



Case Report

Uttarabasti in bladder neck contracture following transurethral resection of prostate: A case report

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ABSTRACT

Bladder neck contracture is a common complication of the TURP. Traumatic inflictions may lead to the formation of scar tissue around the bladder neck which makes this tubular structure narrower than the normal. It causes urinary flow obstruction associated with pain, heaviness, hesitancy and incomplete bladder emptying. In Ayurveda, such features have been described under the context of *Vatakundalika* and *Mutrotsanga* under the chapter 58 named 'Mutraghata Pratishedha Adhyaya' of Uttar Tanta of Sushruta Samhita. Bladder neck resection surgery is considered as the surgical treatment in this case but the recurrence rate is high. In Ayurvedic texts, *Uttarabasti* has been indicated in the treatment of various urinary disorders. A 70-year-old male patient visited the Outdoor Patient Department (OPD) of hospital of National Institute of Ayurveda (NIA), Jaipur, Rajasthan, India; with chief complaints of difficulty in micturition, pain during micturition along with poor stream of urine for the last 2.5 years. He had past history of surgical intervention of Transurethral resection of prostate (TURP) for prostatomegaly and transurethral incision of bladder neck (TUI-BN) of bladder neck contracture. This was diagnosed as a case of recurrent urinary bladder neck contracture and was managed with *Uttarabasti* of *Bala-Ashwagandhadi Taila* and oral Ayurvedic medicines with encouraging results. Ayurveda may prove helpful in such type of recurrent and recalcitrant cases and the intervention of *Uttarabasti Karma* is specifically indicated for the same.

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1. Introduction

The earliest literature of urinary obstruction and its management with catheterization and direct puncturing of the urinary bladder is available in Atharvaveda [1]. The incidences of bladder neck contracture (BNC) after Trans-Urethral Resection of Prostate (TURP) have been reported to be 0.3–9.2% [2]. This condition significantly compromises the quality of life of a patient. Important determinant factors for post TURP complication of BNC are mainly the weight of adenoma and the type of surgical intervention used [3]. Transurethral resection of bladder neck and transurethral incision of bladder neck (TUI-BN) constitute the endoscopic treatment options for Post TURP bladder neck contracture whereas open surgeries are mainly reserved for recalcitrant cases. In Ayurveda, the features of bladder neck contracture simulate with *Vatakundalika* and *Mutrotsanga*

[4, UT 58/15–16]. According to *Sushruta Samhita*, *Pratiloma Vayu* (oppositely directing vitiated *Vata Dosha*) has been considered responsible for the diseases of *Basti* (urinary tract primarily the urinary bladder) such as *Mutraghata* (retention of urine) and *Mutrakrichhira* (difficulty in micturition) [4] (NS 3/ 27–28). 12 types of *Mutraghata* have been explained in *Uttaratantra* of Sushruta Samhita and Acharya Charaka has described 8 types of *Mutrakrichhira* [4 (UT 58/3–4), 5]. In Ayurveda, various oral formulations are available to manage the vitiation of *Dosha* responsible for urinary tract pathologies. However, to achieve maximum therapeutic effect on local tissues (urethra and urinary bladder) *Uttarabasti* is an Ayurvedic procedure of drug administration through '*Uttarmarga*' (genito-urethral route) and has been considered as a '*Shreshtha*' (superior) procedure [6]. When administered through urethral route, it has indications in various urinary conditions viz. *Mutraghata* or *Apsravi Mutra* (retention of urine), *Mutrakrichhira* (difficulty in micturition), *Bindum Sravati* (dribbling of urine), *Ashmari* (urinary calculus) and *Basti-Vankshana-Meha Shoola* (pain in bladder, groin and phallus) etc. [7–9]

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Hereby, management of a Post TURP and Post TUI case of bladder neck contracture by Ayurvedic approach is presented with appropriate references.

2. Patient information

A 70-year-old male Hindu patient from Jaipur, India; known hypertensive for 7 years under medication, with no history of any addiction and allergy approached the OPD No.32 of NIA Hospital, Jaipur, Rajasthan (India) on 01st of December 2021. He presented the chief complaints of difficulty in micturition, pain during micturition along with poor stream of urine for the last 2.5 years. The bowel habits and appetite of the patient were normal. His father had history of hyperplasia of prostate and had undergone surgical treatment for the same. His mother had history of asthma. The patient had previous history of benign prostatic hyperplasia for which he had undergone TURP in the year 2016. After around 1.5 years of TURP, he again started facing the urinary problem of hesitancy and poor streaming. For that he had undergone bladder neck incision at 2018 but the problems recurred after 1 year and approached to NIA hospital at Shalya Tantra OPD. He depicted symptoms of bilateral knee joint pain for 2 years and the related radiographs were suggestive of osteoarthritis of bilateral knee joints.

Table 1
Ayurveda oral drug intervention.

Name of the drug	Dose	Frequency	Anupana (Taken with)	Duration
<i>Chandraprabhavati</i>	500 mg	Two times a day	Lukewarm water (after crushing/chewing)	2 months
<i>Gokshuradi Guggulu</i>	500 mg	Two times a day	Lukewarm water (after crushing/chewing)	2 months

3. Clinical findings

The diagnosis of bladder neck contracture is considered in any patient who complains of a poor urinary stream or in patients who have prolonged unexplained incontinence [10]. In this case, the patient’s detail history was noted and on general examination, the tongue was clear and moist with normal pulse rate, rhythm and force and normal temperature. Normal bilateral respiration and blood pressure of 124/76 mm of Hg level was observed. Local examination of penile and surrounding region, no discoloration, discharge, tenderness, calculus or foreign body lodgment.

4. Timeline

Follow up and clinical status.

Day of Illness	04/12/21	08/12	11/12	15/12	18/12	22/12	25/12	29/12	01/01/22	05/01
Hesitancy	+	+	+	+	+	+	+	+	+	+
Painful Micturition	+++	+++	+++	+++	++	++	++	++	++	+
Poor stream	++++	++++	++++	+++	+++	+++	+++	+++	+++	++
Feeling of inadequate emptying of bladder	+++	+++	+++	+++	+++	++	++	++	++	++

Day of Illness	08/01	12/01	15/01	19/01	22/01	26/01	29/01	02/02	05/02/22
Hesitancy	+	+	-	-	-	-	-	-	-
Painful Micturition	++	+	+	-	+	+	+	-	-
Poor stream	++	++	++	++	++	++	+	+	+
Feeling of inadequate emptying of bladder	++	++	++	+	+	+	-	-	-

5. Diagnostic assessment

Before starting the treatment, the patient was thoroughly investigated. His routine blood investigations and urinalysis reports

were normal. Fasting blood sugar levels and renal function tests were normal. His uroflowmetry reports revealed maximum flow rate of 6.2 mL/s, average flow rate of 1.7 mL/s with hesitancy of 01 s. KUB Ultrasonography reports were suggestive of significant post-void residual urine of 97 mL.

6. Past history of surgical intervention

The patient had undergone TURP (Trans-urethral Resection of Prostate) for LUTS in march 2016 and bladder neck incision for post TURP bladder neck contracture in January 2018.

7. Therapeutic intervention

The two drugs viz. *Chandraprabhavati* and *Gokshuradi Guggulu* were prescribed for oral administration [11,12]. For *Uttarabasti*, 50 mL of *Bala-Ashwagandhadi Taila* was used [13]. The treatment was continued for two months. Total 19 sittings were administered as mentioned in the timeline above.

7.1. Oral intervention

The following oral formulations were prescribed (Table 1):

7.2. Uttarabasti Karma

In *Ayurveda*, *Uttarabasti* has been stated as the supreme procedure for any diseases related to urinary bladder and tract. *Uttarabasti* with *Bala-Ashwagandhadi Taila* was carried out twice weekly for 2 months. This formulation contains Rasna patra (leaves of *Pluchea lanceolata*) – 12 gm, Chandana kastha-sara (heartwood of *Santalum album*) – 12 gm, Manjistha moola (root of *Rubia cordifolia*) – 12 gm, Durva panchanga (whole plant of *Cyanodon dactylon*) – 12 gm, Madhuka moola (root of *Glycyrrhiza glabra*) – 12 gm, Chora moola (root of *Angelica glauca*) – 12 gm, Sariva moola (root of *Hemidesmus indicus*) – 12 gm, Ushira moola (root of *Vetiveria zizanioides*) – 12 gm, Jalada kanda (rhizome of *Cyperus*

rotundus) – 12 gm, Kushtha moola (root of *Saussurea lappa*) – 12 gm, Aguru kashtha (wood of *Aquallaria agallocha*) – 12 gm, Devadaru kashtha-sara (heartwood of *Cedrus deodara*) – 12 gm, Haridra kanda (rhizome of *Curcuma longa*) – 12 gm, Kumuda

panchanga (whole plant of *Nymphaea pubescens*) – 12 gm, Shahwa panchanga (whole plant of *Anethum sowa*) – 12 gm and Padmakeshara beeja (seeds of *Prunus pudum*) – 12 gm as Kalka dravyas, tila taila (oil of *Sesamum indicum*) – 540 mL as Sneha dravya, Bala moola (root of *Sida cordifolia*) – 3072 gm, Ashwagandha moola (root of *Withania somnifera*) – 3072 gm and Laksha niryasa (resin of *Lacifera lacca*) – 3072 gm as Drava Dravya and Dadhi Mastu (curd water) – 2160 mL. The oil was autoclaved prior to each sitting of the *Uttarabasti*.

7.3. Procedure of Uttarabasti Karma

Patient was advised to take less fluids in the day of *Uttarabasti Karma* both before and after the procedure so as to optimise maximum intravesical retention of the administered drug. He was asked to void urine just before starting the procedure. *Uttarabasti* was given using feeding tube (6G) and sterile disposable syringe following all aseptic precautions.

8. Results

Treatment effects on Uroflowmetry.

S.No.	Uroflowmetry	Before treatment	After treatment
1	Voided volume	57.1 mL	198.1 mL
2	Max. flow rate	6.2 mL/s	10.5 mL/s
3	Average flow rate	1.7 mL/s	6.0 mL/s
4	Voiding time	34 s	33 s
5	Flow time	34 s	33 s
6	Hesitancy	01 s	00 s

9. Follow-up and outcomes

After 6 months of follow-up, the patient was healthy with sustained relief in urinary symptoms. No medicines were prescribed during the follow-up period.

10. Discussion

After prostatic surgery, bladder neck contracture can develop and induce stricture like symptoms. Mild contractures can often be managed by instrumentation and more substantial contractures by either bladder neck incision or resection but the failure rate is high [14].

This condition was approached and managed according to the principles of management of *Vatakundalika*. In the process, the *Vitiated Apana Vayu* makes the upward movement (*Udavrita*) along with the pain and obstruct the flow of urine. It causes urinary flow obstruction associated with pain, heaviness and stiffness in the urinary bladder and the tract. It may be followed by operative injury [15].

Obstruction to flow of urine results in changes in the urinary bladder. Even after surgical management, one third of the total patients suffer from voiding and storage dysfunction resulting in frequency, urgency, decreased stream of urine, hesitancy and feeling of incomplete evacuation of bladder with significant post void intravesical residual volume. Initial detrusor response to the obstruction is the hypertrophy of smooth muscles that leads to detrusor instability and impaired contractility [16].

Intravesical drug administration by means of *Uttarabasti Karma* is absorbed by the urothelium. *Sneha Aushadha Dravya* (medicated Oil or Ghee) has the benefit as it is retained in layers of urothelium for a longer period for sustained action for some hours. For each sitting 50 mL of *Bala-Ashwagandhadi Taila* was administered. In *Ayurvedic* texts, the maximum amount of *Sneha*

(medicated Oil/ghee) indicated for *Uttarabasti* is one *Prakuncha* (~50 mL).

The ingredients of *Bala-Ashwagandhadi Taila* have the properties of *Tridosha Shamana* (pacification of *Vata*, *Pitta* and *Kapha*), *Snigdha-Tikshna Guna*, *Ushna Virya*, *Katu Vipaka* and *Mutrala* (diuresis). It corrects vitiated *Apana Vayu* by virtue of its *Mutrala*, *Bastishodhaka* (purification of urinary tract principally urinary bladder) and *Tridosha Shamana* properties. Oil by virtue of its *Sukshama* (minute), *Snigdha* (unctuous) and *Vyavayi* (quickly spreading) *Guna* (properties) penetrates deeper layer of bladder wall, softens the local tissues and reduces fibrosis; thereby increases their elasticity and promotes healing. It strengthens the musculature of urinary bladder for sufficient contraction and relaxation of the detrusor muscles.

Chandraprabhavati and *Gokshuradi Guggulu* are the classical *Ayurvedic* formulations that are indicated in multiple *Mutra* and *Bastigata Vikara* (urinary problems and diseases of urinary tract principally of urinary bladder).

Uttarabasti Karma is a safe and cost-effective procedure, if carried out by a trained *Ayurvedic* practitioner using strict aseptic precautions. However, this facility is not available everywhere at all *Ayurvedic* treatment centres. Rational management is both patient and disease specific. This is a single case study and management of the same cannot be generalized for every patient; constitute its major limitation.

11. Conclusion

In the present case study, *Ayurvedic* medicines were administered per oral and per-urethral routes. Significant improvement in all the symptoms was observed which was also reflected in his post treatment uroflowmetry and ultrasonography investigations. In the follow-up period of 6 months after active treatment, patient reported no recurrence of symptoms. The use of oral *Ayurvedic* medications and *Uttarabasti Karma* are helpful in recurrent post TURP bladder neck contracture and may be considered in the management of the same.

Patient perspective

The patient was satisfied as he shared his perspective during and after the treatment. He was fed up of repetitive surgical interventions and had visited the hospital of NIA, Jaipur to get some relief and to obviate the need of further surgeries; that were advised to him by the uro-surgeons. Sustainability of relief in the follow up period of 6 months was helpful to achieve the aim with which he visited the hospital.

Informed consent

Patient's informed consent was taken.

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Authors contributions

Conceptualization: Saroj Mani Pokhrel; Aditya Sharma; Manorma Singh. Methodology/Study design: Saroj Mani Pokhrel; Aditya Sharma. Validation: Manorma Singh. Formal analysis: Saroj Mani Pokhrel; Manorma Singh. Investigation: Aditya Sharma. Resources: Manorma Singh. Writing original draft: Saroj Mani Pokhrel. Writing review and editing: Saroj Mani Pokhrel; Manorma Singh.

Supervision: Manorma Singh. Project administration: Saroj Mani Pokhrel; Aditya Sharma; Manorma Singh.

Declaration of competing interest

None.

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