**ABSTRACT:**

**Introduction:** Narrowing of lumen of urethra is known as urethral stricture. 70% of urethral stricture is insidious at bulb. Trauma, infections like (TB, Gonorrhea), TURP are the main causes of urethral stricture. Symptoms include varying amount of urethral discharge “morning dew drop”, difficulty in micturation, dribbling of urine, increased frequency, incomplete voiding of urine etc. According to modern literature, urethroplasty and dilatation of urethra are the treatment procedures followed for urethral stricture. In Ayurveda urethral stricture can be correlated with mutra marg samkocha. According to Sushruta Samhita uttarbasti is one of the effective procedures for mutra marg samkocha. **Material and methods:** This paper provides a collective information regarding Mutra Marga Samkocha( Urethral Stricture), from Nighantu, Samhita and Modern Medicine. Uttarbasti is performed by the use of oils like Bala taila, Tila taila, Apamarga kshar taila etc. **Result and discussion:** Most of the concerned informations are retrieved from published international journals and classical text of Ayurveda. As per published research papers uttarbasti is highly effective in case of urethral stricture. **Conclusion:**

**Keywords:** Bala taila, Mutramarga samkocha, urethral stricture, urethroplasty, uttarbasti

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**Introduction**

Urethral stricture can be correlated with mutra marg samkocha in Ayurveda. As per Ayurvedic anatomy, disease related to genitourinary system falls under mutravaha shrotas vyadhi. Acharya shushruta has classified mutraghata into 12 types.1 Mutramarga samkocha is not explained with separate title but the symptoms are similar to mutrotsanga.2 Acharya shushruta has explained uttarbasti as treatment procedure of mutrotsanga. Acharya Charaka has classified urinary disease like mutra krichha into 8 types.3 In modern literature it can be correlated with urethral stricture.4 Urethral stricture is narrowing of lumen of urethra.

The causes of of urethral stricture are

- Congenital
- Trauma
- inflammatory(post-gonorrheal, tuberculosis, recurrent UTI)
- instrumental (following passage of large calibre endoscope)
- post operative(TURP) etc.

**Pathologically**

Inadequately treated infections leads to infection of periglandular tissues, which become infiltrated with round cells and fibroblasts, gradually infiltrated tissues contract and scar tissues form. Due to this stricture is formed.

Treatment of urethral stricture according to modern literature include-

- internal urethrotomy
- dilatation of urethra and urethroplasty.

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*Corresponding Author:
Pratigya Koju
BAMS Final Year Scholar, Ayurveda Campus, Ayurveda Campus, Institute of Medicine, T.U., Kirtipur, Kathmandu, Nepal.
E-mail: pratigyakoju77@gmail.com
Submitted: 27.04.2020 Received: 29.04.2020
Revised: 12.06.2020 Accepted: 26.06.2020*
● There is chance of recurrence in internal urethrotomy.

**Uttar basti** is one of the important panchakarma procedure for treatment of reproductive and urinary disorders. In this procedure medicated oil, decoction, ghee are passed through genito-urinary tract. In male decoctions and oils are passed per urethra to bladder and per vagina to uterus or urinary bladder in female. Entire procedure should be performed in aseptic condition. This procedure is performed till 15-20 minutes and performed in alternate days or in interval of 3 days. 7 sittings of procedure has found to be providing satisfactory results in urethral stricture.

Nowadays evidence based male uttarbasti is practiced.

Some of the conditions are:

<table>
<thead>
<tr>
<th>Condition</th>
<th>Clinically practiced medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Azoospermia</td>
<td>Pipalyadi taila/Anutaila</td>
</tr>
<tr>
<td>Benign Prostatic hyperplasia(Mutraghata)</td>
<td>Daruharidra kashaya/ Bhruhatyadi kasaya</td>
</tr>
<tr>
<td>Physiological urethral stricture</td>
<td>Tila taila/ Sahacharadi taila/ Bala taila/ Apamarga kshara taila</td>
</tr>
<tr>
<td>Erectile dysfunction</td>
<td>Ashwagandha taila/ Sahacharadi taila/ Arjuna shalmali sidda taila</td>
</tr>
</tbody>
</table>

**Incidence**

0.6% of total population is found to be suffered from urethral stricture. Most of the are found to be middle and old aged male.

**Materials and Method**

Literary sources like classical texts, clinical trials, published manuscripts.

**Equipment required:**

- Surgical gloves
- 10-60 ml autoclaved (tila taila/bala taila/apamarga taila)
- 10 ml disposable syringe, kidney tray
- infant feeding tube no.6
- betadine solution
- sponge holder
- honey 4ml
- rock salt 1gm
- sterilized gauze pieces
- 2%lidnocaine jelly

**Dose**

- 10-60 ml on surgeon’s choice, Angulimulsamit prasrut15 (i.e. palm of hand stretched out and hollowed as if to hold liquid up to the bases of fingers)

**Procedure**

Uttar basti is performed in following 3 phases as follow.

1. **Purvakarma(pre-operative)**
   - All the needed investigations are done and necessary vitals are taken at first.
   - Patient is asked to void urine, and be free from natural urges. Then asked to lie in supine position with cloth undone.
   - Then Antisepctic care is given.
   - Then luke warm autoclaved oil is mixed with rock salt.

2. **Pradhan karma(operative)**
   - Thus obtained mixture is loaded in 10 ml disposable syringe.
   - The penile region is painted by betadin with help of betadin soaked gauzes and sponge holder. Then penis is retracted and cleaned by betadin solution.
   - Then fetal feeding tube is inserted and when it reaches bulbomembranous urethra patient is asked to take deep breathe. Further fetal feeding tube is inserted till it reaches bladder.
   - Then the medicated oil mixture is passed through fetal feeding tube by the help of syringe in one shot. Patient is asked to remain in same position till 15 minutes.
   - Then the fetal feeding tube is removed and prepuce is repositioned to avoid phimosis. This process is done in alternative days or in interval of 3 days for 7 sittings.

3. **Paschat karma(post operative)**
   - Patient is avoided to micturate till 2 hrs after procedure.
   - Post procedure vitals are taken and noted.
   - Patient is called for followup on regular interval.

**Contraindications..**

- Hypersensitivity
- Anatomical urethral stricture
- Phimosis
- Hypo/Epispadias
Observation and Results

As per different case study report, different published manuscript and clinical trials the procedure called uttarbasti is more effective for treatment of urethral stricture. After 7 days of this procedure it was observed that patient felt 70% decrease of symptoms and after 1 month of treatment report in RUG significant resolution of stricture was seen along with 90% decrease of symptoms. The report of urethrogram of patient who underwent through this procedure shows that there is marked increased in calibre of lumen and increase inflow rate by about 3 times. 

<table>
<thead>
<tr>
<th>Symptoms</th>
<th>Total Patient</th>
<th>Severe</th>
<th>Moderate</th>
<th>Mild</th>
<th>After 5th Sitting</th>
<th>No Any Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burning micturation</td>
<td>30</td>
<td>19</td>
<td>10</td>
<td>1</td>
<td>25</td>
<td>5</td>
</tr>
<tr>
<td>Straining at micturation</td>
<td>30</td>
<td>25</td>
<td>5</td>
<td>_</td>
<td>27</td>
<td>3</td>
</tr>
<tr>
<td>Decreased stream of urine</td>
<td>30</td>
<td>29</td>
<td>1</td>
<td>_</td>
<td>23</td>
<td>7</td>
</tr>
<tr>
<td>Prolonged micturation</td>
<td>30</td>
<td>3</td>
<td>23</td>
<td>4</td>
<td>28</td>
<td>2</td>
</tr>
<tr>
<td>Hematuria</td>
<td>6</td>
<td>_</td>
<td>2</td>
<td>4</td>
<td>6</td>
<td>_</td>
</tr>
<tr>
<td>Incontinence of urine</td>
<td>9</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>9</td>
<td>_</td>
</tr>
<tr>
<td>Strangury</td>
<td>24</td>
<td>6</td>
<td>18</td>
<td>_</td>
<td>23</td>
<td>1</td>
</tr>
<tr>
<td>Retention of urine</td>
<td>1</td>
<td>1</td>
<td>_</td>
<td>_</td>
<td>1</td>
<td>_</td>
</tr>
<tr>
<td>Frequency of micturation</td>
<td>29</td>
<td>8</td>
<td>14</td>
<td>1</td>
<td>25</td>
<td>4</td>
</tr>
</tbody>
</table>

Discussion

Mutra marga samkocha is due to predominance of vata and kapha dosha. Where as dushyas are rasa, rakta, mamsa, sleshmadhara kala (mucous membrane). As the act of micturation is under the control of apana vayu, when it gets vitiated urinary defects arise. Due to vitiation of vata dosha chala, ruksha, khara guna increases in mutramarga resulting in mutramarga samkocha. Hence for the treatment of mutramarga samkocha vata and kapha should be passified, which is done by different medicine used in procedure called uttarbasti. Mode of action is explained as follows.

- Pharmacological action of ingredients used in procedure
  - Tailas like bala taila, apamarga taila, tila taila are the oils especially used in procedure. All the used oils are vata and kapha samak. The rock salt used along with taila has anulomak property which helps in easy absorption of oil through mucosal linings. Vyavahi, sukhsha and snigda properties of tila taila, apamarga and bala taila helps in lubrication and dilatation of lumen. The sodhana and ropana properties of honey helps in healing of scars.

- Pathophysiological action
  - Due to recurrent infection especially like gonorrhea, tuberculosis, UTI the mucosal linings are replaced by scars which leads to hypertrophy and finally causing narrowing of urethral lumen. The Oils used in procedure are absorbed by mucosa of urethra and urinary bladder which helps in healing of scars due to recurrent infections. It softens tissue, increase elasticity, penetrates up to deep tissues, heals and promotes regeneration. In modern aspect drugs and oils used reduces fibrosed part.

- Mechanical action
  - Mechanically stricture are decreased by the mechanical dilatation of urethra due to use of fetal feeding tube and catheters.

Conclusion and Recommendation

As it is precisely mentioned in different classics uttarbasti should be performed by handful of practitioners. Uttarbasti is very effective in treatment of urethral stricture. It is mainly due to direct application of drug locally on target organs which has also been proved scientifically. Hence it is recommended to clinicians for treatment of uttarbasti as per different evidence based clinical trials.

Abbreviations: Not Applicable
Acknowledgements: Not Applicable
Conflict of interest: Author declares that there is no conflict of interest.
Source of support: None
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How to cite this article: