

A CRITICAL REVIEW ON THE CONCEPT OF NASAPANA AND ITS MODE OF ACTION.

DR. UNNIKRISHNAN. V. S¹, DR. PRASHANTH. A. S.², DR. PRIYADARSHINI³

¹P G Scholar, ²Prof. and Head, Department of Kayachikitsa, Ayurveda Mahavidyalaya, Hubli, Karnataka, ³Lecturer, SLN Ayurvedic College, Amritsar

ABSTRACT

Ayurveda prescribes Panchakarma therapy for the elimination of vitiated dosas. It is the process by which the root causes of the vyadhi is corrected and the essential balance of 'Tridosha' is maintained in the body. In our day to day life due to life style changes, improper food habits, medicines, tobacco, alcohol, Sleeping disturbance, suppression of urges, mental stresses, depression, night awaking & day sleeping mankind get affected with many painful diseases including many *Shiro Gata Rogas*. The nose is the doorway to the brain and it is also the doorway to consciousness. Vagbhata, quotes *Shiras* as *Urdwa moola*, *Adah shakha* as branches and this is a metaphor, the Shiras is situated above and from there the branches are distributed downwards. These nerves produce and control the functions of the whole body. *Nasa* is told as *Dwara* for *Shiras* which is *Uttamanga*. chakradutta in vata vyadhi chikitsa, mentioned *Nasapana* in management of *Apabahuka*, *Viswaci*, *Pakshagata*, *Ardita* and *Manyastamba*. *Nasapana* is the nasal administration of internal medication in larger dose. Ayurveda is based on scientific ways of its kind. Facts mentioned in Ayurvedic classics do not merely stand on imaginations or logical interpretations but are written after careful investigations, observations and experimentations. As the detailed description of procedure is not found, here in this article an attempt is made to explain in detail about NASPANA.

KEYWORDS: *Nasapana*, *Nasya*, *Apabahuka*, *Manyastamba*, *Viswaci*, *Ardita*.

INTRODUCTION

The nasal administration of internal medication in larger dose is called *Nasapana*. The nasa is the doorway to the brain and it is also the doorway to consciousness and directly connects the external environment with brain. Vagbhata, quotes Shiras as *Urdwa moola, Adah shakha* as branches and this is a metaphor, the Shiras is situated above and from there the branches are distributed downwards. These nerves produce and control the functions of the whole body. Nasa is told as Dwara for Shiras which is *Uttamanga*. Chakradutta in vata vyadhi chikitsa, Nasapana is stated in management of *Apabahuka, Viswaci, Pakshagata, Ardita and Manyastamba*. Chakradatta the pioneer of Nasapana gives the explanation as ***Pibennasyam*** which has to be understood like drinking through nose. He used the word ***Nasyanipito*** ie the word nipito has got 2 meanings one is paana and the other is concentrated form of dravya. As nasapana is the administration of medicated kashaya through nose in larger dose, in the sense chakradatta says, the dosage of kashaya should be similar to the

kashaya which is given orally, Approximately 1 pala.

Nasapana is made of two words Nasa and pana.

In Ayurvedic texts, Nasa Dhatu is used in sense of nose (***Nasa Nasikayam***).

Pana means *pibenartha*, intake, to drink. The word also carries meaning "Rakshana" as it saves one from marana due to daha

Nasapana is indicated in specific conditions like *Ardita, pakshaghata, Apabahuka, Viswaci, Manyastamba, Bahu Shosha and Shirogata Vata*. The fact which is common among these indications is all are *Urdhwa jatru gata vikara* and are resultant of *Margavarana Samprapti* and *Dhatukshya*. The involvement of *Vyana Vata, Prana Vata* in the manifestation of these Vatavyadis is definite; in order to nourish this Prana vata we need to administer the dravya via nose, as the nose, as the doorway to consciousness. Prana or energy of life enters the body through breath taken in through the nose. Nasal administration of medication helps to correct the disorders of affecting the higher cerebral, sensory and motor functions. So the mentioning of

pibennasyam by Chakradatta appears to be more scientific in this context.

HISTORICAL REVIEW OF NASAPANA:

There were no traces of Nasapana in Samhita kala. It came to limelight during the period of Chakrapani, he has not mentioned about Nasapana in his commentary on Caraka samhita. In the context of *Bahusheersshagata vata* he has commented that Nasya with taila prepared from *Masha* and *saindhava* is beneficial in the management of *Bahusheersshagata vata*.

Chakradatta:

He has made this unique contribution in his work Chakradatta. In vata vyadhi chikitsa Nasapana is stated in management of *Apabahuka, Viswaci, Pakshagata, Ardita and Manyastamba*. The detailed description of procedure is not found. Yogas like *Baladi kwatha, Masha Baladi Kwatha, Dashamoola Bala Masha Kwatha* are seen.

Bhavaprakasha:

He has included the same in his work and he has added *Baladi Kwatha* in management of *Sheersshagata Vata* in Vata Vyadhi Chikitsa.

Vangasena Samhita:

In Vata Vyadhi Chikitsa, Vangasena has mentioned the same Yogas for Nasapana; he has added *Dashamoola Kashaya* in managing *Pakshagata*.

Yogic literature:

In the authentic text of Yoga Ghrenda Samhita, Neti karma is explained as one among the shat karmas, it is of two types, jala neti and sutra neti. It destroys Kapha dosha and gives clear vision.

NASAPANA VIDHI:

There is no specific guideline mentioned for nasapana. so the procedure is taken as nasyavat. ie the poorvakarma paschat karma and all other precautions are taken similar to nasya. the procedure is more similar to the jalaneti so nasapana can be done as jalaneti technique.

Nasapana includes

- Poorva Karma
- Pradhana Karma
- Paschat Karma

Poorva Karma:

This includes the following points like, Preparation of kashaya Sterilization of Specially designed Nasapana yantra, Atura vaya, Kala, Atura siddhata etc. Before taking Nasapana patient is strictly advised to take food. Then, patient is taken to a comfortable room,

which is without dust, extreme breeze and sunlight. Bahyasnehana in the form of Mrudu Abhyanga is done to shiras first and then over Gala, Kapola, Lalata and Karna. After Snehana, mild Swedana is done to the part of the body above the shoulders. Care of the eyes should be taken with closing the patient's eyes with a band of cloth.

Pradhana Karma:

Once the Poorva Karma is over, the patient is made to sit comfortably on a chair. (As there is no such specifications seen in classic about the position for Nasapana, as the procedure Nasapana is considered to be followed as Nasyavat. For Nasya It is been explained in the classics that the position of head should be little lowered and on the same time legs should be raised little. But practically it was found difficult for the patient to swallow kashaya in this position so the best position for Nasapana is sitting posture and at the same time the head has to be slightly elevated.) The head of the patient is then highly elevated and with the help of left thumb patient's nose raised simultaneously with the right hand, the medicine is poured into the nostril at a stretch with the constant pressure over the

bulb. The same procedure should be repeated for other nostril also. During the procedure patients are asked to swallow the contents as much as possible.

Paschat Karma:

Gandoosha and kavala graha followed. The patients were advised to take sukshosha jala and laghu ahara. Patients are strictly advised to avoid sheeta jala snana and sheeta jala pana during the whole course.

DOSE OF NASAPANA:

Chakradatta has advocated the dosage of drava dravya used for Nasapana should be similar to the kashaya which is given orally, 1 pala. (48ml) approximately 40ml, it has to be considered as the total dose of administration. So the total dose has to be divided equally for both the nostrils i.e, 20 ml in each nostril.

In most of the medicines explained in nasapana, acharyas mentions about prakshepa dravyas which are teeksha and rooksha, in some context tailas are mentioned as prakshepa dravya and Also some medicines are used in the form of ksheera paka. So in such cases we can incorporate the dosage principles of nasya in this context.

Acharya sarangdhara has described the following dosage schedule for nasya karma according to the materials used.

Tikshna aushadha choorna-1shana(4masha)(24ratti), Hingu-1 Yava(1/2 Ratti), Saindhava-1 Masha (6 ratti), Dugdha-8 Shana(64 drops), Jala(Aushadhasiddha)-3Karsha(3 Tola), Madhura Dravya-1 karsha(1 Tola).

NASAPANA YOGAS:

1. Baladi kwatha - Decoction on Bala Mula, Paribhadra or Swarasa of Kapikacchu taken orally or Masa Rasa taken for 1 month makes the affected arm very strong resembling in power of vajra.
2. Dasamuladi kwatha - Decoction of Dashamoola, Bala, Masha, added with Taila and Ghritam as Nasapana after food in the evening alleviates Apabahuka and Viswachi.
3. Decoction prepared of Masha. Atmagupta, Balamoola, Vatari, added with Hingu and Saindhava cures Pakshaghata.
4. Baladi kwatha- Bala Moola Kashaya and Saindhava, cures Bahusheersagata vata, Manyastamba.

5. Mashabaladi kwatha - Masha, Bala, Kapikachhu, Katruna, Rasna, Aswagandha, Eranda added with Hingu and Saindhava alleviates Pakshaghata, Manyasthamba, Karnanada, Ardita within a week.

6. Jalapana - Intake of water through nostrils in early morning acts as rasayana, promotes vision and alleviates shades, wrinkles and greying, Pinasa, Kasa, Swarabheda, Shotha.

Most of the drugs used in the Nasapana are either Kaphavata Shamaka or Vata Shamaka some of the drugs are Teekshana such as Hingu, Saindhava and Eranda moola. They produce irritation of the nasal mucosa which increases the nasal secretions as a result of increased circulation .It also probably generates a chemical impulse which is further transformed into electrical impulse which is finally converted into a neuronal impulse. This neuronal impulse influences on cerebral cortical areas thereby producing a stimulatory effect leading to evacuation of dosha. Also the irritant effect of Nasapana dravya increases blood circulation to the brain. So the accumulated morbid doshas are expelled out through small

blood vessels. Ultimately the morbid dosha are thrown out along the nasal discharge, tears and saliva. Also the vatashamaka drugs and Brumahaniya drugs allieviate vata .Hence probably this preparation is effective in both Dhatuksayajanya and Margavaranjanya Vata Vyadhis.

Acharya Cakradatta specifies to add taila and Ghrita to Mashabaladi Kashaya and Dashamooladi Kashaya, the specific reason behind this may be that nose being rich in vascular structure nasal mucosal membrane provides good absorbing surface. Hence yamaka sneha containing lipids in it surpasses the blood brain barrier and also carry active principles of kashaya with them. These active principles may reach upto certain levels in nervous system to produce vatagna effect and bala, masha bring about Brumhana effect i.e., regeneration of the tissuses. In this way Nasapana helps in management of Systemic disorder like Pakshaghata as well.

PROBABLE MODE OF ACTION OF NASAPANA:

Theories put forward for explaining Nasya karmukta holds good for

Nasapana too, as the route of administration is the same.

It can be understood by following concepts:

1. Absorption via nasal mucosa.
2. Absorption via gut.

1. Absorption via nasal mucosa:

Regarding the absorption of drug through the nasal mucosa it is possible that a fraction of this drug is absorbed through the mucous membrane. Many nerve endings which are arranged in the peripheral surface of mucous membrane i.e, olfactory, trigeminal etc. Probably the drug after entering the nasal cavity first reaches the olfactory epithelium through which it reaches the olfactory nerve from there it enters cribriform plate of ethmoid bone and reaches anterior cranial fossa. Finally it probably reaches the medial and lateral olfactory areas of cerebral cortex and will be stimulated by Nasapana dravya and impulses are transferred through central nervous system. This results in better circulation and nourishment of the organs. Many drugs absorbed through the rich blood supply of the nasal mucosa enter the systemic circulation more rapidly than administered orally. Due to Ushna guna of drugs the

Dosha sanghata (compactness) Vilayana takes place. Action of Tikshna guna is to break the mala and dosha in microforms. Due to Sukshma guna, drug reaches micro-channels, disintegrates endogenic toxins, which are then excreted through the micro-channels (Anupravana bhava).

If the mode of action is similar to that of Nasya then a question arises that why larger quantity of medicine is administered via nose which is a real practical difficulty and a question of patient's acceptance.

This can be interpreted as follows:

It has been said earlier that Pranavata is also said to be involved in the pathogenesis of the diseases like Apabahuka, Viswaci, Pakshagata, Ardita and Manyastamba..i.e, in order to nourish this Prana vata we need to administer the dravya via nose, is the nose, as the doorway to consciousness. Prana or energy of life enters the body through breath taken in through the nose. Nasal administration of medication helps to correct the disorders affecting the higher cerebral, sensory and motor functions. So the mentioning of pibennasyam by Chakradatta appears to be more scientific in this concept.

One of the reasons for the low degree of absorption of peptides and proteins via the nasal route is rapid movement away from the absorption site in the nasal cavity due to the mucociliary clearance mechanism, so larger dose enables to increase the rate of absorption as well the time taken for administration of larger dose, the continuous stream also contribute for greater absorption.

2.Absorption via gut:

In order to produce an effect, a drug must reach its target site in adequate concentration. This involves several processes embraced by the general term pharmacokinetics. In general, these processes are:

- 1.** Administration of the drug.
 - 2.** Absorption from the site of administration into the bloodstream.
 - 3.** Distribution to other parts of the body, including the target site.
- An important step in all these processes is the movement of drug molecules through cellular barriers (eg intestinal walls).

Phagocytosis is one more process where the absorptive cells engulf the material and exerts its action. After the dravya is administered into the gut,

absorption is accomplished with the help of enterocytes. The end products are absorbed mainly in the intestines through the villi. Each villus is connected to the circulatory and lymphatic systems. The dravyas are absorbed with the help of energy by an enzyme and the sodium ion cofactor. Absorbed drug enter directly into the circulatory system and fat soluble into lymphatic system by the absorptive cells of villi, which then go to the liver via portal vein for metabolism. Here we need to take consideration of yakrit which is Raktavaha Sroto Mula and Siras being Upadhatu of Rakta Dhatu, the dravya when reaches yakrit does the poshana of sira and thereby helps in Samprapti Vighatana. The intestinal villi may also be taken as Pakwashaya –seat of vata, as the general rule of pharmacokinetics when the drug reaches its target it has to exert its action.

A careful review of principles of Ayurvedic physiology and pharmacology indicates that Ahara (food substances) and Oushadha (drugs) Dravyas undergo digestion and metabolism synthesizes nutritive and active principles along with Kitta

formation. The substances like Mutra, Purisha, and Sweda are the bi-products of drug metabolism and drug metabolites are excreted through them. The metabolism of drug usually tends to make the less polar, lipid soluble substances (Guru Guna Dravyas) as more polar and water soluble (Laghu) thus facilitating their excretion by kidneys. If a drug is already highly polar and water soluble, then it may not get metabolized and may get excreted as such. Excretion of each and every herb was not studied and reported so far. Modern pharmacology attributes the activity of a drug to its chemical structure and Ayurveda explains it by the drug's Panchabhautic configuration and the profile of Panchabhautic ratio is inferred with the general principles like Rasa, Guna, Virya and Vipaka.

SUPERIORITY OF NASAPANA OVER NASYA:

The major limitation with nasya is the poor contact of the formulations with nasal mucosa. Many attempts have been made in the recent past years to increase the residence time of drug formulations in the nasal cavity, resulting in improved nasal drug absorption. Researchers became

interested in the nasal route for the systemic delivery of medication due to high degree of vascularization and permeability of the nasal mucosa. Hence, in Nasapana when the kashaya in the larger dose is poured continuously definitely has the more residence time of aushada dravya as compared to that of nasya, thus the better nasal drug absorption may take place

Moreover Nasapana is unique in itself due to its matra. It is taken in equal quantity as that is given orally, so administration of larger amount of Nasapana dravya through nostrils enables high rate of absorption via nasal mucosa and when compared to nasya. It also stimulates Prana vata which controls all indriyas.

PROBABLE COMPLICATIONS OF NASAPANA

- Administration of medicine in unhygienic conditions may lead to upper airway infections and thereby cause sensory irritations of the nasal mucosa.
- If not properly administered there is a chance of getting injury to the pathway
- Improper administration can cause pulmonary aspiration leading to

Pneumonia and even death within minutes from asphyxia.

BIBLIOGRAPHY

- 1) Acharya Vagbhata, Ashtanga Hridaya, Sarvanga Sundara commentary of Arunadatta and Ayurveda Rasayana of Hemadri, edited by Bhisagacharya Hari Sadashiv Sastri Paradakara Vaidya, Varanasi; Chaukambha Surbharti; reprint- 2010.
- 2) Chakrapanidatta, Cakradatta- Chikitsa Sangra, translated by P V Sharma, Varanasi; Chaukambha Publishers: 2007.
- 3) Kaviraj Shri Ambikadattashastry, Bhaishajya Ratanavali vidyotini hindi vyakhyateeka, Varanasi; Chaukambha Prakashan: Reprint 2013.
- 4) Shri Vaidya Sodhala – Gadanigraha, translated by Sri Indradeva Tripathi, Varanasi; Chaukamba Sanskrit Samsthana: 2nd edition 2001.
- 5) Sharangadhara, Sharangadhara Samhita, VaidhyaSagarPandit Parasurama sastri, Choukhambha Orientalia, Varanasi, 2002.
- 6) Vangasena, Vangasena Samhitha, Nirmal saxena, Choukamba Sanskrit Series Office, First edition, Varanasi.
- 7) A text book of swastavritta by Dr. Mangalagowri.V.Rao. chaukamba orientalia reprint edition 2012.

- 8) Dr.Vasant C. Patil, Principles & Practice of Panchakarma, Published by Chaukamba Orientalia 4th Edition 2014. volume1published by CBS publishers and distributors, Delhi 32 1991.
- 9) Human Anatomy by Dr. B.D. Chauriasia, 2nd edition,

Corresponding author:

DR. UNNIKRISHNAN. V. S

PG Scholar, Dept. Of Kayachikitsa, Ayurveda Mahavidyalaya, Hubballi.

Email: drvsnikrishnan@gmail.com

Source of Support: NIL

Conflict of Interest : None declared

