



## Review Article

### A REVIEW ON ROLE OF *UTTAR BASTI* IN THE MANAGEMENT OF ERECTILE DYSFUNCTION

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**KEYWORDS:** *Klaibya*,  
*Dhwajabhangaja Klaibya*,  
Erectile dysfunction,  
*Uttarbasti*.

#### ABSTRACT

In Ayurveda classics, *Klaibya* refers to erectile dysfunction i.e., a man who is unable to perform satisfactory sexual intercourse. Various *Acharyas* has mentioned different causes of the *Klaibya* likes psychogenic, neurogenic, vascular pathological factors. Male sexual dysfunctions are the most common of the psychosexual disorders in clinical practice. It refers to a problem during any phase of the sexual response cycle that prevents the man from experiencing satisfaction from the activity. Mainly *Dhwajabhangaja Klaibya* can be compared with the erectile dysfunction on the basis of symptoms. *Basti* is unique form of treatment modality that not only expels the vitiated *Doshas* rapidly but also nourishes the body. Charaka considered *Basti* as *Ardhachikitsa*, *Uttarbasti* is an important *Panchakarma* procedure where the medicated oil, *Ghrita* or decoction is administered into urinary bladder or uterus and is indicated in genito-urinary disorders of both male and female. *Uttarbasti* is the prime line of treatment in the case of *Klaibya*; it deliberates to overcome the *Dhatukshaya*, *Shukrakshaya* and *Jara-avastha*. Probably *Uttarbasti* acts by following mechanisms first pass metabolism, bladder permeability barrier, neurological stimulation, psychological stimulation. In the results of aphrodisiacs as well as rejuvenation therapy (i.e., *Uttarbasti*) and medication therapies are more effects on erectile dysfunction that may helps in process of erection.

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#### INTRODUCTION

*Vajikarana* is the branch of *Astanga ayurveda* deals with successful sexual life is one of the most basic needs for the process of human lives. All Ayurveda literatures deal with all the aspects of love and sex, with its personal, social, cultural and medical importance. Modernised lifestyle consists of food habits like fast food, junk food and spicy food, irregular meal timings, mental factors like fear, anxiety, stress, shy, tension excess use of electronic gadgets (mobile, computer etc.), excess data consumption, exposed to various radiations and long driving which produced heat and vibration are the *Nidans* of *Klaibya*. These life styles originates various sexual dysfunctions are more common among people now-a-days.<sup>[1]</sup> Erectile

dysfunction is defined as the complete or persistent inability to maintain or achieve a penile erection sufficient for satisfactory sexual performance for a couple. Its etiological factors are also includes age, diabetes mellitus, neurologic diseases, smoking, cardiovascular diseases (CVD), and others.<sup>[2]</sup> Its incidence increases drastically from about 6% in the age group 20-29 years, to 50-70% in the age group 40-79 years.<sup>[3]</sup> Its incidence has been projected to increase significantly to over 320 million by the year 2025.<sup>[4]</sup> India has been dubbed as the impotence capital of the world due to the high incidence of the life style diseases and probably the largest population of males in the world.<sup>[5]</sup> *Uttar Basti* is the best therapy in the

purpose of erectile dysfunction. It is the best among all types of *Basti* because of its excellence property.<sup>[6]</sup> In erectile dysfunction, *Uttarbasti* effects on the penile muscle tone by its proper absorption on bladder muscle, systemic circulation in bladder permeability barrier and neuro-psychogenic pathways. Aims of the article - review on erectile dysfunction, review on *Uttarbasti* and erectile dysfunction management through *Uttarbasti*.

### **Klaibya**

Various *Acharyas* mentioned about *Klaibya*, denotes that

- 1) "*Klaibyamiti dhvajanucchayaha*" – that is absence of penile erection.<sup>[7]</sup>
- 2) "*Klaibyaapaharsetyadi*,
- 3) "*Klaibyamiti shandatetartha*" – lack of interest about sex.<sup>[8]</sup>
- 4) "*Shandata-streegamanaashaktitwam*" – not indulging in sexual activity.<sup>[9]</sup>

According to *Acharya Charaka*, *Klaibya* is classified into 4 types. They are – *Bijopaghataja Klaibya*, *Dhwajabhangaja Klaibya*, *Jaraaja Klaibya* and *Shukra-kshayaja Klaibya*.<sup>[10]</sup> But, *Acharya Susruta* mentioned 6 types of *Klaibya* are.<sup>[11]</sup>

1. *Manasa Klaibya*
2. *Saumyadhatukshayaja Klaibya*
3. *Dhwajabhangaja Klaibya*
4. *Marmachedaja Klaibya*
5. *Bramhacharyaja Klaibya*
6. *Khara-shukraja Klaibya*

### **General Features of *Klaibya***<sup>[12]</sup>

General features of *Klaibya* are –in spite of lovable with female partners, not indulging in sexual activity with her due to erectile dysfunction, further he goes to activities then produces dyspnea, sweating, premature ejaculation and unable to perform coital activity with his partners due to improper erection.

### ***Dhwajabhangaja Klaibya***<sup>[13]</sup>

It occurs due to the excessive intake of *Amla* (sour), *Lavana* (saline), *Kshara* (alkaline), *Viruddhabhojana* (improper combination of foods), *Asatmyabhojana* (unwholesome foods), *Ati-Ambupana* (excessive intake of water), *Vishambhojana* (irregular food habits), *Pishtanna* (pastry foods), *Guru bhojana* (intake of heavy foods), *Dadhikshira-anupamansasevana* (intake of caurd, milk and meat of marshy land animals), *Vyadhikarshanat* (emaciation of body due to suffering from diseases), *Kanyanam* (sexual relationship with un-married girls), *Gamanaadyoni Gamanaadapi* (sexual

intercourse in parts except vagina), *Deergharogachira-utsrista* (sexual intercourse with a woman who suffering from any chronic diseases), *Rajaswala* (sexual act at menstruation time), *Durgandha yoni* (whose vagina is foul in smell), *Dusta yoni* (whose has vaginal diseases), *Parisruta* (has vaginal discharge), *Chatuspadavigamanad-shephasaavighata* (injury of penis by the coitus with the animals), *Medhraadhabanat* (improper washing of penis), *Medhrasyashastra-danta-nakhakshata*, *Kaasthaprahara* (injury to the penis by blunt instruments, teeth, nails and wooden parts), *Nishpeshad* (sinking of urethra), *Shukaati-sevana* (excessive intake of the medicines which used for penile erection for long time), *Retasapratighata* (suppression of seminal urges).

Sign and symptoms of the *Dhwajabhangaja klaibya* are *Medhraswayathu-Vedana-raga* (swelling, pain and redness of the penis), *Tibra-sphota-lingapaka* (pustular eruptions and suppuration on the penis), *Mansavridhi-kshipravrana* (formation of muscular growth and immediate ulceration on the penis), *Pulakaudakasamasrava* and *Shyaba-Arunaprabhasraba* (exudates of the ulcers like rice water, brownish black or pink in colour), *Balaya-Kathinaparigraha* (circular and hard shaped marks appear below the penis), *Visheeryatemanee-Medhra-mushka* (drooping down of the glans penis, whole body of the penis and also testicles).

### **Erectile Dysfunction**<sup>[14]</sup>

ED is defined as the persistent inability to maintain or achieve a penile erection sufficient for satisfactory sexual performance. Its etiologies are - vasculogenic causes (ageing, increased cross-linking of collagen fibres induced by nonenzymatic glycosylation, hypoxia, or altered synthesis of collagen associated with hypercholesterolemia), neurogenic causes (injury or any types of surgery of the spinal cord, multiple sclerosis, peripheral neuropathy), endocrinological causes (decreased level of testosterone hormone due to suppression of gonadotropin-releasing hormone), psychogenic causes (anxiety, depression, relation conflict, loss of attraction, sexual inhibition, conflicts over sexual preference, sexual abuse in childhood and fear of pregnancy or sexually transmitted diseases), medication related causes (like as diuretics e.g. thiazides, spironolactone; anti-hypertensive drugs e.g. calcium channel blockers, centrally acting drugs, beta-blockers; anti-depressants e.g. tricyclic antidepressants, monoamine oxidase inhibitors; H<sub>2</sub> antagonists e.g. ranitidine, cimetidine; hormones e.g. progesterone, estrogens, corticosteroids, GnRH antagonists; anticholinergics e.g. anticonvulsants etc.).

## Physiology of Penile Erection

Penile erection is produced by the Sympathetic and Para-sympathetic pathways. The para-sympathetic pathway originates from intermediolateral columns of S<sub>2</sub>-S<sub>4</sub> sacral spinal segments, passes via pudendal nerves to the pelvic plexus. This pathway causes increased smooth muscle tone that helps in erection. Erection is inhibited by cholinergic para-sympathetic pathways and nonadrenergic-noncholinergic (NANC) pathways. NANC releases nitric oxide (NO) by NO-synthesis that acts on smooth muscle cells. Nitric oxide (NO), helps in the corporal smooth muscle relaxation by increased production of cyclic 3', 5'-guanosine monophosphate (cyclic GMP) and is also defended by endothelin-I (ET-1) and Rho-kinase, which induces vasoconstriction. These may result in penile erection.

The sympathetic pathway originates from the T<sub>11</sub>-L<sub>2</sub> spinal segments and passes through hypogastric plexus. This pathway causes detumescence. It results in sympathetic discharge and ejaculation due to the postsynaptic alpha-adrenergic receptors and activation of Rho-kinase.<sup>[15]</sup> This event increased venous flow into lacunar spaces, indicates increased smooth muscle tone due to intracorporal pressure, at first time. Then, occurs a slow pressure decrease and indicates reopening of venous channels. Lastly, venous outflow is restored and occur flaccid state.<sup>[16]</sup>

## Uttarabasti

In Ayurveda, *Uttarabasti* is defined as the procedure by which administration of drugs (e.g. *Kasaya*, *Kwatha*, *Taila* or *Ghrita*) through urethral route in males and urethral or vaginal route in females. It is the best among all types of *Basti* because of its excellence property.

### Types of Uttarabasti

*Uttarabasti* is classified into various ways-

#### Based on the route of administration<sup>[17]</sup>

*Mutrashayagatauttarabasti*

*Garbhashayagatauttarabasti*

#### Based on the form of drugs<sup>[18]</sup>

*Snehaoranuvasanauttarabasti*

*Niruhauttarabasti*

#### Uttar basti yantra

Mainly, *Uttarbastiyantra* having two parts – *Bastinetra* and *Bastiputaka*

#### *Bastinetra*<sup>[19]</sup>

It is an instrument, which as hollow tube like structure. It is also called as *Pusphanetra*. It can be made up of *Swarna* (gold), *Raupa* (silver) etc. Its

tip should be like as flower's stalk of *Jati* or *Ashwahana* (*Karavira*) and *Go-pucchaakriti* (cow's tail) in shape. The diameter of the openings of the *Netra* should be like pass through a mustard seed (*Sarsapachidranaya*). It has two *Karnikas* (rings). One *Karnika* is situated at the end where the *Bastiputaka* is tied and another at the length of 6 *Angula* from tip. The length of *Bastinetra* should be 12 *Angula* in length (acc. to *Susruta* – 14 *Angula*<sup>[20]</sup>) for males.

#### *Bastiputaka*<sup>[21]</sup>

The *Bastiputaka* is means to a bag or pouch in which contain the *Bastidravya*. It is connected with *Bastinetra* and made up of the bladder (*Basti*) of cow, goat, sheep, pig etc. It should be firm (*Drudha*), thin (*Tanu*), free from vessels (*Nastasira*), does not having any foul smell (*Vigandha*) in nature.

#### *Uttar Basti Vidhi*<sup>[22]</sup>

*Uttarbastividhi* is classified into 3 steps - *Purva karma*, *Pradhan karma* and *Paschat karma*.

#### *Purva Karma*

In *Purva karmas*, the patient should be advised for taking bath and then, subjected for taking food along with *Mansa rasa* (meat soup) or *Payasa* (milk). Then, advised to the patient for evacuating the bowel and urine and the patient is made to sit over the soft chair in comfortable position (*Pitha-janusama*). After that, subjected to *Mriduabhyanga* on the penis, surroundings inguinal region, lower abdomen and buttock.

#### *Pradhan Karma*

At first, physician should hold the penis gently and then, *Ghritayuktashalaka* should be introduced slowly into the penis upto urinary bladder for checking the presence of any obstruction into the urinary tract and it cleared any types of obstruction and also detects the length of urethral passage to urinary bladder. Then, *Bastinetra* (*Pusphanetra*) is smeared with *Ghrita* introduced slowly upto bladder acc. to the direction of perineal suture. *Bastiputaka* (fills with *Bala-ashwagandhataila*) is attached with another opening of the *Bastinetra*. Then, apply gentle pressure over the *Bastiputaka* for administration of the *Uttarabasti* medicine.

***Paschat Karma:*** After retention of urine with medicine, *Mansa rasa Yuktayavagu* should be given.

## DISCUSSION

*Acharya Charaka* explain *Purushartha chatustaya*, they are *Dharma* (virtuous action), *Artha* (wealth), *Kama* (desire) and *Moksha* (salvation).<sup>[23]</sup> Each and every parts has own



importance of a human life. The *Kama* as one among the fundamental factors of *Purushartha* for reproduction. The *Kama* means *Sukha*, it is attained by after properly making obligations and good use of the wealth. Even though the *Kama* is having a broad meaning, in the present study it is used to mention the sexual desire. It comprises many other factors including the normal functioning of behavior, social, psychological and physiological factors. As sexual union is not an individual entity, the partners have equal responsibility in the successful completion of the intercourse; they are assigned with duties to have pleasure and satisfaction. Successful sexual-life is the result of the balance of *Sharirik* and *Manshik Dosha*. *Vata* is the prime reason for vitiation of other *Dosha*. *Basti* balances the *Vata*, and is also *Balya*, *Shukravardhak*, and *Sarvarogaprashamana*.<sup>[24]</sup> In that case medicine may be used *Balaashwagandhatailam*, *Ashwagandha ghrutam*, *Phalaghrutam*, *Kalyanakaghrutam*, *Phalakalyanghrutam*, *Sukumarahurta*, *Mahakalyanakaghrutam*,

#### Probable Mode of Action of *Uttar Basti*<sup>[25]</sup>

In Ayurvedic system, *Klaibya* is managed mainly by *Uttarbasti* and also other drugs. *Uttarbasti* is more efficacy on its excellence properties. In *Klaibya*, *Uttarbasti* is performed after *Virechana karma* because of proper absorption and affects by its absorption, systemic circulation and neural stimulation in hypothetically.

**First pass metabolism:** *Ausadhis* goes to urinary bladder by *Uttarbasti* method. Administered drugs only acts on the desired site either due to less absorption or due to metabolic loss for which systemic therapy in the bladder diseases. Loss can be avoided from first pass metabolism, achieved by administering Interavesical drugs delivery (IDD), for the treatment of disease like cancer. Subsequent to drug instillation into the bladder, the concentration of drug in the bladder tissue in linearly depends on the concentration of drug in urine. Logically it can be expected that trans-vesical (across the urothelium) drug transport may be improved if the concentration gradient remains high since passive diffusion is the sole driving force available for intravesical drug absorption.

Urinary bladder is consists of mucosal cell (composed of transitional epithelium and lamina propria), sub-mucosal cell, detrusor muscle and adventitia. *Ausadhis* absorbed on the epithelium cell with the help of capillary.

#### Bladder permeability barrier<sup>[26]</sup>

The Bladder permeability barrier (BPB) for indexing Interavesical drugs delivery. The BPB

formed by Urothelium makes barrier between bold and urine represents through barrier in comparison to others.

#### Permeability

The urothelial cells has two parallel pathways to move across vasculature, they are trans-cellular pathway (through the cells), and the para-cellular pathway (through the tight junctions and lateral intercellular spaces). The barriers properties of the urothelium are changed by the modifications of either cellular or tight junction permeability.

#### Passive permeability

The bladder is able to maintain large gradients for water, small non electrolytes, ions, protons and ammonium between the urine it stores and blood.

**Neurological stimulation:** S<sub>2</sub>-S<sub>4</sub> somatic neural pathway regulates the external urethral sphincters; same continuation for penile erection, so *Uttarbasti* may inhibits para-sympathetic stimulation from hypothalamus.

**Psychological stimulation:** *Uttar basti* may effects on the alteration of psychological factors e.g. stress, anxiety, depression etc. and helps in penile erection

#### CONCLUSION

The *Klaibya* is a disease, affects natural life process of many human beings due to un-healthy sexual life. Un-healthy sexual life is occur mainly due to various psychological problems like where as partner was poor in a considerable majority of subjects in sexual and nonsexual areas and certain partners were shy, feared or negative towards sex. *Uttarbasti* not only perform to penile erection, also with required mental support of the partners and oral medications also. How *Uttarbasti* effects on urinary bladder still not clearly known.

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**Cite this article as:**

Dipanjan Jana, Gouranga Maity, Raghunath Das. A Review on Role of Uttar Basti in the Management of Erectile Dysfunction. AYUSHDHARA, 2018;5(5):1919-1924.

**Source of support: Nil, Conflict of interest: None Declared**

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