



Review Article

ISSN: 2454-5023
J. Ayu. Herb. Med.
2019; 5(2): 70-75
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www.ayurvedjournal.com
Received: 18-01-2019
Accepted: 07-03-2019

Nasya Karma in Visha Chikitsaa: An emergency drug-delivery system

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ABSTRACT

Poisoning is always an emergency condition that doctor has to handle diligently and cautiously. *Nasya karma* (NK)- drug delivery through nasal passage is considered to be the best one among all the panchkarmas for all *urdhwajatrugata* (Organs above the adam's apple) diseases. According to its practical application with minimum requirements, its accessibility is comparatively is easier. From 2016, CCIM has declared *Agadatantra* as a clinical subject. *Agadatantra* is the ayurvedic toxicological science which deals with the study of signs and symptoms of different types of poisons and its management. Among the twenty-four treatment modalities of *vishachikitsa*, *nasya* is one. But practice application of drugs which are used for NK in poisoned cases were not available at first hand. **Objective:** to present relevant data available in all the major classics of Ayurveda collectively regarding NK in poisoning, its procedurals applicability in detail. **Discussion:** From the available data, it is observed that there are ample drugs and *agadas* (anti toxic drugs) are mentioned for the NK in different types of poisoning. Almost in all types i.e. in *Sthaavara* (inanimate-plants, minerals, metals) and animate poisons (Snakes, scorpions, etc.) NK is indicated as a first aid treatment. So, this article may prove much helpful to researchers, UG, PG, scholars and scientist fraternity for innovative way of fast acting drug delivery system. Some latest researches are also mentioned supportive of the research question. **Conclusion:** one is able to establish the significance, use and procedures of *Nasya* in poisoning cases.

Keywords: *Aagadatantra*, *Vishachikitsa*, *Nasyakarma*, Antitoxic drugs.

INTRODUCTION

The concept of targeted drug delivery system has been originated from the perception of Paul Ehrlich, who proposed delivery of drug to be as a 'Magic Bullet' [1]. Nasal cavity has a large surface area and highly vascularized mucosa. Drugs are absorbed by the rich network of blood vessels and are passed through systemic circulation; thus, it avoids first pass metabolism. Despite the potential of the nasal route, a number of factors limit the intranasal absorption of drugs, especially the proteins and peptide drugs, these factors are the mucus and epithelial barrier, mucociliary clearance and enzymatic activity. Rapid mucociliary clearance of drug formulations that are administered through the nasal cavity is thought to be an important factor for the low bioavailability of drugs administered intranasally. Increasing the residence time of the drug formulation in the nasal cavity and thus prolonging the period of contact with the nasal mucosa may improve the drug absorption. The intranasal route of administration will probably have great future scope for the development of peptide preparations and other drugs those administered parenterally. Surface modification technology can be used as an excellent formulation strategy for nose to brain drug delivery.

Out of all types of Panchakarma, *Nasya Karma* is the best therapy for *Urdhwajatrugata Roga* and especially for *Naasaagata Roga* according to all Ayurvedic scholars and ancient literatures. Without *Nasya karma*, it is not possible to eliminate the vitiated *Dosha*, which are situated in *Shira* or *Naasaa Pradesh* [2]. "*Nasya*" becomes a prime therapy for maintaining the health of "*Urdhwajatru*" region, because it is the only *Karma*, which finds a place in simple routine references like "*Dinacharya*" and also within the most sophisticated places like "*Panchakarma*".

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DESCRIPTION OF NAASAA

As per its etymology, the word 'Naasaa' is derived from the root word "Nastru" which means "the only gateway to head". The Ayurvedic classics explained Naasaa as the only route to the head. Therefore, a lot of medicaments are advised to be introduced through nose, which can influence the head directly, especially in unconscious conditions as well as in fatal emergency conditions like *Sanyaasa*, *Murchchhaa*, *Sarpadamsha* etc. [3]

Historical Background of Nasya Karma – A review

Since ancient times, India is very well known worldwide for its splendid civilization (culture) which had its own system of medicine i.e. Ayurveda. It is difficult to find its root; but glimpses point that, Indian culture origins from Vedic time. Therefore, we find the references of Naasaa (Nose) as an *Indriya* in ancient classic literature, like Yajurveda, Atharvaveda and Bhagawata Geeta.

Although it is very difficult to say that the procedure of Nasya Karma therapy was in practice during Vedic period. But a few Mantras of Rigveda indirectly refer towards the Karmas which are included under Panchakarma measures. There is a Mantra of Rigveda, in which eradication of Roga from the routes of *Naasaa* (Nostrils), *Chibuka* (Chin), *Shira* (Head), *Karna* (Ear) & *Rasana* (Tongue) are mentioned [4]. Thus, we can assume that this reference of eradication of diseases through the above mentioned routes probably refers towards Nasya Karma or *Shirovirechana*. However, the term "Nasya Karma" has been used many times in Krishna Yajurveda, *Shatapatha Braahmana* & *Upanishada*.

In Buddha period, there are some Jaataka stories about the famous Vaidya "Jeevaka", who has reportedly utilized Nasya Karma several

times such as – Nasya of medicated Ghrita for the treatment of Shirah Shoola and Nasya of Virechana Aushadha to Lord Buddha as well. The same reference about Nasya of Virechana Aushadha is mentioned in Vinaya Pitaka as well.

Even in Vaalmiki Raamaayana, the famous reference regarding use of the herb "Sanjeevani" mentions the use of Nasya Karma. The drug "Sanjeevani" was blew by Sushena in the nose of Lakshmana to make him conscious.

After Buddha Kaala, Ayurvedic Classics like Charaka Samhita, Sushruta Samhita and Ashtaanga Hridaya became famous, where the subject of Nasya Karma therapy is elaborately described. In Samhita period, the specification in Nasya Karma had reached to such an extent of perfectness that it was being used not only for the treatment of adult humans but also for the fetal health [5].

Etymology according to Vaachaspatyam

The literary meaning of the word "Nasya" is "being in the nose" or "the things beneficial to the

Nose". *Vaachaspatyam* also derives the word 'Nastah' which means "beneficial for the nose".

Definition of Nasya: As stated by Sushruta, administration of medicines or medicated oils through the nose is known as a Nasya [6].

Synonyms: *Shirovirechana*, *Shirovireka*, *Murdhavirechana*, *Nastah Karma*, *Naavana* are the synonyms of *Nasya Karma*.

Table of classification of Nasya according to various Aachaarya

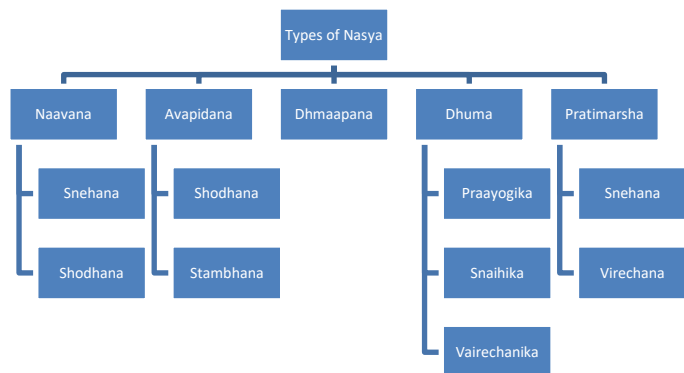
Sr. No.	Name of Aachaarya	No.	Reference	Classification
1	Charaka	3	Ch.Si. 9/89,92 Ch.Vi. 8/154	According to mode of action – <i>Rechana</i> , <i>Tarpana</i> , <i>Shamana</i>
		5		#According to the method of administration – <i>Naavana</i> , <i>Avapidana</i> , <i>Dhmaapana</i> , <i>Dhuma</i> , <i>Pratimarsha</i>
		7		According to various parts of drugs utilized - <i>Phala</i> , <i>Patra</i> , <i>Mula</i> , <i>Kanda</i> , <i>Pushpa</i> , <i>Niryaas</i> , <i>Twak</i>
2	Sushruta	5	Su.Chi.40/21	<i>Shirovirechana</i> , <i>Pradhamana</i> , <i>Avapida</i> , <i>Nasya</i> , <i>Pratimarsha</i>
3	Vaagbhata	3	A.H.Su.20	<i>Virechana</i> , <i>Brimhana</i> , <i>Shamana</i>
4	Kaashyapa	2	Ka.Si. 2 & 4	<i>Brimhana</i> , <i>Karshana</i>
5	Shaarangadhar	2	Sha.Utt.8/2,11,24	<i>Rechana</i> , <i>Snehana</i>
6	Dalhana	2	Su. Chi.	<i>Praayogika</i> , <i>Snaihika</i>
7	Videha	3	40/31	<i>Sangyaa Prabodhaka</i> , <i>Stambhaka</i>

Charaka's Classification of Nasya

According to Aachaarya Charaka, Nasya is of five types viz. *Naavana*, *Avapida*, *Dhmaapana*, *Dhuma* and *Pratimarsha* [7]. *Naavana* is further divided into *Snehana* and *Shodhana*; *Avapidana* into *Shodhana* and *Stambhana*; *Dhuma* into *Praayogika*, *Vairechanika* and *Snaihika*; while *Pratimarsha* is divided into *Snehana* and *Shodhana*.

The above mentioned five types of Nasya are regrouped according to their pharmacological action into three groups viz. – *Rechana*, *Tarpana* and *Shamana* [8].

Charaka Samhita has also mentioned 7 types of Nasya according to parts of the drugs to be used in Nasya Karma viz – *Phala*, *Patra*, *Mula*,



It is clear from the above description that, two types of classification of Nasya Karma are available in Ayurvedic literature:

One is based on the pharmacological actions viz. *Rechana, Tarpana, Shamana*.

Other is based on the preparation of drug and the method of its application. e.g. - Dhmaapana (Powder is blown), Avapida (Extracted juice is used), Dhuma (Smoking through nose) etc.

Nasya Karma has been mentioned as a treatment modality in *Visha Chikitsaa* [10]. In this perspective, *Nasya* can be defined as the procedure in which the medication given through the nasal route removes the poison as well as the vitiated *Dosha* from the head and neck region. It also stimulates the centers in the brain which are affected by the *Madakaari Guna* of *Visha* and helps to regain the consciousness of patient immediately.

Therefore, in the context of *Visha Chikitsaa* (Treatment of Poisoning), the following three types of *Nasya* are more important -

- 1) **Avapida Nasya**- The word Avapida means the juice expressed from leaves or paste (Kalka) of required medicine (Chakrapaani). (Sha. Utt. 8/12)- method of Avapida nasya

Rationale: Avapida Nasya is specifically indicated in *Vishaabhighaata* [11].

Drugs: For Shodhana purpose, Kalka of Tikshna Dravya like Saindhava, Pippali etc. has been mentioned as Avapida Nasya.

Dose: Like *Shirovirechana*, *Avapida Nasya* should be given in the following dose –

Hina Maatraa - 4 drops

Madhyama Maatraa - 6 drops

Uttama Maatraa - 8 drops

- 2) **Dhmaapana Nasya**- *Dhmaapana* or *Pradhamana* is specifically a Shodhana Nasya.

Definition: This type of *Nasya* is instilled using medicated *Churna* (Powder) for *Shirovirechana*. It is mentioned as *Dhmaapana* in *Charaka Samhitaa* and *Pradhamana* in *Sushruta Samhitaa*.

Rationale: *Pradhamana* is described on the 13th rank among the *Chaturvinshati Upakrama* used for the treatment of poisoning.

Principle: When the medicated powder is blown into the nose, it gets spread through the respiratory passage into the body, by which the spreading of poison is reduced and this is one of the preventive measures to reduce spread of poison.

Drugs: The powders of medicines like *Katukaa, Katabhi, Katphala* should be blown up into the persons nostrils to reduce the spreading of the poison.

Method: In *Pradhamana Nasya*, *Churna* (Powder of drugs) is administered (Inhaled) by Nasal passage with the help of *Naadi Yantra* (6 *Angula Naadi*, open ended on both sides). The *Churna* (Fine powder) of required drug is kept at one end and air is blown from the other end, so that the medicine could enter into the nostrils [12].

Videha: Aachaarya Videha has described another method for *Pradhamana*, in which fine powder of drug is kept in a *Pottali* made of a thin cloth and is used to inhale, so that smallest particles of the medicine enter into the nostrils.

Dose: According to Videha, the dose of *Dhmaapana Nasya* is three *Muchuti* (3 pinch). For the *Pottali* method, *Churna* should be at least 2 Tola i.e. 20 gms.

Drugs: Generally *Tikshna* drugs like Rock salt, *Garlic, Guggulu, Maricha, Vidanga*, etc. are used for this type of *Nasya*. Hence, caution should be taken during its administration.

- 3) **Dhoomapaana** – *Dhooma* means medicated smoke, while *Dhoomapaana* means inhaling the medicated smoke through nostrils.

Principle: Fumes or smoke arising from anti-toxic materials are used for detoxification. This anti-toxic medicated smoke enters the body & clears all the channels (*Strotasa*) of circulation from all kinds of obstructions. On entering the body, this fume also nullifies the toxic effect of the poison.

Rationale: *Dhooma* is described on the 17th rank among the *Chaturvinshati Upakrama* used for the treatment of poisoning.

Dhuma Nasya: It is defined as the medicated fume taken by nasal route and eliminated by oral route. Aachaarya Sushruta hasn't described it as a type of *Nasya*. The smoking per mouth is known as *Doomapaana* and is not included in *Nasya*. It is harmful to the eye sight.

Drugs: For *Praayogika Dhuma*, drugs like *Priyangu, Ushira* etc. should be used.

For *Snaihika Dhuma*, drugs like *Vaasaa, Ghrita* etc. should be used.

For *Vairechanika Dhuma*, drugs like *Aparaajitaa, Apaamaarga* etc. should be used [13].

INDICATIONS OF NASYA (Nasal medication) IN POISONING

In the cases of poisoning, various herbal drugs or drug formulations have

been advised for use through nasal route in Aayurvedic texts. Moreover, the *Nasya Karma* has been indicated in many different types of

poisoning conditions. It can be observed from the textual illustrations given as follows.

Sr. No.	Drugs/Formulation used for <i>Nasya</i>	Indication
1	<i>Mrutasanjeevana Agada</i> ^[14]	In all types of poisoning
2	<i>Shirishapushpa Yoga</i> ^[15]	<i>Sarpa Damsha</i> (Snake Bite)
3	<i>Parama Agada</i> ^[16]	Poisoning by <i>Vishvambhara</i> etc. (An insect)
4	<i>Kshaaraagada</i> ^[17]	In all types of poisoning
5	<i>Moola</i> (Roots) of <i>Bandhujeeva, Bhaarangi</i> and <i>Krushna Tulasi</i> ^[18]	<i>Shirogata Visha</i> (When effect of poison is seen in head), Unconsciousness due to <i>Visha</i>
6	Powder of <i>Pippali, Hingu, Vrishchikaali, Manashilaa, Shirishabeeja, Apaamaarga, Lavana</i> ^[19]	<i>Shirogata Visha</i> (When effect of poison is seen in head), Unconsciousness due to <i>Visha</i>
7	<i>Pippali, Kshavaka, Ativishaa and Maricha</i> ^[20]	<i>Shirogata Visha</i> (When effect of poison is seen in head)
8	<i>Kaakaanda and Shirisha Patra Swarasa</i> ^[21]	In 5th Vega of <i>Sthaavara Visha</i>
9	<i>Nasya</i> ^[22]	<i>Darveekara Sarpa Damsha</i> (in 3 rd Vega)
10	<i>Tikshna Avapida Nasya</i> ^[23]	<i>Darveekara Sarpa Damsha</i> (in 7 th Vega)
11	<i>Avapida Nasya</i> ^[24]	<i>Raajimaana Sarpa Damsha</i> (in 6 th Vega)
12	<i>Vaartaaku, Beejapura, Jyotishmati</i> etc. ^[25]	When obstruction occurs in nose, eye, ear, tongue and throat due to poisoning
13	<i>Tikshna Pradhamana Nasya</i> using <i>Churna</i> (Powdered drugs) ^[26]	When the person is unconscious due to poisoning
14	<i>Shyaamaa, Yavaphala, Faninjaka, Shirisha</i> grinded with <i>Vaartaaka juice or Sarpi Manda</i> ^[27]	In <i>Lootaa</i> poisoning
15	<i>Shirisha Phala Saara</i> ^[28]	In <i>Mushaka Visha</i>
16	<i>Kutajaadi Pradhamana Nasya</i> ^[29]	<i>Vrishchika, Unduru, Lootaa, Sarpa, Gara Visha</i>

Administration of *Nasya*

The procedure of giving *Nasya* therapy may be classified into the following three headings:

1) Purva Karma (Pre-measures)- Before giving *Nasya*, prior arrangement of the materials and equipments should be done. There should be a special room “*Nasya Bhavana*” free from atmospheric effects like direct blow of air and dust etc. and with appropriate light arrangement ^[30]. Following articles should be collected before *Nasya*. (i) *Nasya Aasana*- (a) A chair for sitting. (b) A cot for lying. (ii) *Nasya Aushadhi*– Drugs required for induction and management of *Shirovirechana* should be collected in the form of *Kalka, Churna, Kwaatha, Kshira, Udaka, Sneha, Aasava, Dhuma* etc. in sufficient quantity. (iii) *Nasya Yantra*- For *Snehana, Avapida, Marsha* and *Pratimarsha Nasya*, there should be a dropper or *Pichu*. For *Pradhamana Nasya*, 6 *Angula Naadi* and specific *Dhumayantra* for *Dhuma Nasya* are required. Besides these, one needs efficient assistant, dressing material, spitting pots, bowl, napkins and towels also.

2) Pradhaana Karma (Nasya therapy)- As described by the *Bruhatrayi* (3 Major *Aachaarya*), the following procedure should be adopted for performing the *Nasya Karma* ^[31].

Patient should lie down in supine position with ease on *Nasya* table. *Shira* (Head) should be “*Pralambita*” (Lowering or head down position) and feet slightly raised. Head should not be excessively flexed or extended. If the head is not lowered, the nasal medication may not reach to the desired distinction and if it is lowered too much, there may be the danger of getting the medication to be lodged in brain. After covering the eyes with clean cotton cloth, the physician should raise the tip of the patient’s nose with his left thumb and with the right hand, lukewarm medicine (*Sukoshna Aushadha*) should be dropped in both the nostrils alternately in proper way ^[32].

The drug should neither be less nor more in the dose, it should be in the proper quantity. It should neither be very hot nor very cold i.e. it should

be lukewarm. The patient should remain relaxed while taking *Nasya*. He should avoid speech, anger, sneezing, laughing and shaking of head during *Nasya Karma* ^[33].

3) Paschaata Karma (Post measures) ^[34] - After administration of medication through nasal passage, patient should lie supine (*Uttaana*) for about 2 minutes time interval & he should be asked to count the numbers up to 100. After administration of *Nasya*, feet, shoulders, palms and ears should be massaged ^[35]. The head, neck and cheeks should again be subjected to sudation. If possible, snuffing of *Rasna churna* should be done for *Vaata Prashamana*.

Mode of action of *Nasya Karma*

A clear description regarding the mode of action of *Nasya Karma* is not available in *Aayurvedic* classics. According to *Aachaarya Charaka, Naasaa* is the gateway of *Shira*. The drug administered through nose as *Nasya* reaches the brain & eliminates the morbid *Dosha* responsible for producing the disease.

According to *Ashtaang Sangraha, Naasaa* being the gateway to *Shira*, the drug administered through nostrils reaches *Shringaataka* (*A Siraa Marma*) by *Naasaa Srotas*. It spreads in the *Murdhha* (Brain), *Netra* (Eyes), *Shrotra* (Ears), *Kanthha* (Throat), *Siraamukha* (Opening of the vessels, etc.) and scratches the morbid *Dosha* in supra-clavicular region, finally expelling them out from *Uttamaanga* ^[36].

Aachaarya Sushruta has clarified *Shringaataka Marma* as a *Siraa Marma* formed by the union of *Siraa* (Blood vessels) supplying to nose, ears, eyes & tongue. He further points out that injury to this *marma* will be immediately fatal ^[37]. *Indu*, in his commentary on *Ashtaanga Sangraha*, has opined *Shringaataka* as the inner side of middle part of the head i.e. *Shiraso Antarmadhyama*.

According to all prominent *Aachaarya, Naasaa* is said to be the gateway of *Shira*. It doesn’t mean any channel which connects directly to the

brain, but they might be connected through blood vessels or through nervous system (olfactory nerve etc.)

There have been certain researches which have indicated that, the nasal route of administration of drug can prove to be a better option for drug delivery. Kumaar Aanand (1979) had attempted contraceptive drug administration by per nasal route & has opined that the route is more beneficial than systemic administration. Micheal Russel (1977) has observed that the perspired scent, which has been painted on the upper lips, has caused the synchronization of menstrual cycle in female volunteers by constant smelling. Scientists of Institute of Medical Sciences, New Delhi have proved after experiments that, drug administered through nose shows effective action in the brain. So, it can be said that there is a very close relation between *Shira & Naasaa*. Thus, to understand the pathways used for action of *Nasya* drugs on central nervous system, it is important to explore the modus operandi of *Nasya Karma*.

CONCLUSION

Nasya Karma, being an important measure in *Visha Chikitsaa*, has been broadly mentioned in 24 treatment modalities by *Aacharya Charaka*. It can be observed that *Nasya Karma* is not mentioned only as a single method, but three different types of *Nasya Karma* have been indicated for this purpose, namely *Avapida Nasya*, *Dhmaapana Nasya* and *Dhuma Nasya*. This is only because of the great utility of *Nasya Upakrama* in the cases of poisoning.

Even though such a wide range of treatment options have been suggested in the cases of poisoning; however, every treatment modality out of the 24, cannot be used in all the types of poisons. Other treatments like *Vamana* (Emesis) or *Virechana* (Purgation) have been indicated in some types of poisoning, while they are contraindicated in certain other conditions. However, *Nasya Karma* is one such treatment method, which has been indicated in almost all the different types of poisoning viz. inanimate poisons as well as animate poisons like *Sarpa Damsha*, *Mooshaka Visha*, *Lootaa Visha*, *Vishvambhara insect bites*, as well as the *Kritrima Visha* i.e. *Gara Visha*. This shows the importance of *Nasya Karma* in *Visha Chikitsaa*.

The *Nasya Karma* has been specifically indicated, when the poison reaches the head region (*Shirogata Visha*). As the medicines administered through *Nasya* directly enter the central nervous system, this treatment modality can be aptly used in such emergency medical conditions. The administration of *Nasya* doesn't need any specific pre-therapeutic measures like *Snehana* (Oleation) or *Swedana* (Sudation) etc. which are compulsory before other starting other treatments like *Vamana* or *Virechana*. This makes it more suitable for its use in the emergency cases of poisoning.

Moreover, the utilization of *Nasya Karma* has been observed right since the Vedic period and this extensive tradition of *Nasya Karma* gives lots of confidence about its safety and efficacy. Even certain researches in modern medical science have proved its utility, but still there is a greater need to explore and utilize this treatment option in a more scientific manner.

REFERENCES

1. Patel Z, Patel B, Pardeshi C. Nose to brain targeted drug delivery bypassing the blood-brain-barrier: an overview. *Drug Invent Today*, 2012; 4(12):615-615.
2. Dr. Brahmanand Tripathi, Charak Samhita. vol 2, Chikitsasthana 30/294; Ch. Si. 9/93; Su. Chi. 40/23; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005;
3. Dr. Brahmanand Tripathi, Ashtang Hridaya, Sutrasthana. 20/1 Chaukhamba Sanskrit Pratishthan Delhi; reprint 2011; page no.1162
4. Dr. Brahmanand Tripathi; Rigveda. 10-16-4

5. Dr. Brahmanand Tripathi; Charak Samhita; vol 1(sharirasthana. 8/19), Chaukhamba Surbharati Prakashan Varanasi; reprint 2005.
6. Kaviraj Ambikadutta shastri, Sushrut Samhita. Chikistasthana. 40/21,, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 54.
7. Dr. Brahmanand Tripathi, Charak Samhita. vol 2 siddhisthna 9/89-92 Chaukhamba Surbharati Prakashan Varanasi; reprint 2005.
8. Dr. Brahmanand Tripathi, Charak Samhita; vol 2 siddhisthna 9/89-92 Chaukhamba Surbharati Prakashan Varanasi; reprint 2005.
9. Dr. Brahmanand Tripathi, Charak Samhita, vol 1 (Vimanasthana 8/154), Chaukhamba Surbharati Prakashan Varanasi; reprint 2005.
10. Dr. Brahmanand Tripathi, Charak Samhita. vol 2, Chikitsasthana 23/54-60,190,193, 196,213,214,242,248; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no. 780.
11. Kaviraj Ambikadutta shastri, Sushrut Samhita. part-1, Dalhana on Chikistasthana.40/44, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 47.
12. Dr. Brahmanand Tripathi, Charak Samhita. vol 2, Siddhisthana 9/107; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no. 795.
13. Dr. Brahmanand Tripathi, Charak Samhita. vol 1(Sutrasthana. 5/20-26), Chaukhamba Surbharati Prakashan Varanasi; reprint 2005.
14. Dr. Brahmanand Tripathi, Charak Samhita. vol 2, Chikitsasthana 23/54-60; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no. 759.
15. Dr. Brahmanand Tripathi, Charak Samhita. vol 2, Chikitsasthana 23/193; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no. 791.
16. Dr. Brahmanand Tripathi, Charak Samhita; vol 2, Chikitsasthana 23/214; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no. 795.
17. Kaviraj Ambikadutta shastri, Sushrut Samhita. part-1, Kalpasthana 6/3, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 54.
18. Kaviraj Atridev Gupta, Ashtanga Sangraha. Uttarsthana 42/37; Chaukhamba Krishnadas Academy Varanasi; reprint 2005; page no. 359.
19. Kaviraj Atridev Gupta, Ashtanga Sangraha. Uttarsthana 42/37; Chaukhamba Krishnadas Academy Varanasi; reprint 2005; page no. 359.
20. Kaviraj Atridev Gupta, Ashtanga Sangraha. Uttarsthana 42/37; Chaukhamba Krishnadas Academy Varanasi; reprint 2005; page no. 359.
21. Dr. Brahmanand Tripathi, Charak Samhita. vol 11, Chikitsasthana 23/45; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no.757.
22. Kaviraj Ambikadutta shastri, Sushrut Samhita. part-1, Kalpasthana 5/20-30, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 47. Kaviraj Atridev Gupta; Ashtanga Sangraha; Uttarsthana 42/53; Chaukhamba Krishnadas Academy Varanasi; reprint 2005; page no. 361.
23. Dr. Brahmanand Tripathi, Ashtang Hridaya; Uttarsthana 36/75; Chaukhamba Sanskrit Pratishthan Delhi; reprint 2011; page no.1162.
24. Kaviraj Ambikadutta shastri, Sushrut Samhita. part-1, Kalpasthana 5/20-30, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 47. Kaviraj Atridev Gupta; Ashtanga Sangraha; Uttarsthana 42/53; Chaukhamba Krishnadas Academy Varanasi; reprint 2005; page no. 361.
25. Dr. Brahmanand Tripathi, Ashtang Hridaya; Uttarsthana 36/75; Chaukhamba Sanskrit Pratishthan Delhi; reprint 2011; page no.1162.
26. Kaviraj Ambikadutta shastri; Sushrut Samhita(2007); part-1, Kalpasthana 5/43, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 49.
27. Kaviraj Ambikadutta shastri; Sushrut Samhita; part-1, Kalpasthana 8/134, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 78.
28. Kaviraj Atridev Gupta; Ashtanga Sangraha; Uttarsthana 46/23; Chaukhamba Krishnadas Academy Varanasi; reprint 2005; page no. 377.
29. Kaviraj Ambikadutta shastri; Sushrut Samhita; part-1, Kalpasthana 7/37, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 59, Dr. Brahmanand Tripathi; Ashtang Hridaya; Uttarsthana 38/23; Chaukhamba Sanskrit Pratishthan Delhi; reprint 2011; page no. 1180
30. Dr. Brahmanand Tripathi; Charak Samhita; vol 2, Chikitsasthana 23/206-207; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no. 780
31. Kaviraj Ambikadutta shastri; Sushrut Samhita. Chikistasthana. 40/25,, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 54
32. Charaka (Ch. Si. 9/104) Vagbhata (As. H. Su. 20/18-20) and Sushruta (Su.Chi. 40/26-27)
33. Dr. Brahmanand Tripathi; Charak Samhita; vol 2, Siddhisthana 9/102; Chaukhamba Surbharati Prakashan Varanasi; reprint 2005; page no. 795

33. Kaviraj Atridev Gupta; Ashtanga Sangraha; Sutrasthana 29/16; Chaukhamba Krishnadas Academy Varanasi; reprint 2005;
34. Charaka (Ch.Si. 9/106-108) Ashtanga Hridaya (As. H. Su. 20/22) and Sushruta (Su. Chi. 40/21)
35. Dr. Brahmanand Tripathi; Ashtang Hridaya; Sutrasthana. 20/21Chaukhamba Sanskrit Pratishthan Delhi; reprint 2011; page no.1162
36. Kaviraj Atridev Gupta; Ashtanga Sangraha; Sutrasthana 29/2; Chaukhamba Krishnadas Academy Varanasi; reprint 2005;
37. (Su. Sha. 6/27) Kaviraj Ambikadutta shastri; Sushrut Samhita; part-1, Sharirsthana 6/27, Chaukhamba Sanskrit Sansthan Varanasi; reprint 2007; page no. 59,

HOW TO CITE THIS ARTICLE

Tomar S, Jawanjal P. *Nasya Karma* in *Visha Chikitsaa*: An emergency drug-delivery system. J Ayu Herb Med 2019;5(2):70-75.