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Review Article

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A DETAIL CRITICAL REVIEW OF LITERATURE ON UTTARBASTI WITH SPECIAL REFERENCE TO PANCHKARMA

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INTRODUCTION

Before going into the description of the "Uttara Basti" it is important to know about the anatomical considerations of the urethra and bladder as it provides a sound base for Carrying out the description of Mutrapraseka and Basti in the light of modern anatomy along with their applied aspects.

Mutra praseka

Synonyms: Mutrasrota (Su. Ni. 13/53; A.Hr. Ni -9/34), Mutrapraseka (Su. Chi. – 7/36); Mutramarga (Su. Chi. – 7/35; Ch. Si – 9/39; Su. Ut. – 58/18); Mutrapatha (Ch. Chi. 26/37); Mutraseka (Su.Chi.7/38); Mutrayanam (Madhukosha Ni 27/10); Mutrayahi Srota (Da. – Su.Utt.

Anatomical and Physiological consideration: Though, there is no explanation regarding the size shape, and other details but some references in Uttara Basti capter gives an idea about the length of the Mutraseka. The Bastinetra Pramana is said to be of 12 or 14 Angulas in the male and 2 Angulas in the female. (Su. Chi. 37/101-105; Ch.Si.-9/65, 67).

Anatomically it is also related to the testes (Vrishana) as Sushruta himself describes – below the opening of the urinary bladder (internal urinary meatus) and two fingers on right side, the Shukra enters and flows out through the urinary passage (urethra) of the man (Su. Sha. 4/22). This is further substantiated by Sushruta in Udavarta capter wherein he says that "Mutrashaye payuni mushkayoshca shophorujomutravinigrahasca" - (Su.Utt. - 55/15) i.e. suppression of sexual urge leads to Shopha and Ruja in the Mutrashaya (Basti), Guda, Mushka (testes) and leads to the retention of urine (Mutra Apravritti). This is further substantiated by the Laxanas

mentioned in "Shukrashmari" (Ch. Chi. 26/411-42). The Mutrapraseka is the "Urethra", which is described hereafter. The relation of urethra and its epithelium lining are almost in agreement to that mentioned by Acharya Sushruta.

Vyutpatti

Etymology: The term, Uttarabasti "is composed of two words, Uttara "and, Basti". The grammati Cal exposition of the term Uttara is as follows –

- 1. According to noun Uttara = Ut + Tara. The Tara suffix is always used to denote comparatively better status, by this giving meaning of better type of Basti. The prefix "Ut" signifies "superior" status of Uttarabasti.
- 2. Verbal exposition According to Shabdakalpadruma, Uttara = Ut + Tr + Apa, where "Triplavanataranayoh" denotes that the root "Tr" means to float, to sail, to Carry etc.
- 3. According to various commentators, "Gudat" or "Niruhat uttarena margena diyate iti", there by signifying the route of administration.
- 4. According to Vyakarana Nyaya and Mimamsa, Uttara Basti is "Yogarudha samjna".
- 5. According to Svasamjna and Padartha Tantra yukti and Prati Tantra Siddhanta, the word Uttarabasti can be considered as a Ayurvedic technical term which denotes a type of Basti given through Mutra and / or Yonimarga.

Nirukti

- Uttaramarga diyamanataya kimva shreshtaGunatayo uttarabastih" (Ch. Si. 9/50).
- Saniruhaduttaramuttarena va margena diyate iti uttarabasti" (A. S. Su. 28/9).

Definition

The Basti which is given through Uttaramarga or Utkrishta Avayava or therapeutic procedure having Shreshta Guna, is termed as Uttarabasti. Acharya Vagbhata says that the one which is administered after (Uttara) the Niruhabasti procedure is known as Uttarabasti.

However the term "Uttaramarga" can be understood in two ways

- The term "Uttara" represents superior qualities.
- Mutramarga in males and both Mutra and Apathya Marga in females. Utkrishta Avayava means the best part of the body. Generally Basti is administered in three routes -Gudamarga (anal route), Mutramarga (urinary route) and Apathyamarga (in females, vaginal route). The guda Marga and Mutramarga are used for the excretion of Malas but Apathyamarga expels Rajas or menstrual contents in females, which is linked with

Garbhashaya and helps expulsion of foetus. So Apathyamarga and Garbhashaya may be considered as Utkrishta Avayava (A. Hr. Su. 19/70).

- Classification: Both Kashaya and Sneha are administered as Utter Basti
- Apparatus: Bastinetra and Bastiputaka are the two components made use of in the procedure of Uttarabasti.
- **Basti putaka:** "Aurabhra shaukare tu pakshinam tasyalabhe driteh pado mruducarma tato api va" (Su. Chi. 37/107). i.e. one should prepare from the soft skin of the Basti (bladder) of pig, goat or sheep. If these are unavailable then skin of various birds or other animals can be made use of.

Bastinetra

A. For males

a. Length:

"Catudashangulam netramaturangula samitam" (Su.Chi. 37/101)

i.e. the length of the netra should be equal to 14 Angulas of that patient.

"Dvadashangulam" (Ch.Si. 9/51)

i.e. it should be 12 Angulas in length.

b. Size and Shape

"Malati pushpavrintagram chidram sarshapanirgamanam" (Su.Chi. 37/101). "Jatyashvahanavrintena samam gopucca samsthitam" (Ch.Si.9/51).

i.e. the tip should be of the size of the stalk of a jasmine or oleander flower and tapering shape like the cows tail. It must have a hole of the size of a mustard seed.

c. Metals to be used

"Haimam roupyam va (Ch.Si. 9/51-52)

i.e. the Netra should be made out of gold or silver.

d. Provision of karnikas

"Nivishtakarnikam madhye" (Su.Ch. 37/103).

"Dvikarne" (Ch.Si. 9/51).

i.e. one Karnika should be provided at the midpoint of the Netra (i.e. 7 Angulas / 6 Angulas) and the other at the base for proper grip.

Acharya Chakrapani opines - "Dvikarnikamiti netre bastibandhanarthamekatah karnika, apara agre shephato prmana shadanguladai karnika kartavya" (Cakra – Ch. Si. 9/51).

That one of the Karnikas is to be provided at the base for tying the Bastiputaka and other at the distance of 6 Angulas (the length of the Medhra – Ch.Vi. 8 / 117).

e. Length of netra to be introduced

"Angulayatha catvari panca shat sapta va saptangulam param netram pranidheyam bhishagvida himsyadbastim marma cheda pramanadhikam tatah" (Ksharapani).

"Saptangulam ca paramam pranidhanam - (Da. Su. Chi – 37/101).

i.e. the Bastinetra is to be introduced only upto 7 Angulas length and that is the reason why Karnika is to be provided at that length, otherwise if it is introduced to a greater length, the Basti is likely to be injured.

B. For females

a. Length

"Dashangulam" (Su. Chi. 37/103; Ch. Si. 9/65)

i.e. the Netra should be of 10 Angula Pramana.

b. Size, shape

"Mutrasrotah parinaham mudgavahi" (Ch. Si. 9/65)

i.e. its circumference should be of the size of the urethral canal and the channel of Netra should be large enough to allow a free passage of Mudga (green gram seed).

c. Provision of karnika

"Narinam caturangule" (Su. Chi. 37/107).

The Karnika is to be provided at a length of Four Angulas.

d. Extent of introduction of netra

"Tasmapathya marge tu nidaddhyaccaturangulam kanyanam tvekamangulam." (Su. Chi.37/104-105).

"Apathyamarge narinam vidheyam caturangulam ... ekamangulam." (Ch. Si. 9/65).

i.e. it should be inserted in to the vagina upto a depth of Four Angulas and upto a depth of two Angulas in the urethra in case of an adult women. Where as in case of young girls, the catheter should be introduced only upto one Angula in the urethra.

e. Time of administration

"StrinamAartavakale tu Garbham yonistadashighram jite grihnati marute" (Ch. Si. 9/67).

i.e. it should be given during their menstrual period, as the mouth of the uterus at that time and readily receives the ingected Sneha. If the Vata is thus subdued, the uterus becomes readily impregnable.

C. Dosage

The quantity of Aushadha Dravya to be used should be assessed according to Vaya, Bala, Deha, Satva, Satmya etc. but general principle are mentioned in the text –

A. - "Snehapramanam paramam prakuncashcatra." (Su. Chi.37/102). - ".... Snehasyardha palam nayet." (Ch. Si. 9/52).

[here 1 Prakauca = 1 Pala = 4 Tola (48 gm/ml) and $\frac{1}{2}$ Pala = 2 Tola.]

This is the quantity of Sneha to be used for a person above 25 years of age. For a person below 25 the Dosage is adjusted accordingly.

"Matra Shuktirvikalpa va" (A. Hr. Su. 19/73), i.e. the Matra is 1 Shukti which equals 2 Karshas and this is to be adjusted accordingly at as the case.

B. "Snehasya prishritam catra svangulimulasammitam" (Su. Chi. 19/73)

i.e. the Snehapramana for females is 1 Prisrita (Anjali); this is for Uttama Bala Rogi; for Madhyama Bala and Avara Bala patients the dose should be decided by physician. For Garbhashaya Shodhana, the quantity is twice that of the Snehapramana (Da. Su. Chi. 37/106).

Indications of uttarabasti

"Shukram dushtam mutraghatanmutradoshan..... shulam bastou vankshane ghorananyan bastijanscapi rogan hitva mehanuttaro hanti bastih." (Su. Chi. 37/115-16).

i.e. except Prameha, Uttarabasti is indicated in other rogas like Shukradushti, Mutraghata, Mutradosha, Yoniroga, Bastishula, and also in other complicated diseases of the Basti. "Bastijeshu vikareshu yonivibhramshajeshu ... aprasravati mutre ca bindum bindum sravatyapi.....(Ch. Si. 9/63-64).

i.e. Uttarabasti should be administered in disorders of the Basti, prolapse of uterus, other Gynecological disorders, stasis of urine and conditions of incontinence of urine.

Procedure of uttara basti

The method of administration is different in both males and females but mainly the whole procedure can be divided into three parts

- a. Purva Karma
- b. Pradhana Karma

- Pashchat Karma
- a. Purvakarma: Prior to Uttarabasti, Acharya Vagbhata has indicated that 2-3 Asthanpana Bastis should be given in order to purify the Malamarga (A. Hr. Su. 19/70). The dose should be decided according to the condition of the patient. Prior to administration of Uttarabasti, thepatient should have bathed; taken food mixed with meat juice or milk and should have voided his faeces and urine. (Ch. Si. 9/53).

Acharya Sushruta says that Snehana, Swedana should be performed and Yavagu and Ghrita with Kshira should be given (Su. Chi. 37/108).

- **b. Pradhana karma:** The patient should then be seated on a knee high and soft seat in a straight and comfortable position. Then his phallus should be made erect (Nalamasya praharshitam) and Shalaka (probe), smeared with ghee should be inserted in to the urethra. If it can be passed without any obstruction, then the Bastinetra should be introduced according to the size of the phallus (in the line of perineal raphae). If it penetrates too far, it may injure the bladder and if insufficiently inserted the Sneha may not reach its destination. Then, compressing the Bastiputaka without shaking it and without causing discomfort that Bastinetra should be withdrawn. (Su. Chi. 37/109-113; Ca. Si. 9/53 - 56).
- **c.** Pashchat karma: If the given Sneha doesn"t return, then observation should be done for one night. If it fails to return, then Shodhanavarti should be inserted (Ch. Si. 9/57; Su. Chi 37/118.)

Duration

Two, three or four Snehabasti should be injected in the course of day and night. Such treatment should be done for three days with a gradual increase in the Dosage. In the same manner, the procedure should be repeated after an interval of three days (Ch. Si -/ 69; Su. Chi 37/113; A. Hr. Ni. 19/76).

Position in females: The women should lie in spine position with the thighs well flexed. The netra should be introduced in the line of the curve of the spinal column and in such a way that no discomfort is caused to the patient. (Ch. Si. 9/68; Su. Chi.37/113).

Complications and Management: If excessive burning sensation is felt, then Guda Basti with Kwatha of SheetaVirya Aushadis should be given (Su.Chi.37/123-124). All the other complications should be treated similar to the complications of Sneha Basti. The rest of the regimen should be followed like that of Anuvasan Basti (A. Hr. Su. 19/76).

Discussion on modern aspect

Modern aspect of uttarabasti

Intra-vesical therapy is the direct reference of Uttarabasti in modern medical science. Instillation of medicines into the bladder by transurethral Catheterization is known as intravesical therapy. A lot of research has been directed towards this therapy and the physiological properties of bladder epithelium in modulating the effect of the instilled drugs. A few findings in relation to the bladder epithelium and its transport mechanisms are being presented here Bladder epithelium and transport properties: As the mammalian bladder functions as reservoir for hypertonic urine, it must be impermeable to water. Although the structural features of urothelium support the concept of impermeability, the physiologic experiments suggest otherwise.

Ultra structural studies have shown that the lumen of the bladder is lined by the transitional epithelium composed of atleast three cell layers. The inner most layer of the urothelium is formed by the basal cells attached to the basement membrane. An intermediate layer consists of larger cells containing lysosomes and numerous cystoplasmic vesicals. The most superficial apical layer is composed of large hexagonal cells containing microfilaments and covered with glycocalyx. Urothelial impermeability has been inferred form the presence of tight junctions between adjacent apical cells.

Studies have proved that the volume and composition of urine were altered when left in the bladder for 12 hours compared with hourly voiding. Instillation of amino acids into the bladder produces an increase in concentration gradient form the mucosal to the serosal surfaces. Sodium and amino acid gradients suggest that mechanisms exist for transport of substances across the urothelium. In vitro data demonstrates that, the mammalian bladder possesses active ion transport system. Although apical epithelial cells in the bladder are impermeable to water but they actively transport sodium by means of various channels.

Disruption of the polysaccaride layer covering apical cells, increase permeability to urea and has been linked to inflammatory or hypersensitivity disorders of the bladder. It is also possible that other substances such as prostaglandins have a cyto-protective role and effects urothelial permeability. Human bladder mucosa synthesizes a variety of prostaglandins that may influence bladder physiology.

A consensus has not been reached regarding the physiologic role of active ion transport mechanism in the bladder. One function may be in the epithelial cell volume regulation during changes accompanying distention. Because ion transport can occur in several directions; another role for this process may be active maintenance of urine hypertonicity. The extensive vascularity of the sub epithelial region of the bladder has been used as the evidence for this hypothesis. Epithelial permeability could provide a mechanism for exposing smooth muscles to intra vesical contents, thereby altering the bladder contractility. Investigators have demonstrated that intra vesical instillation of anti-neoplastic drugs, anticholinergic drug agents and Calcium channel antagonists influence detrusor muscle function and access systemic circulation. A better understanding of urothelial permeability may explain such disorders as interstitial cystitis and how substances are excreted in the urine or administered intravasically to influence the bladder sensation and the contractility.

Though, these experiments provide ample reference for the action of the bladder epithelium, to interpret these in terms of Uttarabasti and its effects is bit difficult as it would need detailed analysis of the drugs that we instill, in relation to the dose and retention period. Therefore it is difficult to justify the mode of action of Uttarabasti

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