of urine were reduced.
- Time interval between passage of urine increases from 1.5-2 hours to 3-4 hours.

Third Follow-Up

After 3 month- Improvement in the previous complaints (70% improvements) and no fresh complains:

- Frequency of micturition reduces up to 8-12 times per day.
- Dribbling after micturition and intermittent flow of urine were occur occasionally.
- Time interval between passage of urine increases from 4-5 hours.

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Haematological

Table 1.Comparative assessment of all follow-up

	First Visit (08/09/12017)	Follow-up after 30 days (09/10/2017)	Follow-up after 60 days (10/11/2017)	Follow-up after 90 days (11/12/2017)
Hb (gm/dl)	10.5	11.4	11.2	10.8
TLC (ul)	6910	5900	7300	6500
DLC (%)	N: 57.2 M: 8.9 L: 30.6 E: 2.9 B: 0.4	N: 63.3 M: 7.8 L: 23.2 E: 5.1 B: 0.5	N: 64.3 M: 6.0 L: 24.2 E: 4.7 B: 0.5	N: 59.9 M: 7.2 L: 26.2 E: 6.1 B: 0.5
ESR (1st hrs)	11	13	8	12
PLT ($\times 10^3$ /ul)	178	218	342	318
FBS	115	93	101	105
PPBS	135	112	134	128
BU (mg/di)	16.4	25.3	32.9	28.7
Sr. Creatinine(mg/di)	0.6	0.75	1.10	1.16

Urine examination - routine & microscopic

Date		First Visit (08/09/2017)	First follow-up after 30 days (09/10/17)	First follow-up after 60 days (09/10/2017)	First follow-up after 90 days (09/10/2017)
	Specific gravity	1.001	1.021	1.023	1.030
	Reaction	Acidic (5.5)	Acidic (6.0)	Acidic (6.7)	No reaction (7.0)
	Sugar	Nil	Nil	Nil	Nil
	Albumin	Nil	Nil	Nil	Nil
	Other	---	---	---	---
M.	Pus cells	20-25WBC/HPF	8-10WBC/HPF	3-4WBC/HPF	2-3WBC/HPF
	Epithelial cells	4-6	Nil	Nil	Nil
	R.B.C.	18-20/HPF	6-8/HPF	Nil	Nil
	Other	---	---	---	---

Urine examination - culture & sensitivity

	First Visit	First follow-up after 30 days	Second follow-up after 60 days	Third follow up after 90 days
Culture	Klebsiella pneumonia > 100000 colonies/ mi grown	Sterile	Sterile	Sterile
Sensitivity	Gentamicin, levofloxacin, Nitrofurantoin, Imipenem, Tobramycin, Tigecycline, etc.	----------	---------	----------

USG (KUB) and PVRU

	First Visit	First follow-up after 30 days	Second follow-up after 60 days	Third follow up after 90 days
Kidney	Rt-94×39 mm Lt-95×42mm	Rt-93.7×39.1 mm Lt-100.2×42.8mm	Rt-92×40 mm Lt-97×41.8mm	Rt-95×39 mm Lt-93.2×42mm
Ureter	WNL	WNL	WNL	WNL
Bladder	Wall appears thickened = 6mm and irregular	Wall appears thickened = 4.2mm and irregular	Wall appears thickened =3.8mm and irregular	Wall appears within normal limit
PVRU	116 ml	96 ml	70 ml	38ml

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Discussion

According to Acharya Charak there is no cause greater than vata in the manifestation of the disease and there is no better remedy, other than Basti. That is why he mentioned in Agraya Ganas that "Bastivataharanam" and "Bastistantranam".

नाभिप्रदेशं कटिपार्वश्कुक्षिं गत्वा भाकृद्दोशचयं विलोडय ।

सस्नेह कायं सपुरीशदोशः सम्यक् सुखेनैति कृतः स बस्तिः ।। च सि 1/40.41

The administered Basti dravya, collects the accumulated Doshas and Shakruta from nabhi, kati, parshva, and kukshi pradesha causes snehana of the body, expels out the doshas. Basti introduced into the Pakvashaya acts upon every organ system of the body and draws out the impurities by its potency like sun draws outer evaporates the water from the earth by its heat (C. Si. 8/64).

Since in Allopathy, the management of *Cystitis* is mainly done with the Antibiotics and antiseptics like Hippuric acid, Mandelic acid etc., these drugs have many side-effect and recurrences of infections whereas ayurvedic therapy has no or minimal side effects. Such type of side-effects is minimal with the *Ayurvedic* drugs which are used here. So, Ayurveda provides better option for the management of the *Cystitis with bladder atony* over the allopathic drugs in respect to the symptomatic improvement, treatment of the disease and with minimal side effect etc.

Conclusion

Present Case study shows that Ayurvedic treatment for Mutrakriccha (Chronic Cystitis with bladder atony) is very effective in terms of clinical features and diagnostic parameters; it also enhances the quality of life of patient. It needs further studies based on various parameters and on large sample size to prove efficacy on scientific parameters.

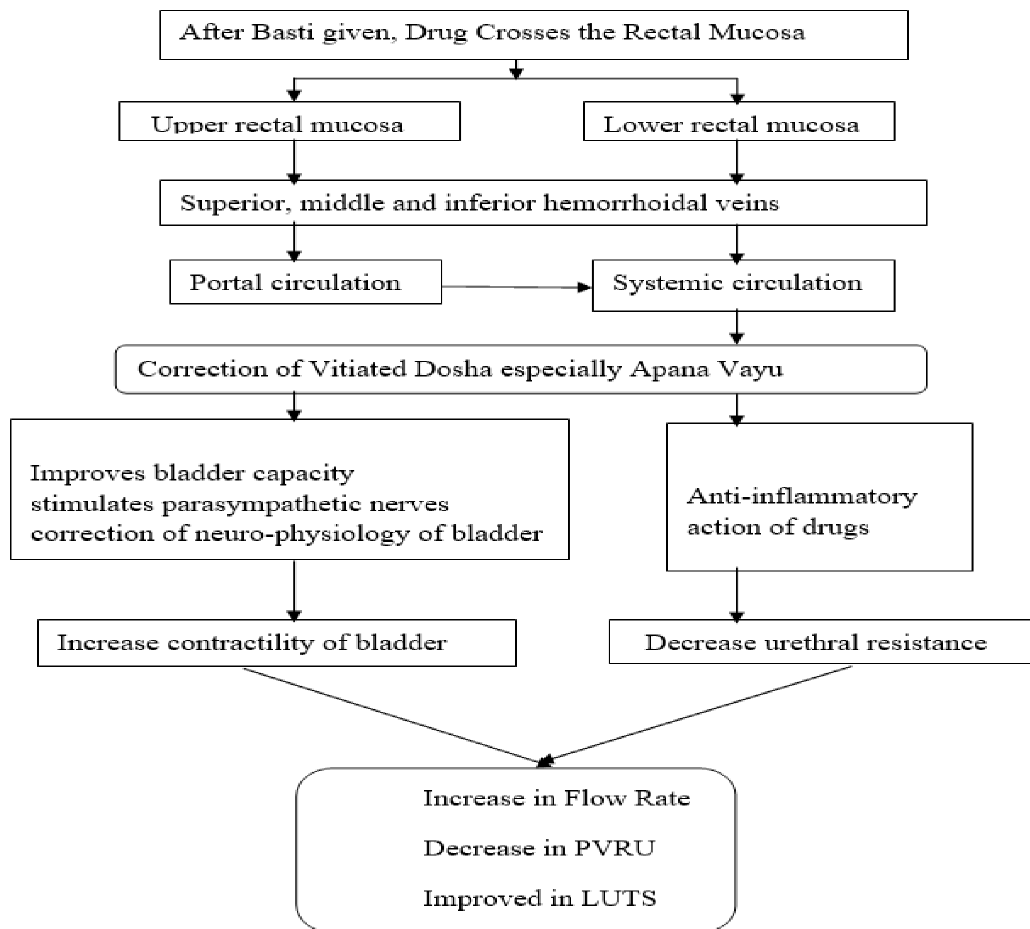

Figure 2.Probable mode of action of Basti Therapy[6]

It is assumed that medicaments used in Basti therapy are absorbed through Rectal mucosa and these acts locally and systematically causing decrease in inflammation and stimulates sympathetic nervous system to stimulate smooth muscles of Urinary bladder.

Conflict of Interest: None

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