

MANAGEMENT OF MANASIKA KLAIBYA W.S.R.ERECTILE DYSFUNCTION- A CONCEPTUAL STUDY

Rajesh K, Dr. Abdul Khader

¹PG Scholar, ²Reader,

Department of PG studies in Kayachikitsa, SKAMCH&RC, Bengaluru, Karnataka, India

ABSTRACT

Nidra is considered to be one of the *Trayupasthambha*, i.e. 3 pillars of *Ayurveda ahara* (food), *nidra* (sleep), *Brahmacharya* (celibacy). *Nidra* when done in completely it provides *sukha* (happiness), *Pushti* (body growth), *Bala* (strength), *Vrishya* (satisfaction), *Gyana* (knowledge) and *jeevana* (life) and when not done in improper way results in *dukha* (sorrow), *Karshya* (lean), *Abala* (reduced strength) *agyana*, *kleebata* (impotency), *najeevana* (death)¹. *Nidra* is caused when the *manas* gets exhausted or become inactive and the sensory and motor organs become inactive then the individual gets *Nidra*²-----The resultant of awakening in the night time leads to *rookshatha*, which in turn results in *vatadosha prakopa* and *tamo* and *rajo dosha*. According to national sleep foundation poll, almost a 3rd of American employee reports that day time sleeplessness interferes with their daily activities, Those who work long hours report greater impatience, lower productivity, reduced sexual life, etc., Stressful working conditions can lead to three types of strains: Behavioral, physical and psychological. Physical symptoms that may occur because of occupational stress include fatigue, headache, chronic mild illness, and sleep disturbances, Loss of sex drive³. Oxidative stress (OS) is a condition that occurs when the production of Reactive Oxygen Species overwhelms the antioxidant defense mechanisms. In male reproductive pathologies, Oxidative Stress significantly impairs spermatogenesis and sperm function, which may lead to male⁴. *Acharya Charaka* while explaining about *Klaibya* he explains as *Retodosha* as causative factors for *Klaibya*⁵. *Acharya Sushruta* classifies *Manasika Klaibya* as one among *Klaibya*. The treatments explained for the *Nidra nasha* are explained as externally, *abhyanga*, *utsadana*, *snana* etc. *Ekamoolika* drugs like *Aswagandha*, *Bramhi*, and *Yogas* like *saraswathaarishtha*, *manasamithravati* etc can be used⁶.

Keywords: *Nidranasha*, *Manasika klaibya*, oxidative stress, *Retodosha*, *chikitsa*,

INTRODUCTION

Man's best escape from the stresses of life is provided by sleep – and the rest and recuperation which it affords. Sleep occupies 1/3rd of our lives and turns out to involve the basic biological states of the brain

and body. Various studies have shown that up to 30 percent of the adult population complaint of serious insomnia at least once during the course of a year. About a third of all U.S. adults experience some type of sleep

disorders during their lifetimes. A recent estimate says sleep disorders cost the U.S. economy \$45 billion a year. Our natural sleep patterns are controlled by an internal body clock called a “circadian clock”.^{7&8}

It regulates body temperature, hormone levels, heart level and other vital body functions. If someone is suffering chronic loss of sleep, these important functions soon become impaired, overall health is usually affected as is a person’s memory and mood. It is estimated that over the past century a person’s average nightly sleeping time has been reduced by two hours^{9,10}

CONCEPT OF KLAIBYA

Klaibya can be understood under two spectrums, that is due to *Rasa Pradoshaja* and one is under *ShukraPradoshaja*.

Definition of *Klaibya* according to different acharyas:

- Means lack of penile erection. (Ch.Su. 28/18 Ck.)

CLASSIFICATION OF KLAIBYA

- Means lack of penile rigidity(As.Sa.Ci. 13/32 Indu)
- Means incapability of a person to perform sexual act and its form is *Klaibya*. (Y.R. pg. 429)

Acharya charaka explains that “When a person is unable to cohabit with a submissive, beloved partner due to looseness of his penis, although there is constant firm desire to do so, or if sometimes attempts to do sexual act, he feels breathlessness, fainting with profuse perspiration and all attempted ends into failure without ejaculation due to flaccidity of penis, is considered as *Klaibya*.”

- From this it is clear that lack of erection and lack of rigidity are the cardinal features of *Klaibya*.
- Hence it is more appropriate to use the term “Erectile Dysfunction” or male erectile disorder in particular for describing *Klaibya*.

TABLE NO-1, SHOWING CLASSIFICATION OF KLAIBYA ACCORDING TO DIFFERENT ACHARYAS

TYPES	CHARAKA (CA.CH. 30/154)	SUSHRUTA (SU.CI. 26/10-15)	BHAVAPRAKASHA (BH.P.UT.KH 72/1-9)
<i>Bijopaghataja</i>	+	-	-
<i>Dhvjabhangaja</i>	+	-	-
<i>ShukraKshayaja</i>	+	+	+
<i>Jarasambhavaja</i>	+	-	-
<i>Manasika</i>	-	+	+
<i>Sahaja</i>	-	+	+
<i>Aharaja</i>	-	+	-
<i>Pumsatvapaghataja</i>	-	+	-
<i>Bramhacharyajanita</i>	-	+	-
<i>Pittaja</i>	-	-	+
<i>Viryavahinadichedana</i>	-	-	+
<i>Shukranirodhaja</i>	-	-	+
<i>Medhrarogajanita</i>	-	-	+

NIDANA OF KLAIBYA¹¹

TABLE NO-2, SHOWING LIST OF NIDANAS ACCORDING TO ACHARYAS

KLAIBYA	AHARAJA NI-DANA	VIHARAJA NIDANA	MANASA NI-DANA	ANYA NIDANA
<i>Bhija Upagataja</i>	<i>Shita, Ruksha, Alpa, Sanklisha, Anashana, Viruddha, Ajirna-bhojana</i>	<i>AtistriSevana, Shrama, Abhicara</i>	<i>Avishvasa, Shoka, Chinta, Bhaya, Trasa, Narinamarasajna-ta</i>	<i>RasadiKshaya Vatadi - Vaishamyapa Pancakar-mapacara</i>
<i>ShukraKshaya</i>	<i>Ruksa Anna-PanaRuksaAushadha Nirahara Asatmyabhajana</i>	<i>Ativyavaya</i>	<i>Cinta, Krodha, Shoka, Irsya, Bhaya, Utkantha, Udvega-in Excess</i>	<i>Ashurasadi DhatuKsaya RaktadiKsaya Krusata</i>
<i>Pittaja</i>	<i>Katuatisevana Amlaatisevana Lavanaatisevana</i>			
<i>Jaraja</i>	<i>AvrusyaSevana Anahara</i>	<i>Shrama</i>	<i>Klama</i>	<i>RasadiKsaya BalaViryaksaya Indriyaksaya Ayusakarsana</i>
<i>Sthira Shukraja</i>		<i>Balina Brahmacharya Shukravega Nirodha KsubdhaManana</i>		

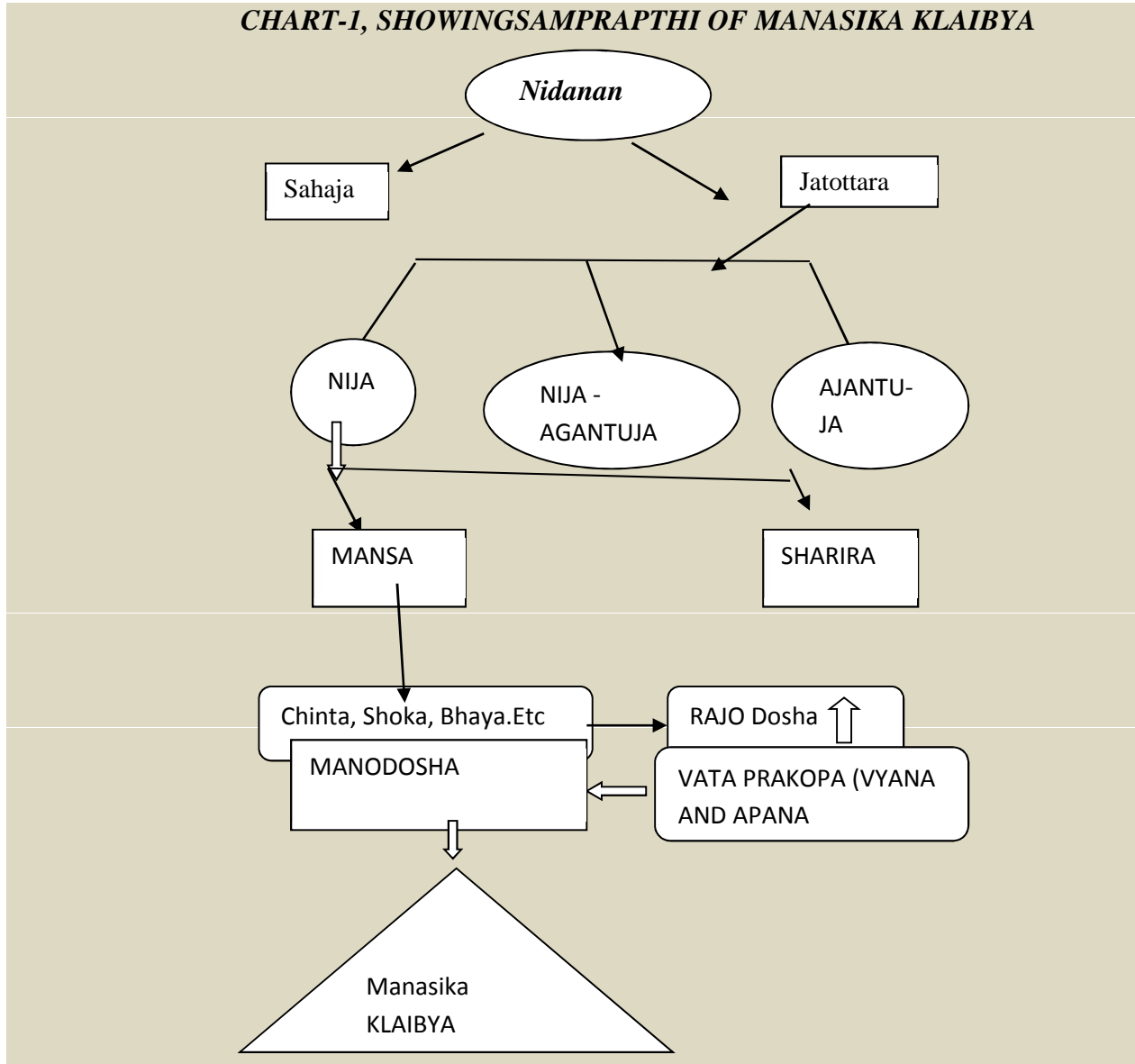
II. Nija –Agantuja Kilaibya:

TABLE NO-3, Nidana mentioned for MedhraRogaja (DhavajabhangajaKlaibya)

KLAIBYA	AHARA	VIHARA	MANASA
<i>Dhvajabhangaja Klaibya</i>	<i>AtiAmla AtiLavana Kshara Virudhha Asatmya Vishama Anupmamsa Pishtanna Gurubhojana Atyambupan</i>	<i>Kanyagamana Ayonigamana Dirgharogayonigamanayoni ChiotsrusthaYonigamana ChatuspadaGamana RajasvalaYonigamana DurgandhaYonigamana Medhrasya-Adhavana Sukatisevana RetasaPratighata</i>	<i>Moha Kamaharsita</i>

III. AgantujaKlaibya: Shastra, Kshara, Agni, Kshata, Abhighata

CHART-1, SHOWINGSAMPRAPTHI OF MANASIKA KLAIBYA



NEUROTRANSMITTER WITH ITS FUNCTION¹²

Neurotransmitters are also known as chemical messengers. They are endogenous chemicals that enable neurotransmission. They transmit signals across a chemical synapse, such as a neuromuscular junction, from one neuron(nerve cell) to another "target" neuron, muscle cell, or gland cell.

“Sexual arousal occurs not just in the genitals but in the whole body and, especially, in

the brain. For men, it actually begins when the brain sends impulses down the spinal cord and out to the nerves that serve the penis. These impulses trigger the production of nitric oxide (NO), which causes penile arteries to dilate and the spongy core of the penis to relax and become engorged with blood.

The neurotransmitter that carries the sexual message is acetylcholine (ACh).

ACh also seems to control sexual behavior through its activity in the brain.”

Acetylcholine is one of a number of neurotransmitters that are involved in sexual response, but is of particular significance to ED sufferers because it is the dedicated chemical messenger sent between brain and penis along the spinal cord to stimulate erections.

❖ FUNCTIONAL CLASSIFICATION OF NEUROTRANSMITTERS:

1. Excitatory Neurotransmitter

2. Inhibitory Neurotransmitter

- Neurotransmitter effects may be excitatory (depolarizing) and/or inhibitory (hyperpolarizing)
- Determined by the receptor type of the postsynaptic neuron
- Gaba and Glycine are usually inhibitory
- Glutamate is usually excitatory
- Acetylcholine-excitatory at neuromuscular junctions in skeletal muscle

ERECTILE DYSFUNCTION¹³

Erectile dysfunction (ED) is defined as the consistent inability to achieve or maintain an erect penis sufficient for satisfactory sexual intercourse.

- ED affects approximately 10% of men and >50% of men >70 years.
- Erectile dysfunction may occur as a result of several mechanisms:
 - Neurological damage
 - Arterial insufficiency
 - Venous incompetence
 - Androgen deficiency
 - Penile abnormalities
 - Iatrogenic: medications or supplements
 - Psychogenic

Evaluation

History

- *Sexual history*
- Extent of the dysfunction, its duration, and progression

- Presence of nocturnal or morning erections
- Abrupt onset of erectile dysfunction that is intermittent is often psychogenic in origin.
- Progressive and persistent dysfunction indicates an organic cause.

➤ *Symptoms of hypogonadism*

Reduced libido, muscle strength, and sense of well-being

➤ *Full medical history*

E.g., diabetes mellitus, liver cirrhosis, or neurological, cardiovascular, or endocrine disease

Intermittent claudication suggests a vascular cause.

A history of genitourinary trauma or surgery is also important.

Recent change in bladder or bowel function may indicate neurological cause.

Psychological history

➤ *Drug history*

- Onset of impotence in relation to commencing a new medication

➤ *Social history*- Stress, Relationship history, Smoking history, Recreational drugs, including alcohol

PHYSICAL EXAMINATION

- Evidence of primary or secondary hypogonadism
- Evidence of endocrine disorders:
 - Hyperprolactinemia, thyroid dysfunction, hypopituitarism.
 - Other complications of diabetes mellitus, if present
- Evidence of neurological disease
- Autonomic or peripheral neuropathy
- Spinal cord lesions
- Evidence of systemic disease, e.g.: Chronic liver disease, chronic cardiac disease Peripheral vascular disease

CAUSES OF ERECTILE DYSFUNCTION¹⁴

Psychological (20%)	Stress, anxiety, Psychiatric illness
Drugs (25%)	Alcohol, Anti-hypertensive, e.g., diuretics, B-blockers, methyldopa, Major tranquillizers, Tricyclic antidepressants, benzodiazepines, Glucocorticoids, anabolic steroids, ant androgens
Endocrine (20%)	Hypogonadism , Hyperprolactinemia, Diabetes mellitus , Thyroid dysfunction, Obstructive sleep apnea
Neurological	Spinal cord disorders, Peripheral and autonomic neuropathies, Multiple sclerosis
Vascular	Peripheral vascular disease, Trauma ,Diabetes mellitus Venous incompetence
Other	Hemochromatosis, Debilitating diseases, Penile abnormalities, e.g., priapism, Peyronie’s disease, Prostatectomy

INVESTIGATION OF ERECTILE DYSFUNCTION

➤ *Baseline investigations*

- Serum testosterone
- Prolactin, LH, and FSH if serum testosterone is low
- Fasting blood glucose
- Thyroid function tests
- Liver function tests
- Renal function
- Serum lipids
- Serum ferritin (hemachromatosis)

Testicular size (using orchidometer)

- Normal: 15–25 ML
- Reduced to <15 ML in hypogonadism
- In Klinefelter’s syndrome, they are often <5 ML.
- In patients with normal testicular size, suspect genital tract obstruction. e.g., Congenital absence of vas deferens.

- MRI: useful for assessing penile fibrosis and severe cases of Peyronie’s disease.

SCALES¹⁵ - International Index of Erectile Function short form (IIEF 5) Also known as the

Sexual Health Inventory for Men (SHIM) **GRISS QUESTIONARE FOR MALES-** It’s a questionnaire which contains about 36

question with which will be able to find out the type of male sexual dysfunction weather it’s a primary or secondary.

CHIKITSA¹⁶

DIETARY FORM

Shali Rice, Curd, Milk, Wheat, Ikshu , Pishta, Mamsa rasa Sweet, Draksha, Mishrimamsa of Anupadeshiya, Masha, Ghrita, Yush, To use theonion inTila

Vihara

Comfortable beds, Comfortable room, Proper time, To wear clean cloth, To speak slowly, To take bath, To observe celibacy, To lay down in fragrant and airyplace.

DRAVYA CHIKITSA

- *Brahmi* powder or mixed with the sweet drink form
- *Sankhapushpi* powder or in the sweet drink form
- *Ashwagandha* powder 3gm + *Pippalimula* powder 3gm. to be given twice a day with milk.
- *Ashwagandha* powder 2gm + *Pippalimula choorna* 2gm +*Parasikayavani choorna* 2gm mixed and to be given with milk or-water at night before sleep.
- *Loknath Rasa*

- *Ashwagandha Churna* with *Sharkara* & *Ghee* (Vangasena)
- *Kashaya of Jeevaniya Gana* with milk (A. S.)
- *PippaliMoola Churna* with *Jaggery* (B.P.)
- Roasted *Vijaya choorna* with *madhu* (B.P.)
- *Sarpagandha* powder – 2gm with milk twice/thrice daily
- Decoction of root and bark of *Kakamachi* with *Jaggery* (B.P.)
- *Nidrodaya Rasa* (*Rasatarangini*)
- *KalyanakaGuda* (*Ch. Kal. 7*)

ADRAVYA CHIKITSA:

- Using articles of Pleasant smell and sound (Ch.)
- Gentle rubbing (Ch.)
- To listen good music and news (Su.)
- To keep the mind in a calm and happy state (A.H.)
- Living without worry (A.S.)
- To remain as always satisfied. (A. H. Su. 7/66-67)

EXTERNAL FORM

- *Abhyanga* • *Utsadana* • *ChakshuTarpana* • *ShiroLepa* • *VadanaLepa* • *MurdhaTaila*
- *KarnaPurana* • *ShiroBasti* • *Shirodhara*, *Tailadhara*, *Takradhara*, *Kshiradhara*.

RESEARCH UPDATES

- Research has shown that those with apnea have greatly decreased testosterone, libido and erectile function and it's all from inadequate sleep. And don't just get the idea that its severe sleeping disorders such as apnea that effect erectile function: researchers have found that even "shortened Rapid eye movement REM latency" and "reduced theta power", i.e. poor sleep quality, are associated with erectile dysfunction as well.
- Another big risk factor for erectile dysfunction is inflammation. A 2008 UCLA study found that disturbing just a few

hours of participant's normal sleep led to significantly increased inflammation levels throughout the body. One 2009 study showed that a key marker of inflammation (TNF alpha) was increased by too little sleep as well. (By the way, some markers of inflammation, specifically C Reactive protein and IL6, Were increased by too much sleep, so moderation is in order here.)

DISCUSSION

- Often, the appearance of normal sleep processes at inappropriate times, In a sense they are analogous to sexual parapraxias, in which a fundamentally normal, but often minor, activity in the context of overall sexual behavior comes to dominate and to disturb other aspects of sex Idiopathic Insomnia
- In the samprapthi of *Mano dosha*, the *Dhatu* like *Shukra Kshaya* in particular and *Dhatu Kshaya* in general, aggravation of *Vata particularly Vyana* and *Ap-ana* and *Shukra vaha Srotodusti* have a major role in *Klaibya*
- The erection is a neuron vascular event, any disease or dysfunction affecting the Brain, Spinal cord, Pudendal and Cavernous nerves or receptors in the terminal arterioles and cavernous smooth muscle can induce Erectile Dysfunction.
- The possible mechanisms have been proposed to explain the inhibition in psychogenic dysfunction i.e., direct inhibition of Spinal erection center by the brain as an exaggeration of the normal Suprasacral inhibition (Steer1990) and A sub classification of psychogenic ED has been proposed, Type-1, Type-2, Type-3, Type-4, Type-5.

- Neuropsychological testing studies suggest that their pattern of deficits is different from that typically seen in sleep deprivation. Insomnia does not seem to estimate time differently from good sleepers.
- Thus, it appears that the problem of insomnia is more complex than first meets the eye, and the solutions for it are probably different from merely increasing the number of minutes of EEG-measured sleep.
- Among those that have been proposed are energy conservation, restoration of cellular energy stores, emotional regulation, consolidation of memory, and preservation of context in which to organize memory of new stimuli.
- Theories of functions of dreams in modern times are many, ranging from views that they represent manifestations of unconscious conflicts or mechanisms for assimilating stressful events or those they represent a delirium-like state.
- Positron emission tomography (PET) studies of rapid eye movement (REM) sleep suggest that there is activation of the pontine brainstem, as well as limbic and Para limbic cortical structures mediating emotional responses, accompanied by a reduction in activity of dorso lateral prefrontal cortical structures regulating executive and mnemonic cognitive processes.
- In the case of sleep disturbance due to depression, for instance, it is possible that fundamental alterations in biogenic amine metabolism that alter mood states may also lead to sleep disturbance.
- Lack of sleep is tied to many conditions that can effect erections including heart

disease. What researchers actually recently discovered is that the arteries of people getting low sleep levels (less than five hours) actually become significantly more calcified.

CONCLUSION

- Due to *Nidranasha*, The *Rajo Guna* keep the *manas* in active condition and this over activity of Manas doesn't allow to take sound sleep, When the *Manasika Bhavas* cross the physiological limit, they are considered as *Manasika Vikara*, which is pathological state, adversely affecting the mind and the body.
- The treatment should be aimed with drugs having *Nidrajannajna*, *Medhya*, *Manasa Dosha hara etc* which helps in correcting stress and anxiety and inducing Sleep.
- The Emotions are responses to internal and external stimulation characterized by multiple systems like subjective, physiological, behavioral and relational. Emotional reactivity indicates the individual threshold, peak intensity, rise time and recovery time in response to emotional stimulation.
- Considering the interaction between sleep and emotional valence, poor sleep quality seems to correlate with high negative and low positive emotions, Good sleep seems to be associated with high positive emotions.
- Sleep and impotence are intimately related: hardened arteries will be BAD for an erection since nice, flexible, expandable arteries that allow blood to flow into penis.
- Another way that lack of sleep can lead to erectile dysfunction is through high blood pressure, or inflammation, high

blood pressure is a known risk factor for erectile dysfunction and scientists have recently discovered the close link between sleep and high blood pressure.

- Lack of sleep is also correlated with lower testosterone and testosterone is critical for male libido and the androgen receptors on the pelvic/penile muscles that contract and trap blood in the penis.
- In the article an attempt is made to understand *Nidra* which is a primary need for Humans when disturbed would affect in males resulting in Sexual function.

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CORRESPONDING AUTHOR

Dr. Rajesh. K

Email: Rajeshkrishna_1987@rediffmail.com

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