Holistic Approach to Female Uttar Basti - A Review Article

Neha Chaudhary¹, Shweta Mishra²
¹Post Graduate Scholar, Department of Panchakarma, Government Ayurvedic College and Hospital, Varanasi, Uttar Pradesh, India.
²Lecturer, Department of Kayachikitsa, Government Ayurvedic College and Hospital, Varanasi, Uttar Pradesh, India.

ABSTRACT

In Ayurveda, Basti is considered as Ardhchikitsa by some Acharyas and as a complete therapeutic procedure by others due to its vast areas of action. As defined by Acharya Charak, Basti is of three types and among them; Uttar Basti has been highlighted for most of the uro-genital disorders in both males and females. As it gives quick relief and can easily be practiced in OPD basis, it outpowers other systems of medicine and can be used as alternative for invasive intervention. Vaginal douching and Urethral douching have been practiced already but Uttar Basti has a far wider scope in terms of disease diversity. Through this article, an attempt has been made to review Uttarbasti through classical texts to understand the concept of Uttarbasti and to understand its mode of action with its importance in clinical practice.

Key words: Ayurveda, Uttarbasti, Uro-genital disorders

INTRODUCTION

Uttar Basti is a procedure, in which drug is administered through Uttar Marga i.e., Marga above the Guda (Apatyamarg and Mutramarga) and it imparts Srestha Guna to the body. Acharya Vagbhata defines it as the one which is administered after the Niruha Basti and is given in Uttar Marga.

Aims and Objectives

1. To study the methodology of Uttar Basti.
2. To study classical indications mentioned in Ayurvedic textbooks and different Yogas used for Uttar Basti in current practices.
3. To study the scientific approach of Ayurveda towards the concept of Uttar Basti according to different Aacharyas.

MATERIAL AND METHODS

Types of Uttar Basti

Uttar Basti can be classified in many ways:

A. Based on Marga (Route) of Administration:[³]
   1. Mutrashyagata Uttar Basti: The administration of drug through Urethral route.
   2. Yonigata Uttar Basti: The administration of drug through Vaginal route.

B. Based on Drug of Administration:[⁴]
   1. Snaihika Uttar Basti: When only Sneha Dravya such as Ghrita and Taila are used for Uttar Basti, it is called Snaihika Uttar Basti.
   2. Niruhika Uttar Basti: When Kashaya, Swarasa, Ksheerpaka, etc are used to administer in Uttar Basti.

Address for correspondence:
Dr. Neha Chaudhary
Post Graduate Scholar, Department of Panchakarma, Government Ayurvedic College and Hospital, Varanasi, Uttar Pradesh, India.
E-mail: drnehachaudhary7@gmail.com
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Basti, it is called as Nairuhika Uttar Basti. There is no addition of Madhu, Lavana, Sneha, Kalka, Kwath etc in Uttar Basti which are commonly added in Niruha Basti.

**Indication And Contra-Indication**[^5,6]

<table>
<thead>
<tr>
<th>Indication</th>
<th>Contra-Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sukra Dushti (Sperm disorders including Harmonal problems)</td>
<td>Prameha</td>
</tr>
<tr>
<td>Shonita Dushti (Menstrual disorders including Uterine Bleeding problems)</td>
<td>Hyper sensitivity</td>
</tr>
<tr>
<td>Pushpodreka (Menorrhagia), Pushpa Nasha (Pathological Amenorrhea), Kastapushpa (Dysmenorrhea).</td>
<td>Bleeding diseases</td>
</tr>
<tr>
<td>Basti Vikara including Mutraghata and Mutrakrichha.</td>
<td>Carcinoma</td>
</tr>
<tr>
<td>Mutraghata, Mutradosha, may be Physiological and Anatomical.</td>
<td>Fistula</td>
</tr>
<tr>
<td>Bindu Srava (Dribbling of Urine or Weakness of Sphincter)</td>
<td>Diverticulum</td>
</tr>
<tr>
<td>Yonivyapada, Yonivyadi (Gynecological disorders)</td>
<td>Genetic and Congenital anomalies.</td>
</tr>
<tr>
<td>Sharkara Ashmari</td>
<td>In the genital tract of Girls Uttar Basti is contraindicated.</td>
</tr>
<tr>
<td>Basti Vankshana Mehana Shoola (Pain in bladder, groin, phallus)</td>
<td></td>
</tr>
<tr>
<td>Yonivibhrmsa (Uterine Prolapse)</td>
<td></td>
</tr>
<tr>
<td>Apradushti (Problem of Placenta implantation)</td>
<td></td>
</tr>
<tr>
<td>Asrigdara (Dysfunctional Uterine bleeding), etc.</td>
<td></td>
</tr>
</tbody>
</table>

**Uttar Basti Yantra (Instruments)**

**Uttar Basti Yantra** is consists of 2 parts:

1. **Bastiputaka**
2. **Bastinetra**

**Bastiputaka[^7]**

It should be made up of bladder of small sized animals such as sheep, pig, goat etc. or else with leather of bird can also be used as Bastiputaka. It should be clean, smooth and procured with Kashaya Dravya.

**Bastinetra[^8,9,10]**

It is also called as Pushpa Netra. It should be made up of Hema (Gold) or Raupya (Silver) and its shape should resemble tail of a cow (broad at the base and tapered towards the end), containing 2-3 Karnika (ridges), it has to be strong (Dridha), smooth (Shlakshan) and Vritta. Length of Bastinetra, circumference and size of lumen of Basti Netra is different in sex and age group as mentioned in the Table 1.

<table>
<thead>
<tr>
<th>Age</th>
<th>Passage</th>
<th>Length</th>
<th>Circumference of Nozzle</th>
<th>Size of Lumen</th>
<th>Karnika (From the Tip of Nozzle)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Urinary</td>
<td>12/14 Angula</td>
<td>Maltipushapavruntagra</td>
<td>Sarshaps annibham (size of mustard seed)</td>
<td>Madhya (at 6/7 Angula)</td>
<td></td>
</tr>
<tr>
<td>Girl Urinary</td>
<td>10 Angula</td>
<td>Maltipushapavruntagra</td>
<td>Sarshaps annibham (size of mustard seed)</td>
<td>At 1 Angula</td>
<td></td>
</tr>
<tr>
<td>Adult women Urinary</td>
<td>10 Angula</td>
<td>Mutrasrota h Parinaah (Size of Urethral Meatus)</td>
<td>Mudguyah (size of green gram seed)</td>
<td>At 2 Angula</td>
<td></td>
</tr>
<tr>
<td>Adult women Vaginal</td>
<td>10 Angula</td>
<td>Medhra Aayamasa mama</td>
<td>Mudguyah (size of green gram seed)</td>
<td>At 4 Angula</td>
<td></td>
</tr>
</tbody>
</table>
In current practice, instrument used for Uttar Basti are:

1. **For Basti Netra-**
   - Rubber catheter (8/9 number) or infant feeding tube can be used for urinary Uttar Basti.
   - While for uterine Uttar Basti, Rubin’s cannula, I.V cannula, intrauterine insemination cannula (IUl) can also be used as Basti Netra.

2. **For Bastiputak - Syringe (10-50 ml) can be used.**

3. Cosco’s speculum, sponge holding forceps, artery forceps, uterine sound, heger’s dilator is also required.

4. Other instruments such as Autoclave, kidney tray, cloth to cover all other parts, cleansing materials (swab, gauge piece, savlon), normal saline, gloves, xylocaine jelly etc. are required.

**Time of Administration (Kala Nirdharan)**

- **Uttar Basti** should be given during early morning (Puruvahana) or in afternoon (Madhyayan).

- Urinary Uttar Basti can be given on any day as no specific time is mentioned for administration of Mutra Marg Gata Uttar Basti. While vaginal and uterine Uttar Basti should be given during Ritukala (just after cessation of menses) as mentioned by Acharya Charak and Vagbhatta because Yoni-Garbhhashya Mukha (vaginal and uterine orifices) are widely open during this time and hence Sneha easily enters and gets absorbed there.[11,12]

- However, Acharya Vagbhatta mentioned that during Emergency condition (Atayyik) Uttar Basti can be administered on days other than Ritukala.[13]

- Administration of 2-3 Asthapana Basti is also mentioned before giving Uttar Basti for Shodhana effect, by Acharya Vagbhatta.[14]

**Dose For Uttar Basti (Matra Nirdharan)**

- Acharya Charak has mentioned that dose of Sneha should be ½ Pala for administration of Uttar Basti irrespective of the route.[15]

- While Acharya Sushrut has clearly mentioned different dosage of Sneha and Kwath for Uttar Basti:[16]

<table>
<thead>
<tr>
<th>Gender</th>
<th>Sneha</th>
<th>Kwatha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>1 Prakuncha (1 Pala)</td>
<td>1 Prasruta</td>
</tr>
<tr>
<td>Female</td>
<td>1 Prasruta (Garbhashya Shodhanarth -2 Prasruta)</td>
<td>2 Prasruta</td>
</tr>
</tbody>
</table>

- Acharya Vagbhatta prescribed the dose of Sneha in females as 1 Prakuncha (1 Pala) and in Kanya as 1 Shukti.[17]

- According to Sharangdhar, Vangsen and Bhavprakash, dose of Sneha should be:[18]

<table>
<thead>
<tr>
<th>Females:</th>
<th>Males:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yoni Marga: 2 Pala</td>
<td>&lt; 25 years: 2 Karsha ( ¼ pala)</td>
</tr>
<tr>
<td>Mutramarga: 1 Pala</td>
<td>&gt; 25 years: 1 Pala</td>
</tr>
<tr>
<td>Bala: ½ Pala (2 Karsha)</td>
<td></td>
</tr>
</tbody>
</table>

- Dose should be fixed considering Vaya, Bala, Satva, Satmya etc.

- In Current Practice, for Mutramarg Gata Uttar Basti- 50 ml of Sneha and upto 200 ml of Kasaya can be given while for Yonimarg Gata Uttar Basti only 5-10 ml of Sneha can be given.

**Drugs and Medication used for Uttar Basti**

**For Urinary Uttar Basti**

- In case of any type of infection such as cystitis, urethritis, Shodhana type of Uttar Basti should be given containing Gokshuru, Punarnava, Shatavari, Erand etc. because of their anti-inflammatory and diuretic effect.

- In case of incontinence, Snaikhik Basti of Bala Taila, Ksheerbala Taila, Sukumar Ghrit etc. should be given for their Balya effect.

- Varunadi Kashaya can be used in case of hydronephrosis.

- While any type of Kshar Basti such as Apamarga Kshar or Yavkshar containing Shweta Parpati can be given in case of urinary infections having pus cells in urine.
For Vaginal Uttar Basti

- In any type of discharge from vagina Triphala Kashaya can be used for Uttar Basti, while in case of itching Aaragwadh Kashaya is preferred.
- Any type of Kshar can be used for erosions while Jatyadi Taila or Ghrit can be used in case of wound or abrasions where healing is required.
- Mahatiktak Ghrit can be used for burning sensation.

For Garbhashyagata Uttar Basti

- For infertility - Phalaghrit, Phalkalyanak Ghrit, Shatpushpa Ghrit, Shattavari Ghrit, Ksheer Bala Taila, Mahanaryana Taila, Narayan Taila, Til Taila etc. can be used.
- For uterine prolapse - Bala Taila, Sukumar Ghrit, Brahmi Ghrit can be used.
- For Tubal Block - Kumari Taila (inflammatory origin blockage), Yavkshar Taila (adhesion blockage), combination of Saindhava and Madhu can be used.
- For Tortous tube - Nirgundi Taila can be used.
- Oligomenorrhoea - Kumari Taila.
- Secondary Amenorrhoea - Phala Sarpi, Apamarg Kshar.
- Dysmenorrhoea - Dashmool Trivrit Taila, Sukumar Ghrit.
- Ovulation induction - Lashun Taila, Shatpushpa Taila, Mahanaryana Taila, Narayan Taila.
- Low level FSH and Prolactin - Phalasarpi.

Uttar Basti Procedure

Like every procedure of Panchakarma, Uttar Basti is also carried out in 3 steps - Poorvakarma, Pradhana Karma and Paschat Karma.

Poorvakarma

1. Sambhar Sangraha (Preparation of material- Instruments and Drug)
2. Matra-Kala Nirdharan
3. Atur Siddhata (Preparation of Patient)

Preparation of Patient

In Classics -

- Acharya Vagbhatta has mentioned administration of Niruha Basti prior to Uttar Basti for Shodhan effect as to purify the Mala Marg.[19]
- Acharya Charak advised the patient to take bath then having food mixed with Mansaras and Ksheer and voided her Mala Marga before Uttar Basti.[20]
- Acharya Sushrut mentioned Sthanik Abhyanga and Swedana over abdomen, thighs, groin area and having Yavagu with Ghrita and Dugdha before administration of Uttar Basti.[21]

In Current Practice -

Advise the patient first to empty her bladder and bowel.

↓

B.P and pulse should be recorded.

↓

All instruments should be autoclaved to avoid any type of infection.

↓

Patient should be made to lie down in supine position with well flexed thighs (Lithotomy position).

↓

Yoni Prakshalana with Panchvalkala Kwatha, Triphala Kwatha, Nimba Kasaya, etc. should be done for local aseptic precautions.

↓

Followed by Sthanik Abhyanga and Swedana over abdomen, thighs, and groin region.

Pradhana Karma (Method of Administration)

In Classics -

1. In Lithotomy position, Bastiputaka containing the prescribed Dravya (either Kwath or Sneha) is taken and Bastinetra lubricated with Sneha is carefully introduced into the Apatyamarg and Mutramarga.

2. Bastiputaka is compressed uniformly, so that the Dravya enters the Marga easily.
3. Such Uttar Basti can be repeated 2/ 3/ 4 times in a day and also has to be given consecutively for 3 days. Then the patient is advised rest for 3 days before giving another course of 3 Uttar Basti.\textsuperscript{[22]}

**In Current Practice -**

**Urethral Uttar Basti:**

In Lithotomy position, after cleansing of the part expose the Urethral Opening and catheterize it.

\[\downarrow\]

Then slowly insert the Bastinetra (Rubber catheter) and wait for the residual urine from the other end of catheter.

\[\downarrow\]

After collecting the residual urine, attach the Bastiputaka (Syringe) to Bastinetra and slowly push the drug.

\[\downarrow\]

Then remove the Netra and ask the patient to lie down until she feels urination.

**Vaginal / Uterine Uttar Basti**

In Lithotomy position, after cleansing of the part, Cusco’s speculum lubricated with oil should be inserted into the vagina to see cervix properly.

\[\downarrow\]

Cervix should be exposed with anterior vaginal wall retractor and speculum.

\[\downarrow\]

Then, uterine sound is passed through external OS to find position of uterus.

\[\downarrow\]

After knowing the position, Cervix is dilated using Hegar’s dilator.

\[\downarrow\]

After dilatation, Sneha filled in Bastiputaka fitted with Bastinetra should be inserted gently and oil is instilled slowly into the vagina or uterus.

\[\downarrow\]

All instruments and towel should then be removed.

\[\downarrow\]

Pichu can be kept in vaginal orifice to prevent outside leaking of Bastidrava.

\[\downarrow\]

Patient is advised to return to supine position with leg folded over each other.

**Paschatkarma**

In Classics -

- The Uttarbasti Dravya Pratyagamana Kala is 100 Matra (~31.66 sec)\textsuperscript{[23]}
- Acharya Sushruta says, after the medicine has returned, in the evening considering the Dosha, Ksheera, Yusha or Mamsa Rasa has to be taken.\textsuperscript{[24]}
- Acharya Charaka and Acharya Vagbhatta mentioned the same Paschatkarma for Uttar Basti as of Anuvashana Basti.
- Acharya Charaka says if the Sneha does not return, then observation should be done for one night. If it fails to return, then Teekshna Shodhanavarti should be inserted.\textsuperscript{[25]}
- Acharya Sushruta says, if Sneha does not return then Shodhana Basti can be given.\textsuperscript{[26]}
- He also mentioned the use of Probe in Mutramarga and abdomen is pressed forcefully below the umbilicus.\textsuperscript{[27]} Then, Varti of size of Mudga, Ela and Sarshapa prepared from Aaragwadha Patra with Nirgundi Patra Swarasa, Gomutra and Saindhava smeared with Ghee is inserted into Mutramarga with the help of Shalaka.\textsuperscript{[28]}

**In Current Practice -**

Blood pressure, pulse to be recorded.

\[\downarrow\]

Patient is advised to relax for 30 min in ward in head low position.

\[\downarrow\]

Fomentation over supra-pubic area should be done with hot water bag to relieve pain.
Patient is advised to take light diet in evening.

↓

All the instruments including syringe, catheter, and oil should be properly autoclaved.

Complications

There is no direct reference of Uttar Basti Vyapad, but the Dosha mentioned for Basti such as Bastiputaka Dosha, Bastinetra Dosha, Basti Pranidana Dosha and Basti Pidana Dosha are applicable to Uttar Basti also.

Assessment

Samyak, Ayoga, Atiyoga Lakshana, and Pariharya Vishaya for Uttar Basti is similar to that of Anuvasaana Basti.[29]

Schedules for Uttar Basti:

- In classics, administration of 2/3 Niruha Basti before Uttar Basti is mentioned. Then 2/3/4 Sneha Basti should be injected in the course of day and night. Such treatment should be done for 3 days with gradual increase in the dosage. In the same manner, the procedure should be repeated after an interval of 3 days.[30]
- In practice at OPD level, Uttar Basti can be given alone for 3/5/7 days.
- Uttar Basti can also be given in Yoga Basti pattern (8 days), where Basti according to Yoga Basti schedule is given in morning followed by Uttar Basti in afternoon.

DISCUSSION

Probable Mode of Action of Yonigata (Vaginal) Uttar Basti

Vaginal delivery can be used for systemic as well as local action. The networks of blood vessels like plexus of arteries extending from internal iliac artery, uterine, middle rectal and internal pudendal arteries supply blood to the vagina. The blood cells are abundant in vaginal wall. This vascularity of vaginal tissue is responsible for first uterine pass effect, or direct preferential vagina to uterus transport. The first uterine pass effect can be defined as a preferential transfer of a vaginally administered drug to the uterus. A significantly higher concentration of progesterone in uterus after vaginal administration as compared to oral administration can be taken as an evidence for the above findings.[31]

The vaginal histology mainly consists of four distinct layers:

1. Superficial layer: composed of non-secretory stratified squamous epithelium.
2. Lamina propria or tunica: made of collagen and elastin, which contains a rich supply of vascular and lymphatic channels.
4. Final layer consists of areolar connective tissue and a large plexus of blood vessels.

The drug transport across vaginal membrane mainly takes place by three major ways:

a) Transcellularly (across epithelial cells) via concentration dependent diffusion through the cells.

b) Paracellularly (between adjacent epithelial cells) mediated via tight junctions.

c) Vesicular or receptor mediated transport.

Drug absorption from vaginal delivery system happens in two steps: dissolution in vaginal lumen and membrane penetration. Cervical mucus acts as a permeability barrier in vaginal absorption. As vaginal fluid is watery in content, any drug intended for vaginal delivery requires a certain degree of solubility in water. This explains the absorption of Kwatha Dravya through Yonimarga and use of Madhyama Paka of Sneha for Uttarbasti (same as Basti) that contains substantial amount of water besides, as mentioned by Acharya Charaka.

Factors affecting Vaginal drug delivery[32]

1. Physicochemical properties of the drug like solubility, dissolution rate, chemical structure, stability, and pore size are thought to influence the vaginal drug delivery.

2. Generally, absorption of low molecular weight lipophilic drugs is much more than large molecular weight lipophilic or hydrophilic drugs.
3. Contact time: More the retention of the medicament within the vaginal cavity more will be the absorption. For this reason, Acharya might have advised to perform Uttarbasti, thrice or more at a stretch in a day so that the medicine remains for more time in the contact of the surface. Prolonged contact with the absorbing surface will cause better drug absorption.

**Probable Mode of Action of Garbhashayagata (Uterine) Uttarbasti**[^33]

Theoretically, the drugs may reach into the uterus by the following mechanism:

1. Direct passive diffusion through the tissues.
2. Passage from vagina to the uterus through the cervical lumen.
3. Transport through venous or lymphatic circulatory systems.
4. Concurrent vascular exchange involving diffusion between adjacent utero-vaginal veins and arteries.

Having an insight about vascular supply of uterus helps in better understanding of drug absorption through uterine route. Arterial supply of uterus is mainly derived from uterine arteries which are branches of the internal iliac arteries. The uterus is also supplied by the ovarian arteries, which are branches of the aorta. The uterine arteries pass along the sides of the uterus within the broad ligament and then turn laterally at the entrance to the uterine tubes, where they anastomose with the ovarian arteries. The uterine veins enter the broad ligments with the uterine arteries. They form a uterine venous plexus on each side of cervix and its tributaries drain into the internal iliac vein. The uterine blood is drained into inferior vena cava like vagina, and hence bypassing deleterious “first-pass” effect.

In a study in ex-vivo uterine perfusion model, it is reported that progesterone applied in vaginal tissue reaches to the uterus within 5 h of application. In another study model, sperm sized 99m TC labelled micro aggregates of human serum albumin was administered through vagina which reaches uterus within a minute indicating the direct transport mechanism involving aspiration through the cervical canal. In recent studies, it is seen that the placement of a formulation in different area of vagina dramatically influences the first uterine pass effect. When drugs are absorbed in the outer 1/3rd of the vagina, it passes to the uterus. This explains the efficacy of Yoni Pichu etc. which are kept just near the vaginal entrance. The Basti nozzle is advised to be inserted up to 4 Angula (~7.5 cm); from this fact it can be said that it is almost nearer to the opening of cervix and the drugs laid to this opening may travel towards the uterus by the osmolarity of Sneha. The Sneha which remains in the inner portion of vagina may show systemic effect by being absorbed and transported into inferior vena cava by vaginal, retro sigmoidal, vesical and uterine veins.

**Probable mode of action of Mutramargagata (Urethral) Uttarbasti**[^34]

Drug administered through phallus or female urethra is called Urethral Uttarbasti. A small fraction of orally administered drugs only acts on the desired site either due to poor absorption or due to metabolic loss for which systemic therapy in bladder diseases most often is not fruitful. This loss can be avoided from first pass metabolism, thus the therapeutic effect of a drug at the target site with very minimal side effects can be achieved by administering Intra-vesical Drug Delivery (IDD). The need of a prolonged regimen by oral administration for achieving efficacy can be lowered by IDD.

The main problem of IDD is low residence time of a drug in the bladder that necessitates frequent instillation. Usually, the drug inside the bladder rarely lasts beyond the first voiding of urine after instillation. Another important obstacle of this therapy is low permeability of transitional epithelium of the bladder also known as Urothelium. However, in diseased state, this tough barrier against IDD is somewhat compromised and even then, only mode of membrane transport across urothelium is passive diffusion. Since passive diffusion is the only driving force for intra-vesical drug absorption, the drug transport across the urothelium (trans-vesical) may be improved if the concentration gradient is high. Increasing retention time of bladder is possible by repeating the therapy for prolonged time. The medicine of Uttarbasti (usually medicated oil or ghee; sometimes decoction) are introduced into bladder for 3 to 4 times in a day and should be repeated in every fourth day. Use of Ghee or...
oil in *Uttarbasti* is beneficial as it remains on the urothelium layer for several hours. It fulfills three main criteria: quick adhesion to the urothelium after instillation, should not bottleneck voiding of urine and retained over urothelium for at least several hours.

In *Ayurvedic* classics, the drugs used in *Uttarbasti* have been advised to release at the level of mid portion of penile part of the urethra in male and in urethra of the female. So, there is also a chance of absorption of drug in urethral part. Moreover, in male, it is said to administer *Uttarbasti* in *Hrishta Medhra* (i.e., Erected Phallus). In erect condition, there is huge accumulation of blood in spongy area, which may drain the drugs to the circulation.

**CONCLUSION**

At present, *Uttar Basti* is confined to a very few gynaecological diseases particularly infertility. Its practice in other gynaecological disorders as mentioned in classical texts has almost disappeared. But, if applied with proper indications, septic precautions and extreme carefulness, it can show marvellous results.

**REFERENCES**

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